Perceptions of second year psychology students at the University of Limpopo towards Sexually Transmitted Infection (STI) testing

by

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DEDICATION

This study is dedicated to:

My dear mother, Mmamoyahabo ‘‘Makobjana’’ Josephina Masetla, and my three brothers; Madume Patrick, Motsere Zachariah and Mokete Peter.

The memory of my late father, Mahasha Mogale Solomon, my late maternal grandmother; Modjadji Mmamolatelo Masetla, and my late paternal grandmother; Mampe Mahasha.

DECLARATION

I declare that the mini-dissertation hereby submitted to the University of Limpopo, for the degree of Master of Arts in Clinical Psychology has not previously been submitted by me for a degree at this or any other university; that it is my work in design and in execution, and that all the material contained herein has been duly acknowledged.

Mahasha T (Mr) 03/04/2022

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ABSTRACT

Sexually transmitted infections (STIs) remain a serious global health challenge, which if left untreated, may threaten an individual's health. The challenge regarding the prevention of STI transmission is the asymptomatic nature of STIs during their early stages. Hence, STI testing is vital in tackling the devastating impact of STIs. The Health Belief Model (HBM) provided a lens through which to understand the study as it provides a basis upon which to predict health behaviours. The study employed a qualitative research method. The study aimed to explore University of Limpopo students' perceptions towards STI testing. The objectives of the study were (1) to establish the perceptions of second-year Psychology students at the University of Limpopo towards STI testing, and (2) to determine the importance of testing for STIs among second-year Psychology students at the University of Limpopo. The study purposively sampled 15 second-year Psychology students at the University of Limpopo.

It was found that the participants were knowledgeable about STI testing. The study revealed psychological effects associated with STI testing ranging from anxiety-related attacks, stress, depression, and insomnia, among others. It further revealed important aspects learned about STI testing, i.e. that some STIs are curable, early detection facilitate early treatment, and STIs are not a myth. The importance of STI testing was also determined. It was also noted that it is important to know one's health status to prevent mother-to-child transmission and health consequences. The study further established the experiences of STI testing, such as anxiety, stress, feeling embarrassed, ashamed, and overwhelmed. In addition, it was found that students are reluctant to test for STIs because of low-risk perception of contracting STIs, the fear of receiving positive test results, lack of knowledge, stigma, and the judgemental attitude of health professionals. The findings also revealed that students consider testing to be a good health behaviour, although the majority of them rarely consult for STI testing. Constructive counselling is highly recommended for those who consult for STI testing. It is further recommended that future research should be conducted in other universities with broader sample size.

Key concepts: Perceptions, Sexually Transmitted infection (STI), and Health Belief Model (HBM).

ACRONYMS

SARS-CoV-2-Severe Acute Respiratory Syndrome Coronavirus 2

HBM-Health Belief Model

HIV-Human Immunodeficiency Virus

HPV-Human Papillomavirus

MEDUNSA-Medical University of South Africa

MSM-Men who have Sex with Men

SMU-Sefako Makgatho Health Sciences University

STI-Sexually Transmitted Infection

UL-University of Limpopo

WHO-World Health Organisation

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CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 Introduction

Sexually Transmitted Infections (STIs) comprise major health issues globally and continue to be a serious health concern, with the youth predominantly getting infected more than the rest of the population (Wilson et al., 2017; Zin et al., 2019). The STI testing services aim to identify, diagnose, and treat individuals during the asymptomatic stage of infections, in an attempt to prevent the transmissions and curb the medical complications associated with infections (Aicken et al., 2016). Folasayo et al. (2017) proffered that the pandemic of STIs is a serious health issue across the globe, with approximately one million people contracting an infection per day. Therefore, improving preventive efforts is a priority, not only in the general population but among groups most vulnerable to infections such as young people.

Despite efforts and various measures to control Human Immunodeficiency Virus (HIV), the rates of other STIs increase rapidly, particularly in rural areas because people lack information about safe sex practices and health services such as condoms are inadequate (MacPhail et al., 2017). Hence, STI testing is the most effective preventive and control measure. It is estimated that 357 million new STIs such as trichomoniasis, Human Immunodeficiency Virus (HIV), gonorrhoea, human papillomavirus (HPV), genital herpes, chlamydia, and syphilis occur per year (Wilson et al., 2017).

According to Chernenko (2014) and Nyasulu et al. (2018) the rates of STIs reach the peak between the ages of 15 to 24 years, mostly among women. Wilson et al. (2017) added that the pandemic of STIs is higher among men who have sex with men (MSM), people under the age of 25 years and minority ethnic groups. In light of this, the importance of STI testing cannot be overemphasised. In essence, STI testing is a means through which an individual can know about his or her health status. In South Africa, the prevalence of STIs among individuals in the age range of 15 to 49 is estimated to have increased from 15.3% to 17.9%. According to Cushman et al. (2018), approximately 15% of people are living with STIs unknowingly.

