Factors influencing consistency of condom use among college students in Durban, South Africa.

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Submitted in partial fulfilment of the requirements

For the degree of Masters of Population Studies

College of Humanities

School of Built Environment Development

University of KwaZulu-Natal

Durban, South Africa

February 2019

COLLEGE OF HUMANITIES

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ACKNOWLEDGEMENTS

I want to give a special thanks to my parents Sibusiso Gwala and Nomathemba Gwala I will forever be grateful to you, for giving me this opportunity to further my studies. I can never thank you enough, the love and tears we shared during this period will forever be cherished. I love you with all my heart.

To my Husband Monde Dube, you have been nothing but astounding, your continuous support and love you have showed me in the duration of my studies has been impeccable. Thank you for believing in me even after having one baby after the other, you supported me and allowed me to run after my dreams. I Love you Mbuyazi!

Special thanks goes to my mother in law Dr Makhosazane Dube. NGIYABONGA!! Thank you for everything mom. Thank God for blessing me with a second mom that has a heart of gold.

I thank God for blessing me with my two minions Qhawe Dube and Mnqobi Dube, thank you for being my motivation and always putting a smile on my face after a long day of work. Without you two in my life I don't know where I would be. I Love you so much my Princes.

To my sister Mrs Neliswa Mncube thank you so much for the love and support and those endless ewallets to cheer me up after a long day. My brother Qinisolesizwe Gwala thank you for believing in me and always supporting me. I love you Guys.

To my babysitter Jabu Luthuli Thank you so much Aunti for taking care of us especially my kids. I can never thank you enough, the care you give them is out of this world. May God Bless you will all your hearts desires.

To my entire family the Manyonis',Gwalas', Ngcobos', Dubes', Gabayis' and friends THANK YOU.

To my supervisor Prof Pranitha Maharaj you are a trooper, thank you for supporting me even when all hopes were lost. I will forever be grateful for your endless support and awarding me the opportunity to be a SaChi bursary recipient Thank you Prof.

Thank you Shanaaz Rademeyer and Julius Nyerere for your assistance.

Jeremiah 29:11- "For I know the plans I have for you," declares the lord "plans to prosper you and not to harm you, plans to give you hope and a future"

ABSTRACT

Condoms remain the only method that provides dual protection against sexually transmitted diseases (including HIV/AIDS) and unplanned pregnancy. For a long time, condoms have been regarded as one of the most effective and practical methods of dual protection. In a country like South Africa with a high HIV prevalence, condoms have an important role to play in curbing the further spread of AIDS. Recent estimates suggest that approximately 7.5 million South Africa are living with HIV/AIDS. The aim of this study is to shed more light on consistency condom use among young students drawing on quantitative data from a self-administered survey consisting of close-ended questions. This study contributes to existing knowledge by investigating consistent condom use among a young segment of the population. The survey consisted of a sample of 230 students, with 57.4% of the sample being females and males being 42.6%. This study draws on the health belief model (BHM) to better understand condom use consistency. This model was selected because it uses behavioural components to explain low levels of consistent condom use.

The findings of the study show that almost half of sample have ever had sexual intercourse. Men were more likely than women to report having sexual intercourse. The majority of the participants were Africans. The study found that 49.44% students under 20 years and 56% students aged 20 years and above used a condom at their first sexual encounter. Furthermore, almost half of the sexually active men and women used a condom the first time they had sexual intercourse. Condom use at last sexual encounter was much higher. In general, attitudes to condom is relatively positive but there are some barriers to consistent condom use. The study confirmed that the rates of condom use are low on the first sexual intercourse because young people are usually unprepared for the event and in most cases, it is unplanned. Consistent condom use remains a challenge among young men and women and more effort is needed to address some of the negative attitudes about condoms.

ACROYNMS

AIDS	Acquired Immune Deficiency Syndrome
HIV	Human Immune-deficiency Virus
HSRC	Human Science Resource Council
KZN	KwaZulu-Natal
SADHS	South African Demographic Health Survey
SRH	Sexual and Reproductive Health
STDs	Sexual Transmitted Diseases
STIs	Sexual Transmitted Infections
Stats SA	Statistics South Africa
TFR	Total Fertility Rate
UNPF	United Nations
UNPF	United Nations Population Fund
WHO	World Health Organization
HBM	Health belief model
CSW	Commercial sex worker
FSM	Female sex work
SES	Social economic status
NDOH	National Department of Health

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Globally there has been a significant progress in addressing the burden of the HIV and AIDS (Asaolu et al., 2016). Whilst considerable progress has been achieved in the reduction of new infections since 2001, HIV/AIDS remains a major global health challenge (UNAIDS, 2015). HIV is still devastating particularly for adolescents and young adults aged 15–24 years who account for approximately 50% of all new HIV infections and 33% of persons living with HIV/AIDS universally (UNAIDS, 2015). In 2017, approximately 37 million people were HIV positive and taking anti-retroviral therapy (ART). Regardless of this public health improvement almost 2 million new infections continue to occur each year particularly in the Sub-Saharan Africa (Justman et al., 2018). South Africa has the highest number of adolescents and young adults aged between 10-24 years living with HIV/AIDS in 2013 (Shisana et al., 2014). Though it seemed stable over the years, there has been an increase in HIV/AIDS related mortality among the ages 10-19 years (Muchiri et al., 2017; UNAIDS. 2012; Karim et al., 2010; Masvawure et al., 2014). The current estimated total HIV prevalence among the South African population is approximately 13.1%. The total number of people living with HIV is approximately 7.52 million in 2018. For adults aged 15-49 years an estimated 19% of the population is HIV positive (Statistics South Africa, 2017).

Globally, there is an estimated 1.2 billion adolescents (10–19year-olds), constituting 18% of the world's population (UNICEF, 2012). Approximately 2.2 million of these (60% of them, female) are living with HIV, and many are unaware of their infection (UNICEF, 2016). In 2016 alone, 610 000 young people between the ages of 15 to 24 were newly infected with HIV, of whom 260 000 were adolescents between the ages of 15 and 19 years (UNICEF, 2016). These statistics indicate that the rate of adolescent and youth new HIV infections is alarming. This is a concern for researchers and health professionals as to what can be done to reduce new infections. Though the HIV prevalence for the youth remains alarming there has been a decline since 2002 from 6.7% to 5.5% in 2018 (Statistics South Africa, 2017)

Among young people living with HIV/AIDS females are at a greater risk of contracting the disease (Tarkang, 2012). The biological composition of females together with gender and structural constraints within which sex takes place increases the exposure of women who are sexually active to contracting the disease more than males (Tarkang, 2012). This is supported by Klatt et al. (2017) who note that women with genital inflammation are more likely to acquire HIV compared to women without genital inflammation. UNICEF (2016) observes that in some sub-Saharan African countries, adolescent girls are two to three times more likely to be infected than boys of the same age group. According to Statistics South Africa (2016) the HIV prevalence has decreased among the youth and the number of new infections has also declined over the years. The Statistics South Africa (2016) states that in South Africa 93% of the population are aware of HIV/AIDS testing and medical conditions, but only 81% have ever tested in the 15 to 24 age group. Multiple sexual partnership has been identified as a key factor influencing the risk of HIV infection (Manyaapelo et al., 2017). A recent report revealed that 5% of women had more than two sexual partners in the past 12 months and 45% reported having sexual intercourse with a person who was not their married or cohabiting partner in the past 12 months (Statistics South Africa, 2016). However, for men 17% age 15-49 in the past 12 months had two or more partners and 55% had sexual intercourse with a person who was not their married or cohabiting partner in the past 12 months (Statistics South Africa, 2016). A study conducted among young men in KwaZulu-Natal, South Africa found that approximately 73% males reported multiple concurrent sexual partnerships (Manyaapelo et al., 2017).

Unplanned pregnancy is also a major reproductive health problem among young people in Sub-Saharan Africa. Even though birth rates are high in most of the countries in the region, considerable numbers of women and couples are becoming pregnant and having children when they want to limit childbearing or delay the birth of another child (Bankole et al., 2007). A significant number of sexually active adolescent women and men do not want to have children because they are in school, too young or not married, and therefore are prone to the risk of unintended pregnancy, unless they are using an effective method (Bankole et al., 2007; Mahlalela & Maharaj, 2016). Teenage pregnancy is a public health concern both in developed and developing countries (Raj et al., 2010). Often in the transition period from childhood to adulthood during which sexual activity may take place, teenagers regard themselves as grown up and ready for sexual intercourse (Hoque et al., 2014). During this transition teenagers usually lack knowledge about the consequences of unprotected sex such

as sexually transmitted infections, HIV/AIDS and unwanted pregnancy (Hoque et al., 2014). The global teenage pregnancy prevalence is 47 births per 1 000 girls aged 15–19 yearly. Projections for 2030 indicate that this will be high particularly in West and Central Africa and Eastern and Southern Africa (WHO, 2018). According to Bhandari and Joshi (2017) worldwide, 16 million adolescents give birth each year covering 11% of births. 95% of these births occur in low and middle-income countries. Studies conducted by Reddy et al. (2006) and Bhandari and Joshi (2017) found that the majority of these pregnancies result in abortions. Even though teenage pregnancy is an international concern, research shows that there has been a decline in teenage pregnancy over the years. In a study conducted by Hoque et al. (2014) in a tertiary hospital in South Africa they found that the hospital rate was 10.3% and the national rate was 12% which showed that there is a decline in teenage pregnancy in that hospital. In South Africa early childbearing remains high but it is not increasing. According to the Demographic and Health Survey, the percentage of women aged 15 to 19 years who have begun childbearing did not change from 1998 and 2016. For both 1998 and 2016, it was 16%. However, the percentage of women beginning childbearing increases with age, from 4% among women aged 15 to 28% among women aged 19 (NDoH and Statistics South Africa, 2017).

Various strategies have been utilized to prevent the spread of HIV and unplanned pregnancy with many focusing on creating awareness of risk factors, condom promotion, reduction of numbers of sexual partners, treatment of sexually transmitted infections (STIs) and delay in first sex (Mumtaz et al., 2005). The condom is the single, most effective available technology to reduce the sexual transmission of HIV (Holmes et al., 2004). Cassell et al. (2006) asserts that condoms are a fundamental segment of STI and HIV/AIDS prevention, and their use has increased significantly over the past decade. Smith et al. (2012) states that condoms are one of the most common choices of contraceptives as they offer dual protection against both pregnancy and disease, they are available free of charge, and they are distributed in many public buildings.

The first known published description of the condom can be traced to the 16th century; different forms of condoms were used long before that time. The condom was used first as a prophylaxis rather than a contraception, and there is evidence that it was for sale in brothels in the 18th century (Youssef, 1993). With the improvement of rubber in the 1840s there was a great increase in the production and sale of condoms; further improvements in condom manufacture occurred with the development of liquid latex in the early 1930s (Gamson,

1990). Condom use is relatively recent in Africa and in many countries in the continent. According to Merson et al. (2008) condoms appeared around late 1980s in Sub-Saharan Africa and was mostly associated with HIV prevention campaigns. However, before this date condom was known by a small group and was used for family planning and STD prevention. For a long time, condoms have been regarded as one of the most effective and practical means of reducing the risk of sexually transmitted diseases among sexually active adolescents and adults (Shlay et al., 2004; Muhindo et al., 2018). More recently concurrent prevention of unintended pregnancy and sexually transmitted infections has been identified as a significant strategy in the promotion of reproductive health (Kleinschmidt et al., 2007). For the sexually active this normally entails the use of a condom, often in combination with another effective contraceptive method (Kleinschmidt et al., 2007). Kleinschmidt et al. (2007) states that dual protection against the risk of STIs and unintended pregnancy is a major public health issue in South Africa, not only because of high levels of STDs and HIV, but also because of the considerable number of women who use long-acting effective hormonal contraceptive methods and therefore have little incentives for using barrier methods for the purposes of contraception. As been highlighted in the South African national contraceptive policy, the enormous burden of STIs and unplanned pregnancies make a compelling case for dual protection (Kleinschmidt et al., 2007).

1.2 Rationale of the study

The alarming rates of new HIV/AIDS infections and unwanted pregnancies among the youth is a matter of grave concern. Globally the United Nations Programme on HIV/AIDS (2015) has put measures to prevent the spread of HIV/AIDS and unwanted pregnancies. However, research indicates that there are still new cases of HIV infections and an increase in abortions (Asaolu et al., 2016; Shiferaw, 2014). According to Nkomazana and Maharaj (2013) when used consistently and correctly, condoms reduce the risk of pregnancy and many STIs, including HIV. This suggest that condom use remains the ultimate protection from both HIV/AIDS and pregnancy, however it should be used in all sexual encounters in order for it to be more effective. Constant research is required to inform public health interventions to increase the consistent and correct use of condoms and promote dual protection of condoms for STI prevention with other effective methods of contraception (Nkomazana and Maharaj, 2013). This study seeks to establish if similar attitudes are held by students at a university in

Durban, South Africa. In South Africa, university students are at high risk of contracting HIV, since the country has the largest population living with HIV in the universe. Globally, university students are in the age range that has the highest rates of new HIV infections (Shiferaw et al., 2014). Shiferaw et al. (2014) notes that the university environment with its attendant relative lack of parental supervision offers great opportunity for young people, who are joining from adolescence to adulthood, to test the boundaries of their new-found independence through sexual experimentation (Shiferaw et al., 2014). In general, the university environment is sexually lenient, since it is where young people from diverse upbringings and sexual orientations meet and live together, with minimum or no parental and administrative prohibitions (Nkomasana and Maharaj, 2014; Masvaure et al. 2009; Omungo 2008; Sabone et al. 2007).

These experiments regularly comprise of engagement in risky sexual activities such as multiple partnerships, inconsistent use of condoms, and having sex under the influence of alcohol or drugs (Shiferaw et al., 2014; Shisana et al., 2014; Claxton et al., 2015). Studies show that during this change from the adolescent stage to young adulthood students change and certain feelings emerge which they are unable to control when they get to university. As Shiferaw et al. (2014) states that when they get to university and experience the freedom of being on they own, that is when the sexual networking results which increase their exposure to high levels of sexually transmitted infections (STIs)/HIV and unwanted pregnancy. According to Claxton et al. (2015), alcohol consumption has been consistently associated with risky sexual behaviours. For example, alcohol use has been connected with engagement in early sexual activity. Students who attend tertiary institutions have access to condoms as well as information pertaining to condom use and the risks associated with inconsistent condom use however they are still using condoms inconsistently.

1.3 Aims of the Study

The overall aim is to explore factors influencing consistency of condom use among university students. The specific objectives of the study are to:

- To explore consistent condom use.
- To investigate attitudes towards consistent condom use.
- To explore benefits of condom usage as perceived by students.
- To describe barriers to consistent condom use.

1.4 Theoretical framework

This study draws on the health belief model (HBM) to understand condom use consistency. This model was selected because of its behavioural components and use in explaining why individuals fail to take preventive measures regardless of the obvious health risks. The model developed from the concept that health behaviour is influenced by individual perceptions about the disease and techniques which can be used to reduce their prevalence (Carpenter, 2010). The model is made up of major components including perceived susceptibility, perceived severity, perceived benefits, perceived barriers, and cues to action.

It describes individual perceptions and beliefs about the criticality of the disease. Student's awareness of problems and impediments of unwanted pregnancies such unsafe abortion, stigma, discrimination, school drop outs, may be perceived as seriousness towards student's health. Therefore, they can be in a better position to change their normal health practices for the better (Carpenter, 2010).

