Knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk, among university students at a South African university

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DECLARATION

I, **Betty Chebitok,** declare that:

1. The research reported in this thesis, except where otherwise indicated is my original work.
2. This thesis has not been submitted for any degree or examination at any other university.
3. This thesis does not contain another persons' data unless specifically acknowledged as being sourced from other persons.
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Signed**……** Date**……**

Supervisor

Dr Mary van der Riet

Signed……Date……

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DEDICATION

Dedicated to my mother Mrs. Salina Chepkemboi Samoei. She is an ideal role model who not only raised me up but also instilled in me the values of hard work, determination, service to humanity, among others, that have helped buoy my quest for academic and professional excellence.

ABSTRACT

University students form a high-risk group in relation to unplanned pregnancy and sexually transmitted infections such as chlamydia, gonorrhoea, hepatitis B, syphilis and HIV/AIDS, due to sexual exploration, unsafe sexual practices and involvement in risky behaviours in their environment. The use of contraceptives such as the male condom, the female condom, the contraceptive pill, the loop, implants, the injectable contraceptive, and contraceptive practices such as the rhythm method and withdrawal, potentially prevent conception; while proper use of the male condom and the female condom protect against the risk of sexually transmitted infections (STIs).

An unplanned pregnancy can negatively impact on a student's university education due to the challenges following childbirth. Students with children may find it difficult to attend to their studies and the needs of their young ones; while financial difficulties may constrain others. STIs, on the other hand, can severely damage a woman's fallopian tubes leading to infertility, ectopic pregnancy and miscarriage. The STIs can cause genital cancers in both men and women and death of an infant following transmission of infection during pregnancy. Pregnant students and those with STIs are at higher risk of dropping out of college, becoming depressed or anxious.

To inform interventions targeting change in behaviour, a qualitative study was conducted at the University of KwaZulu-Natal, on the Pietermaritzburg campus. The aim of the study was to understand students' knowledge of contraceptives, their attitudes towards contraceptive use, their perceptions of sexual risk, and factors influencing their decision-making processes about contraceptive use. The theory of planned behaviour was used to understand contraceptive use among university students. Convenience, purposive and snowball sampling techniques were used to access 25 sexually active students (13 men and 12 women) from all races, religions, levels of study and nationality. Ten in-depth interviews and four focus group discussions were conducted and, the findings were analysed using thematic analysis.

The findings show that participants knew about the process of conception, the right time for contraceptive use, therapeutic benefits of contraceptive use, and sources of contraceptives on campus. The participants demonstrated knowledge of contraceptives such as the male condom, the female condom, the contraceptive pill, emergency contraceptives, injectable contraceptives, the loop, implants, and contraceptive practices such as the rhythm method, withdrawal and abstinence.

There were inconsistencies and low use of contraceptives by the participants in the study, and contraceptives preferred were injectable contraceptives, emergency contraceptives and the male condoms. Participants knew about sexual risk and behaviours that can expose students to the risk of pregnancy and STIs. These behaviours were perceived to be mainly socially defined, like peer interaction, boredom, use of alcohol, drug abuse and watching pornographic movies. Contraceptive use was perceived as a woman's responsibility because women are directly affected by pregnancy and they have access to more methods of contraception than men. Most of the participants were of the opinion that women have little say in negotiating safer sex practice and contraceptive use in relationships. Sexual activity was thought to be primarily for a man's enjoyment. Men are not easily judged for their sexual behaviours if they are in possession of male condoms, while women are if they prepare for sexual activity. Peer interaction, parents' expectations of their children's behaviour and health care service providers' attitudes towards sexual activity and contraceptive use influenced decisions about contraceptive use. The participants identified the cost of buying a good quality male condom and insufficient time to prepare for sexual activity as structural barriers to contraceptive use.

This study concludes that contraceptive use is not a spur of the moment decision, but one guided by beliefs about likely outcomes of their use, beliefs held by significant others about their use, and availability of resources and opportunities that facilitate their use. Although knowledge of contraceptive use may be necessary for their use, it does not influence actual use. Knowledge is likely to influence the formation of intentions to contraceptive use by working mainly through attitudes towards their use. This information could help individuals in sexual and reproductive health centres in designing interventions to create awareness, change in sexual behaviours and promote contraceptive use. The study recommends interventions targeting men on attitudes change particularly in relation to condom use and responsibility for condom use in order to foster respect and shared responsibilities on reproductive health decisions; expansion of methods of contraception for men to widen their choices; and further national research on contraceptive use to inform new programming in higher institutions of learning.

Keywords; knowledge, attitudes, perceptions, sexual risk, contraceptive use, the theory of planned behaviour.

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CHAPTER ONE: INTRODUCTION

1.1. Background to the study

The global rate of pregnancies in 2012 was estimated at 213 million, and 40% were unplanned (Sedgh, Singh, & Hussain, 2014). The annual incidences of unplanned pregnancies among young women in South Africa have been on the rise in the past years, at 68,000 in 2011; 81,000 in 2013; and 99,000 in 2013 (Statistics South Africa, 2014). The trend suggest that the annual estimates of pregnancy among young women in South Africa could be slightly higher in the recent years.

Pregnancy and STIs constitutes a public health concern in South Africa as the country strives to realise the 17 Sustainable Development Goals, with goal 5 focussing on gender equality and empowerment of all women and girls (United Nations, 2015). The sixth target of goal 5 is the provision of universal access to sexual and reproductive health, and reproductive rights (United Nations, 2015). According to Hoque (2011), young people in South Africa aged 15 to 24 are at risk of contracting STIs and women are at a higher risk than men, but it is worrying that the majority of women start contraceptive use after their first pregnancy (Christofides, Jewkes, Dunkle, Nduna, Shai, & Sterk, 2014). Maharaj and Rogan (2011) argue that almost 30% of women in South Africa is estimated to have had their first child before 20 years of age. The age range argued by Hoque (2011) and Maharaj and Rogan (2011) matches the age range for the majority of tertiary students, especially those at the undergraduate level and a few at the postgraduate level.

Arnett (2006) and Hoque (2011) argue that university students are emerging adults. This is a period marked by sexual exploration, individual decision making about sexual relationships, and development of independence (Hoque, 2011). Most of the tertiary students are sexually active (Hoque, 2011) and their sexual encounters do not always include the use of a contraceptive (Fielder & Carey, 2010; Hoque, 2011). Students are engaging in sexual behaviours such as long-term committed relationships, sex for monetary gains (Nsubuga, Sekandi, Sempeera, & Makumbi, 2016; Somba, Mbonile, Obure, & Mahande, 2014), sex with one or multiple partners and sex for pleasure (Hoque, 2011), which may expose them to the risk of pregnancy and/or STIs. Students are also engaging in risky behaviours like alcohol use and drug abuse (Akintade, Pengpid, & Peltzer, 2011; Arnett, 2006; Hoque, 2011), which may interfere with their rational decision making processes to prevent the risk of pregnancy and STIs. Although the risk of pregnancy and STIs may

arise from the lack of knowledge of contraceptive use and inconsistent or incorrect use (Statistics South Africa, 2014), research in universities in South Africa (Hoque, 2011; Maharaj & Cleland, 2006; Patel & Kovrejee, 2009) has shown that students engage in risky sexual practices despite their knowledge of contraceptive use, and consequences of unprotected sex. Similar findings are reported in universities in Nepal (Adhikari & Tamang, 2009) and Nigeria (Bako, 1998).

The risk of unplanned pregnancy and STIs may be problematic for all people (Sedgh et al., 2014) but it may be particularly problematic for university students as the majority plan to complete their education, embark on their careers and bear children when financially stable (Akintade et al., 2011). The consequences of pregnancy and STIs on students especially women not only impact on their social, emotional, financial and academic lives but also the lives of their children and their families. For some women, an unplanned pregnancy may be a financial burden, increase their chance of dropping out from university, decrease their likelihood of getting married in future and lower their self-esteem (Gray, 2014). Student mothers may experience challenges in balancing parenting activities and college demands, relationship difficulties, changes in their physical appearance, hormonal changes, and worries about parturition and childcare (Gray, 2014; Attewell & Lavin, 2007). A study on the perceptions and severity of unwanted pregnancy among students at the University of Venda in South Africa found that unplanned pregnancy may lead to psychological problems like shame, depression, stress, social withdrawal, suicidal ideation and child neglect (Chima Anyanwu, Ter Goon, & Tugli, 2013). There is a substantial evidence that links maternal stress during pregnancy and poor health outcomes of their children, and possibly later neurodevelopmental disorders, cognitive disorders and behavioural disorders (Kinsella & Monk, 2009; Weinstock, 2005). Although women in South Africa may choose to terminate their unplanned pregnancies (Cooper, Orner, Moodley, Harries, Cullingworth, & Hoffman, 2004; Gorrette, Nabukera, & Salihu, 2005; Herrmannsen, 2016), complete abortion is not guaranteed. Nsubuga et al. (2016) in their study at a university in Uganda found that abortion sometimes fails, and it is a risky practice which can lead to death or infertility. According to the study of Gresh and Maharaj (2014) at a university in Durban, South Africa, female participants argued that abortion is a risk practice, and it should only be carried out under certain circumstances like rape.

STIs can damage a woman's fallopian tubes leading to infertility, ectopic pregnancy and miscarriage (World Health Organisation [WHO], 2013). STIs may also cause genital cancers in

both men and women, cervical cancer in women, and death of an infant following transmission of the infection during pregnancy or at childbirth (WHO, 2013).

The consequences of unplanned pregnancy and STIs could be avoided if contraceptives are correctly and consistently used. Builu and Naidoo (2015) argue that contraceptives are potential tools in preventing unplanned pregnancy, while Timmerman (as cited in Herrmannsen, 2016) describes family planning as the best investment in a woman's health with low cost and a high economic return. Although South Africa has invested in contraceptive services, ensuring up to date practice is still lacking. This calls for the need to explore knowledge of contraceptives, attitudes towards contraceptive use and perceptions of sexual risk with university students. Students are knowledgeable, empowered, and influential groups in the societies they hail from hence interventions targeting students to create awareness and change in behaviour could potentially have a broader effect.

1.2. Motivation for the study

The University of KwaZulu-Natal on the Pietermaritzburg campus has a well-resourced clinic offering a variety of contraceptive services to students at no charge. The clinic has ongoing fertility planning programmes that provide information through posters and leaflets. Their aim is to ensure up to date practice. The University of KwaZulu-Natal runs awareness campaigns through HIV/AIDS seminars; research related to social issues like HIV/AIDS, contraceptive use and risky sexual practices; and voluntary counselling and testing facilities on its campuses. Despite the university's efforts to prioritise prevention of risky sexual practice, it is worrying that the interventions in place at Pietermaritzburg campus have not fully addressed the risk of pregnancy and STIs. Instead, the interventions have increased awareness of sexual risk and their consequences, but have not led to changes in students' approach to risky sexual behaviours.

Contraceptive use is a social issue affecting many students (Hoque & Khuman, 2012; Kunene, 2013) but their knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk has not been well addressed. Exploring contraceptive use with students could either influence actual use or postponement of sexual activities in the absence of contraceptives; while exploring attitudes towards contraceptive use and perceptions of sexual risk may uncover their motives for engaging in risky sexual behaviours, factors that facilitate or maintain risky

behaviours, and the kind of decisions made by young people (Miller, Lynman, Zimmerman, Logan, Leukefeld, & Clayton, 2004). This information is crucial in understanding the dynamics of reproductive health decision-making processes, and can be used to educate young people about sexual and reproductive health.

Researchers on contraceptive use in universities have focussed on factors influencing the use of emergency contraceptives among female students (Kunene, 2013); patterns of contraceptive use among students (Hoque & Ghuman, 2012); risky sexual practices among female undergraduates (Hoque, 2011); attitudes of students towards abortion and contraceptives (Patel & Kooverjee, 2009); knowledge and attitudes towards emergency contraceptives (Roberts, Moodley, & Esterhuizen, 2004); and contraceptive use among students on the Pietermaritzburg campus (Oyedeji, 2003). Some of the above-mentioned studies were conducted more than ten years ago making it difficult to draw a comparison with the current situation at universities. There have been changes in the methods of contraception and improvement in their quality (Department of Health, 2012). This might significantly impact on contraceptive use, hence suggesting the need for further research to determine a more recent contraceptive behaviour of students. A behavioural change model, the theory of planned behaviour is useful in exploring the recent trends in human behaviour.

1.3. Motivation for choosing the theory of planned behaviour

While most of the behavioural interventions are based on conceptual frameworks stipulating that changes in behaviour stem from a response to events or stimuli (Bandura, 1977), the theory of planned behaviour adopts a cognitive approach. The theory of planned behaviour proposes that human behaviour is centred on attitudes and beliefs (Ajzen, 1985). Research in South Africa employing the theory of planned behaviour to explore health-related issues among young people have largely focused on one method of contraception which is condom use in the frame of HIV and AIDS prevention (Jemmott, Heeren, Ngwane, Hewitt, Jemmott, L., Shell, & O'Leary, 2007; Protogerou, Flisher, Wild, & Aarø, 2013). The relevance of the theory of planned behaviour in the frame of pregnancy prevention is underexplored, yet factors influencing pregnancy prevention are not always the same as those of HIV and AIDS prevention (Kiene, Hopwood, Lule, & Wanyenze, 2014). Moreover, different methods of contraception are involved in the prevention of disease and pregnancy. Most of the contraceptives are used to prevent pregnancy, while condom use is specifically intended to prevent the risk of pregnancy and STIs.

The theory of planned behaviour was used in this study to explore students' knowledge of contraceptives, their beliefs about likely outcomes of contraceptive use; their perceptions of risk and factors influencing their decision-making processes about contraceptive use. Identification of factors influencing pregnancy and STIs prevention could help inform interventions targeting behaviour change through evaluation existing beliefs about the likely outcomes of contraceptive use, altering existing perceptions of contraceptive use, and a platform for exposure to new beliefs that promote contraceptive use among students.

1.4. Structure of the thesis

The thesis consists of seven chapters. Chapter one is the introduction of the study. The background of the study, the motivation for conducting the study and the gap which the study aims to fill are explored. Chapter two is structured based on the theory of planned behaviour's motivational factors (attitudes, subjective norms and perceived behavioural control). The existing literature on knowledge of contraceptives, attitudes towards contraceptive use, perceptions of sexual risk, factors facilitating or inhibiting contraceptive use, and the strengths and weaknesses of the theory of planned behaviour are presented. Chapter three outlines the rationale for conducting the study, aims and research questions. Chapter four is the research methodology. The qualitative design, sampling techniques, data collection tools, data analysis processes, ethical considerations, credibility, dependability, transferability, and confirmability of the study are explored. Chapter five presents the findings of the study using the three motivational factors stipulated in the theory of planned behaviour as major themes. External or structural factors not accounted for in the theory of planned behaviour are explored in chapter five. Chapter six is the discussion chapter, in which significance of the findings is thematically explored in relation to previous studies on contraceptive use, as well as relating them to the arguments described in the theory of planned behaviour. Chapter seven is the conclusion chapter. The overall conclusion of the study, the strengths and limitations of the study, recommendations on ways to promote contraceptive use among students and areas for further research are explored.

This chapter reviewed information about the relevance of exploring contraceptive use among young people. The current knowledge and ongoing debates on perceptions of sexual risk and contraceptive use among young people are explored in the next chapter.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter presents research studies related to methods of contraception, knowledge of contraceptives, attitudes towards contraceptive use, perceptions of sexual risk and factors influencing decisions on contraceptive use. The relevance of the theory of planned behaviour in health related studies and its critiques will be explored in this chapter. This section will commence by discussing various methods of contraception available in South Africa.

2.2. Methods of contraception in South Africa

Scholars have defined a contraceptive as a form of birth control which interferes with the process of ovulation, prevents the sperm from fertilising the ovum and interferes with implantation (Maya & Ehlers, 2004). Traditional contraceptive practices, natural contraceptive practices, hormonal contraceptives, barrier methods of contraception, and chemical contraceptives are available in South Africa (Department of Health, 2012).

2.2.1. Traditional contraceptive practices

They are diverse practices, herbal mixtures and devices provided by traditional healers (Department of Health, 2012). The devices and herbal mixtures are not industrially manufactured and little scientific research has been conducted in South Africa to test their composition and efficacy.

2.2.2. Natural contraceptive practices

Natural contraceptive practices include abstinence, non-penetrative sex, fertility awareness practices, lactational amenorrhea, and withdrawal (Department of Health, 2012). The efficacy of natural contraceptive practices across different cultural groups in South Africa is not well explored. Abstinence is avoiding sexual intercourse (Department of Health, 2012), hence the most effective way of preventing pregnancy and STIs. Non-penetrative sex is a sexual activity not involving penetration of the vagina and so the sperm does not enter the female genital tract. Fertility awareness practices are based on observation of the naturally occurring signs of fertile and infertile phases of the menstrual cycle. The commonly used fertility awareness practices in South Africa are the Billing's Ovulation method, the sympto-thermal method and the rhythm method (Department of Health, 2012). The Billing's Ovulation method and the sympto-thermal method are

based on observation of the signs and symptoms of ovulation, while the rhythm method is based on keeping a trajectory of days in a woman's menstrual cycle (Department of Health, 2012). Fertility awareness practices are encouraged by the Catholic Church particularly for those who are married (Hubacher, Suazo, Terrell, & Pinel 1996; White, 1999).

Lactational amenorrhea is temporary postnatal infertility that occurs from birth to six months, when a woman is amenorrheic and fully breastfeeding (Department of Health, 2012). Withdrawal is a way of removing the penis from the vagina before ejaculation. Trussell's (2011) research in the USA found that, for every 100 women who practiced withdrawal, 22 of them experienced an unplanned pregnancy. This could suggest that the efficacy of withdrawal contraceptive practice for pregnancy prevention is low.

2.2.3. Hormonal methods of contraception

Hormonal methods of contraception include the contraceptive pill, injectable contraceptives, subdermal implants, emergency contraceptives, the patch, and the vaginal ring. The contraceptive pill, injectable contraceptives and implants contain either oestrogen and/or progesterone hormones that inhibit ovulation by thickening the cervical mucus thus preventing sperm penetration (Department of Health, 2012). The contraceptive pill is taken daily while injectable contraceptives are administered by intramuscular injection at intervals of three or two months depending on the type, with the first injection taken within the first seven days of the menstrual cycle (Department of Health, 2012). This is done to possibly affirm that the user is not pregnant at the time of injection as oestrogen and progesterone hormones may interfere with the developing foetus. The Department of Health (2012) and Lince-Deroche et al. (2016) argue that injectable contraceptives have been and are still popularly used with high compliance rates due to their efficacy, do not require periodic clinic visits, and their use is private as there are no supplies to be kept at home.

Subdermal implants consist of a small plastic rod almost the size of a matchstick placed under the skin of the upper arm (Department of Health, 2012). The device releases small quantities of progestogen into the body. Globally, implants have been shown as the most effective method of contraception with high continuation rates and very low failure rates (Department of Health, 2012). Emergency contraceptives consist of a pill interfering with implantation within 72 hours following unprotected sex, while the patch and the vaginal ring contain oestrogen and progestogen hormones that prevent conception (Department of Health, 2012). The patch is applied on weekly basis to the

skin of the upper outer arm, buttocks, abdomen or thigh (Department of Health, 2012). The vaginal ring is a flexible synthetic ring placed high up in the vagina and should remain in the same position for three weeks, followed by a week without the ring (Department of Health, 2012).

Significant improvements in hormonal contraceptives have been made across the globe to increase their efficacy and minimise their side effects. For instance, a shift from oral contraceptives with higher doses of oestrogen to those with low doses and implementation of new generation progestogens with androgenic properties (Sitruk-Ware, Nath, & Mishell, 2013). Improvement in contraceptives for non-contraceptive use has been made for methods such as injectable contraceptive, the contraceptive pill, and the intrauterine device. Their use can prevent or manage iron deficiency anaemia; reduce the intensity of sickle-cell anaemia; reduce the severity of endometriosis symptoms; and decrease the occurrence of ectopic pregnancy, pelvic inflammatory disease, uterine fibroids, and endometrial cancer (Department of Health, 2012). The above mentioned therapeutic effects of hormonal contraceptive use are reported in Seidman's (2011) study at the University of Belgrade in Europe exploring non-contraceptive benefits of hormonal contraceptives among female students. Seidman (2011) concluded that having knowledge of the therapeutic effects of contraceptives use may increase their use.

2.2.4. Barrier methods of contraception

Barrier methods of contraception include the male condoms, the female condoms, sterilisation and the intrauterine devices which come in two forms, the copper intrauterine device, and the Levonorgestrel-releasing intrauterine device. Sterilisation is a permanent method which includes tubal ligation/female sterilisation and vasectomy/male sterilisation. Tubal ligation prevents fertilisation through the blockage of the woman's fallopian tubes while the vasectomy is a procedure which involves blocking the vas deferens tubes carrying the sperm (Department of Health, 2012). The sperm are kept out of the seminal fluid and are absorbed by the body instead of being ejaculated. Male sterilisation differs from castration and different procedures are involved in each. Sterilisation does not involve the removal of the testicles and it does not interfere with a man's sexual urge, function or appearance (Department of Health, 2012). Sterilisation is the least utilised method of contraception in South Africa and it is offered in a few health facilities (Lince-Deroche et al., 2016).

The male condom is a latex-made contraceptive and is used to cover an erect penis, while the female condom (Femidom) is made of a thin, transparent, soft synthetic rubber which is inserted into the vagina before intercourse (Department of Health, 2012). The female condom has two elastic rings, one ring at the closed end to assist insertion, while the other ring is at the open end to cover the vulva which keeps the condom in position (Department of Health, 2012). Although the correct and consistent use of a condom can protect the risk of pregnancy and STIs, it is not an alternative contraceptive for some people due to cognitive beliefs associated with their use. In a study of Randolph, Pinkerton, Bogart, Cecil, and Abramson (2007) on condom use and sexual pleasure, findings showed that women and men ranked unprotected sex more enjoyable than protected sex. The study of Family Health International (2001) in four provinces in South Africa on acceptance of the female condom reported on challenges associated with their use. The challenges were: feelings of irritation on the vagina, vulva, penis, or anus; reduced feelings of pleasure from intercourse; its noisiness; fear that it may slip into the vagina during intercourse; and the outer ring is perceived as cumbersome (Family Health International, 2001).

The copper intrauterine device is a small, flexible gadget made of plastic and copper fitted into the uterus within 12 days of the menstrual cycle, from the first day (Department of Health, 2012). The copper intrauterine device prevents fertilisation by restricting movement of the sperm to the upper female genital tract and inhibit implantation by altering the mucous membrane that lines the uterus (Department of Health, 2012). Although the copper intrauterine device is long-lasting, reversible, effective, and a suitable contraceptive for all (Lince-Deroche et al., 2016), their use in South Africa is still low (Department of Health, 2012).

2.2.5. Chemical methods of contraception

Chemical methods of contraception include the spermicides such as gel, sponges, foam, and inserts. Spermicides contain chemicals that stop the sperm from moving (Department of Health, 2012). Spermicides are rarely accessible in health care facilities and are least utilised in South Africa (Lince-Deroche et al., 2016).

Although hormonal contraceptives, barrier methods of contraception and chemical contraceptives are available in South Africa, not all of these methods can be accessed from Pietermaritzburg campus clinic.

2.3. Methods of contraception accessible at the clinic

The Pietermaritzburg campus clinic is well-resourced and offers free health-related services to students ranging from, HIV and AIDS counselling and testing, treatment of STIs, somatic illnesses, and reproductive health counselling. Contraceptives available at the clinic include the contraceptive pill, the patch, vaginal ring, injectable contraceptives (Depo-Provera^{TM}), emergency contraceptives, male condoms, female condoms, and subdermal implants. Students are required to consult with the clinic nurse in the use of each method except the male condoms and the female condoms. The condoms are placed in condom dispensers at the clinic entrance, in the waiting room and in the toilet so that students can access them voluntarily. During consultation with the clinic nurse, students are given a pamphlet describing each method of contraception in terms of estimated their percentage of efficacy, how they work, their advantages and their possible side effects.

2.4. The theory of planned behaviour

The theory of planned behaviour is an extension of the theory of reasoned action. The theory of planned and the theory of reasoned action were designed to provide an explanation of motivational influences on human behaviour (Ajzen & Fishbein, 1980). The theory of planned behaviour proposes that cognitive determinant of human behaviour is the intention (Ajzen, 1991). Intentions indicate the effort a person plans to use in order to perform behaviour in question (Ajzen 1991). Intention captures three motivational factors: attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991; 1985). Attitudes refer to the perception of risk, and overall evaluation of performing behaviour under consideration (Ajzen, 1991). Subjective norms (normative beliefs) refer to opinions held by significant others about performing behaviour, and are determined by a person's motivation to comply with the norms or beliefs in a given situation (Ajzen, 1991). Perceived behavioural control reflects on the beliefs about the availability of factors that facilitate or inhibit performance of behaviour (Ajzen, 1991). Perceived behavioural control factors that may facilitate performance of behaviour include the availability of reliable information, abilities, opportunities, emotional independence, self-confidence, and support from significant other (Ajzen, 1991). The theory of planned behaviour proposes that a combination of attitudes towards behaviour in question, subjective norms and perceptions of control over the behaviour produce intentions, which when combined with actual control influence performance of

behaviour (Ajzen, 1985). The theory of planned behaviour has been widely used to explore health-related issues.