Over the years, efforts were made to accommodate people who need to consult for STI testing and to make sexual health services accessible to people (Aicken et al., 2016). However, a barrier to STI testing and the stigmatising nature of visiting STI

testing clinics harms individuals who consult for STI testing. Other challenges faced in the prevention of the spread of STIs are time, long distances travelled to access clinics, and the manifestation of symptoms at an advanced stage of infection, which contributes to an individual transmitting an infection unaware (Spence et al., 2020). Therefore, STI testing remains crucial because it facilitates early detection and treatment.

If STIs are left untreated, they can hurt an individual's health (Augustatis, 2017). Among males, the consequences could be an increased risk of developing prostate, anal and penile cancer, infertility, developing oropharyngeal, damage to reproductive and sexual organs, and rendering them prone to contracting other STIs. However, the rates of STIs among males are underreported because they are asymptomatic and rarely consult for STI testing. On the other hand, females are more likely to consult for STI testing compared to males; therefore, the rates of STIs among males could be higher than what is known. Nyasulu et al. (2018) averred that an individual living with an STI is 5 to 10 times more likely to transmit or acquire HIV than an individual without an STI. Wilson et al. (2017) concurred that undiagnosed and untreated STIs, such as gonorrhoea, trichomoniasis, syphilis, and chlamydia, can facilitate the easy transmission of HIV. Furthermore, STIs may result in ectopic pregnancy, cardiovascular disease, neonatal mortality, infertility, infant morbidities, and chronic pelvic pain. In essence, undiagnosed, and untreated STIs may lead to poor health and reduced life expectancy, among other consequences.

The efforts to increase STI testing, diagnosis, treatment and curb the pandemic of STIs remain a priority across the globe (Wilson et al., 2017). To maximise the benefits of STI testing in the public, interventions that increase access to STI testing and treatment among groups at risk should be deemed as necessary. The early diagnosis of STIs among young people requires their cooperation and wilful participation in STI testing (Ofori, 2019). Young people's participation in early testing and diagnosis programmes is vital. Generally, STI testing among young people remains quite low and only a few of them are willing to be tested. Studies reveal that only about 25 percent of the youth have consulted for STI testing before.

According to Ogden (2019), the consequences of testing include distress and anxiety caused by stigma attached to STIs. Additionally, positive results following testing are

received with a negative feeling as they make an individual aware of his or her undesirable health status. Furthermore, the negative psychological effects associated with the confirmation of an STI after testing often influence an individual's behaviour, causing negative emotions such as shock, worry, anger, distress, and depression. In addition, the existence of a testing programme influences social beliefs about what is healthy, attitudes, and perceptions towards STIs. Ofori (2019) added that young people's participation in STI testing is affected by fear of an HIV test, mistrust towards health professionals, stigmatisation, religious beliefs, inadequate STI testing centres, and cultural beliefs.

Risenga and Davhana-Maselesele (2017) stated that in some societies, community members perceive STI testing services as taboo and shameful. In such communities, testing positive for an STI may lead to the marginalisation of an infected individual, which discourages people to get tested. Concerning STI testing that is done face-to-face with a health professional, some young people often fear judgment and embarrassment, which in turn has an impact on their willingness to seek sexual health care (Aicken et al., 2016).

The increased rates of diagnosed STI cases could be attributed to factors such as lack of sex-related education among young people under the age of 18 years as this age group engages in sexual activities despite being less informed about STIs (Doster, 2018). Additionally, at least 50% of students do not use condoms and those that use condoms are inconsistent. Condoms are an effective method to prevent the transmission of STIs if used correctly and consistently (Martin-Smith et al., 2018). Therefore, the incorrect and inconsistent use of condoms can contribute to the transmission of STIs. In contrast, MacPhail et al. (2017) stated that there is relatively good knowledge amongst students about STIs, especially regarding when the transmission of an STI is possible.

1.2 Operational definitions

1.2.1 Perception

Risenga and Davhana-Maselesele (2017) defined perception as the process of attaining awareness or understanding of sensory information. In addition, perception is a process of selecting, interpreting, and organising sensory input (Hunt, 2013). Moreover, Weintraub (2013) defined perception as the process by which stimuli is selected, organised, and interpreted to make sense of our world. In the current study, the definition of perception by Weintraub was adopted.

1.2.2 STI testing

According to Gumede (2017), STI testing refers to the process where a practitioner draws an individual's saliva or blood and performs a laboratory test. In contrast, Ogden (2007) defined STI testing as setting up services specifically aimed at identifying problems or measuring aspects of the health of the patient. In this study, the definition of STI by Gumede was adopted.

1.3 Research problem

STIs pose serious health threats among university students, particularly because students engage in risky sexual behaviours far more than their peers who are not students (Mobach & Macaskill, 2011). Svensson and Waern (2013) added that engaging in sexual activities is common among students and they usually do not use condoms, which increases the possibility of STI transmission. However, the exact magnitude of STIs remains unknown, largely due to under-testing and under-reporting (Folasayo et al., 2017).