Perceived susceptibility explains that the belief of an individual in contracting a disease promotes healthier behaviour (Carpenter, 2010). When an individual who perceive themselves at higher risks of contracting diseases practice healthy behaviour and engage themselves in preventive measures that reduce the risks (Carpenter, 2010). Students who believe that they can contract HIV/AIDS and STIs if they do not practice safe sex, will adopt the new behaviour and use condoms during sexual intercourse. They regard themselves as susceptible to disease.

Perceived benefits describe how an individual views benefits, values, and usefulness of a new behaviour in reducing the risk of developing a disease. Generally, people adopt healthier behaviour if they believe that it will reduce their chances of contracting diseases (Carpenter, 2010). Condom usage reduces the risk of HIV/AIDS, STIs and unintended pregnancy.

Perceived barriers refer to preventative measures for adopting new behaviour. This is significant in determining behaviour change. An individual should witness the benefits of new health behaviour overshadowing the results of old behaviours. This will assist an individual to overcome the barriers and adopt a new one (Carpenter, 2010). Barriers may

include attitudes of condom providers, lack of knowledge, distances to the family planning services, lack of money and discrimination.

There are two modifying factors, firstly, cues to action include events, people and things that trigger change in behaviour. For example, illness of a family member, public service announcement and mass media campaigns (Montanaro and Bryan, 2014). Secondly, self-efficacy; people should believe in themselves for their behaviour to change. They should believe that they are capable of adopting new behaviours. If a new behaviour is to be adopted, a person should believe they have the ability to carry out a particular action (Montanaro and Bryan, 2014).

This research study will use the components of perceived susceptibility, perceived benefits, perceived severity, perceived barriers, cues to action and self-efficacy to ascertain the barriers that may prevent university students from using condoms during sexual intercourse.

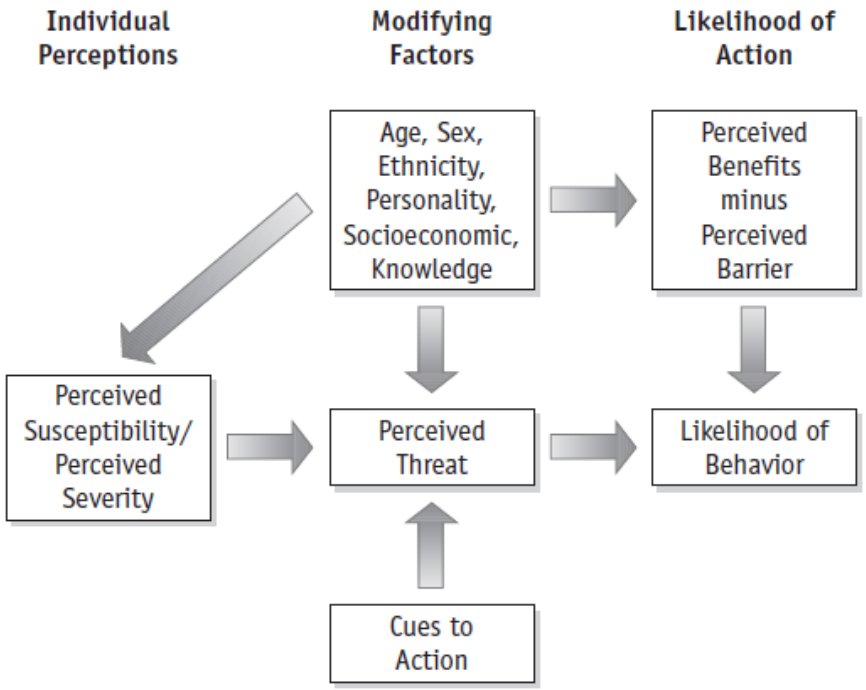

Figure 1. 1 Health Belief Model

Source: Katikiro and Njau (2012)

1.5 Conclusion

This dissertation consists of five chapters. Chapter one contains the background to the study and the rationale for the study as well as the conceptual framework. Chapter two is a comprehensive literature review that outlines national and international factors influencing the consistency of condom use. Chapter three discusses the research methodology used in this study, which includes study location, process of data collection, method of data analysis and ethical considerations. Chapter four outlines the main findings of the interviews that were conducted. The final chapter focuses on discussion of the main findings and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on condom use among young people. As discussed, there are several factors that affect condom usage, and these include demographic factors such as age and gender, behavioural characteristics such as engaging in risk taking behaviour, and psychosocial factors such as condom use self-efficacy. The focus is on existing literature starting with a review of individual-level factors including demographic correlates followed by the behavioural and psychosocial factors that have been found to be associated with consistency of condom use.

2.2 Levels of condom use

Previous research indicates that condom use among young people and other sub populations is influenced by demographic, psychosocial, behavioural, and contextual factors. However, little is known about the interaction between individual-level variables and factors outside a person in relation to condom use. In addition, there is a lack of information on variables that distinguish between different types of condom users (i.e. consistent, sporadic, and non-users) (Tawk, et al., 2004). The latter information would be useful when designing HIV-prevention interventions best suited to different subgroups. Several methodological issues may have contributed to this gap in our knowledge of the correlates of condom use. First, existing studies rely heavily on bivariate statistical analyses or single-level regression analyses, which do not allow for an assessment of the interactions between independent variables in addition to their relationship to the outcome variable (Norman, 2003). Part of the reason for the lack of use of multilevel regression may have been because many of the studies tend to be of a more exploratory nature rather than being hypothesis-driven. Second, studies adopt different measures of condom use. For example, Adih and Alexander (1999) assessed determinants of lifetime condom use and condom use at last intercourse, while Westercamp et al. (2010) evaluated the determinants of consistent condom use.

The adoption of different measures of condom use makes it difficult to synthesize findings across studies. When measuring condom use, it is also important to consider the possibility of recall bias. For example, in their study Volk and Koopman (2001) reported that participants were asked to report the lifetime number of partners with whom they had unprotected intercourse. It is probable that some respondents will not remember all instances in which condoms were used during sexual intercourse. In the present study, condom use at last intercourse was selected as the outcome variable when analyzing data from sexually experienced youth in order to reduce the likelihood of recall bias. Inconsistency in the operationalization of other key variables also limits the synthesis and comparison of findings across studies.

Men and women in general are more likely to use condoms with their casual partners than with their main partners (McCall et al., 2016). The accurate use of them reduces the risk of HIV and other sexually transmitted infections by almost 100 percent. Therefore, condom promotion has received considerable attention in the fight against the AIDS pandemic (Cassell et al., 2006). For young people who are sexually active, besides sex with one uninfected partner, the condom is the only method that offers protection against HIV and some other STIs. According to Lewis et al. (2009) college students are predominantly vulnerable to HIV infection because of their pattern of sexual behaviour, which includes engaging in sex with multiple partners and inconsistent condom usage (Lewis et al., 2009). Most youth used condoms inconsistently or they do not use condoms at all when in committed relationships (Walsh et al., 2013). Pinyoporpanish et al. (2017) in a study conducted in Chiang Mai, Thailand found that even though people had been partaking is sexual intercourse only a few reported to have used a condom in last three months, less than 5% of the population used a condom. Sharma and Nam (2018) conducted a study in Nepal, the results demonstrated that a total of 7.6% used a condom at last sex, with 16.3% of males and 6.2% of females reporting using condoms in their last sexual encounter. According to Sarkar (2008) among other social factors, gender inequality, lack of a communication among partners with regard to condom use, and the stigma attached to the condom could result in unprotected sexual intercourse (Sarkar, 2008). Personal factors such as a dislike of the condom, consumption of alcohol and use of drugs prior to sexual intercourse may also influence condom use (Sarkar, 2008). Sarkar (2008) argues that the above factors contribute to women not being able to negotiate condom use during sexual intercourse and also

increases risky sexual behaviour. In society women who ask for a condom during sexual intercourse are perceived as promiscuous (Malema, 2012).

A study by Beksinska et al. (2012) on the progress and challenges to male and female condoms in South Africa using data from three national HIV surveys that were conducted in 2002, 2005 and 2008 found that condom use at last sex in youth (14–24 years) increased from 57.1% to 87.4% as reported by men, and from 46.1% to 73.1% as reported by women (Beksinska et al., 2012). The rates doubled from 26.7% to 56.4% for men in the 25–49 age group. Women aged 25 to 49 years who had reported lower rates than men in 2002 and 2005 had made some improvements, with 58.1 % using a condom at last sex in 2008 compared to 19.7% in 2002. In 2008 the percentage reporting ever using a condom at last sex increased to 58.1%. A cross sectional baseline survey conducted in South Africa by Shai et al. (2012) found that 47.7% of men reported that they had never used a condom, amongst those who used a condom 36.9% were inconsistent and 15.4% were consistent with one partner in the past year (Shai et al., 2012). Consistent condom use was an uncommon sexual practice with half of the men having never used condoms in the past year and inconsistent condom use being twice as likely as consistent use (Shai et al., 2012). Men who reported inconsistent condom use reported similar socio-economic backgrounds to consistent users but were more sexually risky and more violent compared to both never and consistent condom users (Shai et al., 2012).

A study conducted by Lachowsky et al. (2016) in Canada, on event-level analysis of condom use during anal intercourse by gay and bisexual men (GBM) found that out of 513 participants, 436 GBM (85%) reported a total 1196 anal sexual events and 56% of these events were protected by condom use (Lachowskty et al., 2016). A study conducted in the United States by Smith et al. (2015) also found that only 16% of MSM reported consistent condom use during anal sex with male partners of any HIV status. A study by Hensel et al. (2012) found that out of 25 149 reported behavioural incidents, condoms were used in 25.5% of insertive events and 18.8% of receptive events. Good ratings of sexual gratification were associated with condom use among men who were the insertive partners during sexual activity. However, condom non-use was highly associated with high ratings of pleasure among men who were the receptive partner (Hensel et al., 2012). Therefore, these results indicate that condoms are less likely to be associated with sexual pleasure for individuals wearing it compared to those on the receiving end. The feeling the receptive partner gets can affect condom use during anal intercourse. A study conducted by Maharaj and Cleland (2006)

found that in the previous 12 months among young men and women who were sexually active approximately 75% reported using condoms at last sex either alone or with another method. A minority of men (10%) and women (15%) reported condom use combined with another contraceptive method. However only 87% of men and 90% of women surveyed who reported using condom at last sexual intercourse said that the condom was put in before penetration (Maharaj and Cleland, 2006). In all sexual encounters condom use was not consistent.

2.2.1 Consistency of condom use

According to Beksinska et al. (2012) consistency of condom use in South Africa is a challenge and the meaning of consistent condom use differs substantially therefore comparisons are not always appropriate. There is limited information on older couples in married and stable partnerships. Most data on consistency of condom use has focused on adolescents and young adults. A study conducted by Beksinska et al. (2012) in three public tertiary institutions in Durban found that condom use among students at last sex was 75%. In the study consistent condom use were those who reported 'always using condoms from their first sexual intercourse'. The study found that only 24% of males and 28% of females used condoms in all sexual encounters (Beksinska et al., 2012). This trend is consistent with most studies where high rates of condom use at last sexual encounter are accompanied by significantly lower rates of consistent use (Beksinska et al., 2012, Maharaj and Cleland, 2006). A national study conducted by Pettifor et al. (2005) among youth in South Africa aged 15-24 found that 52% used condom at last sex, while only 33% reported consistent condom use. Consistent condom use was defined as always using condoms with their most current sexual partner. A national survey conducted by Shisana et al. (2014) found that of all respondents who were sexually active during the previous 12 months, only just over one third of respondents aged 15 years and above indicated that they had used a condom at their last sex act with their most recent sexual partner. Substantial sex differences was found, with a higher percentage of males (38.6%) reporting that they had used a condom compared to females (33.6%).

In two studies conducted with a young rural population in KwaZulu-Natal, South Africa consistency was defined as always using condoms in the 12 months prior to the interview (Chimbindi et al., 2010; Shai et al., 2010). A study on socio-demographic determinants of

condom use found that of 3,914 respondents who reported ever having had sex, 1,863 (48%) reported *"never"* using condoms, 980 (25%) reported *"sometimes*" using condoms and 1,071 (27%) reported "*always*" using condoms with their most recent partner. Those who reported "*never*" were excluded from further analysis, leaving 2,051 people who reported either "*sometimes*" or "*always*" using condoms (Chimbindi et al., 2010). These results show that there is a small percentage of people who consistently use a condom. On the other hand, a study conducted by Maharaj & Cleland (2005) among female respondents aged 15 to 49 years and male respondents aged 20 to 55 years found that a small proportion of respondents reported that they consistently or occasionally used condoms with their spouse or partner (15% of men and 18% of women). Of these, only 5 men and 12 women said that they always used condoms, with the remaining indicating occasional use. Consistency of reporting within couples was high: In most (77%) couples, both partners said they were not using condoms, while in 10%, both said they were using condoms always or occasionally (Maharaj and Cleland, 2005).

A study conducted in Uganda by Muhindo et al. (2018) found that majority of the female students who reported high confidence in negotiating condom use were those who used a condom the last time they had sexual intercourse. A cross-sectional study conducted in Malawi by Haddad et al. (2018) found that more men used a condom consistently compared to women, because they are the ones that initiate condom use. Women found it harder to use condoms consistently because their use of condoms was dependent on men. A study conducted in Dar-es-Salaam in Tanzania by Katikiro and Njau (2012) found that 296 participants reported they had sex in the past 3 months before the study was conducted. From the 296 sexually active participants, 260 (87.8%), reported no condom use in the past 3 months before the study. Males were marginally more likely to use a condom compared to their female counterparts (41.3% versus 36.7%). Furthermore, females were more likely to have unprotected sexual intercourse due to a demand from a sexual partner compared to males (53.7% versus 38.7%) (Katikiro and Njau, 2012). Numerous studies have found that males report higher condom use than females (Zuma et al., 2016; Volk and Koopman, 2001; Wilson et al., 2011). These studies suggest that men are more likely to report not only ever using condom but also consistent use (Zuma et al., 2016; Volk and Koopman, 2001; Wilson et al., 2011). Meekers and Klein (2002) also found gender differences in reported condom use, with a significantly higher proportion of males being confident in their ability to negotiate condom use, to purchase or obtain condoms and to use condoms correctly. These

findings are not surprising since the condoms in question are male-controlled contraceptives and prophylactic devices. A study conducted in Cape Town by Muchiri et al. (2017) found that condom use was higher among males compared to females and consistency declined with age. Haffejee et al. (2018) conducted a study in KwaZulu-Natal and found that condom use was low at sexual debut as well as during sexual activity in the last 3 months.

2.3 Factors promoting condom use

2.3.1 Dual protection/perceptive of risk of HIV.

Dual protection is defined as concurrent prevention of unintended pregnancy and STIs (Workowski, 2015; Tsuyuki et al., 2016). This can be accomplished through abstinence, consistent condom use, or dual method use of condoms plus an effective non-barrier contraceptive. A study conducted by Kleinschmidt et al. (2007) showed that a small group of women who are sexually active and use a condom during sexual intercourse are automatically protected against STIs and pregnancy. There were also women who used a single-method, the pregnant individuals who used condoms as a measure to prevent STIs and the ones who only used a highly effective contraceptive method (Kleinschmidt et al., 2007). A study conducted by Kaida et al. (2017) in Canada found that almost three- quarters of sexually active 16–49- year- olds used effective contraceptives, most commonly male condoms and tubal ligation; use of female- controlled reversible methods was limited.