2.4.1. The relevance of the theory of planned behaviour in exploring health-related issues

The theory of planned behaviour is useful in predicting variance in behavioural outcome. Meta-analysis of the theory of planned behaviour in behaviour change research found that, the theory is useful in predicting 20% (Armitage & Conner, 2001) to 34% (Godin & Kok, 1996) of variance in behaviour arising from interventions, and a greater percentage of behavioural intention. In a study of Marcoux and Shope (1997) in south-eastern Michigan evaluating predictive ability of the theory of planned behaviour in alcohol use among eighth-graders, intentions elucidated about 26% of variance in alcohol use, 37% of variance in frequency of alcohol use, and about 30% of variance in the misuse of alcohol.

The theory of planned behaviour has been applied in a reproductive health study in Uganda on factors motivating contraceptive use among women of reproductive age in rural areas (Kiene et al., 2014). The findings showed the theory of planned behaviour predicted 26.0% of the variance in the use of a contraceptive (Kiene et al., 2014). The relevance of the theory of planned behaviour in predicting behavioural outcomes in South Africa is reported in the research of Jemmott et al. (2007) on intention to use condoms among adolescents, and Protogerou et al. (2013) on predictors of condom use among university students. In the study of Jemmott et al. (2007), the theory of planned behaviour predicted 36.0% of the variance in the intention to use condoms while in study of Protogerou et al. (2013), the theory predicted 43.0% of the variance in the intention to use condoms among sexually active sample, and 31% among sexually inactive. All the above-mentioned studies exploring the relevance of the theory of planned behaviour in health-related issues are quantitative in nature, while the applicability of the theory of planned behaviour in qualitative studies is underexplored.

Despite the relevance of the theory of planned behaviour in health-related research, the theory has received a reasonable share of criticism in regarding its validity and utility in research, with scholars for example, (Armitage & Conner, 2001; Sniehotta, Presseau, & Araújo-Soares, 2014) calling for it to be renounced.

2.4.2. Critique of the theory of planned behaviour

Although factors identified in the theory of planned behaviour are recognised as possible contributors to behaviour change, the theory does not recognise the influence of structural or external factors to behaviour change. These are factors that inhibit or facilitate performance of behaviour but are beyond an individual's control (Kiene et al., 2014). For instance, lack of access to contraceptives may negatively impact on actual use even if a person is motivated to prevent the risk of pregnancy and STIs. Studies show that lack of access to contraceptives may contribute to unplanned pregnancy (Darroch et al., 2008; Seutlwadi, Peltzer, & Mchunus, 2012). The lack of access to contraceptives could be attributed to financial cost, insufficient time for their access, their unavailability in reproductive health-care centres, and socioeconomic and political factors impeding their access.

The theory of planned behaviour is concerned with perceived rather than real behavioural control (Beck & Ajzen, 1991), yet in many circumstances, a perceived behaviour might not necessarily be realistic. Situations in which a perceived behaviour, for instance, contraceptive use, may not be realistic may occur where a person lacks information about contraceptives; when conditions or opportunities that facilitate contraceptive use have changed; or when a new method of contraception has been introduced to the market. Under such conditions, measuring of perceived behavioural control construct may contribute little to accuracy in predicting contraceptive use outcomes.

Bagozzi (1992) argues that attitudes, subjective norms and perceived behavioural control are essential but not sufficient determinants of behaviour as described in the theory of planned behaviour. According to Bagozzi (1992), the factors described in the theory of planned behaviour do not provide detailed and specific guidance for behaviour modification. Ajzen and Fishbein (2004) in response to this kind of critique argue that, the significance of the three motivational factors in predicting behavioural intention is anticipated to vary from one behaviour to another, and from one population to another population.

Although the theory of planned behaviour studies have shown moderate predictive variance ranging from 20% to 37% in the behavioural intention (Armitage & Conner, 2001; Godin & Kok, 1996; Kiene et al., 2014), the percentages of variance give a pessimistic view of the effectiveness

of the theory. The theory of planned behaviour only predicts greater percentages of behavioural intention and not actual practice (Godin & Kok, 1996). The percentages of variance do not necessarily explain behaviour change which is the main objective of interventions in sexual and reproductive health education programmes. Furthermore, some behaviours may not remain stable over time, for example, changes in methods of contraception, the introduction of new contraceptives and improvements in the quality may significantly impact on actual use. Although intentions described in the theory of planned behaviour may guide performance of behaviour, the theory does not clarify the exact nature of the relationship between an intention and actual practice (Armitage & Conner, 2001). There is a great distinction between forming an intention to perform behaviour, for instance, to use a contraceptive and actual use, and also the processes involved in the formation of intentions and implementation of intentions differ.

The influence of past experience on the present behaviour is not considered in the theory of planned behaviour. Armitage and Conner (2001) argue that human behaviour stems from past experiences rather than only cognitive processes described in the theory of planned behaviour. Armitage and Conner (2001) raised this argument based on the findings of their research which linked behaviours performed in the past with future behaviours. Armitage and Conner (2001) concluded that recurrent performance of behaviour may precipitate later occurrences under the mechanism of habitual practices, but behaviour does not necessarily become routine just because it has been performed repeatedly. The effect of past behaviour on future behaviour is reported in the research of MacPhail, Pettifor, Pascoe, and Rees (2007) in South Africa, on contraceptive use among women of reproductive age. In that study, past experience with unplanned pregnancy was a predictor of future contraceptive use (MacPhail et al., 2007).

Godin and Kok (1996) in their research showed normative factors as the weakest predictors of intention. This argument could be applicable to contraceptive use, for instance, beliefs as to whether a significant other approves contraceptive use coupled with a person's moral obligations to engage in sex may play a little role in predicting actual use. Ajzen and Fishbein (2004) in response to this kind of critique argue that there are a few situations in which one or two motivational factors making up the theory of planned behaviour may be necessary.

Personal norms play a role in predicting behavioural intentions, rather than only cognitive processes described in the theory of planned behaviour. For instance, people may not feel morally obliged to refrain from sexual activity, but they may regard themselves as non-risk takers. Patel, Yoskowitz, and Kaufman (2007) argue that non-risk takers hold a set of values that might prevent themselves from risk. For example, non-riskers may abstain from sex, engage in protected sex, avoid risk-taking behaviours like alcohol use, drug abuse, and avoid being in the company of risk-takers. Despite the weaknesses of the theory of planned behaviour, its relevance cannot be disregarded. The theory of planned behaviour gives an understanding into issues explored in this study such as factors influencing risk-taking behaviours and decision-making processes about contraceptive use.

The next sections of the chapter will provide an overview of the literature further illustrating the background of the study, as well as discussing contraceptive use among young people. It is structured based on the theory of planned behaviour's three motivational factors: attitudes towards contraceptive use, subjective norms, and perceived behavioural control.

2.5. Attitudes towards contraceptives use

The theory of planned behaviour argues that attitude towards a behaviour is guided by beliefs about probable outcomes of performing behaviour in question, for instance, contraceptive use (Ajzen, 1991; 1985). Issues to be explored under attitudes towards contraceptive use are knowledge of contraceptives, risk taking behaviours, the risk of pregnancy, contraceptive use in relationships, and perceived health risk and cognitive beliefs about contraceptive use.

2.5.1. Knowledge of contraceptives

The theory of planned behaviour views knowledge as a reflection of the underlying attitudes towards behaviour (Ajzen, 1991). This could mean that beliefs about contraceptive use may represent information people have about contraceptives. Wallace (2002) argues that human behaviour is guided by knowledge of the behaviour and their willingness to perform behaviour. Wallace's (2002) argument could imply that, contraceptive users require sufficient information for them to compare a variety of methods of contraception, and evaluate their outcomes as either positive, negative, or both positive and negative. Satisfaction of the methods of contraception could be measured by the lack of worries over the risk of pregnancy and/or STIs, and simplicity in method use. Wallace (2002) further comments that knowledge may influence behavioural

intention but it is not sufficient in predicting behaviour. This argument suggest that having accurate information about contraceptives and their purpose does not guarantee wise decisions to prevent the risk of pregnancy and STIs. Scholars attribute knowledge of contraceptives to a number of sources, such as through peer interaction; through interaction with family members; and knowledge obtained in schools, from health care clinics and from mass and social media (Adhikari & Tamang, 2009; Nsubuga et al., 2016).

Lince-Deroche et al. (2016) comment that nearly all women in South Africa (93.4%) have received information about modern contraceptives, and approximately three-quarters of this population (70.5%) have an experience with using a contraceptive. Research in universities in Nepal (Adhikari & Tamang, 2009), Lesotho (Akintade et al., 2011), Uganda (Nsubuga et al., 2016), South Africa (Patel & Kooverjee, 2009) and Tanzania (Somba et al., 2014) have showed that students seem to know more about contraceptives and their effectiveness in preventing the risk of pregnancy and/or STIs. Studies in South Africa on knowledge of contraceptives and pregnancy among women of reproductive age found that, having a higher level of education, for instance university education, may suggest a better understanding of contraceptive use (MacPhail et al., 2007; Myer, Mlobeli, Cooper, Smit, & Morroni, 2007; Seutlwadi et al., 2012). Kistnasamy, Reddy and, Jordaan (2009) in their study on the evaluation of knowledge and use of emergency contraceptives at a university in Durban, South Africa showed that students knew about the use of emergency contraceptives to prevent the risk of pregnancy and not STIs. According to Kistnasamy et al. (2009), female students raised social and health-related concerns about men taking advantage of the availability of emergency contraceptives to pressurise women to engage in unprotected sex. This finding relates to the argument raised by Patel and Kooverjee (2009) and Seutlwadi et al. (2012) that, knowledge of contraceptives influence the formation of intentions to prevent the risk but is not actual use.

The unfavourable attitudes towards contraceptive use impact on actual use even with sufficient knowledge. This is evident in a study of Raselekoane et al. (2016) at the University of Venda in South Africa on knowledge of contraceptives and attitudes towards contraceptive use among male students. The unfavourable attitude towards contraceptive use in the study of Raselekoane et al. (2016) was not linked to lack of knowledge as 91.7% of participants knew about contraceptives. The lack of information about contraceptives is not necessarily an antecedent of decisions that produce undesired outcomes (low use), but there is a possibility that insufficient knowledge of

contraceptives may negatively impact on their use. Hogue and Ghuman (2012) in their survey on contraceptives use among students at the University of KwaZulu-Natal reported low use of contraceptives due to insufficient knowledge of contraceptives and the right time for their use. Similar findings are reported in other research in universities in Ghana (Appiah-Agyekum & Kayi, 2013), Nigeria (Bako, 1998) and South Africa (Patel & Kooverjee, 2009; Roberts et al., 2004). In the study of Myer et al. (2007) at a hospital in South Africa, women who were seeking abortion services did not know about the availability of emergency contraceptives in the clinics they were attending. This could suggest that that insufficient knowledge of some methods of contraception may negatively impact on their actual use.

Some men argue that they lack knowledge of female contraceptives and they may use this argument to evade responsibility for contraceptive use. This is evident in Varga's (2001) systematic review of the literature in sub-Saharan Africa on sexual and reproductive health among young men. The lack of knowledge of female contraceptives and shifting the blame and responsibility for contraceptive access and use on women were common in most of the studies reviewed (Varga, 2001).

2.5.2. Risk taking behaviours

The sexual risk is a behaviour that increases a person's chance of contracting STIs including HIV, and/or experience unplanned pregnancy (Hoque, 2011; Maluleke, 2010). Young people in South Africa are engaging in risky behaviours that place them at risk of pregnancy and STIs. Hoque's (2011) study at the University of KwaZulu-Natal, South Africa on risky sexual practices among female students found that students were engaging in risky practices like sexual exploration, sex with multiple partners, drug abuse, and excessive alcohol use. Hoque (2011) concluded that students who had multiple sexual relationships were seven times at risk of consuming alcohol than their counterparts. In the study of Maluleke (2010) in Vhembe district of the Limpopo province, South Africa, showed that young people were engaging in risky sexual behaviours such as multiple sexual partner relationships, unprotected sex, sex in exchange for a reward, use of substances prior to engagement in sex, and forced sex. In the study of Khoza (2004) in South Africa on risky sexual behaviours among young people, factors exposing young people to risk-taking behaviours were found to be socially defined such as acting out of curiosity, group conformity, unemployment, competition, and irresponsible parenting skills. According to Khoza (2004), participants knew

about safer sexual practices and the consequences of risky sexual practices but were engaging in risky behaviours which put them at risk of pregnancy and/or STIs.

2.5.3. The risk of pregnancy

The theory of planned behaviour argues that human behaviour stems from rational decision-making processes resulting from cost-benefit analysis of the probable outcomes of differing behavioural options (Ajzen, 1991). For instance, the way a person perceives the risk of a pregnancy or STI could have an influence on how a contraceptive is used. Patel et al. (2007) contend that people who believe in the negative outcome of unsafe sex (low-risk takers) will make efforts to prevent it from happening, while the contrary group (high-risk takers) make little efforts to prevent the risk. The behaviour of high-risk individuals is discussed in research conducted at universities in Nepal (Adhikari & Tamang, 2009), New Zealand (Breheny & Stephens, 2004); the USA (Brückner, Martin, & Bearman, 2004), Nigeria (Bako, 1998) and South Africa (Hoque & Ghuman, 2012; Maharaj & Cleland, 2006; Patel & Kooverjee, 2009; Roberts et al., 2004) in which the risk of pregnancy was perceived as a major concern by students but little effort were made to prevent it. Similar behaviours of high-risk individuals are reported in the research in South Africa on contraceptive use among teenagers (Mwaba, 2000), and women of reproductive age (Ehlers, 2003; Maja & Ehlers, 2004). Participants in those studies reported the irregular use of contraceptives despite having knowledge of contraceptives, which suggest little concern over the possibility of pregnancy.

The low-risk takers are likely to use contraceptives to prevent the risk of pregnancy or STI due to irreversible consequences of the risk on financial, social and educational spheres of their lives. The behaviour of low-risk takers is discussed in research in universities in Ghana (Appiah-Agyekum & Kayi, 2013) and South Africa (Maharaj & Cleland, 2006), which found that students were using either male or female condoms to prevent the risk of pregnancy. In the research of MacPhail et al. (2007) in South Africa on contraceptive use among women of reproductive age, previous experience of unplanned pregnancy was likely to be a strong indicator of future contraceptive use. This would be viewed in the theory of planned behaviour as a reflection of women's efforts to prevent the risk from happening. The way young people perceive the risk of pregnancy or STIs could determine their approach to contraceptive use in relationships.

2.5.4. Contraceptive use in relationships

Contraceptive use in relationships is mostly perceived as a woman's responsibility even in universities (Nsubuga et al., 2016; Patel & Kooverjee, 2009). This is due to a variety of contraceptives devised for women and perceptions that women are directly affected by pregnancy (Ehlers, 2003; Mfono, 1998; Nsubuga et al., 2016). Discussions about contraceptive use in relationships may increase their use as shown in the study of Maharaj and Cleland (2006), and Seutlwadi et al. (2012) in South Africa among young people. Although talking about contraceptives can positively impact on their use, discussions about contraceptive use in relationships are minimal (Bjelica, 2008; MacPhail et al., 2007). This is may be attributed to anticipated negative reactions and opposition from uncooperative male partners who associate contraceptive use with infertility and promiscuity (Ehlers, 2003; Ochako, Mbondo, Aloo, Kaimenyi, Thompson, Temmerman, & Kays, 2015; Somba et al., 2014).

2.5.5. Perceived health risk and cognitive beliefs about contraceptives use

The theory of planned behaviour argues that human behaviour is guided by beliefs about likely outcomes of performing behaviour under question (Ajzen, 1991). Fears about the outcomes of using contraceptives are based on misconceptions about their use, which may limit users' trust in them. This in turn impact on actual use. The severity of fears of the outcomes of contraceptive use differ with the method of contraception, while the commonly reported fears are about using the male condoms and hormonal contraceptives. Although natural contraceptive practices, traditional contraceptive practices and condoms have lower health-related risks than hormonal contraceptives, they are rarely considered by the majority of people (Department of Health, 2012).

Jemmott et al. (2007) and Protogerou et al. (2013) argue that the male condoms are perceived to be easily accessible but the majority of young people are against their use due to commonly held beliefs about using them. Condom use is associated with low sexual pleasure, and the latex material used in making a condom is perceived to cause skin irritation. This is evident in studies conducted in Kenya (Ochako et al., 2015) among women of reproductive age; Tanzania (Somba et al., 2014) among university students; and South Africa on condom use among university students (Protogerou et al., 2013), Black students' beliefs and attitudes about condoms (Nicholas, 1998), and condom use among adolescents in Limpopo province (Jemmott et al., 2007). The research of Appiah-Agyekum and Kayi (2013) at a university in Ghana showed misconceptions about condom

use such as they cause vaginal bruises, they lead to promiscuity and mistrust in relationships and the cost of buying them is perceived as unaffordable to students. The beliefs about the likely outcomes of condom use may limit women's ability to make independent decisions to prevent the risk of pregnancy and STIs in the case of an uncooperative partner. This is because condom use is largely dependent on a man's acquiescence (MacPhail et al., 2007; Protogerou et al., 2013). Babatunde and Ake (2015) argue that women who are not free to negotiate safer sex with their partners are at risk of sexual violence. The power differences between men and women in relationships may make interventions targeting women on behaviour change ineffective.

The commonly held beliefs about likely outcomes of hormonal contraceptive use include: can cause weight gain; make a relationship too planned; can cause infertility, can lead to excessive vaginal bleeding, can cause illness like cancer and can cause irregular menstrual cycle or a possibility of blood accumulating in the uterus. The beliefs about hormonal contraceptive use are reported in the following studies: obstacles to modern contraceptive use among women of reproductive age in Kenya (Ochako et al., 2015); the determinants of contraceptive use and non-usage at a university in Uganda (Mehra,Agardh, Petterson, & Ostergren, 2012); students' attitudes towards abortion and contraceptive use at a university in South Africa (Patel & Kooverjee, 2009); and female students' awareness of contraceptives and barriers to contraceptive use at a university in Lesotho (Akintade et al., 2011).

The importance of children in marriage can hinder contraceptive use even before women initiate their use. Ehlers (2003) argues that male dominated societies place a high value on children being conceived in marriage, while in childless marriages, women are unhappy and guilty. Contraceptive use in such contexts may be discouraged due to perceptions that their use can cause infertility (Ehlers, 2003; Raselekoane, Morwe, & Tshitangano, 2016). This relates to the argument in the theory of planned behaviour that beliefs about behavioural outcomes, for instance, infertility, and significant other's disapproval of behaviour, for instance, men's approval of contraceptive use, impact on actual practice (Ajzen, 1991).

2.6. Subjective norms

The theory of planned behaviour proposes that subjective norms are views about normative expectations of important others about behaviour, for instance contraceptive use, and a person's motivation to comply with the expectations (Ajzen, 1991). The issues to be explored under

subjective norms are the role of peers in influencing contraceptive use, the role of health care service providers in influencing contraceptive use, and religious beliefs about sexual activity and contraceptive use.

2.6.1. The role of peers in influencing contraceptives use

The theory of planned behaviour argues that individuals who are put under pressure by significant others to perform behaviour, for instance, use contraceptives, and believe others in their position experience the same pressure, are likely to hold strong intentions to perform behaviour (Ajzen, 1991). This theoretical assumption is evident in the study of Tabane and Peu (2015) in the Tshwane District, South Africa, on the views of female teenagers about contraceptive use. Young women gave in to their peer demands due to social pressure to the extent that, the approval or disapproval of their sexual behaviours guided their use or non-use of contraceptives (Tabane & Peu, 2015). The influence of peers on contraceptive use or non-use is likely because peers find it easy to discuss sex-related issues among themselves. This is evident in the study of Bjelica (2008) at a university in Serbia, on socio-demographic factors influencing contraceptive use among female students.

2.6.2. The role of health care service providers in influencing contraceptives use

The theory of planned behaviour argues that accurate information about behaviour may positively influence a change of attitudes towards behaviour (Ajzen, 1991). Supporting contraceptive users in all aspects may positively influence actual use. For instance, support on method switching if necessary and proper counselling on contraceptive use could help users to choose a contraceptive that suits their needs.

Darroch, Singh, and Frost (2008) argue that the negative attitudes of health care service providers towards contraceptive use, may leave their clients with irrelevant information about contraceptive use or provoke emotions of shame and fear. This may overpower users' courage to access contraceptive services, while others may discontinue their use (Darroch et al., 2008). The arguments raised by Darroch et al. (2008) are evident in the study of Bako (1998) at a university in Nigeria, on knowledge of emergency contraceptives among undergraduate students; and in the research of Kistnasamy et al., (2009) at a university in South Africa on the use of emergency contraceptives. Students in those studies indicated their willingness to use emergency contraceptives if they were not criticised for their behaviour. The unfavourable attitudes of health care providers towards contraceptive use which interfere with their duty to offer youth friendly

services is reported in a systematic review in developing countries, on the attitudes of health care service providers towards sexual and reproductive health services among adolescents (Chilinda, Hourahane, Pindani, Chitsulo & Maluwa, 2014).

Although there is no legal restriction preventing individuals above 12 years of age from accessing contraceptives in South Africa, there are health care service providers who often refuse to provide young women with contraceptives or accurate information about contraceptive use. This is evident in the study of Wood and Jewkes (2006), which showed that nurses do not take seriously medically inaccurate issues raised by young women about the consequences of contraceptive use on fertility and menstruation; while others scolded young women seeking contraceptive services. This is despite the presence of the policy which requires health care service providers to give valid health-related information to clients on available methods of contraception and anticipated their side effects (Department of Health, 2012). Peer, Morojele, and London (2013) argue that in South Africa, the attitudes of health care service providers towards contraceptive users are often influenced by their cultural beliefs and values that discourage provision of contraceptive services to unmarried youths.

In other contexts, like in Nigeria where contraceptives are provided to young people above 18 years of age, service providers often limit provision of contraceptives to the male condoms (Ahanonu, 2014). This is despite the evidence that access to condoms has little impact on their use (Seutlwadi et al., 2012). The attitudes of health care providers towards the provision of contraceptives to unmarried adolescents in the study of Ahanonu (2014) were informed by Nigerian culture which is against premarital sex but advise young women to abstain from sex. The health care service providers were of the view that giving contraceptives to young women is a way of promoting promiscuity, while long-acting hormonal contraceptives like the implants and intra-uterine devices are unsuitable for childless women as they can cause infertility (Ahanonu, 2014).

Although people may make rational decisions to perform behaviour, for instance, prevent the risk of pregnancy and STIs, as proposed in the theory of planned behaviour (Ajzen, 1991), the unwillingness of health care service providers to acknowledge young people as contraceptive users may block their proper evaluation of behavioural outcomes. Kistnasamy et al. (2009) in their study at a university in South Africa on knowledge of and attitudes towards the use of emergency

contraceptives recommended that health care service providers should be aware of their beliefs about contraceptive use and premarital sex, in order to avoid projecting them on to the users. Such recommendation is necessary because beliefs held by young people about the expectations of those they interact with might influence their decisions about performing behaviour, for instance, contraceptive use, as argued in the theory of planned behaviour (Ajzen, 1991).

2.6.3. Religious beliefs about sexual activity and contraceptives use

Religious beliefs have the potential to influence a person's values and beliefs about when sexual intercourse is permissible, but the association between religiosity and contraceptive use may differ contextually. Religious beliefs may differ depending on the homogeneity of a context and the type of religion or denomination. Studies associating religiosity to sexual behaviours are few but their findings link intrinsic religiosity with conservative attitudes towards sexual behaviours (Hubacher et al., 1996; White, 1999). White (1999) points out that in many parts of Africa, religious leaders and belief systems prohibit modern contraceptive use even in areas where the methods are available. For example, the Catholic Ethical and Religious Directive 52 states that the Catholic health centres may not encourage the use of modern contraceptives except in marriage where natural contraceptive practices are recommended (Hubacher et al., 1996; White, 1999). The argument raised by (Hubacher et al. (1996) and White (1999) could suggest that sexually active individuals have no control over their own bodies but are put in that position by religious beliefs.

Nsubuga et al. (2016) in their study at a university in Uganda found that students who subscribed to Evangelical and Adventist churches perceived contraceptive use as an incorrect behaviour, and so they discouraged their use. This finding relates to the argument in the theory of planned behaviour that beliefs about a behaviour, for instance, contraceptive use, may represent information people have about the behaviour in question (Ajzen, 199). The study of Protogerou et al. (2013) at the University of Cape Town, South Africa showed that high religiosity may decrease a person's likelihood of engaging in risk-taking behaviours.

Islamic law offers two legal avenues for sex that is, cohabitation and marriage (Engineer, 1992; Srikanthan & Reid, 2008), and the law warns against the use of hormonal contraceptives, and equate their use with killing life (Keefe, 2006). This suggests that unmarried Muslim women have little control over contraceptive use even if they wish to plan their pregnancy. Khan's (2015) thesis on the experiences of married Muslim women in negotiating health-based contraceptive use and

religiousness in Durban, South Africa elaborates how Muslim religious beliefs impact on decisions about contraceptive use. Women viewed contraceptive use in relation to practical considerations of health and observation of God's will, and were faced with moral conflicts to prioritise their responsibility at home, and be sexually available to their husbands (Khan, 2015). The religious beliefs which Khan (2015) is talking about may interfere with women's decision making processes to prevent the risk of pregnancy and STIs.

Attitudes towards contraceptive use and normative beliefs of significant others about contraceptive use alone do not influence the formation of intentions to use contraceptives. The formation of intentions to contraceptive use are also influenced by perceptions of control over their use.

2.7. Perceived behavioural control

The theory of planned behaviour argues that perceived behavioural control is determined by a person's access to the necessary resources and opportunities that facilitate performance of behaviour (Ajzen, 1991). Social restrictions on sexual activity and access to contraceptive services will be explored under perceived behavioural control.