STIs also increase the prevalence of other infectious diseases among infected students, further resulting in such students' poor academic performance (Misiri & Muula, 2004). Numerous countries across the world have accepted voluntary STI testing as one of the major steps towards the prevention and control of the STI pandemic. According to AL-Maliki (2014), the prevention of infection transmission receives great attention because of the pandemic of several STIs. Gumede (2017) revealed that in South Africa, testing campaigns have become more available, and the percentage of people testing has increased as a result.

Lack of confidentiality and treatment for STIs, particularly HIV, cause people to perceive STI testing programmes as unimportant (Risenga & Davhana-Maselesele, 2017). Moreover, stigmata attached to STIs prevent people from seeking STI testing, especially females (Cunningham et al., 2009; Svensson & Waern (2013). People living with STIs are often subjected to negative societal attitudes. In addition, the stigmata and stereotypes associated with STIs also make people infected with STIs have a negative self-image.

The rates of complications associated with STIs are high among young people, despite the provision of free sexual health care services (Aicken et al., 2016). Additionally, the rate of STI transmission without knowledge can be reduced by voluntary STI testing, despite the presence of symptoms (Chernenko, 2014). However, Risenga and Davhana-Maselesele (2017) reported that there is a high rate of reluctance to get tested.

Risky sexually behaviour persists despite knowledge and awareness raised about the consequences of such behaviours. Studies have been conducted on sexual behaviour, knowledge, and perceptions towards STI related issues with a particular focus on young and older adults. However, quite a few studies were conducted among university students. Such studies were conducted abroad. Therefore, in South Africa, and at the University of Limpopo in particular, a study on the university students' perceptions of STI testing is non-existent. Hence, there was a need to study the perceptions of second-year Psychology students at the University of Limpopo towards STI testing.

1.4 Purpose of the study

1.4.1 Aim of the study

This study aimed to explore University of Limpopo students' perceptions towards STI testing.

1.4.2 Objectives of the study

The objectives of the study were:

- To establish the perceptions of second-year Psychology students at the University of Limpopo towards STI testing.
- To determine the importance of STI testing among second-year Psychology students at the University of Limpopo.

1.5 Motivation of the study

STIs are often asymptomatic, especially during their first stages; thus, treatment may be delayed. For this reason, more regular testing for STIs should be regarded as important health behaviour. Numerous STIs other than HIV are curable, particularly when detected early and proper treatment is followed. Gumede (2017) averred that testing campaigns have become more available, and efforts have been put to increase the percentage of people screening for STIs. Because of this, the researcher sought to explore the perceptions towards STI testing among a representative sample of second-year Psychology students at the University of Limpopo.

1.6 Significance of the study

This study contributed to the existing knowledge about the perceptions towards STI testing, especially among university students. It revealed the ways through which STI testing programmes could be improved by targeting and addressing barriers to STI testing, thus encouraging people to consult for STI testing through the promotion of sophisticated and accommodative STI testing programmes. Such programmes entail prioritising individuals' needs, including their need for privacy or confidentiality, respect, constructive counselling, and targeting stigma, dealing with judgmental/condemnatory attitudes of health professionals and myths about STIs.

1.7 Summary of the chapter

This chapter introduced the research study, problem statement, operational definitions of keywords, the purpose of the study, motivation of the study, and significance of the study. The following chapter presents a review of literature conducted in the past on the subject under investigation in this study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The phenomenon of sexually transmitted infections (STIs) is among major health threats across the globe, including Southern Africa. It results in critical psychological and academic problems. Among adolescents and youth, it represents a serious health challenge and burden which calls for effective primary and secondary interventions (Zizza et al., 2021; Nigussie & Yosef, 2020). More than 100 million new STI cases are reported per year among people under the age of 25 years. Nyasulu et al. (2018) and Oluwole et al. (2020) added that STIs largely affect young people, with STI rates reaching their peak among people aged 15 to 24 years. Over the years, there has been an increase in efforts to control HIV, but notifications of other STIs such as chlamydia and gonorrhoea feature among the most reported ones, particularly among young people (Doster, 2018).

Adolescents and youth are at a greater risk of getting infected due to multiple sexual partners and frequently changing sexual partners, poor STI preventive behaviours, and not seeking relevant medical help following possible exposure to STIs. Early sexual debut and unwillingness to utilise protection during sexual intercourse contribute to an increase in the rate of STI infection. Oluwole et al. (2020) added that other factors contributing to higher STI rates among young people are that bodies of young women are biologically vulnerable to STIs, confidentiality concerns when they have to consult with health practitioners and lack access to healthcare facilities. Furthermore, having been infected with an STI in the past and poor knowledge of STIs are also significantly associated with unwillingness to consult for sexual healthcare (Kassie et al., 2019).