According to Messman-Moore et al. (2010) "risky sexual behavior is one of the most consistent predictors of revictimization". Low personal HIV risk perception is very unsafe as it may increase the spread of HIV infections, since students may continue to engage in risky sexual activities as they are under the assumption that they are not at risk from the virus. For example, a study conducted in South Africa discovered that the majority of students (83%) had never been worried that they could contract HIV, with only 26% feeling that their lives were at risk (Peltzer 2005). On the other hand, some studies reveal that other university students may take part in risky sexual practices knowing very well their personal health risks yet fail to change their sexual behaviours (Maswanya et al. 1999; Nshindano and Maharaj, 2008; Peltzer et al,, 2005). A research study conducted in Zimbabwe by Nkomazana and Maharaj (2014) found that about a third of the respondents (32.43%) felt that their own

sexual behaviours were exposing them to the risk of contracting HIV. Though, it was not evident why they continued to participate in activities that increased their exposure to HIV, given that they were fully aware of the risk posed by their actions. Fewer than half of the respondents (41.14%) felt that their own behaviours were safe and did not expose them to the risk of HIV infections. This suggest that 58.86% of the sexually active respondents were not aware that their sexual behaviours were exposing them to HIV risk. A slightly higher proportion of respondents from the state university (35.38%) revealed that they felt exposed to the risk of HIV transmission due to their own sexual behaviours as compared to only 21.92% from the private university A study conducted by Mahlalela and Maharaj (2016) found that the perception of being at risk of HIV and pregnancy motivated women to use a condom during sexual intercourse.

2.3.2 Age

Findings on the association of age with condom use are mixed. Several studies have found a greater odds of condom use with increasing age (Adih and Alexander, 1999; Karim et al., 2015), while others have found the opposite relationship with older individuals being less likely to use condoms (Camlin and Chimbwete, 2003). Two conceivable methodological issues may explain these conflicting findings. First, in the study by Adih and Alexander (1999), the outcome variable was whether a person had ever used condoms, while condom use at last intercourse was the outcome variable in the study by Camlin and Chimbwete (2003). The former study, found that older people would have a longer sexual history and, therefore, a higher likelihood of having ever used condoms. On the other hand, when condoms at last intercourse is the outcome variable, younger people may be expected to have a greater likelihood of condom use as they are more likely to be single, a factor found to be associated with a greater odds of condom use (Zellner, 2003).

In addition, these disparities may reflect differences in the study population such that studies including a wider age group (15–49 years), such as the study by Camlin and Chibwete (2003) which found that younger people have higher rates of condom use largely due to their single status. On the other hand, those focusing on the youth (15–24 years) found a positive association between condom use and age (Adih and Alexander, 1999; Karim et al., 2010;

Zellner, 2003; Shisana et al., 2014), as older youth may be less apprehensive about obtaining and using condoms.

2.3.3 Types of partners

The type of sexual partner has been found to be associated with condom use (Caldwell and Mathews, 2015). Several studies suggest that condom use is highest with casual partners and commercial sex workers (CSWs) (Camlin and Chimbwete, 2003; Meekers and Klein, 2002). A study by Shannon et al. (2015) found that CSWs were more susceptible to HIV/AIDS because of the nature of their work and lack of literacy.

In the Sub-Saharan region sex work has been the key driver of the epidemic and the burden of HIV remains excessively high amongst female sex workers (Kharsany and Karim, 2016 and Wirtz et al 2015). Even in countries with generalized epidemics, HIV prevalence is considerably higher among female sex workers than in the general population (Kharsany and Karim, 2016). According to Kharsany and Karim (2016) though, the combination of HIV prevention methods has the potential to prevent more than 90% of HIV transmission during vaginal and anal sexual intercourse, their use is primarily influenced by relationship type and heavily influenced by the form of partnerships. For example, condom use is generally highest in commercial sex work and lower and inconsistent in non-commercial and regular partnerships (Kharsany and Karim, 2016). A study conducted by Weastercamp et al. (2010) analysing the partnerships of 1370 men found that 19% reported never using condoms, 74% reported sometimes using condoms and only 7% consistent condom use with their partners. A study conducted by Wirtz et al. (2015) in two West African countries observed that there were more female sex workers who reported forced sexual intercourse and no payment over the years. It also found that many women had a challenge in negotiating condom use compared to those with greater power in the sexual encounter (Wirtz et al., 2015). A study in Tanzania by Romijnders et al. (2015) found that almost half of their participants said they can convince their partners to use a condom, but they reported they never used a condom.

2.4 Factors inhibiting condom use

2.4.1 Availability and accessibility

The distribution of free condoms was started in South Africa by the directorate of health as early as in 1999 (Haile, 2017). In South Africa the cost of condoms is not a barrier to condom use, condoms are available for free in the public health sector (Alli et al., 2013). In addition, today, anyone can order condoms through the Internet free of charge (Haile, 2017). Condoms are delivered to any assigned address in a discreet package, within a week of ordering. Different sizes and types of condoms are also available (Haile, 2017).

The free condoms are primarily aimed at young people under the age of 25 and other "high risk" groups such as men who have sex with men (MSM), sex workers and sex customers, prison inmates, asylum seekers and people with HIV and their partners (Halie, 2017). In South Africa the service providing free condoms first started in 1999, 400.000 condoms were distributed. Last year more than 5 million condoms were distributed and 35% of these were ordered by ordinary people (not organizations) compared to 28% the year before (Halie, 2017).

Lack of access to condoms has become a major hindrance to safer sexual practices, predominantly in developing countries (Muñoz et al., 2010). Individuals with low income depend on free condoms and utilise them to engage in sexual services to fulfil economic needs; for them, limited access leads to high-risk behaviour (Muñoz et al., 2010). A study conducted by Maharaj (2012) found that out of pocket costs such as transportation expenses influences access to clinic facilities. In the study a small number of the women and men in the focus groups had their own private transport while the majority depend on public transport to get to the clinic for their contraceptive supplies. In rural areas, health facilities are located some distance from their place of residence and, they often have to walk long distances in order to get to the clinic. According to Gilmour et al. (2000) it is sometimes difficult for individuals to reach clinic sites, though there is a system of public transportation within the areas known as mobile clinics, which are designed for deep rural areas which are far from the government clinics (Gilmour et al., 2000; Alli et al., 2013). Inadequate access to health facilities is therefore, a major problem for some women, especially those in the rural areas (Alli et al., 2013). However, women were also not entirely happy with the time that they have to wait in the clinic. They complained that they spent the entire day at the clinic,

they arrive at the health facility early in the morning, only to leave late in the afternoon. Many felt that the waiting period for the consultation was not practical. Some also complained about the failure of health facility staff to keep appointments made with patients, and this also influenced their decision to use a particular health facility (Allie et al., 2013)

The mobile clinics come at least once a week, and when it does come there are long queues of individuals who are severely ill and there is not that much privacy since it is a small unit (Maharaj, 2012). Therefore, people find it hard to ask for condoms especially young female adults, which makes them more susceptible to HIV/AIDS and unwanted pregnancies (Gilmour et al., 2000). According to Rizkalla et al. (2010) it has been well recognised that discomfit during the purchase of condoms remains a problem in acquiring and use among young adults and women. Condoms have been described as a "socially sensitive product"; a factual or fictional belief that is associated with embarrassment, which in turn affects purchasing behaviour (Rizkalla et al., 2010, Alli et al., 2013). Alli et al. (2013) states that lack of privacy and confidentiality remains an obstacle to accessing services. Men and women felt that lack of privacy led to other clients listening in on their consultation during the waiting period. Furthermore, they were worried that staff members usually discuss their problems with others in the clinic and this stops them from expressing the actual reason for coming to the clinic (Alli et al., 2013) Young people were also concerned about confidentiality because of the stigma associated with obtaining contraception. They stated concerns that they would be embarrassed if other members of their community recognized them. Lack of privacy, serves as a hurdle to accessing services, particularly at mobile clinics in the rural areas (Alli et al., 2013).

On the same note, research has suggested that adolescents prefer to buy condoms from places where they are clearly visible and easier to purchase, even when given a cheaper option (Rizkalla et al., 2010). The way condoms are placed in stores makes it difficult for individuals to access condoms though they are available to them. A study in the United States of America by Rizkalla et al. (2010) found that the accessibility of condom was poor in places that were frequently visited. The majority of the stores are convenience stores and the pharmacies are small and privately owned. The authors note that accessibility was a problem in poor districts with the highest rates of HIV, STIs, and teenage pregnancy.

Gilmour (2000) conducted a study in KwaZulu-Natal, South Africa about the availability of condoms and found that access is an important issue when it comes to public clinics as sources for condom dissemination. Though public clinics are in a reachable location, they are not utilised by all sectors of the community at risk of STDs or HIV (Gilmour, 2000). The author further states that no men were seen at any of the family planning clinics sampled which indicate that men are unlikely to get condoms from this source unless there is a radical policy change directed at redressing this problem (Gilmour, 2000).

2.4.2 Awareness and knowledge of condoms

Sogarwal and Bachani (2010) state that to increase the effectiveness of condom awareness initiatives, it is important to determine awareness of HIV and their preventive actions, precisely condom use. According to Okunlola et al. (2006) the male condom enjoys broader advertising worldwide among other barrier methods because of its double potential role, especially among sexually active youth. Regardless of this universal awareness, its use in achieving safer sex is almost entirely subject to the choice of the male sexual partner (Okunlola et al., 2006). In 1980 the female condom was developed as an alternative strategy meant for ensuring a female controlled safe sex method (Okunlola et al., 2006). It is a loose fitting polyurethane sheath; its purpose is like the male condom except that it is inserted inside the vagina (Okunlola et al., 2006). There are some concerns about the female condoms including male partner objection, the cost compared with male condoms and difficulty of insertion (Okunlola et al., 2006). Its efficacy has been found to be comparable with that of other barrier methods. Men and women have heard of female condoms but do not utilise them because of the negative connotation associated with it. There is the belief among men that women gain an undue advantage in controlling sex associated with female condoms (Okunlola et al., 2006).

In Zimbabwe a study was conducted on the level of awareness of female condoms and its uptake, Chipfuwa et al. (2014) found that the majority of respondents (53.3%) did not receive health education on the female condom from the health institutions. This constitutes a large number of women who lacked health education hence the need for health institutions to strengthen awareness campaigns on the female condom (Chipfuwa et al., 2014). Even though many respondents (81.4%) had heard of the female condom from nurses, the media,

counselling and friends, they did not have sufficient and correct information about the female condom (Chipfuwa et al., 2014). In a study conducted by Maharaj & Cleland (2005) in KwaZulu-Natal, South Africa found the couples' knowledge of condoms and where to obtain them was very high. However, level of use was lower among rural, less educated couples than urban, more educated couples. A small number of participants reported that they consistently or occasionally used condoms with their spouse or partner.

Correct knowledge of condoms is integral part of sexual and reproductive health (SRH) and all efforts should be made to educate adolescents about them (Jha et al., 2010). Even though knowledge of contraception is accumulating, their use lags far behind (Jha et al., 2010). Mahat et al. (2016) has demonstrated that AIDS knowledge is associated with greater condom use. Low levels of knowledge about the transmission and prevention of AIDS among adolescents was a predictor of non-use of condoms. A study done in Addis Ababa found that 88.7% knew about HIV infection, but only 66% admitted they do not use a condom at all. (Petros et al., 2017). There have been some literature documenting that knowledge about HIV and its transmission is associated with higher levels of condom use. Higher odds of condom use have been found among those who are knowledgeable about the prophylactic properties of condoms and among those with accurate AIDS-related information, as indicated by the source of AIDS education (Camlin and Chimbwete, 2003).

Several researchers have investigated the relationship between people's perceptions of the pros and cons of using condoms, and their reported use of condoms. Two studies that examined the association between perceived benefits of condoms and actual condom use found that perceived benefits were not significant predictors of ever having used condoms and condom use at last intercourse (Adih and Alexander, 1999; Volk and Koopman, 2001). This is contrary to what would be expected based on the health belief model, which posits that the likelihood of engaging in a health behaviour such as condom use is higher if a person perceives high benefits of engaging in the behavior (Montanaro and Bryan, 2014). It is plausible that the reason none of aforementioned studies found an association was due to the measures used to assess perceived benefits. Although knowledge and awareness have been reported to have a limited effect on changing attitudes and behaviour, they are important components of sex education which help promote informed, healthy choices (Samkange-Zeeb et al., 2011). Education plays a vital role in condom use in women, with one study in South Africa suggesting that only 16% of uneducated women reporting using a condom at last sex compared to 63% of those with higher education (Beksinska et al., 2012). Condom use is

higher in urban setting compared in rural areas (Beksinska et al., 2012. A study conducted in KwaZulu-Natal, South Africa found that knowledge of condoms was nearly universal: Approximately 90% had heard of the method and knew a possible source of supply. Condoms were also commonly known as an extremely effective method of preventing HIV infection (Maharaj and Cleland, 2005). Research suggest that regardless of having high levels of knowledge on HIV and AIDS, many university students continue to take part in risky sexual practices and appear not personally concerned about contracting the virus (Nkomazana and Maharaj, 2014; Ferrer et al., 2007; Ntata et al., 2008; Peltzer, 2005; Rahamfey et al., 2008). Fehr et al. (2017) conducted a study on perceived barriers and benefits of condom use among college students and found that 95.8% of participants had received some form of sexual reproductive health education.

2.4.3 Self efficacy

Self-efficacy is another factor that has been linked with STI risk (Lin et al., 2005). Self-efficacy refers to a person's confidence in his or her skills and ability to engage in a behaviour or the perceived belief that one can control motivation, thought processes, emotions and behaviour (Bandura, 2014). Condom efficacy is the confidence in an individual's ability to effectively use a condom during sexual intercourse (Mehra et al. 2014). Such efficacy needs risk reduction and self-regulation skills but having the skills and being able to transform them into action under challenging circumstances are two different matters (Mehra et al., 2014). For instance, if one has the confidence in one's ability to correctly apply a condom or the ability and confidence to tell your partner that you want to use a condom (Devine-Wright et al., 2012).

The literature investigating the role of self-efficacy in influencing condom use behaviour indicates that young people who are confident in their ability to obtain and use condoms are more likely to use condoms consistently than those who are less confident in their abilities (Adih and Alexander, 1999; Karim et al., 2010). A study found that participants who had lower self-efficacy for maintaining a monogamous relationship were likely to have more sexual partners (Lin et al., 2005). Having a high number of sexual partners is considered to be a risk factor for STIs (Boyer et al., 2017). In the same research, evidence suggested that participants who used condoms less consistently tended to have less self-efficacy for using

condoms consistently, even if they perceived AIDS as a more severe disease compared to the other participants (Lin et al., 2005).

French and Holland (2013) conducted a study on condom negotiation strategies as a mediator of the relationship between self-efficacy and condom use. The results suggested a strong relationship between condom use self-efficacy and condom influence strategies. Furthermore, condom influence strategies completely facilitated the relationship between condom use self-efficacy and condom use (French and Holland, 2013). Even though condom use self-efficacy had a relationship with condom use, the most important factor predicting condom use was the ability to practice condom negotiation strategies. Meanwhile for women, condom use self-efficacy encouraged the use of a very assertive negotiation strategy, withholding of sex, and was consequently related to increased condom use (French and Holland, 2013). Generally, for both women and men applying the assertive condom negotiation strategies were found to be the most significant aspects of increasing condom use (French and Holland, 2013).