2.7.1. Social restrictions on sexual activity

Social beliefs about when sexual intercourse is permissible and attitudes towards appropriate and inappropriate sexual behaviours might impact on how contraceptive use is perceived. Studies in Nepal (Adhikari & Tamang, 2009), Turkey (Askun & Ataca, 2007), South Africa (Lebese, Rachel, Maputle, Ramathuba, & Khoza, 2013; Mfono, 1998) and Uganda (Nsubuga, 2016) have found that the society forbids open discussions about sex-related behaviours like pregnancy and contraceptive use with young people, and perceives such discussions as encouraging promiscuity. Social restrictions that forbid sex-related discussions suggest the society's expectation that young people should not engage in sex, and this may prevent them from accessing contraceptive services regardless of their wishes.

2.7.2. Access to contraceptive services

Access to contraceptive services in South African universities may not be an issue, but students may not be accessing reliable contraceptives due to health care service provider barriers, disapproval from significant others, and cognitive beliefs about contraceptive use. Inconsistent use of contraceptives is closely associated with lack of access to reliable methods. This is evident in

the research of Darroch et al. (2008) in the USA, in which 38% of the participants had missed at least one active contraceptive pill within six months preceding the study. Studies in South Africa on contraceptive use among young people also report similar finding (Maharaj & Cleland, 2006; Seutlwadi et al., 2012). While the use of emergency contraceptives should be limited to emergencies, for instance, rape or unplanned sexual activity, their use do not serve these purposes for some students. The use of emergency contraceptives served as the main method of contraception in the study of Kunene (2013) at a university in Durban, South Africa.

Hormonal contraceptives, barrier methods and chemical contraceptives can be accessed from government clinics at no cost in South Africa and are reliable, but they are rarely used by young people due to beliefs about likely outcomes of their use (Akintade et al., 2011; Patel & Kooverjee, 2009; Raselekoane et al., 2016). This is an indication that access to contraceptives, does not translate into actual use. Traditional contraceptive services are obtained from traditional healers (Department of Health, 2012) and a few people may be in a position to access them. This may negatively impact on their use especially in universities where traditional healers are not easily accessible. Natural contraceptive practices such as non-penetrative sex, fertility awareness practices, lactational amenorrhea and withdrawal seem unreliable in preventing pregnancy and require some skills to effectively utilise them (Department of Health, 2012).

While factors identified in the theory of planned behaviour are recognised as possible contributors to the formation of intentions to contraceptive use, they are not sufficient. These factors alone do not help to change the behaviour of young people that much if external/structural factors are not taken into consideration.

2.8. Structural factors

Structural factors are factors not addressed in the theory of planned behaviour but have an influence on decision-making processes about performing behaviour (Kiene et al., 2014). The cost of accessing contraceptive services is a factor impeding contraceptive use.

2.8.1. Cost of accessing contraceptive services

In South Africa, women who are financially stable may access contraceptive services from commercial sectors, while those without sufficient financial resources may seek contraceptive services from government health clinics at no fee. Women accessing contraceptives from government clinics incur unforeseen costs related to travelling expenses in terms of money and time. Male condoms can be accessed from public toilets but there are perceptions that good quality ones are obtained from commercial pharmacies, but their cost limit students' access (Maharaj & Rogan, 2011).

Although information about contraceptives can be obtained from health care facilities, some people may choose to seek information about contraceptives from the internet, where the internet-related costs are incurred like accessing inaccurate information and buying the internet data bundles. Managing somatic symptoms following contraceptive use such as a headache, nausea and weight gain may involve buying over-the-counter medication or visiting a doctor for a check-up. However, emotional costs such as worries of not obtaining preferred method and dealing with the stigma associated with contraceptive use (Darroch et al., 2008) may affect contraceptive users. The barriers to contraceptive access and use may lead to unfavourable attitudes towards their use which in turn impact on actual use. Scholars (Kunene, 2013; MacPhail et al., 2007; Maharaj & Cleland, 2006; Myer et al., 2007) have recommended that increasing affordability, access and challenging stigma associated with contraceptive use may increase their use.

2.9. Summary of the chapter

A variety of sources have been outlined to give a broader picture of what is being said about contraceptive use among young people, both nationally and globally. The existing information on contraceptive use suggest that method choice is dependent on a person's perception of the risk of pregnancy and/or STIs. Knowledge of contraceptives alone does not translate to actual use due to the presence of other factors that influence intentions to use or not use contraceptives. These factors

include perceived health effects and misconceptions about contraceptive use; influence of significant others; religious restrictions about contraceptive use; limited discussions about contraceptive use in relationships; lack of concern over the possibility of pregnancy, and misconceptions about their use. The literature reviewed suggest that a combination of attitudes towards contraceptive use, normative beliefs held by significant others about contraceptive use and the presence of factors that facilitate or impede contraceptive use play a role in influencing decision-making processes about contraceptive use. The next chapter will present the rationale and aims of the study, and highlights the existing research gaps in the literature in universities on knowledge of contraceptives, attitudes towards contraceptive use and perceptions of sexual risk.

CHAPTER THREE: RATIONALE AND AIMS OF THE STUDY

3.1. Rationale of the study

University students form a high-risk group in relation to unplanned pregnancy and STIs due to a lot of sexual adventure, unsafe sexual practices, engaging in sex with multiple partners, and involvement in risky behaviours in their environment (Hoque, 2011; Hoque & Ghuman, 2012; Maharaj & Rogan, 2012). Research on contraceptive use on student populations has focussed on knowledge and use of emergency contraceptive (Oyedeji, 2003; Hoque & Ghuman, 2012; Kistnasamy et al., 2009; Kunene, 2013; Roberts et al., 2004); male students' attitudes towards condom use (Maharaj & Cleland, 2006; Raselekoane et al., 2016); predictors of condom use among undergraduate students (Protogerou et al., 2013); and abortion and contraceptive use (Patel & Kooverjee, 2009). However, this topic is far from being exhausted as a research area in universities. Knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk has not been well addressed in universities, yet the risk of pregnancy and/or STIs are some of the social issues affecting students.

It is evident from the existing literature that, studies conducted in universities or among young people in South Africa mainly focused on participants of either one gender, one race, undergraduates, one nationality, or one method of contraception. This study goes beyond these limits due to the conditions of the sampling frame. Students across gender, race, the levels of study and nationality were considered in this study hence, it gives a picture of sexual behaviours of students in universities. Understanding differences in beliefs about contraceptive use in a diverse student body may guide tailoring of interventions that meet their contraceptive needs as opposed to designing one intervention assumed to cater for the needs of the entire student population.

In addition, studies in universities exploring contraceptive use guided by the theory of planned behaviour for pregnancy prevention are limited, yet the studies contribute to the understanding of factors that facilitate and maintain risky behaviours, and influence decision-making processes on sexual and reproductive health issues. Although there are few people with tertiary level education in South Africa (Statistics South Africa, 2014), university students form an important group for the future development of the nation and lessons learnt may be of relevance to the wider population. For instance, the findings could guide interventions aimed at increasing awareness of contraceptive use, change in attitudes and perceptions of risk, and promote up to date practice.

3.2. Aims of the study

The study applied the theory of planned behaviour to explore qualitatively sexually active students' knowledge of contraceptives; their attitudes towards contraceptive use; their perceptions of sexual risk; and factors influencing their decision-making processes about contraceptive use at the University of KwaZulu-Natal on the Pietermaritzburg campus. The theory of planned behaviour argues that the formation of behavioural intention is guided by attitudes towards behaviour, subjective norms held by significant others about behaviour and presence of factors that facilitate or impede actual practice. Contraceptive use on the other hand is not a spontaneous act, but one guided by factors described in the theory of planned behaviour like attitudes towards contraceptive use, beliefs held by significant others about contraceptive use; and the presence of individual-level factors, and structural factors that facilitate or inhibit actual use.

3.3. Objectives of the study

The specific objectives of the study were to apply the theory of planned behaviour to:

1. Explore the knowledge about contraceptives of students at the University of KwaZulu-Natal on the Pietermaritzburg campus
2. Understand students' perceptions of sexual risk and their attitudes towards contraceptive use.
3. Explore the influence of normative beliefs about contraceptive use on students' contraceptive behaviour.
4. Explore perceived behavioural control factors influencing decision-making processes about contraceptive use.

3.4. Research questions

The research questions explored in the study were:

1. What do students at the University of KwaZulu-Natal on the Pietermaritzburg campus know about contraceptives?
2. How do students perceive sexual risk and what are their attitudes towards contraceptive use?
3. How have normative beliefs about contraceptive use influenced students' contraceptive behaviour?

4. Which perceived behavioural control factors influence students' decision-making processes about contraceptive use?

CHAPTER FOUR: RESEARCH METHODOLOGY

4.1. Introduction

This chapter highlights the research process adopted to pursue the aims and objectives of this study. The study used the theory of planned behaviour to explore sexually active students' knowledge of contraceptives; their attitudes towards contraceptive use; their perceptions of sexual risk; and factors influencing their decision-making processes about contraceptive use at the University of KwaZulu-Natal on the Pietermaritzburg campus. The chapter will give a comprehensive description of the research design, research setting, the sample and sampling techniques, data collection tools, and data analysis procedures used to pursue the aims and objectives of the study. The credibility, dependability, transferability, and confirmability of the study will also be explored in this chapter. This chapter begins with a description of the research design used in the study.

4.2. A qualitative research design

Qualitative research is a type of research methodology that examines information passed through language and behaviour in a natural context (Lincoln & Guba, 1994). Romana (2011) argues that the data in qualitative research depend on human experience, hence more compelling and powerful than data gathered through quantitative research. The data collection tools used in qualitative studies, for instance, interview schedule and focus group schedule, allow for modification of the questions asked during data collection process until data saturation is reached (Lincoln and Guba, 1994). Another advantage of a qualitative research is that there is a clear vision on what is expected of the researcher during the research process, and the data is collected with an effort of plugging them to a bigger picture (Lincoln and Guba, 1994).

While there are many studies related to contraceptive use at universities in South Africa, the majority are quantitative in nature (Hoque, 2011; Hoque & Ghuman, 2012; Kistnasamy et al., 2009; Maharaj & Cleland, 2006; Nicholas, 1998; Patel & Kooverjee, 2009; Protogerou et al., 2013; Raselekoane et al., 2016; Roberts et al., 2014). Quantitative studies are defined by their structured and inflexible data collection instruments, and the way they reduce data into numbers (Romana, 2011). This make quantitative studies on contraceptive use lack detailed narratives of understanding of contraceptive use; attitudes towards contraceptive use; and subjective beliefs

about sexual activity and/or contraceptive use. Unlike quantitative studies, the data in qualitative studies is usually gathered from a few individuals therefore, findings cannot be spread to larger populations. However, findings can be transferred to another setting (Silverman, 2009).

A qualitative research design was used in this study to capture expressive information of the participants about knowledge of contraceptives; their experiences of contraceptive use; their values and beliefs about contraceptive use; their perceptions of risk; and their motivations for engaging in risk-taking behaviours in their context. This information is essential in designing interventions that will fit into contraceptive needs of young people.

4.3. Research setting

The study was conducted at the University of KwaZulu-Natal on the Pietermaritzburg campus in KwaZulu-Natal province, South Africa. The university is a public institution hosting a population of more than 15,000 students the majority being women. The university brings together students from different parts of the world, with diverse nationalities, cultures, languages, religious affiliations and races. The Pietermaritzburg campus hosts five colleges namely Agriculture, Engineering and Science; Health Sciences; Humanities; Law and Management Studies; and Human Resources. All of the colleges offer undergraduate and postgraduate degrees. Students who responded to this study were mainly from the colleges of Agriculture, Engineering and Science and Humanities, which is one of the limitations of the study. Some students in this university are engaging in risky behaviours such as alcohol use, drug abuse and unprotected sex which put them at risk of pregnancy and/or STIs. The risk of pregnancy and/or STIs may not only interfere with students' academic life but also their future careers. Hence, Pietermaritzburg campus provides the opportunity to explore knowledge of contraceptives, attitudes towards contraceptive use and perceptions of sexual risk among students. The findings may guide the university management in designing interventions targeting behaviour change and promote up to date contraceptive use among students.

4.4. Sampling techniques

Patton (1990) defines sampling as a way of selecting a suitable representative portion of a population with the purpose of ascertaining the characteristics of a wider population. This study

adopted three non-probability sampling methods; convenience sampling, purposive sampling and snowball sampling to access participants across gender, race, the levels of study and nationality.

Convenience sampling is a technique of recruiting volunteer participants who are readily available to participate in the study (Durrheim & Painter, 2006; Patton, 1990). Patton (1990) argues that convenience sampling is useful in obtaining general information about a phenomenon of interest. The study was interested in exploring contraceptive use with students who were registered at the University of KwaZulu-Natal on the Pietermaritzburg campus, thus convenience sampling was suitable. Convenience sampling was appropriate for this study as it is efficient in terms of time, money and manpower during data collection process (Oppong, 2013; Patton, 1990). The limitation of convenience sampling is that, there is a likelihood of gathering biased data resulting in unreliable findings (Oppong, 2013; Patton, 1990).

Purposive sampling is a method used in in-depth studies in which the researcher choose participants with experience or knowledge of an issue of interest in the study (Oppong, 2013; Patton, 1990). This study was interested in the experiences of sexually active students on contraceptive use to serve as the primary data source because their sexual behaviours put them at risk of pregnancy and/or STIs (Hoque, 2011). In addition, purposive sampling was considered for this study because the sampling method is cost effective, it gives rich data and it does not require much time or effort during data collection process (Patton, 1990). The limitation of purposive sampling is that it is vulnerability to errors in judgments made by the researcher (Oppong, 2013).

Snowball sampling is a technique where participants are asked to refer other potential participants to the study (Babbie & Mouton, 2005). Snowball sampling is less demanding in terms of cost, time and effort required during data collection process (Patton, 1990). Snowball sampling was considered in the study due to insufficient participants within the conditions of the sampling frame. The participants who took part in focus groups and interviews were asked to refer other potential participants to the study. Snowball sampling is limited in that it involves people referring the researcher to people that they know. The circle of people known to the participants might be fairly small and thus the sample does not provide reliable inference about the population from which the sample was drawn (Magnani, Sabin, Saidel, & Heckathorn, 2005).

The recruitment of participants using convenience sampling, purposive sampling and snowball sampling techniques followed a research protocol outlined in the next section.

4.5. Recruitment process

Gatekeeper's approval (see Appendix 1) from the University of KwaZulu-Natal's Registrar's office was obtained allowing the researcher to approach students on campus regarding their participation in the study. Ethical clearance was obtained from the University of KwaZulu-Natal's Humanities and Social Sciences Research Ethics Committee (HSS/0897/016 M linked to HSS/071/014 CA see Appendix 2) allowing the study to proceed. The link means that the study was conducted in relation to the proposal submitted by Dr Mary van der Riet entitled "Contraceptive use amongst students at the University of KwaZulu-Natal" in 2014, which received ethical clearance (HSS/071/014 CA). The research design; methods of sampling and recruitment; research questions; the interview and focus group schedules; and permission requirements from the Gatekeeper (the Registrar) do not differ from Dr van der Riet's proposal.

Students above 18 years of age were recruited to take part in the study as those below 18 years would have required consent from their legal guardians or parents which could have taken some time to be obtained hence delaying the data collection process. The recruitment of students was done through an advert (see Appendix 3) placed on the university's notice boards calling for volunteers. The advert gave a brief explanation of the research topic, target participants, contact details of the researcher and assurance of confidentiality in the research process. In response to the advert, the students sent WhatsApp messages, emails, call back texts and short messages. Upon receipt of their responses, students were contacted and asked a number of questions to ascertain their age, current registration status, the level of study, faculty, race, religion, gender, nationality, and whether sexually active or have experience with contraceptive use. The total number of participants who met the sampling criteria were 29, but only 25 (13 men and 12 women) took part in the study.

4.6. Sample description

The ages of participants ranged from 18 to 34 years. There were 9 South African nationals and 16 international students. All the international students came from different African countries. There were 9 undergraduates and 16 postgraduates. Out of the postgraduate students, 2 were South

African nationals while the rest were international students. There were 2 married female students and 23 single/unmarried students. Out of the married participants, 1 was pregnant was at the time of the study. In terms of religious affiliations, there were 24 Christians and 1 Hindu. There were 18 participants from the College of Humanities and 7 from the College of Agriculture, Engineering and Sciences.

Participants took part in either focus group discussions or individual interviews, with one male student participating in both. The male participant volunteered to offer personal experiences of contraceptive use after the focus group discussion and he was invited for an interview in order to keep his information confidential. In total, there were 15 (9 men and 7 women) focus group participants and 10 (5 men and 5 women) individual interview participants.

Table 4.6.1. gives a summary of the sample characteristics of focus group participants, and Table 4.6.2. gives a summary of the sample characteristics of interview participants.

Table 4.6.1. Summary of the characteristics of focus group participants

Focus groups	**No of participants**	**Gender**	**Age gap in years**	**Relationship status**	**Nationality**	**College**	**Level of study**	**Religion**
Group 1	3	Female	20-24	Unknown	All South Africans	All from Humanities	All undergraduates	All Christians
Group 2	4	Male	25-28	Unknown	1 Zimbabwean 1 Malawian 1 Kenyan 1 South African	All from Agriculture, Engineering and Sciences	All postgraduates	All Christians
Group 3	4	Male	26-32	Unknown	1 Nigerian 2 Zimbabweans 1 Kenyan	All from Humanities	All postgraduates	All Christians
Group 4	5	4 Females 1 Male	18-23	Unknown	All South Africans	All from Humanities	All undergraduates	4 Christians 1 Hindu

Table 4.6.2. Summary of the characteristics of interview participants

Individual interviews	Gender	Age gap in years	Relationship status	Nationality	College	Level of Study	Religion
1	F	25	In a relationship	South African	Humanities	Undergraduate	Christian
2	F	21	In a relationship	Zimbabwean	Humanities	Undergraduate	Christian
3	F	28	Married	Zimbabwean	Humanities	Postgraduate	Christian
4	F	29	Married	Rwandan	Humanities	Postgraduate	Christian
5	M	33	In a relationship	Kenyan	Humanities	Postgraduate	Christian
6	M	30	In a relationship	Ugandan	Agriculture, Engineering and Sciences	Postgraduate	Christian
7	M	26	In a relationship	Kenyan	Agriculture, Engineering and Sciences	Postgraduate	Christian
8	M	33	In a relationship	Nigerian	Agriculture, Engineering and Sciences	Postgraduate	Christian
9	M	34	In a relationship	Zambian	Agriculture, Engineering and Sciences	Postgraduate	Christian
10	F	26	In a relationship	Tanzanian	Humanities	Postgraduate	Christian

4.7. Data collection tools

Focus group discussions and individual interviews were used as major tools for gathering information to answer research questions of the study.

4.7.1. Focus group

A focus group is a discussion conducted with a group of people sharing similarities and differences about certain experiences for research purposes (Kelly, 2006). Focus groups were used in the study to obtain group opinions and meanings behind them, and ideas and beliefs about contraceptive use. Focus group discussions enabled participants to talk about sensitive topics such as sexual activity,

how condoms are worn and pregnancy. Such topics might not have been discussed if students were only interviewed.

The focus group schedule (see Appendix 4) was used to guide the data collection process. The schedule followed a set of open-ended questions which enabled participants to freely share their opinions, beliefs and experiences with one another or with the researcher. The questions were developed based on previous studies on contraceptive use. The questions tapped on knowledge of contraceptives and mechanisms of their action; sources of knowledge of contraceptives; understanding of sexual risk and risk factors; factors influencing contraceptive use; and ways to promote contraceptive use. The exercise (refer to Appendix 4, Activity 1) obtained from the study of Johnson and Mayoux (1998) on the use of participatory skills in investigations was used to commence each session. The exercise was used to ascertain participants' knowledge of reproduction, and to build rapport between researcher and participants and among participants. The participants were asked to draw the female reproductive system and illustrate how conception occurs and how it can be prevented. It was followed by a brief discussion of the drawings and responses to questions asked from the drawings.

Four focus groups were conducted in English during the time convenient for students. The first group comprised of three female undergraduates, all South Africans; the second group comprised of four male postgraduates (3 international students and 1 South African national). The third group comprised of four men, all international students at postgraduate level. The fourth group was recruited through snowball sampling. The group comprised of four women and one man, all South African nationals in their first year. The male participant in the fourth group asked to participate with his peers to hear their views on contraceptive use. All women in the group gave a verbal consent allowing him to be part of the group. Rich data was obtained in this group due to the participants' social interaction and positive engagement with each other in the discussion.

The focus group sessions lasted 45 to 90 minutes. The length of each session was dependent on participants' knowledge of contraceptives and their willingness to discuss issues about contraceptive use. The researcher was faced with two major challenges in the process of data collection. The first one is about scheduling focus group appointments as participants gave different times and venues that suit them, hence it was difficult to conduct focus group discussions

with all the participants who responded to the initial advert (see Appendix 3). The second challenge is that focus group discussions were to be conducted before individual interviews, but that did not happen due to insufficient participants.

4.7.2. Interviews

An interview is a dialogue between two people where the interviewer asks the interviewee questions to explore an issue of interest in the study (Terre Blanche, Durrheim & Kelly, 2006). The interviews were used to explore individual views and experiences on contraceptive use, sexual risk and factors motivating contraceptive use (Kelly, 2006). The use of interviews enabled participants to freely discuss confidential information about their sexual life and experiences on contraceptive use. That kind of information would not have been raised in a group setting. A set of open-ended questions (see Appendix 5) was used to guide the data collection process. These questions gave participants room for flexibility in sharing their ideas and experiences with the researcher. All the questions were developed based on previous studies on contraceptive use. The questions tapped on knowledge of contraceptives and mechanisms of their action; sources of knowledge; experiences of contraceptive use; factors motivating contraceptive use; opinions on ways to promote contraceptive use among students. Rephrasing of the questions and probing of participants' responses were necessary not only for an insightful discussion, but also to gain an understanding of any concept raised in the session (Kelly, 2006). Ten in-depth interviews comprising of five men and five women were conducted in English at convenient times for students. Most of the participants interviewed were those who responded to the initial advert (see Appendix 3).

The interview sessions lasted 15 to 35 minutes. The length of each session was dependent on a participant's knowledge of contraceptives, experience of contraceptive use and the length of time a participant was willing to stay in the session. The researcher had initially planned each interview session to last between 45 minutes and 1 hour but most of the students were busy while others were not willing to stay in a session for long. Due to limited time in some sessions, probing of participants' responses might not have been well conducted. Another setback encountered in the process of collecting data is that, a few students who volunteered to participate in interviews failed to adhere to their appointments. The researcher had to reschedule them and in that process, four students withdrew from the study.

4.8. The research process and ethical considerations

The researcher began each session with a brief introduction to the study and thanked the participants for responding to the study. Participants were informed of the ethical approval (see Appendix 2) which allows the study to be conducted on the Pietermaritzburg campus. It was followed by presenting the information sheet (see Appendix 6 for focus groups and Appendix 7 for interviews) to all participants indicating objectives of the study; the nature of their involvement; anticipated risks; and benefits of their involvement. The information sheet stipulates procedures to maintain privacy and anonymity of the participants and the data in written and digital form. Before each interview or a focus group commenced, participants were asked to choose a pseudonym to be used throughout the session. That was done to anonymise participants in any form of the research once the report is compiled. A summary of the information sheet was given, and participants were informed about storage of the collected data. The participants were informed that only researcher and the research supervisor have access to the data and they will be safeguarded in a locked cabinet at the supervisor's office for five years, and thereafter incinerated. The role of the supervisor was made clear and participants were issued with her contact details in case they want to inquire more about the study. The contacts of the ethics administrator were also provided in case participants have any queries about the research.

Although there were no anticipated risks for participating in the study, an agreement with the Child and Family Centre (see Appendix 8) was obtained allowing the researcher to refer students to the centre for emotional support. The participants were issued with contact information for the Child and Family Centre located at the Pietermaritzburg campus. This precaution was considered because sexual and reproductive health issues are sensitive and may trigger emotional vulnerabilities on participants. For instance, some students might have experienced unplanned pregnancy or STIs and discussions about contraceptive use might remind them of the social, emotional and financial challenges which might have accompanied their experiences. The participants were given contact information of the university clinic for further inquiries on contraceptive services or other sexual and reproductive health issues.

The participants were informed of their right to voluntary participation, refusal to answer any question, and freedom to terminate the session without any negative consequences. It was followed by issuing of the consent form (see Appendix 9) and participants were asked to carefully read and

voluntarily sign to indicate their understanding of the nature of their participation and obtain an agreement for participation. The participants were asked to give a written consent to an audio recording (see Appendix 10) in each session as this could save time and allow the researcher to fully concentrate on the research process. The participants in focus groups were asked not to reveal their personal experiences of contraceptive use, their sexual life, and their experiences of pregnancy as these could be too exposing. Although efforts were made to ensure confidentiality of participants, it is argued by Terre Blanche et al. (2006) that confidentiality is not guaranteed especially in a group setting. The participants were informed of this and were asked to keep all the information shared confidential and sign a confidentiality pledge to that effect (see Appendix 11).

4.9. Data transcription

The tape recorded data in response to interview questions and focus group questions were transcribed using notations drawn from the Jefferson system of transcription (Jefferson, 2004).The Jefferson system of transcription is where every single word or line mumbled or spoken by a participant in the audio file is transcribed (Jefferson, 2004). The Jefferson system of transcription is employed by conversation analysts and many discourse analysts because transcripts are designed in conversation analysis to capture what was said and how it was said (Jefferson, 2004). The Jeffersonian system of transcription allow the transcripts to give a comprehensive version of the composite nature of their interaction (Jefferson, 2004). The notations used in the data transcripts of this study include: (.) untimed pause; (.3) number of seconds elapsed between speech or stressed word or phrase; ((word)) possible transcription of the words; :::: syllable elongation; () incomplete or inability to distinguish the word; ‘Ha ha’ loud laughter; ‘he he’ softer laughter; and capital letters to illustrate increase in the rate of speech.