University students gradually face high risks of becoming infected with STIs as they spend many years at university (Doster, 2018). The influence of substances such as drugs and alcohol, immaturity, peer pressure and experimenting with risky sexual behaviours are reported as factors leading to STI contraction, with female students more prone to infections than male students (MacPhail et al., 2017). Zizza et al. (2021) added that the rate of infection among women is higher than among men due to their greater anatomical susceptibility to infections compared to men.

According to Zin et al. (2019), underdeveloped countries experience the prevalence of incurable STIs. Zizza et al. (2021) added that the prevalence of STIs is higher in developing countries, particularly in the African continent. However, the trend is reported to occur at a quicker rate in developed countries lately. Nyasulu et al. (2018) established that the Sub-Saharan region of Africa does not only carry the heaviest burden of STIs but is also the leading region with the cases of STIs across the globe. Moreover, Sub-Saharan Africa contributes to over 70% of the global burden of STIs as a result of sexual exploration and experimentation occurring at a young age Nigussie & Yosef, 2020. The majority of young people underestimate the risks of STI infection due to the asymptomatic nature of some STIs during their earliest stages. For instance, there is an estimated 15% of people living with STIs unaware (Nyasulu et al., 2018). In the Northern Cape Province of South Africa, the prevalence of STIs is estimated to be 7,4%. A study among adolescents in the Eastern Cape Province of South Africa revealed that the prevalence of STIs was 15,8%, with the decline in the age of sexual debut cited as an explanation for an increased number of STI cases.

2.2 The history of STI testing

STI testing has become the vital means through which STIs are detected before symptoms manifest in the twentieth century (Ogden, 2019). The detection of an illness during the asymptomatic stage (also known as secondary prevention) is highly practised across the globe (Wilson et al., 2017). Voluntary STI testing was the dominant model historically (Evangeli et al, 2016). People actively sought STI tests from health facilities voluntarily. Client initiated, mobile, and home-based testing were the main focus of increasing the number of people who test for STIs in some countries. These measures addressed barriers such as the cost of travelling and privacy concerns. In the early twentieth century, regular STI examination and testing were introduced in the United States of America (USA), which sparked interest in the concept of population testing (Ogden, 2019). In the United Kingdom (UK), the Health Centre was developed to provide both social and health services for the community and enabled the health of the local community members to be surveyed and closely monitored easily. Sweden also developed large scale testing programmes and similar programmes were developed in Germany and Japan.

According to Ogden (2019), an interest in STI testing has continued into recent years. In 1993, national testing programmes were developed, specifically for individuals aged 40 to 75 years. Moreover, in some western countries, contracts were developed which included mandatory tasks to test patients over 75 years of age. Furthermore, financial incentives for achieving set levels of testing for pre-school children were introduced in an attempt to encourage health professionals to conduct more STI testing. Routine STI testing was recommended by the World Health Organisation (WHO) in the year 2007 as a strategy to increase the number of people who attend STI testing programmes (Evangeli et al., 2016). This involved offering STI testing to people attending healthcare facilities regardless of their reason for consulting, but with an option to decline in event that they do not wish to be tested. Recent testing programmes have also focused on self-testing and over the counter STI tests, which enables individuals to place an order for a test, collect their sample, return their test sample to the laboratory, and receive the results through an SMS or telephonically (Wilson et al., 2017). Unlike face-to-face STI testing services, self-testing increased the number of people who test for STIs.

2.3 The perceptions towards STIs testing

According to Spence et al. (2020), due to lack of knowledge, STIs are highly stigmatised infections that remain a barrier to people accessing testing facilities. This, in turn, influences people's perceptions towards STI testing and people living with STIs. Wilson et al. (2017) established that an estimated quarter of the student population had never attended an STI testing programme, while about half of the student population had not tested for a year. Furthermore, many people feel embarrassed, ashamed, and anxious about the possibility of other people seeing them attending or discovering that they have attended an STI testing programme (Spence et al., 2020). Whereas some students do not consult for STI testing because they belief that they are at a low risk of getting infected (Woldeyohannes et al., 2017). In contrast, Martin-Smith et al. (2018) revealed that about 20% of students reported to have had an STI test in the past six months whereas 13% intended to have a test in the subsequent month. Women and students above the age of 25 years are more likely to take an STI test, especially those that have been in universities for more than 5 years.

2.3.1 The knowledge/understanding of STIs and STI testing

According to MacPhail et al. (2017), students, especially those in urban regions display adequate knowledge about STIs, the need to utilise condoms for protection and attendance of testing programmes to facilitate early detection of STIs. Zizza et al. (2021) added that, in the Northern Cape Province of South Africa, the respondents possessed adequate knowledge about STIs. Martin-Smith et al. (2018) concurred that students have greater knowledge regarding STIs and STI testing, with male students more knowledgeable than female students. Hence, they refuse to have unprotected sexual intercourse with an individual whose health status is unknown, while others opt to abstain from having sexual intercourse altogether. However, there is still an inconsistent use of protection from STIs, despite being knowledgeable about the existence of STIs. This indicates that being knowledgeable about STIs does not necessarily entail the motivation to practice safe sex (Folasayo et al., 2017).