In a study of university students in Uganda, Mehra et al. (2014) found a high percentage of females (71.5%) were younger than 23 years compared to their male counterparts (60.5%). A bigger proportion of females (28.5%) reported lower condom efficacy than males (22.2%). The intention to use a condom with a new sex partner was greater in females (74.1%) than in males (61.5%). A smaller number of females (61.8%) reported less pressure with condom use than males (70%). Condoms were less likely to be used with a new sexual partner by females (49.2%) than males (37.4%) (Mehra et al., 2014). According to McCall et al. (2016: 01), high self-efficacy is associated with more consistent condom use. Research has been conducted to examine both condom negotiation and self-efficacy of putting the condom correctly (McCall et al., 2016). A study conducted by O'Leary et al. (2008) found that self-efficacy of condom negotiation was more important than male partners' characteristics. A study conducted by Asante et al. (2016) in Ghana found that higher self-efficacy of condom use was positively related to past condom use and intention to use condoms.

2.4.4 Status of Women

According to Exavery et al. (2012) and Eaton et al. (2006) in the international feud against HIV/AIDS, research emphasizes the significance of communication between sexual partners in relation to condom use. This is based on the fact that communication about condom use between sexual partners is linked with increased use of condoms (Tassiopoulos et al., 2009). Moreover, it has been established that those who influence their sexual partners to use condoms are more likely to use them than those who do not (Exavery et al., 2012 and Perrino et al., 2006). With a high prevalence of HIV/AIDS it is important to have confidence in negotiating safer sexual practices (Exavery et al., 2012). In much of Africa, men are socialized to have control over sexuality and reproduction (Closson et al., 2018). The gender imbalance in many relationships may therefore limit the ability of women to negotiate condom use in relationships (Eaton et al., 2013; Kharsany and Karim, 2016; Musariri and Odimegwu, 2016).

Gender role perceptions may be associated with condom use. A study among Indians in South Africa by Nadioo et al. (2016) found that women's inferior position in relationships and the belief that they should not discuss sexual matters seemed to reduce their ability to negotiate condom use. This increases women's vulnerability to HIV. Greig and Koopman (2003) conducted a preliminary study to explore factors associated with condom use in a sample of 71 women living in Gaborone, Botswana. They found that women's negotiating power, defined as the degree to which a woman felt that she could discuss sexual history and safe sex with partners, and persuade their sexual partners to use condoms; and economic independence, defined as the extent to which women rely on their partner for economic support, accounted for 49% of the variance in condom use when controlling for HIV knowledge, HIV serostatus awareness, cultural norms, alcohol consumption, abuse, and barriers to condom use.

Exavery et al. (2012) in their study of condom use negotiation in three districts in Tanzania, with 2614 women between the ages of 15-49 years found 22.2% of condom use at last sexual intercourse, ranging from 12.2% among married women to 54.9% among unmarried (single) women. Almost 73% of these women reported being confident to negotiate condom use, and these women were significantly more likely than those who were not confident to have used a condom at the last sexual intercourse (Exavery et al., 2012). A study conducted by Maharaj and Cleland (2006) found that 47% of women compared to 33% of men felt that the man has

a greater influence than women over whether a condom is used or not. In the study women were more likely than men to state that it is up to them whether to use a condom during sexual intercourse (66% versus 47%). However, the study concluded that women in abusive relationships had less control over condom use than men (Maharaj and Cleland, 2006).

There is some indication that perceptions of parental disapproval of sex and condoms may deter young people from using condoms (Eaton et al., 2013; MacPhail and Campbell, 2001). One reason why perceived or actual parental disapproval might reduce condom use is because the opportunity to have sex often arises when parents or other adults are away from home and during this time using condoms is viewed as "wasting" time (MacPhail and Campbell, 2001). A study conducted in three districts in Tanzania found that marital status influences sexual behaviour and the perceived risk of infection. For example, married women may be less likely to negotiate safer sex due to fears of being labelled as promiscuous, even when they suspect or are aware of their spouses' extramarital relationships (Exavery et al., 2012).

It may also reflect the fact that males have been socialized to exercise authority in sexual decision-making, whereas there are societal expectations of female passivity during sexual encounters (Espin, 2018; Altschuler and Rhee, 2015). MacPhail and Campbell (2011) also found that compared to young females, males tend to externalize the threat of HIV rather than acknowledging personal vulnerability, which may increase the chances that males will fail to engage in safer sex. This, in turn, may mean an increase in female vulnerability to HIV infection in situations characterized by female disempowerment in sexual decision-making.

A cross-sectional study conducted by Costa et al. (2016) using interviews administered to a sample of 767 sexually active women (ages 18–65) found that in total, 78.7% of the women were inconsistent condom users. The results illustrated that consistent condom use was influenced by marital status (being not married), having greater perceptions of condom negotiation self-efficacy, having preparatory safer sexual behaviours, and not using condoms only when practicing abstinence. Living with a partner and having a lack of perceived risk significantly predicted inconsistent condom use. Less educated women were less likely to use condoms even when they perceived themselves as being at risk (Costa et al., 2016).

2.4.5 Economic situation

Eaton et al. (2013) found that low socio-economic status was often associated with a greater likelihood of adolescents being sexually active and asserts that poverty is a major reason for the commercialization of sex, whereby young women engage in sexual intercourse with the aim of receiving monetary or material remuneration. Typically, such sexual relationships occur between young females and older males; thus, there is a high potential of power imbalances that limits the females' ability to negotiate safer sex. Economically disadvantaged young males and females may also be unable to purchase condoms (MacPhail and Campbell, 2001). Nkomazana and Maharaj (2014) found that students were having sexual relationships with people who they knew had multiple partners. Some students got into these relationships for benefits such as financial gain or gifts. These extra relationships perpetuate the spread of STIs particularly HIV (Nkomazana and Maharaj, 2014). A study conducted in Zhejiang Province, China by Ma et al. (2017) found that 50% low tier FSW did not use condoms if their clients refused and also they accepted non-use to attract new clients. Jennings et al. (2017) conducted a study in rural, South Africa and found that school-enrolled young women with greater economic resources were more likely to avoid HIV infection by using particular strategies, such as consistently using condoms, reducing the number of sex partners, discussing HIV testing, changing the selection of partners, or abstaining from sexual intercourse.

2.4.6 Substance use

According to Dariotis and Johnson (2015), young people are more likely to engage in risky behaviours such as substance abuse. In general, young people who engage in risky behaviours such as smoking and alcohol use are more likely to be at risk of pregnancy and STIs (including HIV/AIDS). However, the relationship between condom use and risk-taking behaviour is less clear. For example, Adih and Alexander (1999) found that young Ghanaian males who drank beer often or sometimes were more likely to have ever used condoms than those who never or rarely drunk beer. There was no difference across the groups with regards to condom use at last intercourse. On the other hand, frequent consumers of gin were less likely to report condom use at last intercourse than those who never drank gin or only did so

infrequently. Kiragu and Mclaughlin (2011) also reported mixed findings on the association between contraceptive behaviour and risk-taking behaviour. Specifically, the study found that males and females who engaged in substance use were more likely to have ever used contraceptives. Adih and Alexander 1999), Kiragu and Mclaughlin (2011) and Davis et al. (2014) suggest that the social environment characterized by heavy alcohol use and high turnover of sexual partners may inhibit condom use because the positive outcomes anticipated with being intoxicated and having multiple partners outweigh the benefits of safe sex. Similar results were found in a study by Tawk et al. (2004) who investigated the demographic, sexual and social risk factors associated with condom use among a large sample of men in Sydney, Australia. The researchers found that consistent users had a lower likelihood of heavy alcohol consumption and injecting drug use than those who used condoms sporadically.

However, a study conducted in a black institution in America by Younge et al. (2018) found that alcohol and marijuana use did not have a significant influence on the relationships with condom use. Moreover, Wang et al. (2018) also found that alcohol drinkers used a condom frequently because they had anticipated the risk therefore they prepare for safe sex prior to alcohol consumption. A study by Shisana et al. (2014) found that the main populations who were at higher risk of HIV exposure, were the recreational drug users aged 15 years and older (32.0%), the high-risk (alcohol) drinkers aged 15 years and older (32.9%) and black African males aged 25–49 years (21.1%).

However, Mehra et al. (2014) found no association between risk taking behaviour and contraceptive use at last intercourse. One might expect that substance use impairs judgment regarding the need for taking precautions to avoid the negative consequences of unprotected sexual intercourse. Thus, regular consumers of alcohol and other mind-altering substances would report a lower frequency of condom use. However, the available research does not appear to support the hypothesis that substance use is associated with a lower likelihood of condom use. In some respect, young people who engage in risk taking behaviour, may possess qualities that allow them to be less embarrassed about acquiring and using condoms and other contraceptives than peers who abstain from these behaviours (Mehra et al., 2014).

2.4.7 Religion

Churches may serve as a social entity for those youth who attend religious services and can provide them with a sense of belonging, which is important during adolescence (Cooksey and Dooms 2010). In general, religion is described as a protective factor for young people with regard to sexual behaviour and can be associated with behaviours such as delayed sexual debut (Rostosky et al. 2004), lower likelihood of voluntary sexual activity and fewer sexual partners outside romantic relationships (Miller and Gur 2002). Since the mid-1980s, faith communities have provided care, treatment and support to those infected with and affected by HIV, including orphans and vulnerable children (Paterson 2009). However, the faith communities are facing major challenges in their response to the HIV epidemic, especially concerning HIV prevention. The difficulty facing faith communities in addressing aspects of human sexuality other than morals is recognized as one of the major obstacles to their involvement in HIV prevention (Allience, 2009; Messer, 2004; Ryan, 2007).

Findings from quantitative studies assessing the association between religious background and condom use have been equivocal. Kinsman (2001) found that Catholic males were significantly less likely than non-Catholic males to report that they intended to use condoms. In addition, Catholic males and females knew less about condoms than their non-Catholic counterparts. On the other hand, Kiragu and Zabin (1995) found that contraceptive use, including condom use, was not significantly associated with religiosity among a sample of Kenyan secondary school students. Religious background is an important consideration given that close to a third of the population in Kenya is Catholic, a group that has been very vocal in its stance against contraceptives, including condoms.

Further, religious education is one of the subjects through which HIV/AIDS education is integrated into the Kenyan school curriculum with religious education serving as a platform for discouraging sexual activity among young people by taking a moralistic stance (Karibu, 2005). Several studies in Africa and other parts of the world have found a co-occurrence of risk behaviours among adolescents such that those who engage in risky sexual behaviour also tend to engage in other risk behaviour such as substance use (Adih and Alexander, 1999; Kiragu and Zabin, 1995; Kiragu and Mclaughlin, 2011). For example, the association between condom use and religion is unclear because of the different methods used to measure the latter. For example, Kinsman et al. (2001) examined differences across young people who belong to different religious denominations, while Kiragu and Zabin (1995) considered the

combined effect of the importance of religion, specifically affiliation to a religious denomination, and the frequency with which one attends religious services

2.4.8 Peer pressure

Risky sexual behaviour predisposes young people to a number of sexuality related problems including HIV (Cherie and Berhane, 2012). Young people tend to internalize their peers' negative attitudes about condoms (MacPhail and Campbell, 2001). There is a limited literature related to peer pressure and condom use. The few that exist are conducted internationally (Teitelman et al., 2008). A few other researches do not directly address issues of peer pressure and condom use, but they include some aspect/ factors similar to peer pressure as one of the aspect that promotes or inhibits condom use among college students. A study conducted by Cherie and Berhane (2012) found that a total of 377 (10.6%) study participants were involved in risky sexual behaviour in the past 12 months' sex. Overall, 79.4% of the sexually active students reported that they have been sexually active in the 12 months prior to the survey, 45.6% had sex with more than one sexual partner, 55.6% didn't use condom consistently and 20.6% were involved in sex in exchange for money. This study was conducted among high school students who are most vulnerable to peer pressure and the results indicate that students are participating in sexually risky behaviour, but nowhere does it state that they were pressured into doing so. MacPhail and Campbell (2001) found that taunting by peers resulted in the decision not to use condoms among a group of young men. Eaton et al. (2003) also noted that for males, peer pressure may include the need to prove manliness and to have multiple sexual partners. They also point out that young males may be more influenced by their peers than their female counterparts.

2.5 Conclusion

The existing literature on adolescent sexual behaviour in Africa demonstrates that many behavioural, psychosocial, and contextual variables may influence the use of condoms. However, there is a dearth of information on the ways in which these factors interact to influence sexual behaviour and in particular condom use. Further, no literature, to my knowledge, examines the utility of these classes of variables in differentiating between groups based on the consistency of condom use. In the final analysis, therefore, one can conclude that there are a number of factors that influence condom usage among university students.

This literature review chapter highlighted factors promoting condom use such as HIV prevention: A global theological conversation the dual protective benefits of condoms, perceptive of risk of HIV, age and type of partner. It further discussed the factors inhibiting condom use which consist of; availability, accessibility, awareness of condoms, self-efficacy, women's status and power. The literature suggests that consistent condom use is determined by several factors, some of which are linked to gender in more or less obvious ways. Some of these factors prevent inconsistent condom use, while others may work in the opposite direction. The next chapter deals with research methodology that was used in this study.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

As outlined previously studies suggests that condom use is increasing but consistent use remains elusive. The aim of this study is to shed insights into consistent condom use drawing on quantitative data from a survey consisting of close-ended questions. This study is an empirical study using primary data as the main source of data. This chapter starts by outlining the study context, the methods used in the study, the process of data collection, as well as the techniques used in data analysis. The chapter concludes with a review of the ethical considerations and limitations of the study.

3.2 Study Context

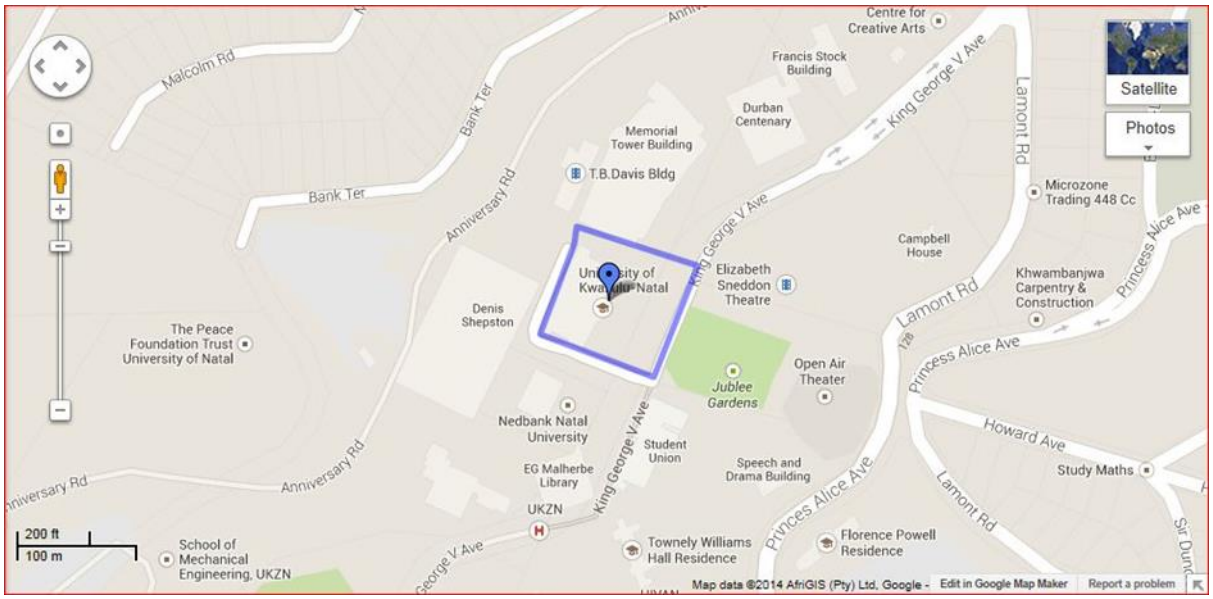

Figure 3. 1 Map of University of KwaZulu-Natal

This study was conducted at the University of KwaZulu-Natal Howard College, South Africa. The University of KwaZulu-Natal has five campuses all of them with their own unique characteristics. The Howard College Campus in which the study was conducted is situated in a prosperous environmental conservancy and the opulent gardens of the University replicate a commitment to indigenous flora and fauna. The University is located in one of the up-market areas in Durban known as "Glenwood". The Howard College Campus currently offers a wide variety of degree options in the fields of Science, Engineering, Law, Management Studies, Humanities, Social Sciences, Architecture and Nursing. This institution has about 8 residences which are continuously growing every year as student numbers are increasing. The data for this research study was collected in Ansel May, an all-male residence and John Bews, an all-female residence in the selected higher education institution in KwaZulu-Natal. These residences are one of the many residence in this institution. The residences are separated by gender and level of qualification. The two residences that were selected are inclusive of only undergraduate students. The university had almost 5336 students staying at university residence in the 2016 academic year.