The pseudonyms used during interviews or focus group sessions were changed to anonymise the data. Thematic analysis was used to analyse the data.

4.10. Data analysis

Thematic analysis is a technique used for identifying, analysing, and reporting themes or patterns in the data set (Braun & Clarke, 2006). Thematic analysis was considered due to its flexibility which permits extensive analytic options in the data transcripts (Braun & Clarke, 2006). This technique can produce an insightful analysis that answers specific research questions in the study (Braun & Clarke, 2006). Despite the significance of thematic analysis, Braun and Clarke (2006) argue for the possibility of a discrepancy between theoretical framework and methodical

assertions, or between research questions and method of thematic analysis used. Thematic analysis is poorly demarcated and does not give room for claims to be made, such as those of the language used in the data transcripts (Braun & Clarke, 2006).

The process of thematic analysis involved analysing data transcripts by searching for patterns in the data generated (Braun & Clarke, 2006). The data were coded and similar responses addressing areas of concern were organised into categories that addressed the research questions of the study. Some of the issues addressed in this study were; knowledge of contraceptives, attitudes towards contraceptive use, the perceptions of risk and factors influencing decision-making processes about contraceptive use. The issues addressed in the study are related to the assumption in the theory of planned behaviour that, knowledge of the outcome of behaviour, for instance, contraceptive use, influence attitudes towards the behaviour which in turn determine behavioural outcomes (Ajzen, 1991). The patterns identified from participants' responses can guide in understanding the kind of decisions made by students about sexual and reproductive health issues. This information can inform interventions that aim at promoting contraceptive use among young people.

In the process of thematic analysis, four major themes were identified. The headings of the first three themes; attitudes towards contraceptive use, subjective norms influencing contraceptive use, and perceived behavioural control factors influencing contraceptive use were drawn from motivational factors outlined in the theory of planned behaviour. The fourth theme is structural factors. These are external factors influencing contraceptive use but are not accounted for in the theory of planned behaviour. Each major theme has sub-themes (refer to Table 5.2 in the results chapter for more information about each theme and their sub-themes).

4.11. Credibility, dependability, transferability and confirmability of the study

While there is no agreement for assessing qualitative research, Babbie and Mouton (2005) stress the rigor of interpretation of findings in order to allow conclusions to be trustworthy.

4.11.1. Credibility

Credibility is ascertaining that finding of the research is congruent with reality (Lincoln & Guba, 1994). The use of focus groups and interviews to collect data enhances the credibility of this study as the data collection tools compensate for their individual methodological limitations (Shenton, 2004; Silverman, 2009). While purposive sampling, convenience sampling and snowball sampling techniques each have their strengths and weaknesses, they can be extremely effective in

combination with one another (Oppong, 2013). The participatory exercise used in the focus group (refer to Appendix 4, Activity 1) helped in building trust between researcher and participants, and among participants themselves (Johnson & Mayoux, 1998). The relationship of trust in the process of data collection made it easy for participants to freely share their experiences and opinions. In that process, important issues that the researcher had not considered were raised.

Thematic analysis enhances credibility in research when the study aims to understand current issues in the context of the study (Braun & Clarke, 2006). The study aimed at understanding the current contraceptive behaviour of students on the Pietermaritzburg campus. Thematic analysis guided identification of motivations behind issues raised by participants on contraceptive use and sexual risk. Silverman (2009) argues for a comprehensive data use, the use of tables and inclusion of the deviant case as a way of enhancing credibility in qualitative research. The scope and analysis of data included in this research are comprehensive and inclusive, with reference to extracts derived directly from the data transcripts. The tables (see Appendix 4.6.1., Appendix 4.6.2., and Appendix 5.2.) are included to give a summary of the main issues highlighted in the research.

4.11.2. Dependability

Dependability refers to the extent to which finding of the research is consistent if it were to be repeated (Babbie & Mouton, 2005; Shenton, 2004). Shenton (2004) argues that dependability of the research is enhanced through a thick description of methodologies used in the research process. A description of the research design used in the study (refer to sub-topic 4.2.), processes involved in the recruitment of participants (refer to sub-topic 4.4. for sampling techniques used and Appendix 3 for the advert), and the research process (refer to sub-topic 4.8.) is provided. A thorough description of data collection tools (refer to sub-topic 4.7.1 for focus group and sub-topic 4.7.2 for interview); data analysis processes and how major themes were obtained (refer to sub-topic 4.10.); and how findings and conclusions were reached is given. This will allow other researchers to assess the extent to which proper research protocol was followed and guide future researchers interested in replicating the study at the University of KwaZulu-Natal.

4.11.3. Transferability

Transferability refers to the degree to which the finding of the study can be applied to other contexts (Babbie & Mouton, 2005; Lincoln & Guba, 1994). Silverman (2009) argues for two types of transferability, the abstract level or the external transferability and specific to the situation level or the internal transferability. The repetitive themes and patterns drawn from this study, for

instance, contraceptive behaviour of students, attitudes towards contraceptive use, barriers to contraceptive use, and motivations for risk taking behaviours can be widely applied to tertiary students in other universities.

A description of all the methodologies employed in the study is provided to give readers a certain degree of understanding on how the research was conducted. This will enable readers to draw comparisons with other studies they might have seen or situations they have experienced (Shenton, 2004). Sufficient description of the research setting (refer to sub-topic 4.3.) and sample that contradict or enhance theoretical ideas is given. Such descriptions according to Silverman (2009) is called refutational analysis. Refutational analysis help readers determine how far they can be confident in transferring to other contexts findings and conclusions presented in the study (Silverman, 2009). Furthermore, Lincoln and Guba (1994) argue for replication of several studies rather than one major project in isolation as a way of gaining a gradual understating of the research issue. This study gives suggestions on areas for further research indicated in chapter seven, the conclusion chapter.

4.11.4. Confirmability

Confirmability refers to the extent to which outcomes result from the aims and objectives of the study and not the biases of the researcher (Babbie & Mouton, 2005). Silverman (2009) argues that researchers should avoid manufacturing data; instead, they should carefully study how artefacts are created. The findings reported in this study were generated through transcribing and analysing the audio recordings of the interview and focus groups. Verbatim transcripts were used, where every single word or line mumbled or spoken by the participants in the audio file was transcribed (Jefferson, 2004). Some of the verbatim extracts are given in the results chapter to illustrate examples of the themes. Silverman (2009) argues for constant comparative analysis, a process of checking for the accuracy of data. Following the transcription of the audio recorded files, the researcher checked for accuracy of the data transcripts by listening to the audio recordings while comparing them to the transcripts, to ensure that all the audio recorded information was captured. This is an indication that accurate data was used in this study hence enhancing its robustness. The questions in the focus group schedule (refer to Appendix 4) and interview schedule (refer to Appendix 5) are included in this report to guide readers on how the data was generated.

In the next chapter, the outcome of thematic analysis of the transcripts will be presented.

CHAPTER FIVE: RESULTS

5.1. Introduction

This chapter presents the analysis of the data from ten in-depth interviews and four focus group discussions conducted with 25 sexually active students, with previous experience of contraceptive use at the University of KwaZulu-Natal on the Pietermaritzburg campus. The study was qualitative in nature and the overall aim was to apply the theory of planned behaviour to delve into the knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk with a diverse student body on the Pietermaritzburg campus. In the process of thematic analysis, four major themes were identified. The headings of the first three themes were drawn from the three motivational factors described in the theory of planned behaviour. They are attitudes towards contraceptive use, subjective norms influencing contraceptive use, and perceived behavioural control factors influencing contraceptive use. The fourth theme is structural factors influencing contraceptive use. These are factors influencing contraceptive use but are not accounted for in the theory of planned behaviour. Each theme has subthemes. The chapter begins with a table which illustrates the major themes and their subthemes.

Table 5.2. A summary of the major themes and their sub-themes.

Major themes	**Attitudes towards contraceptive use**	**Subjective norms influencing contraceptive use**	**Perceived behavioural control factors influencing contraceptive use**	**Structural factors influencing contraceptive use**
Subthemes	Knowledge of contraceptives and how they work Perceptions of sexual risk and approach to contraceptive use	The role of peers in influencing contraceptive use The role of parents in influencing contraceptive discussions and use	Limited access to the female condoms on campus	Cost of acquiring contraceptive services
	Perceived health risk and cognitive beliefs about using hormonal contraceptives	The role of health care service providers in influencing contraceptive use	Gender expectations about men and women's sexual behaviours	Insufficient time and insufficient time for planning and acquiring contraceptive services
	Perceived health risk and cognitive beliefs about using a male condom	Religious beliefs about sexual activity and contraceptive use Social expectations about sexual activity and contraceptive use activity		

5.3. Sample description

Most of the participants were over 20 years of age, there were more female than male participants, and most of the participants were not married. There were more international students (all from different African countries) than South African nationals. There were more postgraduates than undergraduates and most postgraduates were international students. More participants were from the College of Humanities and in terms of religious affiliations, more participants were Christians than other religions. More participants took part in focus group discussion (illustrated in extracts as FGD) than those in the individual interviews (illustrated in extracts as I). For more information about the sample descriptions, refer to Table 4.6.1. and Table 4.6.2. in chapter four.

Extracts from the interviews and focus groups will be used to illustrate examples of the themes. Following the presentation of each extract, information is provided illustrating the pseudonym of participant; gender (M) for male and (F) for female; age in years; an undergraduate student (UG) or a postgraduate student (PG); an international student (I) or a South African citizen (SA). The study distinguished the views of South African citizens from international students to gauge how sexual activity and contraceptive use is perceived contextually. The findings illustrating the first theme, attitudes towards contraceptive use and the sub-themes are presented in the next section.

5.4. Attitudes towards contraceptive use

The theory of planned behaviour proposes that attitudes towards behaviour, for instance, contraceptive use, is guided by beliefs about likely outcomes of performing behaviour (Ajzen, 1991; 1985). Attitudes towards contraceptive use were found to be influenced by issues such as knowledge of contraceptives and how they work; perceptions of sexual risk and approach to contraceptive use; and perceived health risk and cognitive beliefs about contraceptive use particularly hormonal contraceptives and the male condoms.

5.4.1. Knowledge of contraceptives and how they work

Most of the participants understood a contraceptive as a method for preventing the risk of pregnancy and/or STIs. A large number of participants, about 20 knew about the presence of modern methods of contraception such as the male condoms, the female condoms, the contraceptive pill, emergency contraceptives, injectable contraceptives, the loop, and subdermal implants; and the right time for their use. The participatory exercise used in the focus group (refer

to Appendix 4, Activity 1) in which participants were asked to draw the female reproductive system and indicate how conception occurs suggests that participants knew about reproduction, processes involved in conception and a variety of methods of contraception. The following extract is from a female participant who seemed to have extensive knowledge of the different methods of contraception:

> *The different kinds of contraceptives I know are the male condom, the female condom, the pill, the injection and the one you put on our arm. Most of the contraceptives are used by women in order to prevent pregnancies but for men, there are no much contraceptives they use apart from the condom (Zita, F, 23, FGD, UG, SA).*

Zita seems to be saying that the much contraceptives available are meant to be used by women except for the male condom which is used by men, and this limit men's choices of contraceptives.

Four female students (all UG, SA) seemed to know more about the contraceptive pill and injectable contraceptives. The following extract illustrates the views of a female student:

> *What I know about them is that the injection, if you are on injection, you have to inject seven days before engaging in sexual intercourse, because if you get into sexual activity before the seven days, then you might get pregnant but if you have to wait (for after seven days) you will not get pregnant (Zama, F, 22, FGD, UG, SA).*

Zama's opinion illustrates extensive knowledge of injectable contraceptives, in terms of the types and length of time an injection needs to be administered before engaging in sexual activity.

Most of the participants at postgraduate level seemed to have sophisticated knowledge of the permanent methods of contraception that is the male sterilisation and the female sterilisation, and these methods work in preventing pregnancy. The following extract from a male participant illustrates this finding:

> *Sterilisation, we have vasectomy whereby the sperm ducts are cut hence there is no production of sperms. In women, we have tubal ligation where fallopian tubes are cut or blocked in a way that they cannot release the ova (.) (Ayanda, M, 28, FGD, PG, SA).*

Ayanda's response demonstrates a good knowledge of permanent contraceptives. No participant had an experience with permanent contraceptives. This is highly expected among young people as the majority plan to have children at later stages of their lives hence such methods might not be an option for them.

All participants knew about places where a contraceptive could be accessed on campus. The contraceptive pill, injectable contraceptives, emergency contraceptives and the female and male condoms were said to be accessed from the campus clinic. Male condoms were accessed from the toilets, Student Union offices and students' residence on campus. The following extract is from a female student who seemed more knowledgeable about places to obtain male condoms:

> *When I am on campus, at SU (student union) there is an office there and there is also the CHASU group which distributes condoms campus and in every toilet, I believe there are condoms there. Am not sure of these other toilets but what am definite (sure) about is the residential toilets (Leah, F, 21, I, UG, IN).*

Leah's response suggests that students have opportunities and resources which could facilitate their contraceptive use.

This study found that actual contraceptive use was low, and contraceptive choices were limited to a few such as injectable contraceptives, emergency contraceptives, while the male condoms were inconsistently used. This finding suggests that having knowledge of contraceptives and their benefits does not produce favourable attitudes towards their use, neither does it lead to wise judgements to protect against the risk of pregnancy and/or STIs. This contrary to the argument described in the theory of planned behaviour that having knowledge of behaviour may guide rational decision-making processes about performing behaviour.

5.4.1.1. Knowledge of traditional and natural contraceptive practices

Some participants could not differentiate between traditional and natural contraceptive practices. Natural contraceptive practices such as abstinence, the rhythm method, and withdrawal were perceived as traditional practices. There were views from a male student (21, FGD, UG, SA) that the male condoms are traditional contraceptive practices because they can be easily accessed and are 'free of medication'.

Although some participants talked about withdrawal as a contraceptive practice, nobody discussed personal experience about using it. Three male students were of the opinion that withdrawal is ineffective practice in preventing the risk of pregnancy. This was attributed to increased chances of a man forgetting to pull out his penis in unprotected sexual contact due to increased pleasure, and seminal fluid ejaculated before the semen contain traces of sperm which may cause pregnancy.

It was interesting to note that some positions in sexual activity were better than others for getting a woman pregnant. The following extract illustrates the opinion of a male participant:

> *It also depends on the position when you are having sex, there are some positions Ha ha where women can get pregnant (Ken, M, 26, FGD, UG, IN).*

Ken seemed to be knowledgeable in more ways that can increase the risk of pregnancy.

5.4.1.2. Knowledge of the non-contraceptive benefits of contraceptives

Two participants, a male and a female (all FGD, UG, SA) talked about the therapeutic effects of hormonal contraceptives. The female participant was of the view that contraceptive use may improve a woman's facial appearance by removing acne, while the male participant talked about benefits of using the contraceptive pill and injectable contraceptives. The following extract is of the male participant:

> *I have heard from different girls that apparently at the clinics they are advised that they can use the pill and injection at times even if they are not sexually active because it will assist them to relieve the period pains (Melusi, M, 22, FGD, UG, SA).*

Melusi's response that contraceptive use can help to decrease menstrual cramps suggests that his knowledge of female contraceptives goes beyond prevention of the risk of pregnancy and STIs. The theory of planned behaviour argues that beliefs about behaviour may impact on attitudes towards the behaviour. The participants' beliefs about the therapeutic effects of contraceptive use may positively influence their attitudes towards contraceptive use.

5.4.1.3. Sources of knowledge of contraceptives

The following sources of information about contraceptives were identified by most of the participants: the content in school subjects; peer interaction; from intimate partners; from books, posters and pamphlets; and the mass media like the internet, radio, and TV programmes. However, the sources of knowledge of contraceptives mentioned by most of the participants were peer interaction, the internet and the content in secondary school subjects specifically Biology for most international students and Life Orientation for South African citizens. The following extract is from a male student who appeared to have gained knowledge of contraceptives from a variety of sources:

I acquired the knowledge from multiple sources including the fact that as a guy and as in general, we speak about contraceptives and the act of sexual activities, as well at school during Life Orientation classes and they warn us about that, as well as my parents who warn me about having sex (Melusi, M, 22, FGD, UG, SA).

Melusi's response seems to suggest that peer interaction and school subjects are some of the channels for passing contraceptive information to young people.

Parents were rarely mentioned as sources of knowledge of contraceptive use, yet they were perceived as more knowledgeable on the topic. Some participants, like Melusi in the above extract, said that parents advise their children not to engage in sexual activity but do not give them information about contraceptive use. The theory of planned behaviour argues that improper evaluation of outcomes of behaviour may possibly change attitudes towards the behaviour, and this could negatively influence actual practice. The implication of this theoretical assumption to the findings of this study is that students might be lacking sufficient and accurate information about contraceptive use, which could help them evaluate the cost and benefits of using them.

5.4.2. Perceptions of sexual risk and approach to contraceptive use

There were differences between male and female students in the way they talked about the risk of pregnancy and STIs and their attitudes towards contraceptive use. These differences seemed to influence decisions about contraceptive use.

5.4.2.1. Women's perceptions of sexual risk and approach to contraceptive use

Most of the female participants (8) focused on the risk of pregnancy, while a few (4) talked about both, the risk of pregnancy and STIs but emphasised on the risk of pregnancy. Most of the female participants had intentions to prevent pregnancy and a few at undergraduate level reiterated that they act to protect against the risk of pregnancy because they are too young to carry a pregnancy. Most of the female participants were of the view that women are directly affected by the outcomes of pregnancy such as can cause a financial burden, lower their self-esteem, makes them 'regret' their sexual behaviours, and can prevent them from completing their university education within the required time. The following extract illustrates the views of a woman who seemed very concerned about the risk of pregnancy.

The girl needs to be more careful because she is the one who gets pregnant not the boy therefore like she will get behind in life (be delayed) while the boy carries on with their careers, as for a girl you need to be more careful (Vuyi, F, 18, FGD, UG, SA).

Vuyi's opinion suggests that women are aware of the consequences of pregnancy and are cautious about preventing it from happening.

A few women indicated their use of more than one contraceptive at a time to enhance the efficacy of contraceptives to prevent the risk of pregnancy. The following extracts illustrate this finding:

Most of the time I find girls using injection and the implants so that when they forget injection they (implants) a take long time in the body (Ntanzi, F, 18, I, FGD, SA).

Most of the time I use two condoms and injection. It is easier to get a male condom so I just buy it and take to my partner to use. I use the injection because I am given a time frame of three months to prevent myself from pregnancy, so it's convenient (Viola, F, 26, I, PG, IN).

The two extracts suggest that women intend to prevent the risk of pregnancy by considering long-acting methods of contraception like injectable contraceptives and implants. The long-acting methods might be an option as they require little client involvement and fewer follow-up services.

There were reports from a woman whose focus was on the risk of STIs that she prioritises buying a good quality male condom to use with her partner, and initiates its use. The following extract illustrates her opinion:

When it comes to condoms during the time I was sexually active, I used to buy my own because there is the thing about the type of condom, so I would say I would not allow a guy to have sex with me using the type of condom, so I always had my own condoms…I always initiate it (condom) because I know what I want and if you know what you want, is best to be safe than to say if only I:::: and if the guy (man) does not like me initiating then it's his fault that means I am safe he he. (Leah, F, 21, I, UG, IN).

Leah appears to be in control of contraceptive use and shows agency by taking responsibility for preparing for sexual activity as well as prioritising her safety. Leah's attitude and approach to sexual activity is that sex is for a woman's enjoyment.

For one participant, decisions about contraceptive use in marriage are perceived as a woman's responsibility because women are directly affected by the risk of pregnancy. The following extract illustrates this finding:

> *Being a woman means I have to take a contraceptive. I don't think there is a way that a man, my husband can use contraceptives, but I feel like it's my RESPONSIBILITY to do it because at the end it's me to carry the pregnancy. So I don't know how to like to tell him it's your time to go he he (Nandi, F, 29, I, PG, IN).*

Nandi's response relates to the assumption in the theory of planned behaviour that human behaviour is guided by beliefs about behavioural outcomes (Ajzen, 1991).

5.3.2.2. Men's perceptions of risk and approach to contraceptive use

Most of the male participants (10) focussed on the risk of STIs, while a few (3) talked about both, the risk of pregnancy and STIs. The majority of male participants perceived condom use as a safer sex practice to prevent the risk of HIV, while a few argued that partners in stable relationships would prefer to know their HIV status, and this will determine their use or non-use of a condom. These findings are illustrated in the following extracts:

> *I think it also depends on the situation and your partner, like if you have engaged in a long term relationship some people, like those with serious partners, they go get tested (test for HIV) and they will no longer use condoms or contraceptive (Mark, M, 27, FGD, PG, IN).*

> *If you apply the use of condom that is the major thing you have to do to prevent sexual risks because all other risks are minor like South Africa where abortion is legal, you can abort pregnancy, you can get treated for STDs but when someone has contracted the HIV then that may be the end (Mathew, M, 33, I, PG, I).*

Mark and Mathew seemed more concerned about the risk of HIV, while the risk of pregnancy is minor to them. Their opinions underplaying the risk of pregnancy may be attributed to the fact that they are men and thus, they do not directly experience the consequences of pregnancy like women. Mathew talked about abortion as a legal option for women in South Africa. However, no female raised the issue of abortion as one of their choices to deal with pregnancy, and no man who is a South African citizen raised the issue of abortion. This may be attributed to stigma young women experience in accessing abortion services from government hospitals in South Africa.

A few male participants seemed aware of the consequences of unplanned pregnancy on women and showed some level of support to women in making decisions about contraceptive use. The following extract is of a man who appeared more responsible in preventing the risk of pregnancy:

> *I try to convince my girlfriend to start using the pills (Samuel is talking about emergency contraceptive) whenever we are not able to get the male condoms and she agrees to take up the responsibility to ensure there are pills whenever we don't use condoms because she is the one to suffer more, she will carry the pregnancy and when am not able to cater for the kid she is there alone (Samuel, M, 26, I, PG, I).*

Although Samuel seemed responsible for preventing the risk of pregnancy, his response suggests that he does not advise his girlfriend to consider long-term contraceptives like injectable contraceptives, implants or regular contraceptive pills. Instead, he talked about the use of the pill which for him was an emergency contraceptive, yet emergency contraception has its risks. Emergency contraceptive is a hormonal contraceptive and if taken often it can affect fertility.

There were reports from a few men that women should be responsible for contraceptive use as they directly experience the menstrual cycle, and this makes them more knowledgeable than men on their safe and unsafe days within the cycle. The following extract illustrates these views:

> *Well (.) it should be any of us but generally it should be a lady because they know themselves better, they know their cycle better if she is not safe I can suggest to her to use any of the available methods (Job, M, 30, I, PG, IN).*

Job's argument suggests that men engage in unprotected sex but women should still take responsibility to ensure their safety and that of their men to protect against the risk of pregnancy. The cognitive beliefs that women are knowledgeable about their safe and unsafe days in the menstrual cycle may represent the information that most men have and why they burden women with responsibility for preventing the risk of pregnancy.

Although men were perceived as less vulnerable than women when it came to the negotiation of safer sex, there were views from a few male students that women play a role in influencing contraceptive use. They asserted that that men can be easily convinced by women into engaging in unprotected sex.

The arguments made by participants in the study seem to suggest that the perceptions of risk and approach to contraceptive use are gendered. These gender differences determined their intentions

to prevent the risk of pregnancy and/or STIs, which in turn influenced their choices of methods of contraception especially for women, since men's choice is limited to the male condoms.

Although women showed an incredible urgency to prevent the risk of pregnancy, actual use of female contraceptives is hindered by beliefs about the likely outcomes of their use.

5.4.3. Perceived health risks and cognitive beliefs about hormonal contraceptive use

Most of the participants were of the view that hormonal contraceptives have mild to severe health effects depending on the body makeup of a woman, and a method of contraception used. Participants reported similar fears based on the use of injectable contraceptives, the contraceptive pill, and implants. Participants indicated that using the contraceptives could lead to weight gain, increase in blood pressure, infertility, protruding belly, nausea, mood swings, persistent bleeding or spotting, retention of blood in the body, dark marks on the skin, decreased sexual pleasure, backache and headache. The following extracts illustrate the views of four participants:

> *On the side of female contraceptives, I have heard that they have effects like a backache, lack of sexual drives, headaches, and abnormal menstrual cycles (Paul, M, 28, FGD, IN).*
>
> *I think the problem with the injection or the pill is that you may have a problem in future with having children, so I think the best one is condom because if you use injection and then you don't bleed, that blood which stays in your body need to go out (Zita, F, 23, FGD, SA).*
>
> *Pills which if you take them, you grow a big belly, you put on weight, and others may make you bleed like every day. Those are some of the things that may make me hesitant but for me, I don't have any problem with the pill that I was using (Khozie, F, 28, I, PG, IN).*
>
> *I will talk from my first-hand experience, contraceptives have disadvantages, for instance, the use of injection interferes with hormonal imbalance, sometimes you can have low libido, for instance, once I used an injection and I lost my libido. Also one becomes too fat hence it's very hard to control yourself, even if you diet you still find yourself getting fat (Viola, F, 26, I, PG, IN).*

Although people have different responses to using hormonal contraceptives, the above extracts suggest commonly held beliefs about the likely outcomes of using hormonal contraceptives. This

may negatively influence students' decision-making processes about using hormonal contraceptives.

The opinions of one undergraduate female participant suggest that the majority of women wish to be slender, attractive and without stretch marks, while contraceptive use negatively affects weight and appearance. This was the major reason given for not using hormonal contraceptives, with a few opting to use a condom as Zita mentioned in one of the extracts mentioned above. A few women commented that using a contraceptive pill is too demanding as it needs consistency and proper timing which was seen as challenging for students.