MacPhail et al. (2017) noted that young people in rural areas and remote regions are at high risks of contracting STIs due to their lack of relevant information regarding safe sex practices and the consequences thereof, and lack of access to sexual health services, such as STI campaigns and STI testing programmes. The findings further revealed that infections among young people occur because they are inadequately knowledgeable about STIs, the epidemiology of these infections and the ways through which they are transmitted. Zizza et al. (2021) added that the prevalence of STI tends to correlate with a lack of knowledge about the transmission of infections and inadequate knowledge about available medical help following sexually risky behaviour. The study further established that some people do not even know the difference between HIV and AIDS, an HIV “window period”, the risk of infection associated with oral sex, and when to get tested for HIV following a possible STI exposure. Zin et al. (2019) reported that the most known STI is HIV, with 95% of people reporting to be knowledgeable about it. On the other hand, 67% know about syphilis, 43% about gonorrhoea, 30% about genital herpes, 27% about chlamydia, 13% urethritis, 5% about scabies, another 5% about dengue fever, and 2% about brucellosis.

2.3.2 The psychological effects of testing for STIs

According to Ogden (2019), students tend to deny that they could be infected or diagnosed with an STI. Studies on the effects of testing emphasise the negative consequences, with false-positive test results in healthy individuals causing distress and anxiety. Individuals who take an STI test tend to experience various negative psychological consequences such as anxiety and fear, among others (Cushman, et al. 2019). These psychological sequelae could be a result of various stages of the testing process, namely, (1) the existence of an STI testing programme, (2) the receipt of STI testing invitation, (3) the receipt of a negative STI test result, (4) the receipt of a positive STI result, and (5) the effect of any subsequent interventions.

- **The existence of an STI testing programme**

The existence of testing programmes may influence social beliefs about what is healthy and may negatively change society's perception of a tested condition (Ogden, 2019). Moreover, another effect of testing programmes is that such programmes can encourage society to associate having an STI with being promiscuous. This may lead to the victimisation of those individuals who are diagnosed with STIs. Furthermore, STI testing programmes are highly associated with and negatively affected by the high levels of stigma attached to STIs (Powell et al., 2016; Risenga & Davhana-Masalesele, 2017). Therefore, STI self-testing may improve the acceptance of STI testing because it addresses issues about privacy or confidentiality, access to a health facility and stigma attached to STIs. Moreover, emotional support and knowing people who are living with STIs increases the acceptance of STI tests.

- **The receipt of STI testing invitation**

According to Ogden (2019), research indicates that sending out invitations to attend a testing programme may influence both an individual's behaviour and the psychological state of the individual. In addition, studies report that about 55 per cent of people who receive an invitation to attend a testing programme reported feeling worried and anxious. Those that have a history of an STI are less likely to accept the STI test compared to those that have never been infected (Levison, 2019). Younger people tend to reject STI tests more than older people. Moreover, illiterate people, males, and those that are extremely worried that they might have acquired an incurable STI tend

to decline STI tests as well. In contrast, MacPhail et al. (2017) reported that people welcome reminders to attend STI testing programmes. In addition, some studies show that there is no significant increase in psychological morbidity following an invitation to attend testing programmes. Therefore, receiving a testing invitation may cause anxiety, although research reveals that this is not always the case.

- **The receipt of a negative STI test results**

The receipt of negative results does not always decrease an individual's anxiety; instead, it may cause individuals to attend further testing programmes due to a lack of faith in the testing programme (Mac Phail et al., 2017). Additionally, there is a relationship between a negative result and an increased level of anxiety or failure to recover the premorbid level of functioning following negative test results (Ogden, 2019). Furthermore, following negative results, some individuals tend to take further tests even though these tests have not been recommended by health practitioners (Ogden, 2019). Moreover, people may not be reassured by a negative result for two reasons; namely, (1) they may hold a belief about the cause of the illness that does not directly lead to the STI being tested for, and (2) they may show a lack of faith in the test itself. In contrast, Cushman et al. (2019) averred that for women, anxiety becomes lower following receiving negative results.

- **The receipt of a positive STI test results**

The diagnosis of an STI may cause a detrimental impact on an individual's psychological functioning, especially if it is incurable (Ogden, 2019). The receipt of a positive result can be associated with a variety of negative emotions ranging from worry, anxiety, and shock. Martin-Smith et al. (2018) and Ogden (2019) concurred that overwhelming anxiety could occur following the receipt of positive test results. Additionally, positive test results may generate morbidity and terror. Other psychological factors associated with positive test results are fear of death and self-inadequacy, especially upon testing positive for HIV (Evangeli et al., 2016). Moreover, levels of depression are higher in those labelled as STI positive (Martin-Smith et al., 2018). The discrimination towards those that receive positive results may hurt their perception of STI testing, worsened by lack of confidentiality and privacy in STI testing programmes (Risenga & Davhana-Masalesele, 2017).