3.3 Methodology

A quantitative, non-experimental, cross sectional survey with a descriptive design was used to explore the factors influencing consistency of condom use among undergraduate students residing at a selected residence in the University of KwaZulu-Natal Howard College Campus. Quantitative researchers are aligned to the positivist paradigm and therefore gather empirical evidence which is inclined to objective reality (Houser, 2008; Polit and Beck, 2012). The advantages of quantitative research are as follows; quantitative research allows for a broader study, involving a larger sample size, and enhancing the generalisation of the results. It can also allow for greater objectivity and accuracy of results. Generally, quantitative methods are designed to provide summaries of data that support generalizations about the subject at hand. In order to accomplish this, quantitative research usually involves few variables and many cases, and employs prescribed procedures to ensure validity and reliability. The quantitative method uses standard means that allows the research to be replicated, and then analysed and compared with similar studies. Kruger (2003) confirms that 'quantitative methods allow us to summarize vast sources of information and facilitate comparisons across categories and over

time. The researcher can avoid bias by keeping a 'distance' from participating subjects and investigating a subject unknown to them.

On the other hand, the disadvantages of quantitative research is that it collects a much narrower and sometimes superficial dataset. Quantitative results are limited as they provide numerical descriptions rather than detailed narratives and generally provide less elaborate accounts of human perceptions. The research is often carried out in an unnatural, artificial environment so that a level of control can be applied to the exercise. This level of control might not normally be in place in the real world yielding laboratory results as opposed to real world results. In addition, pre-set answers will not necessarily reflect how people really feel about a subject and in some cases might just be the closest match. In quantitative research the development of standard questions by researchers can lead to 'structural' bias and false representation, where the data reflects the view of them instead of the participating subject (Polit and Beck, 2012). For this study, the descriptive design was chosen to obtain more information about the characteristics of the items being researched. The purpose of the descriptive studies is to describe and document aspects of a situation as it occurs (Polit and Beck, 2012)

In the research study the purposive sampling method was used, which is a non-probability sampling technique which encourages voluntary participation. When targeting a specific pre-defined group, the non-probability sampling technique is best suitable, hence it was appropriate for this study. This sampling technique allowed the researcher to get rich information. The non-probability sample technique was used because it is cost effective, it was easier to find students around campus and this method is also time conducive. Though it does not allow the results to be generalised to the whole population (Blanche et al., 2006). The study used the non-probability technique because it is difficult to get everyone to participate in the survey. Purposive sampling also called the judgemental sampling, which is the deliberate choice of the researcher because of the qualities the researcher upholds (Tongco, 2007). The judgemental sampling allowed the researcher to choose respondents based on their availability and willingness to participate in the study. The researcher administered the questionnaire herself and participants were asked if they were willing to be part of the research. This increased the chances of the survey being completed by participants who participated willingly.

The research study used a survey/questionnaire to collect data, which is a way gathering of information from participants through self-reporting in questions provided (Babbie & Mouton, 2005). The research used a survey because condom use is a sensitive topic conducting a self-completed survey assists with gathering more information and allowing the participant to answer as honestly as they can because their identity is protected. The survey was appropriate for this research because it is easier to administer, and it was simple to create the questions for the survey. Conducting a survey saved the researcher a lot of money, and many questionnaires were completed. Instead of having face to face interviews which can make people feel intimidated and ashamed by the interviewer. With the survey numerous questions were covered for all the objectives and a broad range of information was collected. The questionnaire consisted of closed-ended questions. The selection of participants was mainly dependent on the availability of students at the selected residences.

3.4 Sampling criteria and Sample size

The selection of individuals who meet the criteria to participate in the research study were males and females above 18 years of age and are enrolled at the University of Kwa-Zulu Natal. Participants from all race groups were also included and participants needed be undergraduate students who were residing in the selected residence. The selection criteria was also inclusive of students who were sexually active and willing to participate in the study. The exclusion criteria consisted of all post graduate students as well as undergraduate students residing in other residences either than the selected 2 residences.

A population is the entire set of objects that the researcher is interested in to conduct they study. Therefore, sampling is the process whereby a portion of the population is selected to be representatives of the entire population (Polit and Beck, 2012). According to Brink (2006); Burns and Grove (2010) sample size is the portion of the population that meets the criteria required by the researcher to represent the entire population. The sample for this research study included 230 undergraduates registered at the University of KwaZulu-Natal residing in the selected residence. The target population of the study consisted of 230 undergraduate students registered for different courses during the year of 2016 residing in the selected

residence in which the study was conducted. The sample consisted of 132 females and 98 males.

The sample was stratified according to the number of all registered students residing in the university residences (N=5336). The sample size was 197 students which was calculated using Raosoft sample size calculator and based on the margin of error of 7% and confidence interval of 95% and the response rate was 230 participants. The researcher used the non-probability simple random sampling method to recruit participants for the study. The margin of error was 7%, which is the amount of error that you can tolerate. If 90% of respondents answer *yes*, while 10% answer *no*, you may be able to tolerate a larger amount of error than if the respondents are split 50-50 or 45-55. Lower margin of error requires a larger sample size. The confidence level was 95% the amount of uncertainty you can tolerate. Suppose that you have 20 yes-no questions in your survey. With a confidence level of 95%, you would expect that for one of the questions (1 in 20), the percentage of people who answer *yes* would be more than the margin of error away from the true answer. The population size was 5336 which is how many people are there to choose the random sample from for this study. The sample size doesn't change much for populations larger than 20,000. The minimum recommended size of this survey was 197.

3.5 Validity & Reliability

Validity was ensured by the questions that were included in the questionnaire. The questions were directly aligned with the objectives of the research. In this research study the validity of results is ensured by the study measuring what is intended to measure (Leedy and Ormrod, 2010; Babbie and Mouton, 2005; Blanche et al., 2006). The research study is on factors influencing consistency of condom use hence the content of the questionnaire was concurrent to the study topic. Furthermore, to ensure reliability of the instrument a pilot study was carried out on six respondents before the main research was administered.

3.6 Pilot Study

Pilot testing is a process whereby the researcher administers the questionnaire to a small group of individuals that meet the criteria of the actual research sample to see if any amendments need to be made (Saunders and Thornhill, 2012 and Babbie and Mouton, 2005). Pilot study was conducted with six participants to identify any ambiguity and misunderstanding and to determine its stability and consistency. These participants were selected randomly. The participants of the pilot study were students who had the same criteria as students of the main study. However, the only difference was that they were from a different residence within the University, not the selected residences for the present study. According to Saunders and Thornhill (2012) conducting a pre-test is essential for validity and reliability. The researchers' main aim with administering a pilot test was to make sure the questionnaire was clear, and it asked what the research wanted to find. The pilot test confirms that participants understood the questions and had no problem answering them. The participants indicated that the questions were clear and there were no major revisions.

3.7 Data Collection

In order to conduct the study, the researcher had to obtain ethical approval. Before the researcher could be granted ethical approval, the researcher had to first obtain permission from the registrar to conduct the study. The researcher also applied for permission to conduct the study from the Director of the Department of Student Housing. After obtaining permission from the relevant stakeholders' ethical approval was obtained from the University of KwaZulu-Natal. After being granted permission to conduct the study, the researcher then went to the two selected residences to collect the data. The researcher met with the residence assistances (RA) and asked if the RAs could inform the students in the residents that at a certain time the researcher will be coming to do data collection. The researcher than met with the students who were at the lounge and went door to door looking for participants.

The researcher explained to the students that participation in the study was voluntary and that each participant had rights to take part in the study and should they have any negative consequences could refuse to participate or withdraw from the study. Furthermore, the researcher elaborated to the participants that should the participants at any time feel uncomfortable with the research they can withdraw immediately. The researcher gave students a chance to ask questions with regards to the study before distributing the

questionnaires. This procedure was done with every questionnaire distributed whether in groups or individuals. Participants who agreed to partake in the study where given a consent form appendix 3. Because of time constraints some participants took the questionnaires with them and returned them the following day according to their schedule. Due to the nature of the research the questionnaire, which asked participants about condoms use and sexual intercourse was self- administered. The self-administered survey questionnaire allowed the researcher to give the participants space to answer the questionnaire independently and only consult if there is a question they did not understand. The questionnaire comprised of fifty-seven questions, the Likert scale data is made up of both negative and positive questions. The positive statements were coded from 1 to 5 starting from strongly disagree to strongly agree and negative statement in reverse (See Appendix1).

3.8 Ethical Considerations

According to the rules of the University of KwaZulu-Natal, the researcher sent the proposal to the UKZN Ethical Committee and applied for ethical approval. The committee gave full approval for the study with reference number HSS/1441/016M appendix 2. Polit and Beck (2012) states that ethics is a system of moral values and is concerned with the level of which research procedures maintain professional, legal and social obligations to the participants (Polit & Beck, 2012). The study adhered to the following ethical principles:

3.8.1 Beneficences

Polit and Beck (2009) state that beneficences is an important ethical principle that attempts to prevent participants from being harmed or exploited and maximize benefits (Polit and Beck, 2012). Beneficence was promoted in this study as there were no known social, psychological or physical risks in participating in the study. Participants were informed that there are no immediate/direct benefits in participating in this study, however they were told that recommendations made from this study would be of great assistance in better understanding condom use among students. Beneficence was also promoted as information provided by participants cannot be used against them as the questionnaire ensured anonymity.

3.8.2 Respect for Human Dignity

This includes the right to self-determination, full disclosure and freedom to participate or not take part in the research study (Burns and Grove, 2010). In order to maintain respect for human dignity, participants in this research where given a verbal and a written explanation of the purpose of the study to assist the students to make an informed consent when participating. Students were not forced to take part in the study; it was voluntary.

3.8.3 Justice

The justice principle stands for participant's right to fair treatment and privacy during their participation in the research study (Polit and Beck, 2012). Justice was maintained in this study by ensuring the anonymity of the participants. In the questionnaire no names were used and only signatures were required for the consent form. The questionnaire is kept in a safe area that can only be accessed by the researcher. The data that is loaded in the computer has been kept in zipped files that is password controlled by the researcher. The researcher did not give any detrimental treatment to students who refused to participate and those who decided to withdraw from the study. The researcher was available whenever they were needed by the participants. The students were treated equally, and the data was presented as it was collected, without modification. The participants were assured that the final product would be quantified and results would be presented in the aggregate.

3.9 Limitations of the study

The participants may not have honestly answered the questions because the research topic required personal and sensitive information. The sample was drawn from one campus at the University of KwaZulu-Natal and specifically for undergraduates at only two selected residences. The questionnaire was administered during exam time, it was difficult to get people to take part in the study. Moreover, the questionnaire used did not allow in-depth discussions which resulted in some participants not being able to express some information in writing.

3.10 Data Analysis

The data collected from the survey questionnaire was analysed using Statistical Package for Social Sciences (SPSS) 24.0 version and Software for Statistics and Data Science (STATA) version 15 both statistical software for analyzing quantitative data. Cross tabulation and logistic regression was performed on the variable of the research study. Logistic regression was appropriate for the analysis as the outcomes for each variable was dichotomous. Logistic regression was used to predict the odds of being a case/ having experienced an event based on the values of the independent variables or the predictors.

The major advantage of using SPSS and STATA is that it can compute a very large amount of data quickly (Saunders et al., 2012).

3.11 Conclusion

This chapter outlined the research methods which were used to conduct this study. This research study employed the survey method this method was regarded as appropriate in exploring factors influencing condom use among college students. The ethical measures were taken into consideration during data collection without compromising the individual's identity were highlighted. It also looked at how the data was managed and results disseminated. The following chapter will give us an in-depth presentation of the analysis, findings and interpretations.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter outlines the main findings from the self-administered survey that was conducted with university students. In total, the survey consisted of a sample of 230 male and females. The aim of the survey was to explore factors influencing consistency of condom use among university students. This chapter outlines the socio-demographic characteristics of the study population, their awareness of condom use, their accessibility to condom use as well as their attitude towards condom use. Finally, the study looks at consistent condom use and the factors promoting and inhibiting it.

4.2 Socio-demographic characteristics

The study comprised of both male and female students staying in two selected college residences. There were more female students than male students interviewed in this study. Table 4.1 shows that females constituted 57.4% of the sample whereas males constituted 42.6% of the sample. The majority of the students were Africans, 93.9% whereas other racial groups constituted 6.1% of the study population. Moreover, the majority of the students were single, 99.6% and those who were married were 0.4%. These results are summarised in Table 4.1 below.

Table 4. 1: Socio-demographic of the population.

Characteristics		N	%
Gender	**Male**	98	42.6
	Female	132	57.4
Total		**230**	**100**
Ethnicity	**African**	216	93.9
	Other	14	6.1
Total		**230**	**100**
Marital Status	**Single**	229	99.6
	Other	1	0.4
Total		**230**	**100**

4.3. Awareness of Condom Use

4.3.1 Knowledge of condoms

According to Jung et al. (2013), condom use is strongly associated with awareness of HIV/AIDS and knowledge about transmission and prevention of HIV/AIDS and pregnancy. This study sought to explore the awareness of students of condoms use during their sexual interactions.

Table 4.2, summarizes knowledge of condom use. From the results, it is clear that there is high awareness of condoms and its dual protective benefits. Almost 70% of the students agreed that condom use had no side effects like other contraceptive methods, 10% disagreed while 20% were uncertain. Almost 90.9% of students agreed that condoms use was likely to decrease the fear of getting pregnant and contracting STIs, 2.6% disagreed and 65% students were uncertain. 94.4% agreed that condoms reduce the risk of contracting HIV/AIDS compared to 3.5% who disagreed and 2.2% who was uncertain. Overall, 83.1% of the students agreed that condoms are an option for females who cannot use the pill, 7.8% disagreed and 9.1% were uncertain. 94.3% of students agreed that condoms use offer protection against pregnancy while 5.2% disagreed and 0.4% of students who were uncertain. Similarly, the majority of the students, 94.3%, agreed that condoms reduce the risk of

contracting a sexually transmitted disease as opposed to only 3.5% who disagreed and 2.2% who were uncertain.