A female participant indicated her preference for the loop. She attributed this to the lack of side effects such as weight gain and increased blood pressure which could be experienced by those using hormonal contraceptive pill or injectable. The following extract illustrates her views:

> *Because when I spoke to my doctor he said it (loop) does not have the side effects unlike the pills, injections you either gain weight or it may interfere with your blood pressure or sugar something like that (.) It depends on somebody (Nandi, F, 29, I, PG, IN).*

Nandi's perceptions about using the loop may have produced a favourable attitudes towards the method, which in turn influenced actual use.

There were reports from a female participant that the use of a loop could cause cancer of the womb. This may represent the information the participant had about this form of contraceptive. The following extract illustrates her views:

> *Yah I heard that the thing they insert on the womb (loop) might be cancerous, but I have not heard any incident of cancer (Vuyi, F, 18, FGD, UG, SA).*

The theory of planned behaviour argues that unfavourable attitudes towards a behaviour in question negatively impact on the actual performance of the behaviour (Ajzen, 1991). The perceptions and beliefs about the likely outcomes of using hormonal contraceptives could possibly produce unfavourable attitudes towards their use, which in turn might lower their use. The perceived health effects and cognitive beliefs about using hormonal contraceptives might have contributed to their low use by the participants in the study.

5.4.4. Perceived health risks and cognitive beliefs about using a male condom

Although some women may prefer to buy a good quality male condom to use with their partners as indicated in prior extracts in this chapter, there were reports from a male participant that he does not trust women can safely keep the male condom. The following extract illustrates his views:

> *No, I don't trust the girl she might poke holes into a condom as a way of transmitting STI or setting a trap for pregnancy (Melusi, M, 22, FGD, UG, SA).*

Melusi is highlighting two potential risks, the perception that women might want to infect men with an STI, or that women might want to become pregnant in order to keep the relationship. Therefore Melusi takes precautions by carrying his own condom.

Some women may intend to prevent the risk of pregnancy and STIs by initiating the use of male condoms as indicated in other extracts in the chapter but they lack full control in ensuring that their partners use a condom throughout sexual activity. The following extract from a male participant highlights the challenges women go through when they insist on condom use:

> *I have learnt from peers and am getting to know that one of the reasons why people don't use condoms is that the sexual satisfaction is different when you have a condom and when you don't have. Because the girlfriend is afraid of getting pregnancy what they tend to do at times, although they may insist to use the condoms the male at one point decides to withdraw it (take out the condom during sexual activity) without the ladies' awareness (Samuel, M, 26, I, PG, IN).*

Samuel's response suggests that some women may intend to prevent the risk of pregnancy by insisting on condom use, uncooperative partners can go against their wish to protect against the risk of pregnancy. His argument that a man may choose to 'withdraw' the use of a condom without a woman's knowledge and consent, suggests that men value their own sexual pleasure more than the outcomes of unprotected sexual activity, which could be the risk of pregnancy or STIs.

Most of the male participants raised concerns about the lubricating oil on the male condom. The oil was said to interfere with a man's strength to engage in sex. They also made comments suggesting that the male condoms do not fully protect against the risk of STIs and can break and remain inside the body of a woman thus causing infections. The following extracts from two male participants illustrate most of these findings:

There is another narrative about the use of condoms about the kind of oil used in those condoms may affect the performance after some time which I don't know if it's true or not (Ayanda, M, 25, FGD, PG, SA).

Like as I said the perceptions of pleasure while using condoms, it can break and remain inside the woman and cause infections, sometimes in terms of protecting against forms of infectious diseases it has been reported that it is not 100% effective (James, M, 33, I, PG, IN).

James talked about the inability of the male condom to protect against the risk of STIs, which could suggest the risk some men are worried about. Ayanda and James seem to be highlighting the same issues raised by Samuel that men are more concerned with sexual satisfaction and have perceptions that condom use interfere with sexual satisfaction. This may give men an opportunity to manipulate women into engaging in unprotected sex. The cognitive beliefs about the likely outcomes of condom use may produce unfavourable attitudes towards their use which in turn lower their actual use. The perceived health effects and cognitive beliefs about using the male condoms might have contributed to low and inconsistent use of condoms by the participants in the study.

Although knowledge of contraceptives and attitudes towards contraceptives use influenced intentions to contraceptive use, actual use was also dependent on the opinions of significant others about contraceptive use.

5.5. Subjective norms influencing contraceptive use

The theory of planned behaviour proposes that human behaviour is influenced by opinions about normative expectations of significant others and motivations to comply with them (Ajzen, 1991). The role of peers, parents and health care service providers in influencing contraceptive use; religious beliefs about sexual activity and contraceptive use; and social expectations about sexual behaviour and contraceptive use will be discussed under the theme of subjective norms influencing contraceptive use.

5.5.1. The role of peers in influencing contraceptive use

Most of the female participants were of the view that accessing contraceptives on campus was limited by perceived stigma and discouragement from peers. The peers discouraged contraceptive

users by talking about the side effects of contraceptive use, while others were judgmental towards contraceptive users through their commentaries. The following extracts illustrate these views:

> *I have never tried it (to access from campus clinic) but I would NOT because I might meet people I know and they will say oh she is sexually active. But other places where they don't know me I don't mind (Leah, F, 22, I, UG, IN).*

> *It depends on the peers, some of us don't take contraceptive because we fear that our friends are going to judge us and say bad things about us, they might say this will change, this might happen, you not going to have children when you want to, they say all those kind of things about contraceptives and that will make one not to take contraceptives. At the same time, you get supportive friends, who tell you that if you take contraceptives, nothing will happen, it makes you feel protected. It depends on the kind of friends we have but most of the time the friends that we have they judge us instead of supporting us (Londeka, F, 20, FGD, UG, SA).*

The responses of Londeka and Leah suggest that women are aware of the benefits of contraceptive use and want to use them but some do not want to be seen using them because of what people might say about them, or make negative comments about the outcomes of their use. Due to such criticisms, some women like Leah would want to access contraceptives privately, while others like Londeka might completely avoid their use. Londeka raised a point that some peers approve sexual behaviours of other students and seem to understand the importance of contraceptive use. Londeka's opinions relate to the argument in the theory of planned behaviour that human behaviour, for instance, contraceptive use, is guided by beliefs about how significant others expect others to behave, which in turn influence others' decision-making processes about performing behaviour.

5.5.2. The role of parents in influencing contraceptive discussions and use

Most of the participants commented that discussions about contraceptive use with their parents is forbidden and perceived as disrespectful. The following extracts illustrate some of their views:

> *It (discussions about sex) is a secret it is not African in the first place (Job, M, 30, I, PG, IN).*

> *Because there is the cultural aspect of respect, I fear my parents and I cannot discuss with them sexual issues (Viola, F, 26, IN, PG, IN).*

Job and Viola seem to be saying that discussions about sex-related topics are evaded because sexual activity is considered a secret affair and so it should not be openly talked about.

The parent's inability to freely talk about contraceptive use with their children seemed to relate to their expectations about their children's sexual behaviours, and discussing such issues is going against their expectations. The following extracts illustrate the opinions of three participants:

> *My mum knows my girlfriend at home and she asked me if I was sexually active with her, she warns me not to do anything crazy with her. So am not sexually active at home so I can't tell my mum about being sexually active with other girls because she will then say what a son I have raised so we can't talk with our parents about this. She will think I am not a good child she has raised, I have been a good boy and there are many things I have done that I feel I should not be doing, she does not know about them (Melusi, M, 22, FGD, UG, SA).*

> *On my case, most of other girls have that confidentially with their parents, they will be like screaming to them that now they are sexually active uh, (.) and besides that, they could kill me practically (Ntanzi, F, 18, FGD, UG, SA).*

> *It is not hard, if I want to my mum is really free it's only a matter of parental expectations obviously, I am actually 21 years I will be turning 22 soon, I can say I rushed into sex and I cannot discuss with my parent because if I say OK mum, I am no longer a virgin ha ha. If it was not for that I would definitely do it (Leah, F, 21, IN, UG, IN).*

The extracts suggest that the expectations held by parents that their children should not engage in sexual activities limits discussions about contraceptive use, even if young people are willing to engage their parents in such discussions. Therefore, young people would rather conceal their sexual behaviours from their parents in order to avoid their reactions. Melusi's comments seemed to express guilt about his past behaviours which his mother is not aware of.

A comment from an Indian participant indicated that discussions about sexual behaviours are dependent on a parent's openness to their children. The following extract illustrates her views:

> *I think it depends on who you are, even if you are open I can't just tell them, it's like disapproval on their side because it's before marriage (Naomi, F, 18, FGD, UG, SA).*

Naomi seems to be highlighting similar issues raised Leah, Ntanzi and Melsui that, most parents are not open to discuss issues about contraceptive use with their children, even if children are willing to engage their parents in such discussions.

There were concerns raised by a female participant that parents can easily notice their child using contraceptives due to the impact a contraceptive has on the menstrual cycle. The following extract illustrates her opinion:

> *When you are staying at home and you are on contraceptives, your parents will see you and they will know what you don't want them to know about you, that you are having sex. Like if you are on contraceptive may be, you don't go on your periods and if you don't go on your periods, your parents will know that you are on contraceptive because you are not asking for sanitary pads or whatever you using (Londeka, F, 20, FGD, UG, SA).*

Londeka is raising similar concerns like other students that parents do not want their children to engage in sexual activities, and due to noticeable changes in their menstrual cycle, young women may be reluctant to use contraceptives. This may put them at risk of pregnancy.

There were reports from a female participant who shifted the blame on parents for being too rigid to discuss sexual behaviours with their children thus making it difficult for children to initiate such topics. The following extract illustrates her opinion:

> *I think the problem starts with the parent, as a parent you should talk with your child, not every day but about every step of life, like when you reach the age you are now in a stage of what and what so if they don't talk about it, it is not easy for you as a child to approach your parent and talk about that (Phumi, F, 24, FGD, UG, SA).*

Phumi seems to be saying that parents should be blamed for their children's sexual behaviours for not speaking openly about such behaviours to their children who have come of age.

The findings suggest that parents' reticence to discuss sexual behaviours with their children may leave children with insufficient information that could enable them to evaluate the outcomes of performing behaviour, for instance, using contraceptives or engaging in risk taking behaviours, in a rational way as argued in the theory of planned behaviour (Ajzen, 1991). Parent's reluctance to share information on contraceptive use with their children may give room for children to seek information about contraceptive use from unreliable sources like peers or the internet. These are some of the issues raised by most of the participants in the study.

Although contraceptive use seem permissible in marriages as a family planning method, family members like the mother-in-law may influence the decision-making processes of their daughter in-law about the use of certain methods of contraception. The following extract illustrates the opinion of a married female participant:

> *Like my mother-in-law, she does not subscribe to contraceptives. I don't know (.4) there is a way they used to do it like counting the months and know your ovulation, fertile days (.) they are really discouraging the young people (Khozie, F, 28, I, PG, IN).*

Khozie seems to be saying that her mother-in-law is against the use of modern contraceptives but approves of using natural contraceptive practice where a woman is expected to monitor her fertility by identifying fertile and infertile days during each menstrual cycle. Although Khozie talked about contraceptive practice her mother-in-law approves, she resolved to stick to the method of contraception of her choice which is the regular contraceptive pill as indicated in an interview extract reported in an earlier section of this chapter. Khozie was pregnant with her second child at the time of the study an indication that the method she was using did not interfere with her fertility. Khozie's argument suggests that women make efforts to prevent the risk of pregnancy despite the expectations of others on how women should manage their fertility. This relates to the argument in the theory of planned behaviour that people make rational decisions to perform behaviour, for instance, prevent the risk of pregnancy.

5.5.3. The role of public and private health care providers in influencing contraceptive use

Health care service providers were rarely mentioned as sources of knowledge of contraceptive use, yet they were perceived as more knowledgeable on the topic. This was attributed to their judgmental attitude towards young people accessing contraceptive services. Only male participants spoke about the judgmental attitudes of health care providers, yet contraceptives access is an activity of both men and women. The comments they made suggested that service providers in local primary health care clinics and in commercial pharmacies are judgmental towards young people's sexual behaviours. The following extracts illustrate the opinions of two male participants who elaborated more on this finding:

> *Then when it comes to purchasing of the contraceptive or condom whatever, or pills, the person who will attend to you, the nurses the way they look at you when you are buying it is like you are a rotten person, you have no future, you don't know what you are using,*

because of that attitudes people will feel like they don't want you to go and buy or be attended (Samuel, M, 26, I, PG, I).

I would say stigma even from the caregivers, they will stigmatise the students, if you are going for an injection or a pill, they will say that means you want to have sex, why don't you rather abstain yet it is a personal choice, or rather they would insist on, I don't know if it is a policy () or what (Mark, M, 27, FGD, PG, IN).

Mark and Samuel seemed to be commenting on how clinic staff and pharmacists relate to young men and women accessing contraceptive services. Mark perceives the commentaries of health care service providers urging students to 'abstain' as violating their sexual freedom.

Most of the male participants cited poor service delivery in commercial pharmacies as a factor hindering their access to male condoms. They commented that men have to go around looking for pharmacies where they feel accepted. The following extracts illustrate the experiences of two men about these issues.

In 2012, I remember it very well I went to a certain shop to buy condoms, it was my second time to buy them and the way people (pharmacists) were looking at me, I changed from buying in that shop and then I went to a different one where I was assisted (Samuel, M, 26, I, PG, I).

It depends on how it (a male condom) is being accessed, do you have to access by getting them from someone, or is it free where you can go and pick and it is even worst when you access them through the campus clinic because you think the person knows me and then tomorrow would be wondering where I was taking the condoms to (James, M, 33, I, PG, IN).

The comments made by Samuel and James suggest that the beliefs of students about what healthcare service providers would say about their sexual behaviour may lower their motivation to access contraceptives, and this may negatively influence actual use. This relates to the argument in the theory of planned behaviour that motivations to comply with the expectations of significant others impact on behavioural outcomes (Ajzen, 1991).

5.5.4. Religious beliefs about sexual activity and contraceptive use

Most of the participants commented that very religious people may be reluctant to either engage in premarital sex or use contraceptives. They made comments that religions like Catholicism,

Islam, and Johani Masoye a Christian denomination in Zimbabwe are against contraceptive use due to perceptions that their use can interfere with fertility, kills a developing foetus, and undermine God's power and freedom of procreation. The religions encouraged polygamy and sex for procreation. The following extract from a female participant illustrates some of these findings:

> *I remember at one time at the church there was the pastor and she told us that using a contraceptive is equivalent to murder because God created it (conception) as a natural thing that should happen at God's will and time. It was in a camp, and she said bring everything to the tent. I was still young then but it's really still at the back of my mind and people brought their pills, their condoms and they were burnt (Khozie, F, 28, I, PG, IN).*

Khozie's argument suggests that religious beliefs against the use of contraceptive use may have a long-term implication on people even if they do not subscribe to them, and this may interfere with their wise judgements to prevent the risk of pregnancy and/or STIs.

There were reports from a male participant that the Bible prohibits prevention of pregnancy, and punishes those who go against this injunction, and he gave a story in the Bible of a man who was punished by God for preventing pregnancy. The following extract illustrates his opinion:

> *I have read somewhere in the Bible where God advised a certain guy (man) to impregnate his late brother's wife, so he went to have sex with her and before he ejaculates inside, he pulled out and at the end God punished him for that because he did not want to make the circle of life, so I feel like if somebody can analyse the scenario where God has punished the guy from preventing pregnancy then I think you could say that a very religious person could find condoms as something which prevents pregnancy because sex is meant for reproduction, so the fact that you are going to stop reproduction, then it's not OK so a very religious person would see contraceptive as not allowed (Melusi, M, 22, FGD, UG, SA).*

Melusi seems to be saying that a religious person might argue that in the Bible, sex is meant for procreation rather than pleasure, and so contraceptive use is perceived as preventing procreation.

Despite the strong religious prohibitions referred to by some participants, most of the participants commented that very few people strictly abide by religious teachings, while others emphasised on the need for a congregation to hear what is being said but make rational decisions to prevent the risk of pregnancy.

The following extract illustrates the views of a female participant who subscribed to the Hindu religion:

> *No, it doesn't matter what religion you are but you need to, if you don't want to fall pregnant you need to condomise or something it does not matter which religion you belong to (Naomi, F, 18, FGD, UG, SA).*

Naomi's response suggests that prevention of pregnancy is essential and she perceives religious beliefs as minor in influencing contraceptive use. Naomi's response suggest similarities in the way students perceive contraceptive use in spite of the different religious beliefs and practices.

However, it was interesting to note that nobody brought up experiences of how religious beliefs have impacted on their contraceptive behaviour and most of the participants said that they were not too religious. Thus the comments made about the impact of religious beliefs on contraceptive use were based on the thoughts of the participants and not their own experiences or religious positions. This finding suggests that religious beliefs had a minor effect on the participants' decision-making processes about contraceptive use.

5.5.5. Social expectations about sexual behaviour and contraceptive use

Most of the participants were of the opinion the society imposes beliefs about sexual activity which stigmatises contraceptive users. The following extracts illustrate this finding:

> *Where I come from, when one uses contraceptive and you are not married, like myself, so am likely to be stigmatised and tagged as a person who is promiscuous (Viola, F, 26, I, PG, IN).*

> *Where I come from, you can't just walk to a shop and say I want contraceptives, you are considered very weird and immoral. So if I go to a shop and I want to buy something like a condom, I would have to negotiate and think about how I will approach that it is not as simple as going and buying Hedex (painkiller) and sweets (James, M, 33, I, PG, IN).*

> *They (people) will be like so she is definitely going to have sex (Nombuso, F, 25, I, PG, SA).*

The extracts suggest that issues about contraceptive use and sexual behaviours of unmarried individuals affect both national and international students. Nombuso and Viola seem to be saying that sexual behaviours of unmarried women are seen as immoral, while contraceptive use is linked

with promiscuity, while James seems to be saying that accessing a male condom is not an easy practice due the society's expectations of sexual behaviours of unmarried people.

There were comments from one male participant that contraceptive use is not stigmatised but their use is an indication of sexual behaviour which in itself is considered a humiliating practice. The following extract illustrates his opinions:

> *I think the shame is with sex itself, not the contraceptives, the contraceptive shows a sign that you are sexually active, it is not shameful to be using pills or condoms but the fact that you are sexually active, that is the stigma (Melusi, M, 22, FGD, UG, SA).*

Melusi suggests that the perceptions that sexual activity is a shameful act may not only compromise young people's rights to contraceptive access and use but also interfere with their rational decision making processes to prevent the risk of pregnancy and/or STIs.

A few male participants were of the opinion that the motive of accessing the male condom, either to use with the wife or with other women, may determine how a person takes the judgement from others. The following extract from a male participant illustrates some of these findings:

> *I guess it depends on the reason why you are buying it (condom) like if you are buying to use it with your wife, it will be more acceptable in the community like if you go with your wife and buy the condom. It is more problematic like if you are alone, or with a girl that you are not in any formal relationship and you buy a condom, that will be more problematic, the community will view that as immoral and not acceptable (James, M, 33, I, PG, IN).*

The opinions raised by James suggests that perceptions of others about when the male condoms should be accessed and used may impact on actual use, even if a person is motivated to protect against the risk of pregnancy and/or STIs. This relates to the argument in the theory of planned behaviour that approval or disapproval of behaviour by others may impact on behavioural outcomes (Ajzen, 1991).

There were views from a few participants that children are valued in marriage and women in some communities may be required to prove their fertility before marriage. The following extract illustrates the views of a woman from the Zulu community in South Africa:

There is in Zulu, like if a guy (man) has to get a woman to marry say especially in rural areas then you must make the girl pregnant before you can marry, so they want to know if she can be able to give you children (Zita, F, 23, FGD, UG, SA).

Zita's comment suggests that women may fear using contraceptives due to the belief that contraceptives use interfere with fertility as shown in prior extracts in this chapter. Such beliefs may negatively influence young women's decision-making processes about contraceptive use.

In other contexts where women are not required to prove their fertility before marriage, they are expected to bear children a few years after getting married. The following extract illustrates the views of a male participant from Kenya:

For me it is about the side effects like when she swallows the pill it may render her infertile for the rest of her life and that woman will never get a kid and for the family to be sustained everybody needs a kid. So you will find they may be married and stay for five years without a kid, then divorce will automatically come although they are afraid of pregnancies in the premature stages of their relationships (Samuel, M, 26, I, PG, IN).

Samuel seems to be saying that marriage is complete with children and young women who use hormonal contraceptives might render them infertile, and this will make them worthless and vulnerable to divorce when they get married.

There were reports from two female participants at the undergraduate level which were against the perceptions of sexual activity and contraceptive use among the unmarried women. They argued that such perceptions should be ignored in the modern society where women engage in sex at a young age. One of them alluded that the use of hormonal contraceptives is a private practice and not easily detectable, for example, through a variety of methods which involves injections or inserting contraceptive devices into the body. This is unlike the condoms which can easily be noticed when they are being used. Her ideas are illustrated in the following extract:

Yes, it in some cultures, they do not allow women to use contraceptives, but I think women just do it because it's a private thing nobody will know, for like injection, but condoms it can be known (Leah, F, 21, I, UG, IN).

Leah's perceptions of contraceptive use as a private act suggest intentions to prevent the risk of pregnancy, which relates to the argument in the theory of planned behaviour that formation of intentions to perform behaviour may influence positive outcomes (Ajzen, 1991).

However, a favourable attitude towards contraceptive use and approval of contraceptive use by significant others alone did not influence the formation of intentions to use contraceptives. Intentions to use contraceptives was also influenced by perceptions of control over their use.

5.6. Perceived behavioural control factors influencing contraceptive use

The theory of planned behaviour argues that human behaviour is guided by the presence of potential factors that either facilitate or inhibit performance of behaviour (Ajzen, 1991). The issues which fall under perceived behavioural control factors influencing contraceptive use are limited access to the female condoms on campus and gender expectations about men and women's sexual behaviours.

5.6.1. Limited access to the female condoms on campus

Although the participants knew about the female condoms, no participant had experience of using them. This was attributed to their unavailability in the condom dispensers within the university premises and perception was that they would have to be bought. The following extract illustrates the views of a man who elaborated on this finding:

> *The marketplace is biased towards men by flooding them with male condoms which are most used, even here on campus it is only male condoms. The female condoms are not free and easily accessible and they (women) have to buy if they need and may be they don't have money to do that (Paul, M, 28, FGD, PG, IN).*

Paul's comment suggests that lack of access to the female condoms on campus inhibits their use. This finding relates to the argument in the theory of planned behaviour that perceived power of each factor, for instance, access to the female condom, is useful in predicting the extent in which intentions are implemented into actual behaviour (Ajzen, 1991).

5.6.2. Gender expectations about men and women's sexual behaviours

Concerns were raised by most of the female participants about the stereotypes men impose to women carrying condoms or using female contraceptives. There were comments that men mistake women's use of contraceptives to mean they are having multiple sexual partners or they are in relationships for sexual satisfaction. The following extracts illustrate the views of two women:

> *I had this ex (former boyfriend) and when I thought I was ready to take it to another level, I actually bought my own condoms and when I took out my pack of condoms, he was like who else are you having sex with! It is just about stereotypes because men expect women*

not to carry condoms. They think that if a woman is carrying condoms then she is promiscuous or something. But women expect men to always carry condoms so it is all about stereotypes ha ha (Leah, F, 22, I, UG, IN).

Like if I am sexually active and I go to my boyfriend with the female condom he will interpret it in a different manner. He will say so the reason why you came to see me is just to have sex (Nombuso, F, 25, I, PG, SA).

Leah and Nombuso seem to say that women are perceived to be responsible for a particular kind of protection which is for pregnancy, but not allowed to be responsible for having sex just for pleasure. Sexual pleasure is perceived as only for men and are excused, understood or 'allowed' to be sexually active and possibly have other partners. The comments made by Leah and Nombuso also suggest that if men carry a condom they are not automatically criticised as 'you are here for sex, promiscuous' and/ or 'you must be very sexually active', but if women are 'prepared', they are labelled negatively. These findings have to do with how men and women are expected to behave in relation to sex.

Women who are living with their boyfriends use hormonal contraceptives secretly to protect themselves against the risk of pregnancy, but they cannot protect against STIs unless their partners agree to condom use. The following extract from a woman illustrates this finding:

I think some men do not like the fact that women use contraceptives, so like as a woman you have to play hide and seek especially if you are living with your boyfriend (Londeka, F, 20 FGD, UG, SA).

Londeka's comments about women concealing their use of hormonal contraceptives suggests that men do not allow women to be proactive in planning for their sexual behaviour, either by using female contraceptives or having a condom. Concealing contraceptive use might lead to inconsistency in uptake while other women may stop using them. This might put women at risk of pregnancy.

A few male participants were of the view that their gender makes them 'courageous' and have 'easier' access to the male condoms than women. The following extract elaborates on this finding:

In the society I come from men are considered to be proactive in this things like buying a contraceptive, as a man it's easy for me to walk in and buy not because I don't feel stigmatised, it is easy for a man to feel courageous as compared to a woman. So my gender

puts me in a better position because I can manoeuvre through the culture and society's perceptions of what I should do. In negotiating the use of contraceptives of course a man has more say compared to a woman (James, M, 33, I, PG, IN).

James's response suggests that the society recognises men as more sexually active than women and thus men are 'expected' to access the male condoms from the chemist. James seems to be implying that men have more power than women in negotiating contraceptive use.