- **The psychological effects of subsequent interventions**

The psychological impact of referral and treatment should be taken into consideration because it could have an impact that is greater than the risk of an STI in some individuals (Ogden, 2019). An individual may suffer shame related to disclosing the health status with a sexual partner or health care provider if they discovered positive test results through self-testing (Scheinfeld, 2021). Furthermore, studies reveal that following the diagnosis, people experience high levels of intrusive thoughts, avoidance, and high levels of anger. Also, the diagnosis may influence their body image and sexuality, with some individuals engaging in sexually risky behaviours following a positive test result (Martin-Smith et al., 2018). Although the subsequent treatment following a positive STI test result is regarded as constructive and helpful, it could also create psychological distress in some individuals.

2.3.3 The important aspects of STI testing

Gumede (2017) reported that STIs symptoms do not always manifest, especially during the first stages of the disease; for that reason, treatment may be delayed if an individual does not take an STI test to facilitate early detection and treatment. Oluwole et al. (2021) added that over half of the respondents knew that it was possible to live with an STI without symptoms. Moreover, the respondents also knew that some STIs are incurable, while others had learned that STIs could be prevented. The majority of the people belief that testing is important as it enables one to know his or her STI status (Cuffe et al., 2016). STI testing remains crucial in reducing the impact of STIs by ensuring that people receive treatment soon after infection and reducing the chances and risk of infecting others (Spence et al., 2020). Mansor et al. (2020) reported that the majority of the students had learnt that STIs are commonly transmitted through unprotected sex. While others knew that STI infected blood could transmit an STI.

2.4 The importance or beneficence of testing for STIs

2.4.1 Reasons it is important to test for STIs

The term ‘beneficence’ refers to the likelihood that any benefits to the patient will outweigh any present burden (Ogden, 2019). Various STIs other than HIV can be cured when detected in their early stages and relevant treatment is adhered to (Gumede, 2017). Therefore, testing for STIs regularly with or without symptoms is a vital health behaviour. STI testing may aid in facilitating the prevention of mother-to-child transmission by commencing with treatment before STI symptoms manifest. If the treatment is delayed, STIs can have a detrimental effect on an individual’s health, causing such conditions as infertility and pelvic inflammatory disease, among others (Martin-Smith et al., 2018; Nyasulu et al., 2018).

According to Van Wees et al. (2018), STIs may cause reproductive complications such as ectopic pregnancy and tubal subfertility if not detected and treated timeously. There is evidence in favour of testing as a benefit to the patient, that is, in terms of detecting a treatable infection and enabling the individual’s life to be prolonged or enhanced (Ogden, 2019). Furthermore, the confirmation of the absence of STIs through testing may also benefit the patient in that, a negative result may restore health to the patient and serve as a motivation for that patient to engage in good health habits (Spence et al., 2020). Therefore, taking an STI test is associated more with positive effects than with the negative impact on individuals being tested.

2.4.2 The experience of STI testing

Learning of a positive test result without professional support could have a greater impact on the psychological state of an individual (Powell et al.2016). Additionally, minor anxiety is reported while waiting for test results. Other reports highlight concerns about tests’ accuracy, but the most severe anxiety is experienced upon receiving positive test results. The process of testing is also found worrisome and intimidating, with some associating visits to a clinic with being a highly embarrassing experience. Van Wees et al. (2018) explained that some individuals experience extreme fear while waiting for test results which motivates them to engage in preventive behaviour in future. Spence et al. (2020) revealed that some of their participants experienced anxiety about needles and interacting with health practitioners in a face-to-face

context. Hence, they preferred internet-based testing and electronic test results to face-to-face testing with a health care practitioner.

2.4.3 Reason for reluctance to get tested for STIs

Although people are willing to be tested, the majority of them have never volunteered to be tested previously. Cuffe et al. (2016) found that individuals do not go for testing because they do not think they are at risk of contracting an STI, find asking for an STI test embarrassing while others are concerned about lack of confidentiality. Other reasons for an unwillingness to be tested include being afraid of the stigma attached to STIs, discrimination due to STI diagnosis, fear of positive results and lack of treatment or cure for some STIs (Nyasulu et al., 2018; Wilson et al., 2017). There is a minority group that can consent to be tested, only if guaranteed a cure. Whereas some people do not test for STIs because they do not perceive any benefits for testing. Others are simply not concerned about their health; instead, they invest their time in sports, school, and media (Cuffe et al., 2016). Cushman et al. (2019) reported that individuals are anxious and fearful about other people discovering that they have an STI. They worry about how others will perceive them thereafter, which hampers their eagerness to accept STI testing. Furthermore, due to the stigma associated with STIs, individuals have the fear of receiving positive results and anticipate negative reactions from other members of society in the event that they test positive (Powell et al., 2016).

2.5 The psychological predictors of STI testing uptake

The number of people who attend different STI testing programmes differ depending on factors such as the country, the STIs being tested and the time of the testing programme. Three main factors could influence the uptake of STI tests, namely: patient factors, health professional factors and organisational factors.