Table 4. 2: Knowledge of condoms

Statements	**N**	**%**
Condoms have no side effects like some contraceptive methods do		
Agree	161	70
Disagree	23	10
Uncertain	46	20
Total	**230**	**100**
Condom use decrease the fear of pregnancy/ Contracting STIs		
Agree	209	90.9
Disagree	6	2.6
Uncertain	15	6.5
Total	**230**	**100**
Condoms are an option for females who cannot use the pill		
Agree	191	83.1
Disagree	18	7.8
Uncertain	21	9.1
Total	**230**	**100**
Condoms offer protection against pregnancy		
Agree	217	94.3
Disagree	12	5.2
Uncertain	1	.4
Total	**230**	**100**
Condoms reduce the risk of contracting sexually transmitted diseases		
Agree	217	94.3
Disagree	8	3.5
Uncertain	5	2.2
Total	**230**	**100**
Condoms reduce the risk of contracting HIV/AIDS		
Agree	217	94.4
Disagree	8	3.5
Uncertain	5	2.2
Total	**230**	**100**

4.3.2 Accessibility of condoms

According to Rizkalla et al. (2010) condom accessibility is highly prioritized as a preventative measure in places where students are most vulnerable to HIV/AIDS and unwanted pregnancy. Furthermore, Harkabus et al. (2013) adds that accessibility of condoms is the first step in appropriate condom use. Accessibility and consistent condom use are interlinked; the availability of condoms is an important contributor to consistent condom use. To determine consistent condom use it is important to find out if condoms are accessible to students.

The results in Table 4.3 indicates that the majority of students, 80.4%, agreed that condoms are inexpensive, 7.3% disagreed while 12.2% were uncertain about the statement. Most knew were to obtain condoms with 90.5% students agreeing that condoms were easy to obtain, 5.2% were uncertain and 4.3% of the students disagreeing with the statement. Almost 92.2% of the students agreed that condoms could be obtained by either men or women, whereas 6.1% were uncertain and 1.8% were disagreed with the statement. Overall, 85.7 % of the students agreed that one does not require a doctor's visit or prescription to get a condom compared to 9.6% who were uncertain and 4.8% who disagreed. 54.8% of the students disagreed that it is embarrassing to purchase a condom compared to 26.1% who agreed and 19.1% who were uncertain.

Table 4. 3 Accessibility of condoms

Statement	N	%
Condom are inexpensive		
Agree	185	80.4
Disagree	17	7.3
Uncertain	28	12.2
Total	**230**	**100**
Condoms are easy to obtain		
Agree	208	90.5
Disagree	10	4.3
Uncertain	12	5.2
Total	**230**	**100**
Condoms can be obtained by either men or women		
Agree	212	92.2
Disagree	4	1.8
Uncertain	14	6.1
Total	**230**	**100**
Condoms do not require a doctor's visit and prescription		
Agree	197	85.7
Disagree	11	4.8
Uncertain	22	9.6
Total	**230**	**100**
Condoms are embarrassing to purchase		
Agree	60	26.1
Disagree	126	54.8
Uncertain	44	19.1
Total	**230**	**100**

Table 4.4 illustrates the factors and relative importance index with regards to the benefits of condom use as perceived by students. The five most important factors were: condom reduces the risk of contracting STDs, condoms reduce the risk of contracting HIV/AIDS, condoms offer protection against pregnancy, condoms are easy to obtain and condoms can be obtained by either men or women.

Condoms being an option for females who cannot use the pill, condoms are easy and inconspicuous to carry around and condoms have no side effects like some contraceptive methods are some of the factors that were seen as less beneficial.

Table 4. 4: Benefits of condom use

Factor - Benefits of condom usage as perceived by students	RII(%)	Rank
Reduce the risk of contracting a sexually transmitted disease (STD)	89.22	1
Reduce the risk of contracting HIV/AIDS	89.13	2
Offer protection against pregnancy	87.65	3
Condom are easy to obtain	85.83	4
Condoms can be obtained by either men and women	85.83	5
Condoms decrease the fear of pregnancy/ contracting STIs	85.83	6
Condom do not require a doctor's visit and prescription	84.35	7
Condom use represent sexual responsibility	83.04	8
Condoms are inexpensive	82.78	9
Condoms are not time consuming to use	81.74	10
Condoms are an option for females who cannot use the pill	81.48	11
Condoms are easy and inconspicuous to carry around	80.00	12
Condoms have no side effects like some contraceptive methods	78.52	13

4.4 Attitudes towards condom use

Studies suggest that young people complain that condoms interrupt sex (El Bcheraoui et al., 2013; Rhodes et al. 2011; Deacon, 2010). The results in Table 4.5 indicate that 45.7% of students were uncertain about condom usage in reducing the spontaneity of sex, 31.3% agreed while 23% disagreed that condom use reduced the spontaneity of sex. Almost 39.1% of students were uncertain that condoms were physically uncomfortable, 35.2% disagreed while 25.6% agreed with the statement. Furthermore, 38.3% of students were uncertain that condoms usage reduced sensitivity and 32.7% agreed while 29.2% disagreed. On the other hand, 44.4% of students agreed that condom usage made sex feel different and 35.2% were uncertain while 20.4% disagreed. More than 60% of students disagreed that condom were embarrassing to put on and 24.8% were uncertain while 12.2% agreed with the statement. Comparably, 48.3% of students disagreed that condom use could result in a partner losing trust in the other partner who insisted on using a condom. This was opposed to 27.8% students who agreed and 23.9% who were uncertain about the statement. Furthermore, 40.4% of students disagreed that condom usage could result in a person having a lack of trust in a partner who refuses to use it as opposed to 39.6% who agreed and 20% who were uncertain. In a similar manner, 41.3% of students disagreed that condom usage could result in the break-up of a relationship because of the pressure to use a condom compared to, 32.2% who agreed and 26.5 who were uncertain about the statement. The attitudes of the students suggest that

there are some strongly held beliefs about condoms which might also influence their use and also, explain inconsistent use.

Table 4. 5 Attitudes towards condom use

Statement	N	%
Condoms reduce the spontaneity of sex		
Agree	72	31.3
Disagree	53	23.0
Uncertain	105	45.7
Total	**230**	**100**
Condoms are physically uncomfortable		
Agree	59	25.6
Disagree	81	35.2
Uncertain	90	39.1
Total	**230**	**100**
Condoms reduce sensitivity		
Agree	75	32.7
Disagree	67	29.2
Uncertain	88	38.3
Total	**230**	**100**
Condoms makes sex feel different		
Agree	102	44.4
Disagree	47	20.4
Uncertain	81	35.2
Total	**230**	**100**
Condoms are embarrassing to put on		
Agree	28	12.2
Disagree	145	63
Uncertain	57	24.8
Total	**230**	**100**
Condoms may result in a person having a lack of trust in a partner who insists on using a condom		
Agree	64	27.8
Disagree	111	48.3
Uncertain	55	23.9
Total	**230**	**100**
Condoms may result in a person having lack of trust in a partner who refuses to use one		
Agree	91	39.6
Disagree	93	40.4
Uncertain	46	20
Total	**230**	**100**
Condoms may result in a break-up of a relationship because of the pressure to use one		
Agree	74	32.2
Disagree	95	41.3
Uncertain	61	26.5
Total	**230**	**100**

Table 4.6 shows the factors and their relative importance index and rank. The top five factors are: condoms makes sex feel different, condoms decrease sensitivity, condom contribute to lack of trust towards the partner who refuses to use a condom, condoms are physically uncomfortable and they reduce the spontaneity of sex.

Table 4. 6: Attitudes towards condom use

Factor - Attitudes towards condom use	**RII (%)**	**Rank**
Condoms makes sex feel different	64.70	1
Condoms decrease sensitivity	59.91	2
May result in a person having a lack of trust in a partner who refuses to use one	57.48	3
Are condoms physically uncomfortable	56.87	4
Do condoms reduce the spontaneity of sex	56.61	5
May result in the break-up of a relationship because of the pressure to use one	55.22	6
May result in a person having a lack of trust in partner who insist on using one	52.96	7
Are inconvenient	47.65	9
Don't fit properly	46.61	10
Are embarrassing to put on	45.65	11
Are difficult to dispose of	44.09	12
Are difficult to use properly	43.57	13
Do not include clear instructions about how to use properly	43.30	14

Table 4.7 illustrates that that more than two third of the of students 80.8% agreed that condoms are not time consuming to use as opposed to those who were uncertain (15.2%) and those who disagreed (3.9%). Furthermore, 83.9% of students agreed that condom usage represent sexual responsibility as opposed to 11.7% who were uncertain about the statement and 4.4% who disagreed with the statement. The majority of the students indicated that they were uncertain (45.2%) as to whether condoms can be used as part of foreplay as opposed to 35.7% who agreed and 19.2% who disagreed with the statement.

Table 4. 7: Factors promoting condom use

Statement	N	%
Condoms are not time consuming to use		
Agree	186	80.8
Disagree	9	3.9
Uncertain	35	15.2
Total	**230**	**100**
Condoms represent sexual responsibility		
Agree	193	83.9
Disagree	10	4.4
Uncertain	27	11.7
Total	**230**	**100**
Condoms can be used as part of foreplay		
Agree	82	35.7
Disagree	44	19.2
Uncertain	104	45.2
Total	**230**	**100**

4.5 Sexual experiences

4.5.1 Ever had sexual intercourse

Figure 4.1 shows that more than half of the students surveyed, 60% have had sex, while 40% indicated that they have never had sex.

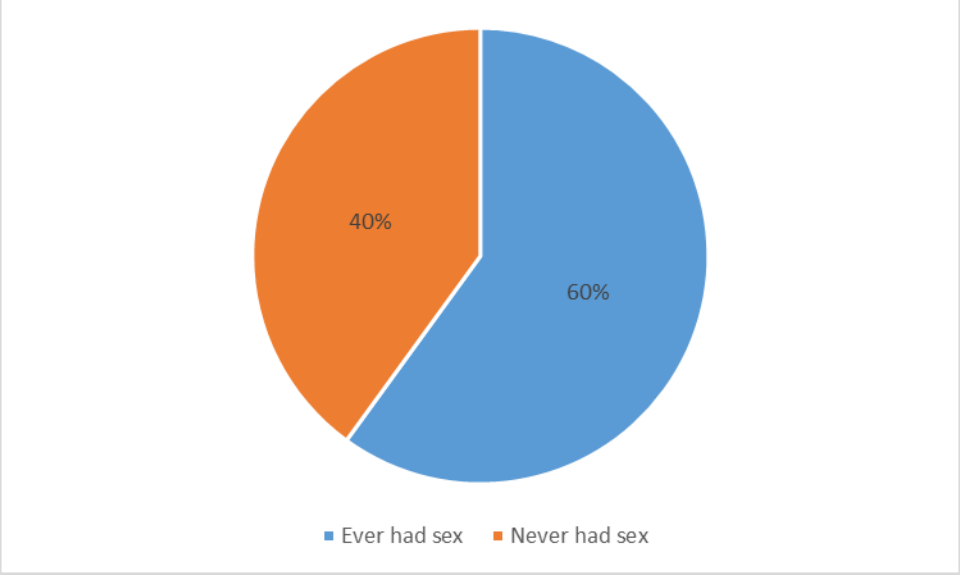

Figure 4. 1 Ever had sexual intercourse

Table 4.8 is a frequency table of students who had sexual intercourse by age and gender. Results indicate that more 53.2% males and 46.8 females reported having sexual intercourse. Ethnicity was not included because the majority of the participants were Africans. Only a few participants were married therefore marital status was not included. On the other hand, 64% of students below age 20 and 36% students above 20 years had sexual intercourse.

Table 4. 8: Percentage reporting having ever had sexual intercourse by background characteristics

Characteristic		
Gender	**(N)**	**(%)**
Male	74	53.2
Female	65	46.8
Age		
<20	89	64.
20+	50	36

4.6 Condom use

4.6.1 Condom use at first sexual encounter

Table 4.9 is a frequency table of students who used a condom the first time they had sexual intercourse by age and gender. Results indicate that 49.4% of students below 20 years and 56% students above 20 years used a condom at their first sexual encounter. Furthermore, 52.7% males and 50.8% females used a condom the first time they had sexual intercourse.

Table 4. 9: Percentage of sexually active who used condoms at first sex by gender and age

Characteristic		
Age	**N**	**%**
<20	89	49.4
20+	50	56.0
Gender		
Male	74	52.7
Female	65	50.8

Logistic regression analysis was conducted to determine the factors associated with condom use at first sex. The results in Table 4.10 indicates the unadjusted and adjusted odds ratio for students who used a condom during their first sexual intercourse by age and gender.

Table 4. 10: The odds of condom use at first sexual encounter by selected characteristics: Results from a logistic regression

	Unadjusted Odds Ratio	P-value	Adjusted Odds Ratio	P-value
Gender				
Male	1.00		1.00	
Female	0.9855 (0.4750 – 1.8029)	0.820	0.9418 (0.4820 – 1.8402)	0.861
Age				
Below 20	1.00		1.00	
Above 20	1.3016 (0.6489-2.6108)	0.458	1.2959 (0.6449-2.6040)	0.467

The odds ratio is presented together with its 95% confidence interval and the corresponding significance value. The unadjusted odds ratio for females was 0.9855 with a p-value of 0.820. This indicates that females were less likely than males to have sexual intercourse. After adjusting for confounding the odds ratio of females was 0.9418 with a p-value of 0.8610. (The small difference in odds size suggests that the extent of confounding was minimal). However, the value 1 does not include 95% confidence interval for the population odds. Therefore, gender is not indicative as to whether students use condoms during their first sexual experience.

The baseline age category used for comparison was “below 20” years compared with “above 20” years. From the results the unadjusted odds ratio for ages “above 20” was 1.3016 with a p-value of 0.458 indicating that the “above 20” age group were 70% more likely to use a condom during their first sexual intercourse compared to the below 20 years. After adjusting for confounding factors the odds remained constant at 1.2959 (minimal confounding) with a p-value of 0.467. The 95% confidence interval for the population odds was straddling unity. Thus “above 20” were more likely to indulge in first sexual intercourse without using a condom.

4.6.2 Condom use at last sexual encounter

Table 4.11 is a frequency table of students who used a condom the last time they had sexual intercourse by age and gender. Results indicate that 75.28% students below 20 years and 64.0% students above 20 years used a condom at their first sexual encounter. Furthermore, 74.23% males and 67.69% females used a condom the first time they had sexual intercourse.

Table 4. 11: Percentage of sexually active who used condom at last sex by gender and age

Characteristic		
Age	**N**	**%**
<20	89	75.28
20+	50	64.0
Gender		
Male	74	74.32
Female	65	67.69

Table 4.12 below presents the logistic regression analysis conducted. The results indicate the unadjusted and adjusted odds ratio for students who used a condom during their first sexual intercourse by age and gender. The odds ratios is presented together with its 95% confidence interval and the corresponding significance value. The unadjusted odds ratio for females was 0.7238 with a p-value of 0.390. This indicates that females were 28% less likely compared to their male counterparts to have used a condom during their last sexual intercourse. After adjusting for confounding the odds ratio of females was 0.6912 with a p-value of 0.332. (The difference in odds size suggests reasonable extent of confounding). However, the 95% confidence interval for the population odds straddling unity. Therefore, gender is not indicative as to whether students use condoms during their last sexual experience.