While a favourable attitude towards contraceptive use, approval of contraceptive use by significant others alone did not influence the formation of intentions to use contraceptives and perceptions of control over contraceptive use identified in the theory of planned behaviour are recognised as possible contributors to the formation intentions to use them, they are not sufficient. Structural factors not addressed by the theory of planned behaviour also play a role in influencing contraceptive decision-making processes.

5.7. Structural factors influencing contraceptive use

This study found that social, political and economic factors such as the cost of acquiring contraceptive services and insufficient time for planning and acquiring contraceptive services influenced decision-making processes about contraceptive use.

5.7.1. Cost of contraceptive services

Most of the participants talked about the availability of free male condoms and female contraceptives at the university clinic. The following extracts illustrate the views of two students:

It all depends on your lifestyle, if you want to buy these red expensive condoms and you do not afford, it is all about affordability. If you do not afford there are free condoms everywhere, like go to clinics, even the injection is free like in Zimbabwe it is actually free (Leah, F, 21, I, UG, IN).

Obviously we are on campus and the university has got broad facilities and all the resources, and right close to us there are pharmacies and so on so we as university students like females have access to morning after pill and injections but in a normal situation, the women at home do not have access to the free clinic but as for here on campus, it is sorted you just walk to the clinic and ask for relevant stuff (Melusi, M, 22, FGD, UG, SA).

The comments made by Melusi and Leah suggest that students know about places to access free contraceptive services on campus, and they seem to blame students who do not want to utilise free contraceptive services offered at the clinic.

The free condoms accessed on campus were perceived as of poor quality. The following extract from a male participant illustrates this finding:

> *When it comes to condoms, the most trustable condoms are the most expensive ones, so somebody like me who do not trust the free ones will go and buy the most affordable ones, but we still think that the most expensive ones would still be better to have, so the issue of money (Melusi, M, 22, FGD, UG, SA).*

The comments made by Melusi highlights perceptions that condoms obtained from commercial outlets are extra safe, but they cost money and this may inhibit their access and use by most students. The perceptions of the quality of condoms obtained at a fee as extra safe may lessen the use of free condoms which are accessible to students on campus.

There were reports from married participants about their use of the loop and the contraceptive pill. The methods were said to be costly and they accessed them at their own cost. The following extracts illustrate their views:

> *Like for the pill, like the one I was using it is REALLY expensive like R200 per packet but I know there are some that you can get for free from clinics (Khozie, F, 28, I, PG, IN).*

> *It is quite expensive like the one I am using (the loop) it is not every month, you pay once and you will remove it anytime you would like to fall pregnant (Nandi, F, 29, I, PG, IN).*

The extracts suggest that some contraceptives may not be affordable to some women but they have to make efforts to prioritise their access and use in order to prevent the risk of pregnancy.

Although the cost of buying a good quality male condom was perceived as a barrier to their access and use, the majority of participants commented that this should not be a reason for students to engage in unprotected sex. Students may choose to access free contraceptives from the university clinic but insufficient time for preparation for sex might be a barrier to their access and use.

5.7.2. Insufficient time for planning and accessing contraceptive services

Participants commented that contraceptive use is not a spontaneous act but involved a lot of planning. For instance, time was spent in seeking accurate information about contraceptives, on

the evaluation of their costs and benefits, on the road travelling to access the services, and in the waiting area at the clinics. However, the time issue for these participants seemed to be mainly related to accessing condoms, while some of the preparation and planning issues were related to the spontaneous and unplanned nature of sexual activity. This makes it hard for men to quantify a sufficient number of condoms to be used at a time as illustrated in the following extract:

> *You have gone to the house carrying two packets of condoms but now the game went on and on and they are finished, so what do you do? how much is enough for you to do the thing (sex) (Laban, M, 25, FGD, PG, IN).*

Laban's response suggests that some students may make prior arrangements for their sexual pleasure and safety by keeping condoms, but sexual activity in itself cannot be planned due to other factors which go along with it like sexual satisfaction. Students in situations Laban is talking about might not have time to access more condoms at night despite their willingness to use them.

A few male participants mentioned instances where they did not intend to engage in sex but their girlfriends visited them unexpectedly. The following extract illustrates the views of a male participant who resided at the university residence:

> *Not even the cost of buying it is also time, you need to walk all the way to the clinic or chemist that is also a cost like if you are having a date at that particular point and time and you had not thought about it beforehand and all of a sudden you realise you are about to have sex and you did not think about or realise you do not have condoms. It would be easier to go the washrooms and have the condoms than putting on your pants and walk to the clinic or nearest chemist (James, M, 33, I, PG, IN).*

James's response suggests that sexual activity is a spontaneous act and students might not have condoms with them every time, and it would be difficult to go and fetch them from the clinic or chemist.

There were opinions from a few participants that the nature of their academic schedule may hinder them from accessing condoms at the university clinic as they may find it closed after hours since the clinic does not operate for 24 hours. Sexually active students in such situations may end up engaging in unsafe sex, postpone their sex plans or access the male condoms from the chemist as some chemists are open after hours. The following extract illustrates the views of a male participant:

Having classes till late hours and I have to access them through the university clinic and by the time the lectures ends and the clinic is closed then obviously I can't have access. Perhaps on that particular day if I have to use contraceptives then I can only access them through the chemist. And if I don't have money on that particular day then it means I may decide not to use contraceptives and that might means having unprotected sex or just postpone the whole thing. And that is why I was talking about having other models of access where you can access them like when you go to the toilet, they need to be accessible (James, M, 33, I, PG, IN).

James' comments suggest that sex is a spontaneous act and students are not always prepared for it, in terms of keeping the male condoms to ensure their sexual safety. This could suggest that some behaviours, for example, sexual activity, is spontaneous and may not involve rational thoughts described in the theory of planned behaviour (Ajzen, 1991).

Despite the perceptions that some students lack sufficient time to make sexual plans or access contraceptives most of the participants were of the view that, time to access contraceptive services should not be a barrier to their use. The participants especially those at the undergraduate level emphasised that students are not always attending lectures, while others can skip classes to access contraceptive services. The following extract illustrates the views of a female participant at the undergraduate level:

They can always dodge classes, a person has to make time (Ntanzi, F, 18, FGD, UG, SA).

Ntanzi seems to be raising a comment that sexually active students should prioritise their sexual safety even at the cost of not attending to some lectures. Postgraduate students, on the other hand, emphasised that time should not be a barrier to their contraceptives access as most of them do not attend lectures.

There were reports from married participants that they had no challenges in accessing methods of contraception they were using. The following extract illustrates the views of a married women:

I will always make time to go and get the contraceptive. I think it would be different for a person on campus doing the school work. For me, if I cannot go, I can send my husband to go and collect those pills (Khozie, F, 28, I, PG, IN).

Khozie's comment suggests that contraceptive access may be difficult for women who are preoccupied with their studies on campus, and it might be more challenging for those with

uncooperative partners or who do not stay with their partners who can be send to fetch contraceptives if necessary. The general perception from most of the students in terms of time for accessing contraceptive services seem to suggest that time is a minor barrier to contraceptive access and use.

5.8. Summary of the results

The chapter presented the findings of a qualitative study which applied the theory of planned behaviour to delve into the knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk among students at the University of KwaZulu-Natal on the Pietermaritzburg campus. The findings showed that students knew about contraceptives such as condoms, the contraceptive pill, emergency contraceptives, injectable, implants, sterilisation, and contraceptive practices like the rhythm method, withdrawal and abstinence. There was low and inconsistencies in contraceptive use, and methods preferred were the male condoms, emergency contraceptives and injectable. The major sources of contraceptive knowledge were peer interaction, mass media and the school subjects like Life Orientation and Biology. Peer interaction was perceived as a major platform for sharing contraceptive information, at the same time it can be used to discourage their use. The parents and health care service providers were rarely mentioned as sources of contraceptive information due to their judgmental attitude towards young people's sexual behaviours.

Most of the participants knew about sexual risk and behaviours that place them at risk of pregnancy and STIs but their comments suggested that some students are engaging in risky sexual behaviours. Women were perceived as more responsible for contraceptive use than men due to the presence of a variety of contraceptives for women than men, and the perceptions that women have knowledge of their safe and the unsafe days in the menstrual cycle. There were comments that sexual activity is for a man's pleasure, while women were easily judged because of their sexual behaviours. A number of side effects were raised about the use of hormonal contraceptives, but their effect on fertility and physical appearance were dominant among participants, while a decrease in sexual sensation was associated with condom use. The cost of buying a good quality male condom to ensure extra safety, lack of access to the female condoms and insufficient time for planning sexual activity were identified as structural barriers to contraceptive access and use.

The next section will discuss the findings highlighted in this chapter while relating them to earlier research on contraceptive use and the assumptions in the theory of planned behaviour.

CHAPTER SIX: DISCUSSION

6.1. Introduction

This chapter will interpret and describe the significance of the findings of the study whose aim was to explore knowledge of contraceptives, attitudes towards contraceptive use, perceptions of sexual risk and factors influencing decision-making processes about contraceptive use among 25 sexually active students at the University of KwaZulu-Natal on the Pietermaritzburg campus. The theory of planned behaviour, a behaviour change model was used to understand contraceptive use among students. The findings of the study will be interpreted in light of what is already known about contraceptive use while any new understanding or insights about contraceptive use will be highlighted. The findings suggest that contraceptive use is not a spontaneous decision, but it is guided by factors described in the theory of planned behaviour like attitudes towards their use, which is influenced by knowledge of and risk-benefit analysing of contraceptive use; normative expectations of significant others about contraceptive use; and access to the necessary resources and opportunities that facilitate actual use.

The significance of the findings related to attitudes towards contraceptive use; normative beliefs influencing contraceptive use; perceived behavioural control factors influencing contraceptive use; and structural factors influencing contraceptive use will be explored in this chapter.

6.2. Attitudes towards contraceptive use

The theory of planned behaviour proposes that human behaviour is guided by beliefs about likely outcomes of performing behaviour (Ajzen, 1991). Beliefs about a behaviour are formed based on the evaluations of the cost and benefit of performing behaviour (Ajzen, 1991). Attitude towards contraceptive use was found to be influenced by knowledge of contraceptives; perceptions of sexual risk; approach to contraceptive use; perceived health risk and cognitive beliefs about hormonal contraceptive use; and perceived health risk and cognitive beliefs about condom use.

6.2.1. Knowledge of contraceptives

Contrary to the findings of earlier studies in universities in Ghana (Appiah-Agyekum & Kayi, 2013); South Africa (Hoque & Ghuman, 2012; Patel & Kooverjee, 2009; Roberts et al., 2004); and Nigeria (Mfono, 1998), in which knowledge of contraceptives and their places of access was low, this study reflects a relatively good awareness of the process of conception, how a contraceptive

works, the right time to use a contraceptive, and sources of contraceptives on campus. The participants knew about methods of contraception such as the male condoms, the female condoms, the contraceptive pill, emergency contraceptives, injectable contraceptives, the rhythm method, withdrawal, abstinence, the loop, and implants. A few male participants at postgraduate level had knowledge of sterilisation which is a permanent method of contraception, although none of them had direct experience of it. This finding is in line with Roux's (1995) comments that most people of student age might plan to have children at later stages of their lives; therefore, a focus on sterilisation, an irreversible method as an option is not expected. The good awareness of contraceptives and where they could be accessed on campus reflected in this study would be viewed in the theory of planned behaviour as a reflection of intentions to use them. Methods of contraception preferred by students were injectable contraceptives, emergency contraceptives and the male condom, which could suggest intentions to prevent the risk of pregnancy and STIs, but their intentions did not result in consistent use of the methods.

Most of the female participants seemed to have an advanced knowledge about contraceptives such as injectable, implants, the female condoms and the contraceptive pill. This trend is mirrored in the recent research in South Africa which found that 93.4 % of women of reproductive age have heard of at least one effective method of contraception (Lince-Deroche et al., 2016). Knowledge of contraceptives is generally predictable in women because they are directly involved in the use of contraceptives except for a male condom which is worn by a man.

The participants in the study did not know about traditional contraceptive practices like herbal mixtures offered by traditional healers to prevent pregnancy (Department of Health, 2012). Traditional contraceptive practices may be least known by students because students are at the university full time, and they might not have time to consult traditional healers as their primary source of health care. In addition, traditional practices are least considered by young people due to the availability of modern contraceptives like hormonal contraceptives and the male condoms. Modern contraceptives have constantly been improved to minimise their side effects and increase their efficacy (Department of Health, 2012), and this may in turn increase their demand. This is an indication that contraceptive behaviour may not remain stable over time hence, lowering the predictive ability of the theory of planned behaviour in contraceptive studies and so it is recommended that such studies should be conducted more often.

The natural contraceptive practices such as ‘counting days’ and withdrawal were well known but less practiced due to perceptions that they do not fully prevent the risk of pregnancy. This finding is similar to the findings reported in studies in Uganda (Kiene et al., 2014), and in the USA (Trussell, 2011) among women of reproductive age also report similar findings. These findings relate to the assumption in the theory of planned behaviour that beliefs about the likely outcomes of performing behaviour influences actual practice (Ajzen, 1991).

The good knowledge of contraceptives and conception in this study could partially reflect the study sample. The university students with an experience of contraceptive use took part in this study and so their level of education and past experiences might have intensified their knowledge. The association between awareness of contraceptives and being educated, for instance, having a tertiary level education is reported in studies in South Africa (McPhail, et al., 2007; Myer, et al., 2007; Seutlwadi, 2012). Participants also learnt about contraceptives from a variety of sources like awareness education and support programmes received from Pietermaritzburg campus clinic; content in Biology and Life Orientation subjects; peer interaction; and mass media including internet material. These sources might have increased student’s awareness of contraceptive use. In addition, the majority students are aware of their sexual and reproductive rights like access to contraceptives of their choice, and this may have heightened their understanding of contraceptives.

6.2.1.1. Knowledge of therapeutic effects of contraceptives

A few participants in the study commented on therapeutic effects of contraceptive use, for instance, making a woman's skin soft, smooth, attractive and decrease menstrual cramps. This finding relates to the study of Seidman (2011) at the University of Belgrade in Europe, and the information contained in the contraceptive guidelines circulated by the Department of Health (2012) in South Africa. In these articles, contraceptive use was said to treat dysmenorrhea and dermatological diseases. Although participants did not report on other non-contraceptive benefits such as prevention of medical conditions like endometrial cancer, sickle-cell anaemia, pelvic inflammatory diseases and uterine fibroid (Department of Health, 2012; Seidman, 2011), awareness of these therapeutic effects may heighten the demand for contraceptives in universities.

However, awareness of non-contraceptive benefits of condom use mentioned by a male participant, like prevention of premature ejaculation which could mean having a long period of

sexual pleasure, as well prevention of the soiling of bedding may also heighten their demand. The theory of planned behaviour argues that sufficient information about behaviour may influence the formation of behavioural intentions (Ajzen, 1991). If condom users are given information about non-contraceptive benefits of condom use, they might change their beliefs and attitudes towards condom use, and this may positively influence actual use.

6.2.1.2. The effect of knowledge of contraceptives on actual use

Despite the good awareness of the process of conception, how a contraceptive works, the right time to use a contraceptive, and sources of contraceptives on campus, contraceptive use among the participants was low and inconsistent. This finding relates to the argument raised by Baggozi (1992) that having information about behaviour does not necessarily link to behaviour change; but contrary to the argument in the theory of planned behaviour that having knowledge of the behaviour, for instance, contraceptive use, may guide evaluations of the risks and benefits of performing behaviour and may influence desirable outcomes (Ajzen, 1991). This finding implies that, having knowledge of the risk of pregnancy and STIs may influence intentions to use contraceptives but does not necessarily provide specific guidance about actual contraceptive use.

The theory of planned behaviour argues that individuals who are motivated to perform behaviour may focus more on outcomes of performing behaviour, for instance preventing pregnancy (Ajzen, 1991). The comments indicating low and inconsistent use of contraceptives in this study could suggest a lack of concern over the possibility of pregnancy or STIs. Such arguments have been reported in the past studies in universities in New Zealand (Breheny & Stephens, 2004), South Africa (Hoque & Ghuman, 2012; Maja & Ehlers, 2004; Patel & Kooverjee, 2009; Raselekoane et al., 2016; Roberts et al., 2004), Uganda (Nsubuga et al., 2016), and Tanzania (Somba et al., 2014).

Although the influence of past experience on future behaviour is not considered in the theory of planned behaviour, Armitage and Conner (2001) link the two behaviours. Participants in the study consisted of sexually active students with an experience of contraceptive use, but the low and inconsistencies in their contraceptive use could imply that, having used a contraceptive in the past does not necessarily influence future use.

6.2.2. Perceptions of sexual risk and risk taking behaviours

The participants in the study knew about behaviours that expose students to the risk of pregnancy and STIs. These behaviours were perceived as socially defined like peer interaction, boredom, use of alcohol, drug abuse and watching pornographic movies. Young people engaging in risky behaviours such as drug abuse and alcohol use is consistent with most studies among young people in South Africa (Maluleke, 2010; Mwaba, 2000; Parker, 2005); and at the University of KwaZulu-Natal, on the Howard College campus (Hogue, 2011). These findings seem to suggest that substance abuse is more common among young people in South Africa, hence interventions targeting behaviour change should also target on alternatives to drug and alcohol use. The study of Khoza (2004) in South Africa also found that peer pressure influenced risk-taking behaviours among young people. Contrary to other studies reporting risk-taking behaviours like engaging in sex with multiple partners (Hogue, 2011; Maluleke, 2010); engaging in sex in exchange for a reward and coerced sexual intercourse (Maluleke, 2010); and sexual activity due to unemployment (Khoza, 2004), participants did not directly involve themselves in such behaviours. This suggests that participants in this study were partial risk takers as argued by Patel et al. (2004) in their study on comprehension of sexual situations and their relation to risky behaviours among young adults.

There were opinions from male participants that men have easier access to the male condoms as compared to the women's access to condoms and female contraceptives, but their access had little influence on consistent use of the condom. This is in contrast with earlier studies in universities in which easy access to condoms influenced actual use (Appiah-Agyekum & Kayi, 2013; Nsubuga et al., 2016; Seutlwadi et al., 2012). Most of the participants were of the opinion that men can easily overcome barriers hindering their access to condoms. This could suggest that prevention of the risk of pregnancy and/or STIs should be largely a man's responsibility, but that was not the case for the participants of this study. Women were perceived as more responsible for protecting themselves and their partners against the risk of pregnancy and/or STIs.

6.2.3. Approach to contraceptive use

The theory of planned behaviour argues that the way a person perceives an issue, for example, pregnancy, could have an influence on behavioural outcome, for instance, contraceptive use. The arguments made by participants in the study suggest that the perceptions of sexual risk and approach to contraceptive use are gendered. The difference between men and women in their

perception of the risk of pregnancy and/or STIs influenced the choice of a method of contraception to prevent the risk. The gender differences in the perception of risk seemed to relate to the availability of more contraceptives for women than men. Hence women are perceived as needing to be more responsible in the prevention of the risk of pregnancy, while men are perceived as more responsible for condom use to protect against the risk of STIs.

6.2.3.1. Women's approach to contraceptive use

Most of the female participants were largely proactive about prevention of the risk of pregnancy and STIs than men, and this was attributed to the availability of more contraceptives for women than for men. Some female participants preferred to buy a good quality male condom to use with their partners to ensure extra safety against risk of pregnancy and STIs. This finding reflect on women's intentions to prioritise their own sexual pleasure and safety by planning for a sexual activity. Women playing a major role in preventing pregnancy than men is consistent with studies in Nepal (Adhikari & Tamang, 2009); Nigeria (Bako, 1998); New Zealand (Breheny & Stephens, 2004), the USA (Brückner et al., 2004); South Africa (Hoque & Ghuman, 2012; Patel & Kooverjee, 2009); and Uganda (Nsubuga et al., 2016). There were reports from female participants which indicated the use of the male condoms to supplement three-month injectable contraceptives in case they fail to prevent the risk of pregnancy, or if they forget regular use injectable contraceptives. The use of injectable could imply that the arguments raised by the Department of Health in South Africa (2012) and Lince-Deroche et al. (2016) could be valid. They argued that the preference of some hormonal contraceptives nationally is because they do not require regular use or regular visits to the clinic and are private (Department of Health, 2012; Lince-Deroche et al., 2016).

The consequences of pregnancy make women more responsible for contraceptive use than men. Women in this study seemed focus to complete their studies within the required time and perceived pregnancy as a barrier hindering them from achieving their goals and cause a financial burden. The financial implications of pregnancy is reported in the studies of Akintade et al. (2011) at a university in Lesotho on contraceptive awareness, Attewell and Lavin (2007) in their book on higher education for the disadvantaged, and in the study of Seutlwadi et al. (2012) in South Africa on contraceptive use among young people. Other consequences of pregnancy raised by women in this study were stress and 'regret' which could interfere with their concentration. This finding

relates to the arguments raised by Attewell and Lavin (2007) and Kinsella and Monk (2009). They argued that regret for an action is likened to guilt and shame which can potentially impact on the emotional well-being of a person. Attewell and Lavin (2007) linked emotional instability with poor concentration on a given task.

6.2.3.2. Men's approach to contraceptive use

Most of the male participants in the study were more concerned with the risk of STIs especially HIV/AIDS, and their use of the male condom is a reflection of intentions to protect against the risk. This finding is contrary to Hogue's (2011) study on risky sexual practices at a university in South Africa in which students associated condom use with people infected with STIs. Although there were reports from male participants that suggested they used condoms, there were also points made about not always using condoms, not being 'prepared', not 'having enough' or 'withdrawing the condom without the woman's awareness. The inconsistencies in the use of the male condoms relate to earlier studies in Nepal (Adhikari & Tamang, 2009) Nigeria (Bako, 1998) and South Africa (Khoza, 2004; Kistnasamy et al., 2009; Patel & Kooverjee, 2009; Protogerou et al., 2013). These findings are in contrast with the assumption in the theory of planned behaviour that everyone behaves in accordance with their intentions (Ajzen, 1991), which questions the applicability of the theory in understanding behaviours like contraceptive use. The theory of planned behaviour does not distinguish between formation of behavioural intention, for instance, to prevent the risk, and implementation of intentions to actual practice, for instance, the use of the male condoms to protect against the risk of HIV/AIDS. In addition, the theory of planned behaviour does not bring forward the differences involved in the formation of intentions and transformation of intentions into actual behaviour.

Although the risk of pregnancy was perceived as a minor issue by most of the male participants in the study, it was particularly minor for a few male participants from other African countries. They talked about abortion as an option for women to manage an unplanned pregnancy. Interestingly, no male participant who is a South African citizen talked about women terminating their unplanned pregnancies despite the legitimacy of abortion in South Africa. In addition, there were no reports from female participants about their possibility of abortion. This may be attributed to perceived misconceptions and health effects of the consequences of abortion. Gresh and Maharaj (2014) argue that women fear to terminate their pregnancies because it is morally unacceptable, while

Sedgh et al. (2014) and WHO, UNICEF, UNFPA, and World Bank (2012) argue that abortion is a risk practice which can lead to maternal mortality and infertility.

Most of the male participants absolved themselves from the responsibility of preventing the risk of pregnancy by citing the lack of knowledge of the menstrual cycle, and so they shifted the responsibility of preventing the risk onto women. This finding relates to other research (Mfono, 1998; Varga, 2001), in which men denied having knowledge of reproduction in order to shift the responsibility for contraceptive use onto women. The arguments about lack of knowledge of the menstrual cycle seem invalid in this study which reflects a good knowledge of reproduction and conception. Hence such arguments could possibly be a reflection of men's attitude towards condom use which it is perceived as the only contraceptive option available for them.

There were reports from male participants about 'advising' their female partners to use emergency contraceptives when the male condom was not used at last sex. Encouraging a woman to go and get emergency contraceptives after a risky sexual is an indication of awareness of the consequences of pregnancy, but men absolve themselves of the responsibility to prevent the risk by using the male condom. It could also imply that men do not have to plan or foresee risk, and this is disempowering for women. The use of emergency contraceptives suggest a response to a crisis which is the urgency to prevent the risk of pregnancy, but their use is not really addressing the issue of risk and do not protect a woman against the risk of STIs. Emergency contraception is a hormonal contraceptive, and if taken too often it can affect fertility, which was a major concern raised by most participants about the use of hormonal contraceptives. There were comments from participants that barren women are not valued in the society, are vulnerable to divorce, and may not get married while others are. These issues were also raised by young people in the study of Ehlers (2003) in South Africa.

6.2.4. Perceived health risk and cognitive beliefs about condom use

Although condom use can protect against the risk of pregnancy and STIs, most of the male participants in the study were concerned about the negative outcomes of condom use. For example the inability of a condom to fully protect against STIs; the possibility of a condom causing infections if it breaks and remains inside the body of a woman; and perceptions that condom use lower sexual pleasure. This finding relates to the argument in the theory of planned behaviour that

negative beliefs about outcomes of performing behaviour, for instance, condom use, influence attitudes towards the behaviour, which in turn impact on actual practice (Ajzen, 1991).

The association of condom use with diminished sexual pleasure relates to other research in the USA on sexual pleasure and condom use among young people (Randolph et al., 2007); and South Africa on beliefs and attitudes towards condom use among Black university students (Nicholas, 1998), and condom use among adolescents (Jemmott et al., 2007). The studies found that men who associated condom use with decreased sexual pleasure were less likely than their counterparts to consider their use. The perceptions that condom use does not offer full protection against the risk relates to the findings reported in other studies in universities in Ghana (Appiah-Agyekum & Kayi, 2013) and South Africa (Nicholas, 1998; Raselekoane, et al., 2016). The implication of this finding is that young people do not always make rational decisions to perform behaviour, for instance, protect against the risk of pregnancy and STIs, as proposed in the theory of planned behaviour. Instead, their focus is more on the challenges related to performance of behaviour, for instance condom use, rather than the outcomes of behaviour, for instance, protection against the risk of pregnancy and STIs. This suggests that the theory of planned behaviour does not account for irrational thoughts or fears surrounding performance of behaviour, for instance, contraceptive use.