2.5.1 The patient factors

Various studies have revealed that demographic factors, emotional or psychological factors, and contextual factors could predict the uptake of STI testing.

- **Demographic factors**

Women who voluntarily take STI tests are more likely to belong to a high socio-economic status, with older women more likely to take an STI test than younger women (Ogden, 2019). Van Wees et al. (2019) established that people who lack STI related knowledge are less likely to consult or follow up for STI testing. MacPhail et al. (2017) established that in terms of gender, women were more likely to consult than men regarding sexual health issues. Ogden (2019) revealed that those who do not smoke, homeowners, those who regularly receive check-ups from health practitioners and those who enjoy good health tend to go for STI testing. In addition, it is those that feel most healthy that tend to lean towards attending STI testing programmes than those who are less confident about the state of their health.

- **Emotional/psychological factors**

Emotional factors such as anxiety, fear, uncertainty and feeling indecent tend to relate to the uptake of STI tests (Ogden, 2019). Those who do not attend testing programmes cite fear of the results, with women who take STI tests reporting to suffer less anxiety compared to men. The cognitions derived from a range of models and emotional factors, particularly reassurance predict the uptake of STI test. Powell et al. (2016) added that another role of emotional factors includes anticipation of a range of unpleasant emotions if they test positive for an STI. In addition, STI testing may require them to expose their body parts to health professionals, which in some cultures is seen as public indecency. Workowski and Bolan (2015) reported that testing could be uncomfortable for some individuals, and it should be performed by experienced professionals to minimise or avoid the possible psychological trauma. Therefore, the intervention should also aim to reduce the uncertainty and help individuals find cognitive closure, which in turn would facilitate an improvement in the number of people who attend STI testing programmes.

- **Contextual and psychosocial factors**

Contextual factors have also been shown to predict STI test uptake. Ogden (2019) reported that individuals often show complex and sometimes contradictory beliefs about their risk of contracting STIs, which relate to factors such as prevalence in their environment and beliefs about transmission. Levison et al. (2019) reported that an

explanation for acceptance of STI test could be psychological and psychosocial factors such as the lower expectation of undesirable results, lack of perception of stigma related to STIs, and perception of benefits related to STI testing. The uptake of the test is also related to the individual's risk perception of susceptibility to an STI and the contextual factors such as family discussion about STI (Martin-Smith et al., 2018). Hill-Tout et al. (2018) revealed that men are poor healthcare services users because of cultures that view visiting healthcare facilities as a sign of weakness. Further challenges are stigma, isolation, shame, vulnerability, loss of social status, and end of sexual relationship following testing positive for an STI.

2.5.2 The health professional factors

Health professionals' beliefs and behaviour need to be assessed alongside those of the patients (Ogden, 2019). Belief in the effectiveness of testing is associated with an organised approach to testing and time spent on testing by health practitioners. Providing information that is objective and tailored to the needs of the patient, dealing with emotion by both eliciting it and containing it, communicating it, and performing sophisticated skills may influence patients to consider taking an STI test (Gumede, 2017). The means of presenting a test may also have an influence on the uptake of an STI test by a patient (Ogden, 2019). The rates tend to be related to how tests are offered by a health professional, which reflects the health professional's own beliefs about the test. Health professionals' behaviour and beliefs about the consultation could influence the patient's decision about whether to take a test or not.

2.5.3 The organisational factors

Many organisational factors may also influence the uptake of STI tests. Research shows that the means of invitation have an effect on the uptake rate and indicate that if the invitation is issued in person, the rates of STI test uptake are higher (Ogden, 2019). The location of the testing programme may also be influential, with more accessible settings promoting attendance to STI testing programmes. In addition, making the attendance of testing programmes mandatory rather than voluntary also has an effect. There is an increase in awareness of STI testing and it is considered to be a great health priority compared to previously. However, some people report lowered self-efficacy due to STI testing programmes (Nyasulu et al., 2018).

2.6 Summary of the chapter

STI testing otherwise known as secondary prevention has been developed in the twentieth century as a vital means to detect STIs at their earliest stage. Specific criteria have been developed to facilitate the testing process and research has been carried out to evaluate means through which to increase patients' attendance of STI testing programmes. But there are debates about the problems with testing programmes, especially about their possible psychological consequences. Although STI testing has psychological consequences, programmes are still being developed, showing that it is still regarded as vital. This chapter reviewed the literature on the history of STI testing, perceptions towards STI testing, the importance of STI testing, and the psychological predictors of the uptake of STI testing. The next chapter discusses the theoretical framework that undergirded this study.

CHAPTER 3: THEORETICAL FRAMEWORK

3.1 Introduction

Various theories provide a framework through which one can understand perceptions towards STI testing and performance of health-related behaviour. These theories include, among others, the Health Belief Model (HBM), which is the theoretical lynchpin of this study.