The baseline age category used for comparison was “below 20” years compared with “above 20” years. From the results the unadjusted odds ratio for ages “above 20” was 0.5837 with a p-value of 0.161. Indicating that the “above 20” age group were 42% more likely to have used a condom with their partner during their last sexual intercourse compared to the “below 20” years. After adjusting for confounding factors the odds remained constant at 0.5656 (minimal confounding) with a p-value of 0.141. The value 1 does not included 95% confidence interval. Therefore, age is not indicative as to whether a give age group used a condom during their last sexual intercourse.

Table 4. 12: The odds of condom use at last sexual encounter by selected characteristics: Results from a logistic regression

	Unadjusted Odds Ratio	P-value	Adjusted Odds Ratio	P-value
Gender				
Male	1.00		1.00	
Female	0.7238 (0.3465 – 1.5115)	0.390	0.6912 (0.3279 – 1.4570)	0.332
Age				
Below 20	1.00		1.00	
Above 20	0.5837 (0.2752 – 1.2381)	0.161	0.5656 (0.2650 – 1.2071)	0.141

4.6.3 Consistent condom use

This figure below show that 30% reported condom use the first time they had sex and this is lower than those who reported condom use the last time they had sex. The majority of the respondents (43%) indicated that they used a condom the last time they had sex, whereas 17.4% indicated that they did not use a condom the last time they had sex while the question was not applicable to the rest of the respondents. These results are presented in Figure 4.2

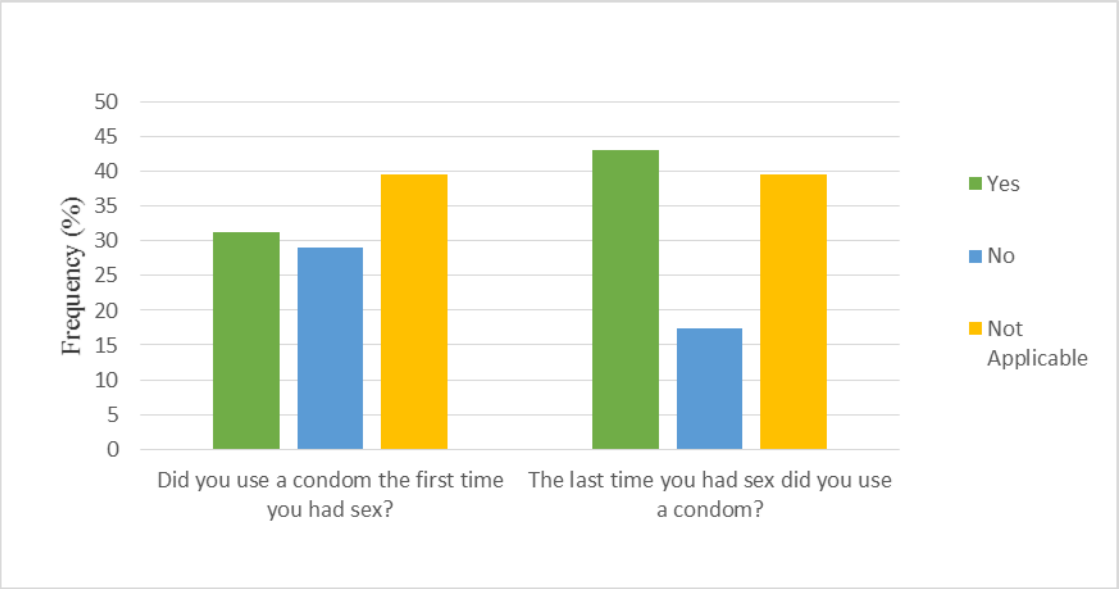

Figure 4. 2 Condom use at first and last intercourse

4.6.4 Factors associated with consistent condom use

Students' level of consistent condom usage was measured using fourteen items. The participants were asked to indicate their level of consistent condom use by responding to a five-point Likert scale with options ranging from strongly agree to strongly disagree. Due to very few observations on some of the categories, categories of strongly agree and agree were combined as while strongly disagree and disagree were combined as disagree. Table 4.1 displays the results of the level of consistent condom use.

The results in Table 4.13 indicates that 82.6% of students disagreed that using condoms means a lack of trust between partners as opposed to only 9.6% who agreed and 7.8% who were uncertain. The majority of the students (53%) were uncertain with regards to whether sex is more pleasurable when using condom, 34.6% disagreed and 12.6% agreed. With regards to using a condom means that your partner does not really love you, the majority of the students 89.1% disagreed with it, 7.8% were uncertain while 3.1% agreed with the statement. In the same vein, 90% of the students disagreed that it is morally wrong to use a condom, 7% were uncertain while 3% agreed with it.

A large portion of students (82.6%) of students responded favourably regarding whether condom usage indicates caring for one's partner compared to 13.9% who disagreed and 7.4% who were uncertain. With regards to the statement which says that condoms decrease sexual pleasure, the majority of the students (42.2%) were uncertain, 37.4% disagreed while 20.4% agreed with the statement. Correspondingly, a further majority and half of the students, 50% were uncertain about the statement which says that men cannot stand a condom because of the mess after usage compared to 39.6% who disagreed and 10.5% who agreed to this.

More than three quarts of the students (77.8%) agreed that condom usage represent responsible sexual behaviour as opposed to 11.3% who disagreed and 10.9% who were uncertain. Comparably, a popular response, 39.1%, disagreed that women think men who use condoms play around as opposed to 36.5% who were uncertain and 24.3% who agreed with the statement. Furthermore, the majority, 46.5%, of students agreed that the excitement of flesh to flesh contact discourages condom usage as opposed to only 17.8% who disagreed and 35.7% who were uncertain.

A favourable response of 47.8% was obtained regarding whether students feel confident in their ability to put a condom on themselves or on their partner compared to, 36.5% who were

uncertain and 15.7% who disagreed with the statement. A further majority, 49.5%, of students also agreed that they feel confident that they would purchase a condom without feeling embarrassed as opposed to 25.3% who disagreed and another 25.2% who were uncertain. Similarly, it was evident that more than two third of the students (67.4%) agreed that they feel confident in their ability to discuss condom usage with any partner they might have as opposed to those who were uncertain 19.1% and those who disagreed 13.5%. Notably, more than two third of the students (73.6%) further agreed that they feel confident in their ability to suggest using condoms with a new partner as opposed to 17.4% who were uncertain and 10% who disagreed with the statement.

Table 4. 13: Factors associated with consistent condom use

Statement	N	%
Using condoms means lack of trust between partners		
Agree	22	9.6
Disagree	190	82.6
Uncertain	18	7.8
Total	**230**	**100**
Sex is more pleasurable when using condom		
Agree	29	12.6
Disagree	79	34.6
Uncertain	122	53
Total	**230**	**100**
Using condoms means your partner does not really love you		
Agree	7	3.1
Disagree	205	89.1
Uncertain	18	7.8
Total	**230**	**100**
It is morally wrong to use a condom		
Agree	7	3.0
Disagree	207	90
Uncertain	16	7.0
Total	230	
Condom usage indicates caring for one's partner		
Agree	190	82.6
Disagree	23	13.9
Uncertain	17	7.4
Total	**230**	**100**
Condom decrease sexual pleasure		
Agree	47	20.4
Disagree	86	37.4
Uncertain	97	42.2
Total	**230**	**100**
Men cannot stand a condom because of the mess after use		
Agree	24	10.5
Disagree	91	39.6
Uncertain	115	50
Total	**230**	**100**
Condom usage represent responsible sexual behaviour		
Agree	179	77.8
Disagree	26	11.3
Uncertain	25	10.9
Total	**230**	**100**
Women think men who use condom play around		
Agree	56	24.3
Disagree	90	39.1
Uncertain	84	36.5
Total	**230**	**100**
The excitement of flesh to flesh contact discourages condom usage		
Agree	107	46.5
Disagree	41	17.8

Uncertain	82	35.7
Total	**230**	**100**
I feel confident in my ability to put a condom on myself or my partner		
Agree	110	47.8
Disagree	36	15.7
Uncertain	84	36.5
Total	**230**	**100**
I feel confident I could purchase condoms without feeling embarrassed		
Agree	114	49.5
Disagree	58	25.2
Uncertain	58	25.3
Total	**230**	
I feel confident in my ability to discuss condom usage with any partner I might have		
Agree	155	67.4
Disagree	31	13.5
Uncertain	44	19.1
Total	**230**	**100**
I feel confident in my ability to suggest using condoms with a new partner		
Agree	167	73.6
Disagree	23	10
Uncertain	40	17.4
Total	**230**	**100**

4.6.5 Factors inhibiting condom use

Results in Table 4.14 show that almost two thirds of the students (63.4%) agreed that family planning services are easily accessible as opposed to 24.3% who were uncertain and 11.7% who disagreed. Comparably, the majority of students, 52.6%, disagreed that they were made to buy condoms as opposed to 23.9% who were uncertain and 23.5% who disagreed. Furthermore, 77.8% of students disagreed that they were made to wait in long queues to obtain free condoms as opposed to 17% who were uncertain and only 5.2% who agreed with the statement. Similarly, 84.8% disagreed that they usually miss class to get condoms as opposed to 10% who were uncertain and only 5.2% who agreed with the statement.

There were 71.3% of students who disagreed that there are no variety of condoms to choose from compared to 18.7% who were uncertain and 10% who agreed. Furthermore, 47.8% disagreed that condoms that were given were their first choice compared to 36.5% of students who were uncertain and 15.7% who agreed. On the other hand, 41.7% of students were

uncertain that the health worker listened to their complaints about condom usage compared to 34.3% who agreed and 23.9% who disagreed with the statement. A further majority, 54.3%, of students disagreed that condoms are inconvenient compared to 35.7% who were uncertain and 10% who agreed on this issue. Moreover, 65.6% of students disagreed that condoms are difficult to dispose of compared to 23% who were uncertain and 11.3% who agreed. Similarly, 67.4% of students disagreed that condoms are difficult to use properly compared to 21.3% who were uncertain and 11.3% who agreed. Furthermore, 65.2% of students disagreed that condoms do not include clear instructions on proper usage and 24.8% were uncertain while 10% agreed with the statement.

Table 4. 14: Factors inhibiting condom use

Statement	N	%
The family planning services are easily accessible		
Agree	147	63.4
Disagree	27	11.7
Uncertain	56	24.3
Total	**230**	**100**
I am made to buy condoms		
Agree	54	23.5
Disagree	121	52.6
Uncertain	55	23.9
Total	**230**	**100**
I was made to wait in a long queue in order to obtain free condoms		
Agree	12	5.2
Disagree	179	77.8
Uncertain	39	17
Total	**230**	**100**
I usually miss class to get condoms		
Agree	12	5.2
Disagree	195	84.8
Uncertain	23	10
Total	**230**	**100**
There is no variety of condoms to choose from		
Agree	23	10
Disagree	164	71.3
Uncertain	43	18.7
Total	**230**	**100**
The condoms that were given are my first choice		
Agree	36	15.7
Disagree	110	47.8
Uncertain	84	36.5
Total	**230**	**100**
The health worker listened to my complaints about condom usage		
Agree	79	34.3
Disagree	55	23.9
Uncertain	96	41.7
Total	230	100
Condoms are inconvenient		
Agree	23	10
Disagree	125	35.7
Uncertain	82	54.3
Total	230	100
Condoms are difficult to dispose of		
Agree	26	11.3
Disagree	151	65.6
Uncertain	53	23
Total	230	100
Condoms are difficult to use properly		
Agree	26	11.3
Disagree	151	67.4
Uncertain	49	21.3
Total	230	
Condoms do not include clear instruction about how to use properly		
Agree	23	10
Disagree	150	65.2
Uncertain	57	24.8
Total	230	100

4.7 Conclusion

This chapter has presented results from the survey administered to undergraduate students in University of Kwa-Zulu Natal (Howard College Campus). The majority of the student population, 75% were below 20 years compared to 25% who were above 20 years. Results suggests that male students were more likely to be sexually active as compared to their female counterparts. The students' knowledge of condom use was likely to contribute to their attitude towards its use. From the study population 60% of the students surveyed were sexually active. This suggests that most students were aware of the dual benefits of condom use in preventing against pregnancy and disease transmission (including HIV/AIDS)

It is evident that there are several factors that influence the consistency of condom use among university students. The results indicate that the students had knowledge about HIV/AIDS transmission and prevention methods. The finding show that students are aware of condoms being the only method that protects you from pregnancy and diseases if used correctly. The students were well equipped about sexual risky behaviour and the consequences. There was no consistent condom use though, rates were higher on the last sexual intercourse as compared to the first time they had sexual intercourse. The findings revealed that condoms were highly accessible and available always.

CHAPTER FIVE
DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter summarises the key findings from a self-administered survey conducted with a sample of 230 students. The overall aim of the study was to explore factors influencing consistent condom use among university students. This chapter also integrates and compares findings to relevant literature. This chapter also provides recommendations and limitations of this study. The research study aimed to shed some insights and experiences into student attitudes towards condom use. The interpretation of findings of the study was guided by factors from the health belief model.

5.2 Discussion

It was observed from this study that students had a high awareness of condoms and the benefits of using condoms. It was also observed that most students agreed that condoms had no side effects in comparison to other contraceptive methods. Moreover, the majority of female students reported that condom use decreases the fear of pregnancy and fear of contracting sexually transmitted infections (STIs). This is also supported by Kleinshmidt et al. (2007) who that highlighted condom use as a preventative measure for sexually transmitted infections together with unwanted pregnancies. Contrary to the study results, Nalwadda et al. (2010) observed that students had misconceptions and fear that condoms may damage the uterus, may get stuck in the reproductive tract and cause death, not fit properly, may be porous, and might have infectious lubricants. The students in this study also reported that condoms are an option for females who cannot use the pill and that it protects females against pregnancy. In addition, students emphasized that condom use reduced the risk of conducting STIs and therefore, reduces the risk of conducting HIV/AIDs. Kleinschmidt, et al. (2007), also stated that consistent condom use is a dual protection measure against the risk of STI`s and unintended pregnancy and for women who could not use long-lasting contraceptive methods. This augments the health belief model which states that people will be more adaptive to healthy behaviours if they believe that it might reduce their chances of contracting diseases (Carpenter, 2010). This is evident with consistent condom use; the numbers were

low the first time they had sexual intercourse and increased by the time they last had sexual intercourse, which is line with the health belief model. With regard to the benefits of condom use, the study found that the majority of the students agreed that condoms are not time consuming when putting them on during sexual intercourse. The study also observe that many of the students agreed that condom use represented sexual responsibility. The majority of the students agreed that family planning services are easily accessible compared to a minority who disagreed. However, other studies (Gilmour et al., 2000; Alli et al., 2013) found that this is not the case in rural areas where people must travel long distances and/or spend money on transport to get to clinics to access condoms.

This study found diverse attitudes exhibited by students towards condoms that is likely to influence consistency. The study observed that the majority of students were uncertain if condoms reduced the spontaneity of sex. In contrast, a study conducted by El Bcheraoui et al. (2013) and Rhodes et al. (2011) suggests a strong belief that condoms reduces the spontaneity of sexual intercourse. A study conducted by Long-White et al. (2017) suggests that the reason students do not use a condom at last sex is because of the spontaneity of the encounter. Deacon (2010) also suggests that students did not use condoms during sexual intercourse because it took away the excitement of sex. Furthermore, in the present study the majority of the students reported that condoms made sexual intercourse feel different. Wang (2013) and Abel (2011) suggests that sex is more pleasurable without a condom both physically and emotionally between the couple. However, a study conducted by Hensel et al. (2012) found that condom use is less likely to be associated with pleasure for the person directly responsible for its use. Most of the students disagreed that condoms are embarrassing to put on. The study also found that most of the students disagreed that using condoms meant a lack of trust between partners. Furthermore, the majority of the students disagreed that using a condom meant your partner does not really love you.