6.2.5. Perceived health risk and cognitive beliefs about hormonal contraceptive use

Appiah-Agyekum (2013) argues that perceived health effects of contraceptives are based on cognitive beliefs people have about contraceptives use which affect their trust in them. Some of the perceived health effects of hormonal contraceptives especially injectable contraceptives, the contraceptive pill and implants were: weight gain which interferes with a woman's perception of self; infertility; persistent bleeding or spotting; accumulation of ‘dirt blood’ in the body; and cause acne. The association of contraceptive use with infertility, weight gain and spotting is consistent with the findings of the research in universities in Lesotho (Akintade et al., 2011); Uganda (Mehra et al., 2012); and South Africa (Patel & Kooverjee, 2009). Misconceptions that contraceptive use cause accumulation of ‘dirt blood’ in the body is an indication of lack of knowledge of how contraceptives work in preventing pregnancy. Hormonal contraceptives contain both oestrogen and progesterone hormones that inhibit ovulation by thickening the cervical mucus, and in that process, the menstrual cycle is interfered (Department of Health, 2012). The theory of planned behaviour argues that attitude towards a behaviour influences behavioural outcomes (Ajzen, 1991).

The implication of this argument for this study is that perceived health risk and misconceptions about using hormonal contraceptives may produce unfavourable attitudes towards their use, and this may lower actual use.

Knowledge of contraceptives; perceptions of sexual risk; attitudes towards contraceptive use; and perceived misconceptions about contraceptive use alone were not sufficient to influence decision-making processes about contraceptive use or non-use. Decision-making processes about contraceptive use were also guided by approval or disapproval of their use by a significant other.

6.3. Normative beliefs influencing contraceptive use

The theory of planned behaviour argues that perception of the expectations of significant other intertwined with motivation to comply with them determine behavioural outcome (Ajzen, 1991). Issues identified under normative beliefs influencing contraceptive use are the role of peers, parents and health care service providers in influencing contraceptive use; and religious beliefs about sexual activity and contraceptive use.

6.3.1. The role of peers in influencing contraceptive use

This study found that peer interaction was a platform for sharing contraceptive information and a medium influencing decision-making processes against contraceptive use. This finding is similar to the findings of other studies in South Africa among young people (Khoza 2004; Mwaba, 2000; Tabane & Peus; 2015). This study, as well as other studies among young people (Bjelica, 2008; Lebese et al., 2013; Mfono, 1998; Nsubuga et al., 2016; Patel & Kooverjee, 2009; Somba et al., 2014) have shown that discussions about social issues like sex and contraceptive use is easy among peers. The implication of these findings is that individuals do not make rational decisions to perform behaviour, for instance, use a contraceptive, in isolation but are influenced by others in their social interaction as proposed in the theory of planned behaviour (Ajzen, 1991).

For the participants in the study, some peers had condemnatory attitudes towards contraceptive users; while others discouraged contraceptive use by talking about their side effects. These commentaries negatively influenced students' attitudes towards contraceptive use. This finding relates to the assumption in the theory of planned behaviour that individuals who are put under pressure by significant others to perform or not to perform behaviour, for instance, use

contraceptives, and believe others in their position also experiences the same pressure are likely to abide by the demands of others (Ajzen, 1991).

6.3.2. The role of parents in influencing contraceptive discussions and use

The parents of participants in this study were rarely mentioned as sources of contraceptive information yet they have a fund of knowledge and experience about contraceptive use. Most of the participants perceived their parents as too reserved and unwilling to discuss sex-related issues with them. This was attributed to cultural prohibitions and disapproval of sexual behaviours of young people. This finding is consistent with other studies in Turkey (Askun & Ataca, 2007) and South Africa (Lebese et al., 2013; Mfono, 1998; Mwaba, 2000), in which discussions about sexual and reproductive health issues were easily ignored at home due to social restrictions; fear of parents' reaction to their children's sexual behaviours; and the assumption that opening up to such discussions might encourage promiscuity. These were also issues raised by some participants in this study. The implication of this finding is that, parents' response to their children's sexual behaviours may negatively influence children's attitudes towards contraceptive use.

6.3.3. The role of public and private health care providers in influencing contraceptive use

The health care providers at local government clinics and commercial health care outlets were rarely mentioned as sources of contraceptive information or services, yet they are experts in reproductive health issues. The health care providers at local government clinics were perceived as judgmental about young people's sexual behaviours through their commentaries which violate young people's sexual freedom, for instance, urging them to abstain. This finding is consistent with the findings reported in a systemic review in developing countries (Chilinda et al., 2014), and in studies on emergency contraceptives use at universities in South Africa (Kistnasamy et al., 2009; Kunene, 2013) and Nigeria (Ahanonu, 2014). In those studies, judgmental attitudes of health care service providers and the lack of youth-friendly services were identified as barriers to contraceptive access and use. Young people are sexually active and they need appropriate information and unbiased services to make rational decisions to prevent the risk of pregnancy and STIs, and they cannot get the information if they are judged for their behaviours. Darroch et al. (2008) argue that judgmental attitudes of service providers provoke fear and shame in contraceptive users resulting in either discontinuation of contraceptive use or inconsistent use. These were some of the issues raised by participants in this study.

Although there is no legal restriction in South Africa preventing university students from accessing contraceptives, there were reports from participants about poor service delivery from health care service providers at chemists. Their comments indicate that the chemist staff perceive young men accessing male condoms as immoral and 'have no future'. These commentaries relate to the study of Peer et al. (2013) in South Africa. The health care service providers refused to offer young people condoms due to their disapproval of premarital sex and perceptions that condom use might lead to promiscuity. Such perceptions may not only jeopardise health care service providers' duties to offer contraceptives to clients seeking the services but also their interaction with them.

The participants had perceived fear that the nurses at the university clinic were going to criticise them because of their sexual behaviours, and this was a barrier to contraceptives access. This finding relates to the argument in the theory of planned behaviour that perceptions of the expectations of significant others intertwined with a person's motivation to comply with those expectations determine behavioural outcomes (Ajzen, 1991). There is a possibility that some of the health effects and misconceptions of hormonal contraceptive use like weight gain, irregular menstrual cycle, dark marks on the skin and spotting reported by most of the participants in the study arose due to incorrect choice of a method of contraception. Such misconceptions can be minimised if young people seek the services of the health care professionals, especially on campus as these services are free and the campus environment is more accepting of students being sexually active.

6.3.4. Religious beliefs about sexual activity and contraceptive use

Most of the participants were of the opinion that very religious people may be reluctant to either engage in premarital sex or contraceptive use. Nsubuga et al. (2006) in their study in Uganda on contraceptive use among university students also reported similar findings. These findings relate to White's (1999) opinion that religious belief systems prohibit modern contraceptive use, even in areas where these methods are available. The Christian denominations mentioned in this study like the Catholic Church and the Johova Masoye Church in Zimbabwe, associated contraceptive use with the killing of the foetus, which was perceived as opposing God's creation. This finding concurs with the Catholic Church's stand (Hubacher et al., 1999) and Islamic belief (Keefe, 2006) that, the use of hormonal contraceptives is sinful and prevents God's divine plan to give life to the world. This finding implies that certain religious beliefs may not give women opportunities to

control over their sexual and reproductive health, despite their willingness to prevent the risk of pregnancy and STIs.

Although comments indicating that conservative religious beliefs negatively influenced students' contraceptive access and use, no participant brought up personal experiences about how their religious beliefs have directly influenced their sexual behaviours or contraceptive use. Instead, most of the participants described themselves as 'not too religious' and this might explain why religion did not seem to have impacted on perceptions of contraceptive use in this group of students. The low use of contraceptives in this study may suggest that 'not being religious' had little influence on actual use. This relates to the claim in the theory of planned behaviour that cognitive beliefs, for instance, perceptions of contraceptive use, potentially influence behavioural intentions and not actual practice (Ajzen, 1991).

A favourable attitude towards contraceptive use and approval of contraceptive use by a significant other seemed to have led to the formation of intentions to use contraceptives, but did not translate into actual use. The formation of intentions to use contraceptives was also guided by the perceptions of control over their use.

6.4. Perceived behavioural control factors influencing contraceptive use

Perceived behavioural control according to the theory of planned behaviour is the perception of ease or difficulty in performing behaviour (Ajzen, 1991). Actual control over a behaviour, for instance, contraceptive use is guided by the availability of resources and opportunities that facilitate performance of behaviour (Ajzen, 1991). Gender and power in relationships, gender expectations about men and women's sexual behaviours, and limited access to the female condom on campus were identified under perceived behavioural control.

6.4.1. Gender and power in relationships

The power to negotiate contraceptive use is in itself a resource and opportunity in sexual relationships. In the theory of planned behaviour this would be viewed as a motivational factor that influence behavioural intentions (Ajzen, 1991). This study found that some women had little say in negotiating the use of male condoms for safer sex practice or the contraception methods for women in their relationships, while others experienced forced sex. This finding is consistent with other studies on sexual risk behaviours among the youth in South Africa (Maluleke, 2010), and in

a systematic review of heterosexual norms, gender and power dynamics on sexuality among young people in Africa (Babatude & Ake, 2015). These findings suggest that women lack full control over their bodies, and this may negatively affect their rational decision-making processes to prevent the risk of pregnancy and STIs.

Although women may form intentions to prevent the risk of pregnancy, they often cannot insist on condom use even if they have access to them. This is because condom use is mostly dependent on a man's acquiescence, and this limits a woman's ability to make independent decisions in the case of an uncooperative partner (MacPhail et al., 2007). The female condom is meant to be used by a woman to protect against the risk of pregnancy or STIs, but using it is not simple as it is not an invisible or an unnoticeable device. The use of female condom still requires a woman's negotiation with her partner. This finding relates to the assumption in the theory of planned behaviour that presence of factors, such as lack of power to control contraceptive use in a relationship, that impede the performance of behaviour, for example, contraceptive use, may produce undesirable outcomes (Ajzen, 1991). The power differences between men and women in negotiating contraceptive use not only compromise women's health and reproductive rights (Raselekoane, et al., 2016), but also make counselling on contraceptive use ineffective.

6.4.2. Gender expectations about men and women's sexual behaviour

Participants in the study were of the opinion that society perceives sex as an act in marriage, while stigmatising young people who are not married, especially women for their sexual behaviours. This finding is consistent with prior research on contraceptive use among teenagers in South Africa (Lebese et al., 2013; Mfono, 1998) and contraceptive use at universities in South Africa (Kunene, 2013), and Uganda (Nsubuga et al., 2016). These findings imply that critical beliefs held by the society about premarital sex can negatively influence young people's access and use of contraceptives even if they are willing to use them. Most of the female participants were of the view that it is a 'normal' practice for men to prepare for sexual activity and sexual satisfaction by keeping the male condoms, but if women do the same they are easily perceived by as 'prostitutes' or are in a relationships for sexual satisfaction. The perceptions about gender expectations in preparation for sexual activity suggest that sexual activity is perceived as primarily for a man's enjoyment.

There were opinions from female participants that, men associate contraceptive use with infertility, and discourage women from using them. This finding relate to the arguments of Ehlers (2003) and Raselekoane et al. (2016) that, women in societies controlled by men are often discouraged from using contraceptives due to the possibility of infertility. The perceptions that contraceptive use causes infertility may negatively influence on women's evaluation of the outcomes of contraceptive use as they cannot do a cost-benefit analysis in an empowered sense. The findings related to infertility is also consistent with other research in South Africa (Ehlers, 2003; Lebese et al., 2013; Raselekoane et al., 2016; Roux 1995) and Tanzania (Somba et al., 2014). A few female participants in this study were of the opinion that men's disapproval of contraceptive use make women to use contraceptives secretly. Concealing contraceptive use may be an indication of women's efforts to protect themselves from the risk of pregnancy and at the same time keeping their relationships. MacPhail et al. (2007) and Seutlwadi et al. (2012) argue that concealing contraceptive use may lead to inconsistency in their use or the discontinuation of use. Hence concealing contraceptive use put women at risk of pregnancy despite their efforts to prevent it.

The social beliefs and gender expectations about young people's sexual behaviours seem to have had less of a significant role to play in the lives of most of the female participants in the study. Most of them argued that societal expectations that single women should not engage in sex before marriage should be ignored because women are sexually active at a young age despite the taboos that prohibit their sexual behaviours. They also perceived contraceptive use as a private act which gives young women a chance to use them secretly. This kind of thinking and perceptions of contraceptive use could imply four things. Firstly, it may suggest that some women do not feel any moral obligation to refrain from sexual activity but they make wise decisions to prevent the risk of pregnancy. This relates to the argument in the theory of planned behaviour that people make rational decisions to perform behaviour, for instance, to prevent themselves from risk (Ajzen, 1991). Secondly, it may suggest that personal norms, for instance, a person's choice to prevent risk, play a role in predicting behavioural intention, rather than only cognitive processes described in the theory of planned behaviour. Thirdly, the argument made by Ajzen and Fishbein (2004) that the relevance of each motivational factor in predicting intentions is anticipated to vary from one behaviour to another, and from one population to another could be valid. The implication of this argument for this study is that society's expectations of sexual behaviours of single women seem to play a little role in young women's lives. Fourthly, the participants in this study were university

students and given their level of education, the majority are aware of their rights to contraceptives access and that might have influenced their thinking and perceptions of contraceptive use.

6.4.3. Limited access to the female condom

Most of the participants in the study knew about the female condom as a method of contraception for women, but a few knew how it is used or had any experience of it. A contrasting finding is reported at a university in Ghana (Appiah-Agyekum & Kayi, 2013) in which the female condoms served as the main contraceptive for most women. For participants in this study, the lack of experience with using female condoms was attributed to perceptions that female condoms are not available in the condom dispensers in toilets and at the clinic. This finding relates to the argument in the theory of planned behaviour that limited access to the required resources, for example, access to female condoms, to facilitate performance of behaviour inhibit the performance behaviour, for example, condom use (Ajzen, 1991). The perceptions that the female condoms are not available on campus may limit women's choices of contraceptives, especially those that protect against the risk of pregnancy and STIs. Women who are motivated to prevent the risk of pregnancy may choose other methods of contraception such as hormonal contraceptives, barrier methods or contraceptive practices like withdrawal, but the methods do not protect against the risk of STIs. According to the Department of Health (2012), withdrawal and emergency contraceptives have high failure rates in protecting against the risk of pregnancy.

The information from the clinic nurse suggests that the female condoms are available in the condom dispensers in the clinic's waiting area. This is an indication that students have made little efforts to access the female condoms within the university, despite the use of condoms having minimal side effects as compared to hormonal contraceptive use (Appiah-Agyekum & Kayi, 2013). This finding according to the theory of planned behaviour would be viewed as the lack of intentions to perform behaviour, for instance, protect against the risk of pregnancy and STIs (Ajzen, 1991).

While factors addressed in the theory of planned behaviour such as favourable or unfavourable attitudes towards contraceptive use; the social approval or disapproval of contraceptive use by significant others; and perceptions of control over contraceptive use were recognised as possible contributors to decision making processes about contraceptive use, they are not sufficient. These

factors alone do not help to change the behaviour of young people that much if structural factors not addressed in the theory of planned behaviour are not taken into consideration.

6.5. Structural factors influencing contraceptive use

Structural factors identified in the study were the lack of resources like time and costs involved in acquiring an extra safe male condom from commercial pharmacies.

6.5.1. The cost of accessing a quality male condom

This study found that students preferred to access the male condoms at the commercial pharmacies due to health care provider barriers. There were also comments that the free condoms on available on campus are of poor quality and do not fully prevent pregnancy or STIs. The cost of buying a good quality male condom to ensure extra safety against the risk of pregnancy and STIs may be a barrier to its access and use as commercial health care outlets require condom users to purchase condoms (Appiah-Agyekum & Kayi, 2013). The cost of buying a good quality male condom may be particularly challenging for students as most of them depend on their parents, scholarships, loans and bursaries to meet their financial obligations, and so their sexual safety might not be a priority to them.

The comments made by participants in this study suggest other costs involved in accessing the male condoms. The costs were mainly related to the time spent travelling to the places of access, and psychological costs in managing the stigma associated with condom use. The findings suggest that some behaviours, for instance, protecting against the risk of pregnancy and STIs, are determined by psychological, social and economic factors rather than cognitive processes only described in the theory of planned behaviour. Therefore, making contraceptive services less judgmental and improving the quality of the free condoms issued by the government could encourage their use.

Although some participants perceived the cost of accessing a safer or more reliable male condom as a barrier to their access and use, it was generally considered a minor barrier. This was attributed to the presence of free male condoms which can be accessed and used by students from condom dispensers at the toilets, university clinic and the Student Union office. Such perceptions would be viewed in the theory of planned behaviour to indicate students' awareness of available resources and opportunities that can facilitate their performance of behaviour (Ajzen, 1991).

6.5.2. Insufficient time for planning and accessing contraceptive services

This study found that that use of contraceptives like injectable contraceptives, emergency contraceptives and the male condoms are not a spur of the moment decision, but their use involves a lot of planning related to time spent in accessing the services. For instance, contraceptive users may spend time in seeking accurate information, in travelling to access services and in the waiting area in health care clinics. Darroch et al. (2008) in their study on contraceptive use and inconsistent use among women of reproductive age in the USA found that the time spent in accessing contraceptive services inhibit their use. This means that prevention of the risk of pregnancy and STIs may require some preparations related to accessing contraceptives, which is lacking for some students. The implication of this finding is that some behaviours, like contraceptive use, are guided by social and economic factors rather than only cognitive processes described in the theory of planned behaviour.

There were reports made by a few women in the study which suggested they were forced by their boyfriends to engage in sex. The implication of this finding is that, sexual activity may happen under conditions beyond an individual's control (Kelly, Parker & Lewis, 2001). This is contrary to the argument described in the theory of planned behaviour that, human behaviour is guided by rational decision-making processes (Ajzen, 1991).

Although the time for planning and accessing contraceptives was mentioned by some students as a barrier to contraceptive use, others were of the view that students should make time to access contraceptive services. This could suggest an internalized health message that students should be responsible for their sexual behaviours, and thus time for planning and accessing contraceptive services was seen as a minor barrier to contraceptive use.

6.6. Summary of the chapter

The significance of the findings of this study was described and interpreted and in this chapter. The findings suggest that having knowledge of contraceptives may guide risk-benefit analysis of the outcome of contraceptive use, but knowledge is not necessarily antecedent of actual use. In the same way, perceptions of the risk of pregnancy and STIs may motivate contraceptive use but does not necessarily provide specific guidance about actual use. The study highlights the role of perceived health risk and misconceptions about contraceptive use, which in turn influence attitudes

towards their use. Most of the perceived fears and misconceptions about contraceptive use were mainly related to the use of male condoms and hormonal contraceptives. The perceptions that condom use does not fully protect against the risk of pregnancy and STIs, and perceptions that it interferes with sex pleasure negatively influenced students' attitudes towards their use. In the same way, misconceptions about hormonal contraceptive use related to their effect on physical appearance, menstrual cycle, and fertility negatively impacted on students' attitudes towards their use. These findings could give an explanation as to why there was a low and inconsistent use of contraceptives by the participants in this study.

Normative beliefs against contraceptive use held by significant others like the peers, parents, health care service providers, and religious institutions played a role in influencing decision-making processes about contraceptive use. The influence of peers, parents, health care service providers, and religious institutions on decision-making processes about contraceptive use relates to the argument in the theory of planned behaviour that, individuals do not make decisions to perform behaviour in isolation, but are influenced by others in their social interaction.

This study highlights the gender differences in the perceptions of sexual behaviours of men and women. Preparations for sexual activity and sexual enjoyment is perceived as for men, while women are not expected to prepare for sexual activity by ensuring their sexual safety yet they are expected to protect themselves and their men from the risk of pregnancy and STIs.

Furthermore, socio-economic factors played a role in influencing contraceptive use, for instance, insufficient time for planning and accessing contraceptive services, and the cost of buying a good quality male condoms from the chemist. This is an indication that decision-making processes about contraceptive use are complex. The formation of intentions to contraceptive use is not only influenced by factors identified in the theory of planned behaviour but also structural or external factors not considered in the theory.

In the next chapter, the overall conclusion of the study is discussed, including the strengths and limitations of the study, recommendations to promote contraceptive use among students, and suggestions on areas for further research.

CHAPTER SEVEN: CONCLUSION

The study demonstrated the applicability of the theory of planned behaviour in understanding knowledge of contraceptive use, attitudes towards contraceptive use, perceptions of sexual risk and factors influencing decision-making processes about contraceptive use among university students. Snowball sampling, purposive sampling and convenience sampling were used to access 25 participants (13 men and 12 women) at the University of KwaZulu-Natal on the Pietermaritzburg campus. Ten in-depth interviews and four focus group discussions were conducted with the participants. Thematic analysis guided the data analysis process. In the process of thematic analysis, four major themes were identified. Three of the themes, attitudes towards contraceptive use; normative beliefs about contraceptive use; and perceived behavioural control factors influencing contraceptive use were drawn from motivational factors influencing human behaviour outlined in the theory of planned behaviour. The fourth theme comprised of structural factors influencing contraceptive use but are not accounted for in the theory of planned behaviour.

The study found that, intention to use a contraceptive is guided by knowledge of contraceptives, attitudes towards contraceptive use; perceptions of the risk of pregnancy and STIs; beliefs about social approval of contraceptive use by significant others; and the availability of opportunities and resources that facilitate actual use. The resources are like the time spent in accessing contraceptive services and the cost of purchasing extra safe methods against the risk of pregnancy and/or STIs like condoms, the regular contraceptive pill and the loop. This study concludes that a combination of knowledge of contraceptives; attitudes towards contraceptive use; normative beliefs held by significant others about contraceptive use; perceptions of control over contraceptive use; and availability of resources that facilitate contraceptive use, may influence the formation of intentions to use a contraceptive but not actual use. This information can be used by the university management in designing interventions targeting change in contraceptive behaviour of students.

How each research question has been addressed in the study will be discussed in the next section.

7.1. What do students at the University of KwaZulu-Natal on the Pietermaritzburg campus know about contraceptives?

The study reflects a relatively good awareness of the process of conception, how a contraceptive works, the right time for contraceptive use, and sources of contraceptives on campus. There were

inconsistencies and low use of contraceptives by the participants in the study which suggest that knowledge of contraceptives is necessary for contraceptive use but not a sufficient predictor of actual use. Knowledge may only influence the formation of intentions to prevent the risk of pregnancy or STIs by guiding an evaluation process of the cost and benefit of contraceptive use.

7.2. How do students perceive sexual risk, and how do they approach contraceptive use?

The study reflects a good awareness of sexual risk and behaviours that expose students to the risk of pregnancy and STIs. There were reports that students engaged in risky behaviours such as substance use, watching pornographic movies and peer influence. This could suggest that having a good understanding of behaviour, for instance, sexual risk, may influence the formation of intentions to perform behaviour but not necessarily the transformation of intentions into actual practice. The study highlights the perceptions that women are more responsible for contraceptive use than men due to the availability of various contraceptives for women, and they are directly affected by pregnancy. The misconceptions of contraceptive use like linking condom use with interference on sexual pleasure and associating hormonal contraceptive use with weight gain, infertility, and irregular menstrual cycle discouraged participants from using them. This could suggest that cognitive processes do play a role in influencing actual behaviour as proposed in the theory of planned behaviour.

7.3. How have normative beliefs about contraceptive use influenced students' contraceptive behaviour?

The study found that beliefs about contraceptive use held by peers, parents, health care service providers and religious institutions influenced decision-making processes about contraceptive use. This relates to the arguments in the theory of planned behaviour that human behaviour is guided by social approval by significant others and their beliefs about the outcomes of performing behaviour, coupled with a person’s willingness to comply with the expectations of others (Ajzen, 1991). The magnitude of the impact of significant others in influencing contraceptive use differ depending on a person’s motivation to comply with the expectations of others.

7.4. Which perceived behavioural control factors influence students' decision-making processes about contraceptive use?

The study highlights the role of gender in influencing decision-making processes about contraceptive use. Women had little say when it came to the negotiation of safer sex and contraceptive use in relationships but they are expected to protect themselves and their men against the risk of pregnancy and STIs. The preparation for sexual activity and sexual enjoyment was perceived as for men yet sexual activity involves both men and women. Women who made efforts to plan for their sexual safety and sexual enjoyment were easily judged because of their sexual behaviours. This indicates that gender is a perceived behavioural control factor that influences decision-making processes about contraceptive use. Insufficient time for planning and accessing contraceptive services, and the cost of accessing a good quality male condom were identified as perceived barriers to contraceptive access and use. These findings relate to the argument in the theory of planned behaviour that human behaviour is guided by the availability of the resources and opportunities that facilitate performance of the behaviour (Ajzen, 1991).

While factors identified in the theory of planned behaviour such as favourable or unfavourable attitudes towards contraceptive use; social approval or disapproval of contraceptive use by significant others; and perceptions of control over contraceptive use were recognised as possible contributors to decision-making processes about contraceptive use, they are not sufficient. These factors alone did not influenced the formation of intentions to use contraceptives. Structural factors not addressed in the theory of planned of behaviour also influenced decision-making processes.

7.5. Structural factors influencing contraceptive use

This study highlights that contraceptive use is neither a simple nor a straightforward process; instead, it is a complex one due to the presence of socioeconomic factors influencing access and sustained usage. The factors are mainly related to access and use of extra safe male condom which is obtained for a fee from commercial pharmacies. This finding relates to the argument raised by Kelly et al. (2001) that sexual activity is a spontaneous act, and so the time for managing risk in sexual activity is lacking.

7.6. Strengths of the study

The theory of planned behaviour largely showed underlying factors that guide decision-making processes about contraceptive use. The factors are attitudes towards contraceptive use, normative

beliefs held by significant others about contraceptive use, and perceptions of control over contraceptive use. The factors moderately influenced the formation of intentions to contraceptive use but not actual use. Therefore, the study gives a modest support to the theory as one that is suitable for understanding contraceptive behaviour of university students, in the same way it has been successfully applied in other contexts to understand a variety of social and health-related behaviours (Conner & Sparks, 2005; Godin & Kok, 1996; Kiene et al., 2014).

The study highlights external factors that influence decision-making about contraceptive use but are not addressed in the theory of planned behaviour. The aforementioned factors are the cost of acquiring contraceptives and insufficient time for planning and accessing contraceptive services.

The consistency in contraceptive use indicators between this study and other studies at various universities in Nepal (Adhikari & Tamang, 2009), Lesotho (Akintade et al., 2011), Ghana (Appiah-Agyekum & Kayi, 2013), Uganda (Nsubuga et al., 2016), South Africa (Hogue & Ghuman, 2012; Patel & Kooverjee, 2009) and Tanzania (Somba et al., 2014) provide credibility to the findings of the study.

7.7. Limitations of the study

The study was conducted at the University of KwaZulu-Natal on the Pietermaritzburg campus hence the findings are not generalisable to other universities in South Africa. However the findings give a picture of the contraceptive behaviour of university students.

Although the use of individually generated beliefs may avoid some of the problems of employing commonly held beliefs (Armitage & Conner, 2001), this study relied heavily on the participants to provide information about their opinions, ideas and subjective views about contraceptive use and sexual risk. Verbal self-reports in research have been heavily criticised that their conclusions are not supported by observation (Beck & Ajzen, 1991). Verbal responses in this study may have been biased by the tendencies of participants to provide socially desired responses, while denying socially undesirable behaviours, for instance, engaging in sex or having multiple sexual partners. If a quantitative method was incorporated in the study, for instance the use of a self-administered questionnaire, it would make some participants more comfortable in responding to questions about their sexual behaviours.

Only seven out of the 25 students who took part in the study were South African citizens, but the university host more students who are South African citizens, than those from other countries. Although there were no significant differences between South African nationals and international students in their knowledge of contraceptives, their attitudes towards contraceptive use and their perceptions of risk; there were slight differences in the way a few male participants who were international students perceived the risk of pregnancy. They said that women in South Africa can easily opt to terminate their unplanned pregnancies, but no female participant regardless of the country of origin, or a male participant who is a South African citizen raised this issue. Therefore the findings and conclusions related to abortion may largely represent the ideas of a few participants from other African countries.

Although this study has its limitations, the repetitive themes and patterns drawn from it, for instance, contraceptive behaviour of students, attitudes towards contraceptive use, barriers to contraceptive use, and motivations for risk taking behaviours can be widely applied to tertiary students in other universities.

7.8. Recommendations of the study

This study found that students are engaging in risk taking behaviours. This finding relates to the outcomes of the study of Oyedeji (2003) on contraceptive use in this campus. This is an indication that the sexual behaviours of the students on the Pietermaritzburg campus have become riskier over the years, despite interventions in place which have enhanced knowledge of risky sexual behaviours. This could suggest that the interventions have not influenced change in behaviour. More sexual and reproductive health awareness programmes are recommended to make students understand that not all types of contraceptives are suitable for everyone; and contraceptive use might involve some trial and error about what works with their own bodies. More awareness of the sexual and reproductive health issues can be done through one-on-one training, phone messages, and messages passed on social networks. The awareness programmes should also involve partners, peers, health care service providers and parents as they are key influencers of decision-making processes about contraceptive use.

Interventions targeting men on attitude change, particularly in relation to perceptions of sexual pleasure and responsibility for contraceptive use are suggested to foster respect and shared responsibilities on reproductive health decisions.

This study highlights the need for the expansion methods of contraception for men beyond the male condom and vasectomy, in order to widen their contraceptive choices. The new developments in the contraceptive industry in the USA is the introduction of non-hormonal contraceptive pill for men which is injected in the scrotum (Mirror, 2015, June 25). The male contraceptive pill works for two years and it has been shown to have 100% success rate, with no side effects (Allen, 2017, February 7). The male contraceptive pill has been approved by the USA Food and Drug Administration panel and it is expected that consumers will be able to get hold of it early in 2018 (Allen, 2017, February 7).

7.9. Suggestions for future research

The study found that peer interaction is a platform which influences decisions about contraceptive use, yet the influence of peers on reproductive health decisions has not been well addressed among young people. Future research could help in designing interventions targeting peer interactions and their social networks.

It is highly expected that a good knowledge of contraceptives and sexual risk influence actual prevention of the risk of pregnancy and STIs, but evidence regarding the relevance of knowledge of contraceptive use in influencing actual use is mixed. The past research, including this study, found that knowledge of contraceptives does not translate to actual use (Kistnasamy et al., 2009; Nsubuga et al., 2016; Patel & Kooverjee, 2009; Seutlwadi et al., 2012). Further research could help individuals dealing with sexual and reproductive health issues to identify indicators of contraceptive use among young people.

The findings of the national survey of young people in South Africa suggest a strong association between having ever been pregnant and future contraceptive use (MacPhail et al., 2007). There is a possibility that incidences of contraceptive use highlighted in this study may have arose from previous experiences of pregnancy. This study did not evaluate whether the participants had a history of pregnancy. Future research exploring the relationship between previous pregnancies and current contraceptive use may inform interventions targeting behaviour change. Such studies are recommended because intentions to use a contraceptive for those with a history of pregnancy, and those without are not always the same.

The study focused on students on the Pietermaritzburg campus only. Further national research is recommended to help inform new programming in higher institutions of learning.

Future research employing a mixed method research design is suggested to determine the predictive value of the theory of planned behaviour in this setting. This may inform interventions targeting behaviour change among students.

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APPENDICES

Appendix 1: Gatekeeper's Approval

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

18 April 2016

Ms Betty Chebitok
School of Human Sciences
College of Humanities
Pietermaritzburg Campus
UKZN
Email: 215080322@stu.ukzn.ac.za

Dear Ms Chebitok

RE: PERMISSION TO CONDUCT RESEARCH

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

"Attitudes towards and perceptions of sexual risk and contraceptive use among university students".

It is noted that you will be constituting your sample by conducting interviews and/or focus group discussions with students on the Pietermaritzburg Campus, UKZN.

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

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

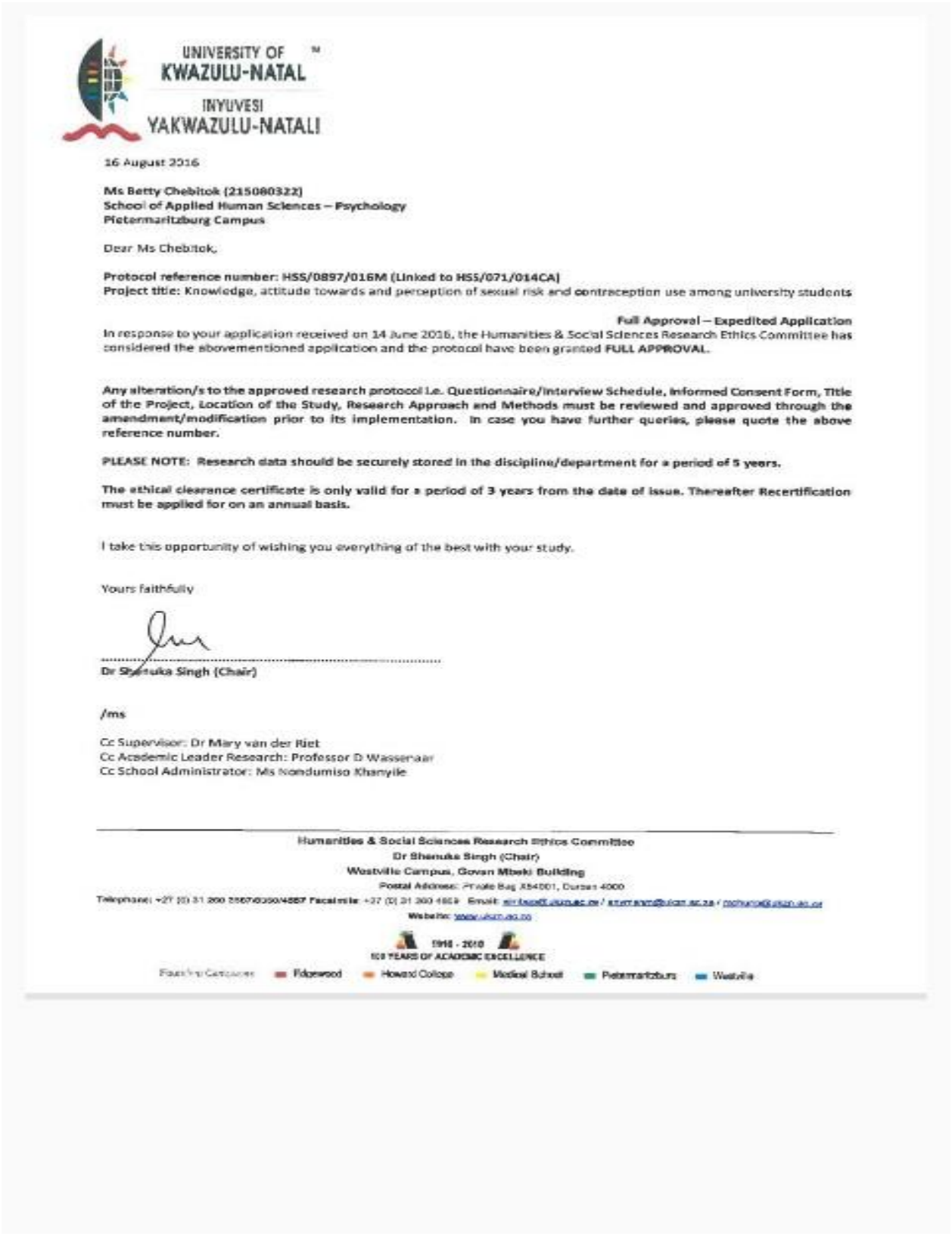
Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR SS MOKOENA
REGISTRAR

Office of the Registrar
Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 260 8005/2206 **Facsimile:** +27 (0) 31 260 7824/2204 **Email:** registrar@ukzn.ac.za
Website: www.ukzn.ac.za

Appendix 2: Ethical approval



UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

16 August 2016

Ms Betty Chebitok (215080322)
School of Applied Human Sciences – Psychology
Pietermaritzburg Campus

Dear Ms Chebitok,

Protocol reference number: HSS/0897/016M (Linked to HSS/071/014CA)
Project title: Knowledge, attitude towards and perception of sexual risk and contraception use among university students

Full Approval – Expedited Application

In response to your application received on 14 June 2016, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL.**

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

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

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

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

Yours faithfully

.....
Dr Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Mary van der Riet
Cc Academic Leader Research: Professor D Wassenaar
Cc School Administrator: Ms Nomdumiso Khanyile

Humanities & Social Sciences Research Ethics Committee
Dr Shenuka Singh (Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4000
Telephone: +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:**
Website:

Appendix 3: Advert

DO YOU WANT TO TALK ABOUT CONTRACEPTIVES?

Would you be interested in participating in a discussion about contraceptive use?
Are you sexually active, an undergraduate or postgraduate student from the University of KwaZulu-Natal, Pietermaritzburg campus and over the age of 18?

I am looking for male and female students from the University of KwaZulu-Natal, Pietermaritzburg campus to be part of my master's research exploring "knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk, among university students"
This will be done through discussion sessions with YOU!!

If you will be interested in participating in this study please contact me by email

contraceptivetudy28@gmail.com

PLEASE NOTE: CONFIDENTIALITY IS GUARANTEED!!!

Appendix 4: Focus group questions

Activity 1: Drawing of a Female Reproductive System

- On the piece of paper provided, please draw the female reproductive system indicating how conception may occur
- On the same piece of paper, please indicate how conception can be prevented

Schedule Questions

1. How do students understand a contraceptive?
2. What different kinds of contraceptives are students aware of?
3. Do the students know how they work?
4. When and how do you think the students learnt about contraceptives?
5. Why do students make use of contraceptives? When should be the right time for students to use a contraceptive?
6. What kinds of contraceptives are preferred by students?
    - Why do they prefer these methods?

7 Where can students get held of a contraceptive on campus?

8 Do students discuss issues of contraceptives with their parents/peers? If not, why not?

- How do students manage contraceptives in relationships?
- Who is in charge of contraceptive use?

10 What are some of the problems students face when trying to access a contraceptive?

11 Do female/male students face particular difficulties in accessing and using contraceptives?

12 Is there anything that could stop students from taking contraceptives or that makes them hesitate to use them?

- If yes, what is it? If no, what is it?

13 How does one's religious beliefs/culture affect contraceptive use?

14 What are some of the perceived side effects/negative consequences of using contraceptives?

15 How can contraceptive use be promoted among students?

Appendix 5: Individual Interview questions

1. What is a contraceptive? What kinds of contraceptives do you know about?
2. How does a contraceptive work?
3. Do you use a contraceptive?
    - Why/Why not?
    - Do you experience any side effects?
4. Which contraceptives do you prefer to use and why?
5. Where do you get contraceptives while on campus?
6. How do you describe/understand sexual risk?
    - What expose you to sexual risk?
    - What risks are important to you?
7. Have you ever discussed issues of contraceptives with your parents?
    - Can you explain what the discussion was about?
    - If you haven't had any discussion, why do you think that is?
8. In your relationship, how is contraceptive use managed?
    - Who initiates contraceptive use? Why is it like the?
    - Who accesses a contraceptive? Why is it like the?
9. Is there anything that could stop you from using contraceptives or that makes you hesitate to use them? Please explain your answer?
10. Does religion/culture play a role in your contraceptive use?
    - Has it affected your contraceptive use? Can you explain how?
11. Does your gender affect your contraceptive use?
12. Do you feel ashamed to access contraceptives from campus clinic? Please explain?
13. Do academic schedule and cost of contraceptives hinder you from acquiring contraceptives?
    - Please explain?
14. What do you think could promote contraceptive use amongst students?

Appendix 6: Focus Group Information sheet

Introduction

Thank you for agreeing to participate in the focus group discussion. This document is intended to provide you with information about the study and your role within it. In order to participate in the study you **MUST** be a male or female registered student at the University of KwaZulu-Natal, Pietermaritzburg campus and over the age of 18 years.

My name is Betty Chebitok, a post graduate student at the University of KwaZulu-Natal, Pietermaritzburg campus. As part of my master's degree, am conducting a study on "knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk, among university students" I would like to know what you understand by contraceptives, different types of contraceptives, when to use contraceptives, opinions on sexual risks, barriers to contraceptive use and your opinions on ways to minimize these barriers. By conducting the research, I hope to get understanding of your perceptions on issues related to contraceptive use.

The focus group process

The discussion will last about two hours. In the focus group the researcher will ask the group various questions about contraceptives for example what do you know about contraceptives? how you obtained information? who is in charge of using contraceptives in relationships? Why do students use contraceptives, what problems men and women face in using contraceptives? whether culture, religion and gender affect decisions on contraceptive use, barriers to contraceptive use and your opinions on how to promote contraceptive use. The research is looking at your opinions and experiences on this social issue therefore, there is no right or wrong answers. You are encouraged to talk freely and informally. You have no obligation to answer any of the questions that you do not want to. Your participation in the focus group is completely voluntary and you are also free to leave the study any time you wish to with no negative consequences.

Recording the discussion

The focus group discussion will be recorded with a digital device. This is to ensure that the researcher is completely focused on the discussion and is not being distracted with taking detailed notes, however small notes might be taken as the discussion goes by. These recording will then be transcribed in order to analyse what has been said in the group.

Confidentiality

Your identity will be kept confidential in the process by using the pseudonym (fake name) of your choice. The pseudonym will be used during the discussion in the focus group, in the transcription of the discussion as well as the final research dissertation. As the discussion is taking place in a group setting, you will be asked to sign a confidentiality pledge stating that everything said in the focus group discussion will be kept confidential. By promising to keep what is discussed in the focus group confidential, you are agreeing not to reveal the identity of anyone in the group or what was said by them to anyone outside the group. However, please be advised that I cannot guarantee confidentiality even if pledge is signed. For this reason, you will not be asked to discuss any personal details concerning your contraceptive use, pregnancy or sexual life, but will instead be asked general questions about what other students do and think. It is also recommended that you do not disclose any sensitive information about yourself or mention the name of the student you are referring to when taking part in the discussion.

What happens after the focus group?

After the discussion, I will take the recordings and transcribe the information into written form. In the process I will still refer you by your pseudonym. These transcriptions will then be analysed and a report will be produced. The report will be used for my master's degree in Educational Psychology and it will be examined by at least two staff members and one external examiner in the Discipline of Psychology.

The data will be available to me as the researcher and my supervisor. The data may also be analysed further in future studies. The findings of the study might also be reported at conferences and they may be used to write journal articles. In all these, your identity will be kept confidential by using your pseudonym. A brief synopsis of the findings will be made available to you upon request.

Storage of the research data

The transcriptions of the discussion will be kept for future research purposes such as additional analysis. They will be stored for five years in a locked cabinet in my supervisor's office, as will any other materials relating to the research. To keep your identity confidential, all the data will be stored separately from information which links it to the pseudonym you used.

Individual interviews

After participating in the focus group, you may be asked to participate in a separate, personal interview as well. If you would like to do this, you will receive details of the process.

Possible benefits of participating in the study

By participating in the research you could benefit directly from discussing the issues surrounding contraceptive use with other university students. You could benefit indirectly from the research as the findings may assist in designing interventions for students surrounding awareness and easy access to contraceptives when needed.

At the time I do not foresee any risk that the study may cause you by participating in the research. If you need advice on further health management or the research raises other social or emotional distress you can visit the Campus Clinic or the Student Counselling Services. At the campus clinic you can get information and assistance on HIV testing, pregnancy testing, sexual advice, contraceptives and information about contraceptives. At the clinic you can book an appointment to either Sr Govender or Sr Peters via email govenderna@ukzn.ac.za and petersi@ukzn.ac.za. You can also approach the Child and Family Centre at the University, for an appointment with an intern psychologist in case of any emotional distress caused by this study (Ms N Naidoo: childandfamilycenter@gmail.com; Tel: 033 260 5166).

Additional

If you have any questions you would like to ask, you are welcome to contact me using the details at the bottom of the page (contacts removed for privacy purposes).

If you have any questions, you may also contact my supervisor:

Dr. Mary van der Riet

033 260 6163;

Email: vanderriet@ukzn.ac.za

If you have any ethical concerns about the study you can also contact Ms. Mariette Snyman of the Humanities and Social Science Research Ethics Committee (Tel: 031 260 8350) Email snymanm@ukzn.ac.za

Thank you for your time and participation. I hope this is an interesting and rewarding experience for you.

Sincerely,

Betty Chebitok

RESEARCHER

Dr. Mary van der Riet

SUPERVISOR

Appendix 7: Interview Information sheet

Introduction

Thank you for agreeing to participate in the individual interview. This document is intended to provide you with information about the study and your role within it. In order to participate in the study you **MUST** be a male or female registered student at the University of KwaZulu-Natal, Pietermaritzburg campus and over the age of 18 years.

My name is Betty Chebitok, a post graduate student at the University of KwaZulu-Natal, Pietermaritzburg campus. As part of my master's degree, am conducting a study on "knowledge of contraceptives, attitudes towards contraceptive use, and perceptions of sexual risk, among university students" I would like to know what you understand by contraceptives, different types of contraceptives you know, contraceptives you use, why you use contraceptives, barriers to your contraceptive use and your opinions on ways to promote contraceptive use among students. By conducting the research, I hope to get understanding of your perception on issues related to contraceptive use.

Your participation

I am asking you to participate in an individual interview that will take approximately one hour. Please note that your participation is voluntary and you are not being coerced to be part of the study. Your agreement to participate in the research will be highly appreciated. You may withdraw from the study at any time you feel like doing so and there will be no punishment or penalties of any kind.

Confidentiality

All the information that you will give during the session be confidential. The notes and records that identify you will be kept confidential to the extent possible by law. Your identity will be kept confidential in the process by using a pseudonym of your choice. The Pseudonym will also be used in the transcriptions of the interview and also in the final report.

Possible benefits of participating in the study

By participating in the research you could benefit directly from discussing the issues surrounding contraceptive use with the researcher. You could benefit indirectly from the research as the findings may assist in designing interventions for students surrounding awareness of contraceptives, promote contraceptive use, and easy access to contraceptives when needed.

At this time I do not foresee any risk that the study may cause you by participating in the research. If you need advice on further health management or the research raises other social or psychological distress you can visit the Campus Clinic or the Student Counselling Services. At the campus clinic you can get information and assistance on HIV testing, pregnancy testing, sexual advice, and more information about contraceptives. At the clinic you can book an appointment to either Sr Govender or Sr Peters via email govenderna@ukzn.ac.za and petersi@ukzn.ac.za. You can also approach the Child and Family Centre at the University, for an appointment with an intern psychologist (Ms N Naidoo: childandfamilycenter@gmail.com; 033 260 5166).

Recording the discussion

The interview will be recorded with a digital device. This is to ensure that the researcher is completely focused on the interview and is not being distracted with taking detailed notes, however small notes might be taken as the discussion goes by. These recording will then be transcribed in order to analyse what has been said in the interview session.

What happens after the interview?

After the discussion, I will take the recordings and transcribe the information into written form. In the process I will still refer you by your pseudonym. These transcriptions will then be analysed and a report will be produced. The report will be used for my master's degree in Educational Psychology and it will be examined by at least two staff members and one external examiner in the Discipline of Psychology.

The data will be available to me as the researcher and my supervisor. The data may also be analysed further in future studies. The findings of the study might also be reported at the conferences and they may be used to write journal articles. In all these, your identity will be kept confidential by using your pseudonym. A brief synopsis of the findings will be made available to you upon request.

Storage of the research data

The transcriptions of the discussion will be kept for future research purposes such as additional analysis. They will be stored for five years in a locked cabinet in my supervisor's office, as well as any other materials relating to the research, there after they will be destroyed. To keep your identity confidential, all data will be stored separately from information which links it to you actual name.

Additional

If you have any questions you would like to ask, you are welcome to contact me using the details at the bottom of the page (contacts removed for privacy purposes)

If you have any questions, you may also contact my supervisor:
Dr. Mary van der Riet
033 260 6163;
Email: vanderriet@ukzn.ac.za

If you have any ethical concerns about the study you can contact Ms. Mariette Snyman of the Humanities and Social Science Research Ethics Committee (Tel: 031 260 8350) Email snymanm@ukzn.ac.za
Thank you for your time and participation. I hope this an interesting and rewarding experience for you.

Sincerely,

Betty Chebitok
RESEARCHER

Dr. Mary van der Riet
SUPERVISOR

Appendix 8: Permission from the Child and Family Centre

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

10 March 2016

To whom it may concern

This letter serves to provide the assurance that should any participant interviewed by Ms Betty Chebitok (Psychology Masters student) require psychological assistance as a result of any distress arising from the research project on *"attitudes and perceptions towards sexual risk and contraceptive use"*, the service will be provided by Masters one Psychology students and intern psychologists at the University of KwaZulu-Natal, Pietermaritzburg Campus Child and Family Centre – phone 033-2605166.

Yours sincerely,

K.P Maruping
Coordinator of University of KwaZulu-Natal, Pietermaritzburg Campus Child and Family Centre

Child and Family Centre
School of Applied Human Sciences

Postal Address: Private Bag X01, Scottsville, Pietermaritzburg, 3209, South Africa
Telephone: +27 (0)33 260 5166 **Facsimile:** +27 (0)33 260 5809 **Email:** Naidoon2@ukzn.ac.za **Website:** psychology.ukzn.ac.za
Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

Appendix 9: Consent form for Focus group and Interviews

I hereby agree to participate in this study. I have had an opportunity to read and understand the information sheet given to me.

The purpose of this study has been explained to me. I understand what is expected of me in terms of my participation in this study and the time commitment I am making to participate.

I understand that my participation is voluntary, and I know that I may withdraw from this study at any point, without negative consequences.

I understand that there is a limit to confidentiality in a focus group setting as the researcher cannot guarantee that the other participants will adhere to the conditions of the confidentiality pledge.

I understand that my data will be stored securely for a period five years and may be used for future research. I understand that measures will be taken to ensure that my identity is protected and my participation in this research will be completely confidential in this regard. I understand that no identifying information about me will be published.

I have the contact details of the researcher should I have any more questions about this research. In the unlikely event that any personal issues should arise during the research, I have been given contact details for Counselling services and the Campus Clinic services.

I have also been given contact information of the Humanities and Social Sciences Research Ethics Committee office.

Signature of Participant…….. Date….....

Appendix 10: Consent to audio record interview/focus group

In order to be able to understand clearly what has been said in the interview/focus group, and to remember it, I would like to record the discussion on the small digital recorder. I will then listen to the recording and write it down word for word.

After the transcription has been made, I will then delete the recording on the digital recorder.

I assure you that your name will not be linked to the recording or the written information from the recording. I will give you a code name, using numbers, for example Participant 1, Interview 3. Or Focus group 3.

Do you consent to the recording of the discussion?

Yes ☐ No ☐

If yes, then please sign here _____ Date _____

Appendix 11: Confidentiality pledge

As a member of the Focus Group, I promise not to repeat what was discussed in this focus group with any person outside of the focus group. By signing this pledge I hereby promise to keep the comments made by the other focus group members confidential.

Signed _____ Date: _____