A study conducted by Knox et al. (2010) observed that people who believed that it is not necessary to use a condom in a relationship with a trusted or committed partner, were less likely to use a condom. In this research study most students agreed that the excitement from flesh to flesh contact discouraged condom use. This is in line with other studies which suggest that when in a committed relationship couples may feel that condom use affects their physical and emotional intimacy, as well as suggesting a lack of trust in the other partner (Caldwell and Mathews, 2015 and Nehl et al., 2016). El Bcheraoui et al. (2013) also observed that participants did not use a condom because they were worried about their partner's

perception of trust. The study also observed that most of the students agreed the condom use represents responsible sexual behaviour. The study also found that majority of the participants agreed that they felt confident in their ability to put a condom on their partners as this enhanced the sexual experience. This is in line with a study by Long-White et al. (2017) who found that participants did not feel embarrassed to put a condom on themselves or their partner in addition to confidently purchasing condoms without feeling embarrassed.

Other studies found that women were more embarrassed to buy condoms than males (Yannessa et al., 2017 and Reeves et al., 2016). In the present study most of the students agreed that they felt confident in their ability to discuss condom usage with any partner. The study also found that the majority of students agreed that they felt confident in their ability to suggest using condoms with a new partner. This indicates a positive attitude towards the consistent use of condoms among sexually experienced students of all ages.

The study found that among the two main age groups; there were more sexually active students above 20 years. Many of sexually active students above 20 years, reported to have used a condom during their last sexual intercourse as compared to below 20 years of age. From this study it was observed that more males reported having used a condom during their first sexual intercourse compared to the females. A study conducted by Adhikari (2010) also found that most of the college students do not use condoms on their first sexual encounter. The study also observed an increased condom utilization for students during their last sexual intercourse. More males reported to having used a condom during their last sexual intercourse compared to females. A study conducted by Beksinka et al. (2012) observed that more males used a condom during their last sexual encounter than females. However, a study conducted by Maharaj and Cleland (2006) found that more females reported using a condom on their last sexual intercourse compared to males. The study found that the majority of the students reported having used a condom on their last sexual encounter as compared to the first time they had sexual intercourse. A study conducted by Beksinka et al. (2012) also saw an increase in condom use from the first sexual encounter compared to the last sexual encounter. This is in line with a study conducted by HEAIDS (2010) that also found that condom use is higher at last sexual intercourse for students.

However, El Bcheraoui et al. (2013) suggests that condom use was significantly less likely at last sexual intercourse for reasons such as; not feeling at risk of contracting HIV, being in a monogamous relationship, and showing commitment to a partner by not using a condom.

This is supported by Reis et al. (2013) who observed that a total of 86.9% participants used a condom in their first sexual intercourse and 69.2% said they use condoms as their usual contraceptive, only 32.8% reported using condoms in every sexual encounter over the last 12 months. On the other hand, Fair et al. (2011) observed that students who were less likely to consistently use condoms when compared to those who were experiencing sexual coercion in their relationship. Condom use has been documented as an important measure of protection against sexually transmitted infections and unwanted pregnancy (Protogerou, et al., 2018). This is likely to contribute to the students' attitude towards its use. Inconsistent condom use can be described as a failure to use a condom during sexual intercourse or incorrect condom use during sexual intercourse (Majra, 2009). It is evident that condom use was not consistent in the study, although it was only measured by the first and last sexual intercourse the results showed some inconsistency.

With regards to barriers of condom use the study observed that many students agreed that family planning services were easily accessible within the university environment. Access to condoms, interaction with health workers and ability to purchase condoms were relatively ranked as important indices of consistent condom use. More specifically the majority of the students agreed that they could easily access condoms without purchasing them. They also disagreed to queueing to obtain free condoms, missing classes to get condoms, lack of variety of condoms to choose from, having difficulties in disposing condoms, and unclear instructions about condom use. The study observed that the majority of the students agreed that condoms are inexpensive and affordable as they are easy to obtain by both men and women. Alli et al. (2013) stated that the cost of condoms should not be a barrier to its use as condoms are freely available in public health sections. However, a study by Wilson & Ickes (2015) found that condoms sold on campus and in stores around campuses usually have inflated prices; making students on modest income shy from purchasing them. Moreover, condom prices differ by package counts and brands and this impacts on its overall price (Wilson and Ickes, 2015). Furthermore, students commented favourably on the accessibility of condoms. It was not necessary to get a prescription to obtain condoms. Halie (2017) who reports that anyone can order condoms through the internet at a price. Moreover, Brackett (2004) and Long-White et al. (2017) supports that condom use does not require a prescription. Unlike other universities Howard College is not surrounded by convenient stores or a pharmacy. A study by Wilson and Ickes (2015) found that there was a variety of condoms sold in the drugs stores nearby, and the first preference was Durex condoms.

Furthermore, the majority of the students disagreed that condoms are inconvenient, as opposed to the small portion who agreed. Moreover, many students disagreed that condoms are difficult to dispose. The majority of the students disagreed that condoms are difficult to use properly. Most of the students disagreed that condoms do not include clear instructions on how to properly use them as opposed to the minority who agreed. According to Lindemann and Harbke (2013), reading the instructions printed on condom packaging does not result in correct condom use.

5.3 Recommendations

Understanding and incorporating strategies to overcome barriers to consistent condom use is crucial for education and prevention efforts. The university wellness clinic is recommended to provide health promotion campaigns that will be focused on sexual and reproductive health with more emphasis on consistent condom usage. The university, government and relevant stakeholders involved in supplying contraceptive services should provide counselling to students and other clients about the need for dual protection practices. Furthermore, this opportunity can be used to train students in correct and consistent condom use. There is a need for capacity building for female students on self-esteem and assertiveness. This will allow them to be able to negotiate condom use and take control of their sexual and reproductive health. This can be achieved through implementation and high promotion of female condoms to allow women to have power to protect themselves as they are more vulnerable to STI & HIV/AIDS. The female condom should be made available and accessible, so it can be easy for women to attain them just like male condoms. This is supported by Vijayakumar et al. (2006) who states that a growing body of literature recommends that providing the female condom along with the male condom increases the number of protected acts heterosexual intercourse.

There is a need for the university to give health education regarding use of contraceptive together with condoms to prevent unwanted pregnancies, STIs and HIV/AIDs as early as orientation day. This could be achieved through improving their entertainment educational communication strategies. The university could have a page on the student portable focusing on their sexual and reproductive health where they will provide awareness and share notices about campaigns happening on campus. The promotion of abstinence and being faithful to one partner should be made a better choice, although students will still perform risky sexual

activity, particularly when under the influence of alcohol therefore, condom promotion is as significant as health promotion.

5.4 Limitations

The study noted several limitations that provides a solid basis for future research. Firstly, the study only measured condom use at first and last sexual intercourse, it did not consider the period in between, which could have assisted in attaining the level on consistency of condom used. Secondly, our study was based on university students, which limits its generalizability in several ways given that individuals not attending college may have different sexual behaviours that is likely to influence their condom use. Future research should include participants who are not in the university, to provide an in-depth understanding of the sexual behaviours relating to condom use. Thirdly, the study was based on two student residences and did not include all student residence. Furthermore, the research study was predominately black undergraduate students, which limited the generalization of the findings to other racial groups failing to reflect on their characteristics. Fourthly, the study participants were more of the same age group, thus a research with a broader age range might be needed to examine the differences in perceptions/attitudes/experiences of condom use exhibited at different developmental stages. The study did not directly measure behavioural intentions such as communication between sexual partners on condom use during their first and last sexual intercourse. Understanding the partner behaviour is important for exploring their attitudes towards consistent condom use.

Other limitations of the study were that this study employed a quantitative approach whereas some key constructs could well be captured qualitatively, therefore this limited the generalisation of the finding. The measures were self-reported therefore, the responses might have been biased. However, the use of self-administered questionnaires and the privacy of the study might have diminished purposeful misreporting. In-depth interviews would have given the researcher more insight on the topic. In addition to these limitations, future studies on the interpretations of sexual behaviour can be expanded to include personal and situational factors i.e. religion and self-esteem as well as contextual factors i.e. alcohol use before sex, relationship status.

5.5 Conclusion

This study explored factors influencing consistent condom use among university students using a self-reported survey. Condom use during sexual intercourse is considered an efficient strategy, given its dual protection in the global fight against poor sexual and reproductive health outcomes. The students had knowledge of the implications of having unprotected sexual intercourse hence the change in behaviour as seen in the research study. The attitudes towards consistent condom use is influenced by the notion that the majority of college students who participate in premarital risky sexual behaviours, commonly suffer from sexual and reproductive health problems, such as HIV/AIDS, unwanted pregnancy, unsafe abortion (Zhang et al., 2015). The study confirmed that rates of condom use are low on the first sexual intercourse because one is usually unprepared for the event and in most cases, it is unplanned.

On the other hand, on the last sexual intercourse there was an increase in condom use because students were more aware of the implications of unprotected sex and prepared for the encounter. Consistent to other research this study confirmed that male partner dominance/resistance to condom use is likely to determine the extent of benefits accrued to the female gender, and efforts should be made so that consistent condom use is perceived by both genders equally. The study concluded that universities are high priority areas for promoting and enhancing healthy sexual behaviour due to high risk of HIV infections among university students in South Africa. Condoms are readily available but it is an individuals' responsibility to ensure that they use a condom in every sexual intercourse to avoid sexually transmitted infections and unplanned pregnancies. This calls for concerted efforts to address this important segment of the population.

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Appendix 1
Questionnaire

Date: _____

1. Gender

1. Male ☐ 2. Female ☐

2. Date of Birth

19_____

3. Ethnic Group (Select 1)

1. African		4. Coloured	
2. White		5. Other	
3. Indian			

4. Marital Status

1. Married	
2. Single	
3. Separated	
4. Divorced	
5. Widowed	

6. How old are you this year?

_____

7. Have you ever had sexual intercourse?

☐ Yes No ☐

8. Did you use a condom the first time you had sex?

☐ Yes No ☐

9. The last time you had sex did you use a condom?

☐ Yes No ☐

Level of consistent condom use

Please mark your response with **X** in the appropriate box in each question

Statements	Strongly disagree	disagree	Uncertain	agree	Strongly agree
1. Using condoms means lack of trust between partners.					
2. Sex is more pleasurable when using condom.					
3. Using condoms means your partner does not really love you					
4. It is morally wrong to use a condom					
5. Condom usage indicates caring for one's partner					
6. Condom decrease sexual pleasure					
7. Men cannot stand a condom because of the mess after use					
8. Condom usage represent responsible sexual behaviour					
9. Women think men who use condom play around					
10. The excitement of flesh to flesh contact discourages condom usage					
11. I feel confident in my ability to put a condom on myself or my partner					
12. I feel confident I could purchase condoms without feeling embarrassed					
13. I feel confident in my ability to discuss condom usage with any partner I might have					
14. I feel confident in my ability to suggest using condoms with a new partner					

Attitudes towards consistent condom use

Please mark your response with **X** in the appropriate box in each question

Statements	Strongly disagree	disagree	Uncertain	agree	Strongly agree
1. Reduce the spontaneity of sex					
2. Are physically uncomfortable					

3. Decrease sensitivity					
4. Make sex feel different					
5. Are embarrassing to purchase					
6. Are embarrassing to put on					
7. Are inconvenient					
8. Are difficult to dispose of					
9. Are difficult to use properly					
10. Do not include clear instructions about how to use properly					
11. Don't fit properly					
12. May result in a person having a lack of trust in partner who insist on using one					
13. May result in a person having a lack of trust in a partner who refuses to use one					
14. May result in the break-up of a relationship because of the pressure to use one					

Benefits of condom usage as perceived by students

Please mark your response with **X** in the appropriate box in each question

Statements	Strongly disagree	disagree	Uncertain	agree	Strongly agree
1. Offer protection against pregnancy					
2. Reduce the risk of contracting a sexually transmitted disease (STD)					
3. Reduce the risk of contracting HIV/AIDS					
4. Are inexpensive					
5. Are easy to obtain					
6. Have no side effects like some contraceptive methods do					
7. Are not time consuming to use					
8. Represent sexual responsibility					
9. Can be obtained by either men and women					
10. Do not require a doctor's visit and prescription					
11. Can be used as part of foreplay					

12. Decrease the fear of pregnancy/ contracting STIs					
13. Are an option for females who cannot use the pill					
14. Are easy and inconspicuous to carry around					

Barriers for consistent condom use

Please mark your response with **X** in the appropriate box in each question

Statements	Strongly disagree	disagree	Uncertain	agree	Strongly agree
1. The family planning services are easily accessible					
2. I am made to buy condoms					
3. I was made to wait in a long queue in order to obtain free condoms					
4. I usually miss class to get condoms					
5. There is no a variety of condoms to choose from					
6. The condoms that were given are my first choice					
7. The Health worker listened to my complaints about condom usage					

Appendix 2
Ethics Letter

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

20 October 2016

Ms Noluthando Gwala 210513697
School of Built Environment & Development Studies
Howard College Campus

Dear Ms Gwala

Protocol reference number: HSS/1441/016M
Project title: Factors influencing consistency of condom use among university students in Durban, South Africa.

Full Approval – Committee Reviewed Protocol

With regards to your response to received 14 October 2016 to our letter of 10 October 2016, the Humanities & Social Sciences Research Ethics Committee has considered the above mentioned application and the protocol has been granted **Full Approval.**

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach/Methods must be reviewed and approved through an amendment /modification prior to its implementation. Please quote the above reference number for all queries relating to this study. Please note: Research data should be securely stored in the discipline/department for a period of 5 years.

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

Best wishes for the successful completion of your research protocol.

Yours faithfully

Dr Shamila Naidoo (Deputy Chair)

/px

cc Supervisor: Prof Pranitha Maharaj
cc Academic Leader Research: Prof Oliver Mtapuri
cc School Administrator: Ms Nolundi Mzolo

Humanities & Social Sciences Research Ethics Committee
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Appendix 3

INFORMED CONSENT FORM
Consent document

Consent to participate in research

Dear Students

I, Noluthando Gwala, a student at the University of KwaZulu Natal, as one of the requirements to complete my studies, I am conducting a study through the college of Humanities, School of Built Environment and Development Studies, University of Kwa-Zulu Natal.

The title of the study is: Factors influencing consistency of condom use among college students in Durban, South Africa.

You have been asked to participate in a research study on: Factors influencing consistency of condom use among college students in Durban, South Africa. The purpose of the study is to explore and describe factors influencing consistency of condom use among undergraduate students and to identify possible solutions in order to increase condom usage among young people.

You have been informed about the study by: Ms Noluthando Gwala- contact number 072 641 0312, Email: tnoluthando@yahoo.com. You may contact me at any time if you have any question about the research.

You may contact the researcher's supervisor- Prof Pranitha Maharaj- contact number 031 260 2243, Email: maharajp7@ukzn.ac.za

You may contact HSSREC Research office- Ms Phumelele Ximba- Telephone- 031 260 3587

Email: ximbap@ukzn.ac.za

Your participation in this research is voluntary and you will not be penalised if you refuse to participate or decide to stop at any time.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet, which is written summary of the research.

The research study including the above information has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate. I have been given opportunity to ask questions that I might have for my participation in the study.

Signature of participant..... Date……..