3.2 Theoretical framework of the study

3.2.1 The Health Belief Model (HBM)

The Health Belief Model (HBM) explains health-related behaviours focusing on the role of socio-psychological attributes that determine these behaviours (Kim & Kim, 2020). The theory was developed by the social psychologists, Rosenstock, Hochbaum, Kegeles, and Leventhal, at the United States Public Health Service, with the focus on understanding the reason people failed to perform preventive health activities (Gurung, 2019). The HBM belongs to the category of value expectancy theories, which state that an individual's behaviours can be predicted. It depends on two variables; namely, the value placed on an outcome by an individual and the possibility that an action will lead to the desired outcome, for example, STI testing to prevent health consequences.

This model predicts and explains health behaviours such as prevention, controlling, screening, and testing for disease, focusing largely on people's attitudes (Louis, 2016). The HBM holds that individuals will take actions to prevent disease if they belief that they are prone to a condition; if the disease would have a serious effect on their lives; if they belief that the action can reduce the severity and when influenced to act by another person or factors (Jones et al., 2014; Kim & Kim, 2020). In addition, the model purports that environmental factors have an impact on the actions of an individual (Kim & Kim, 2020).

According to the HBM, individuals' beliefs about factors such as the perceived benefits of health behaviours, obstacles to perform preventive action, and self-efficacy, influence their motivation to perform preventive health activities (Brannon et al., 2018). The HBM emphasises that cognitive elements characterising an individual's behaviour

depend on rational expectations. It further explains that when individuals are convinced that the condition is severe, they are highly susceptible to it, they are also convinced that a protective or preventive behaviour is necessary, and the costs of adopting the protective behaviour are low, they will comply or adhere to protective health behaviour (Kim & Kim, 2020).

* Assumptions of the (HBM)

The model assumes that an individual is likely to engage in a protective action if he or she thinks an undesirable health condition could be avoided (Brannon et al., 2018). Hence, people need to be made to understand that they can avoid an undesirable condition or complication. This will encourage them to take preventive health actions. In this study, the selected students had to belief that they could avoid a severe condition if they perform a preventive action, STI testing.

The second assumption of the HBM is that individuals will take preventative action if they have a positive expectation such as that by engaging in healthy behaviour, they can avoid a serious condition (Gurung, 2019). They need to anticipate the benefit they will get from practising healthy behaviour (Kim & Kim, 2020). Failure to see a benefit for behaviour will make it difficult for an individual to take an action. The participants in this study had to anticipate the benefits of STI testing to be motivated to consult for STI testing.

The third and last assumption of the HBM is that individuals perform a preventive activity if they belief that they can successfully perform that preventive activity (Ofori, 2019). This requires an individual to belief that he or she possesses the capacity to perform the health behaviour as well as the availability of the knowledge and skills needed to perform the activity, in addition to a supportive environment (Louis, 2016). In this study, the research participants had to belief that they could successfully consult for STI testing and the environment had to be conducive.

* The six factors of the HBM

- **Perceived Susceptibility**

Perceived susceptibility refers to an individual's assessment of health-related risks, with those with high susceptibility more likely to take an action to reduce the risk (Kim & Kim, 2020). People who think are not at risk often have a low perceived susceptibility, and thus may not engage in health behaviours. Those who think they could be infected are more likely to comply with preventive actions and recommendations (Ofori, 2019). This current study sought to establish perceptions towards STI testing, with those who perceived themselves as susceptible to STI, adopting a health behaviour in a form of STI testing.

- **Perceived Severity**

Perceived severity refers to an assessment of the seriousness of the condition and the possible health consequences (Kim & Kim, 2020). Those who consider a health condition to be serious will take an action to curb it or ensure that it does not occur or progress (Branon et al., 2018). In contrast, those who underestimate the severity of the condition will not engage in health behaviours. Perceived severity further includes beliefs about the impact of the condition on the work and social roles of an individual (Gurung, 2019). In the current study, students had to perceive STIs as serious infections with severe health consequences or complications on their physical, academic and social lives before they considered it necessary to perform preventive actions, such as consulting for STI testing.

- **Perceived Benefits**

Perceived benefits refer to the value that arises when performing health behaviours (Kim & Kim, 2020). If the perceived benefit from action is greater than the perceived barrier, an individual is more likely to engage in preventive action. In this study, the benefits were beliefs that STI testing is effective and can detect infections early for early treatment to commence, thus avoiding severe health consequences or complications.

- **Perceived barriers**

In contrast to perceived benefits, perceived barriers entail an assessment of possible obstacles to performing a health behaviour (Kim & Kim, 2020). Perceived barriers include the costs involved, the risks and effects of a procedure, and discomfort, such as an emotional impact related to engaging in healthy behaviour (Ofori, 2019). Barriers could be the anticipated psychological costs of the recommended health behaviour. In addition, the anticipated barriers to engaging in health activities include availability and accessibility factors, anxiety-related attacks, personal characteristics, and physical barriers (Gurung, 2019). Those who do not perceive barriers or possess the capacity to deal with barriers will perform the preventive health activity. In this study, the main barriers identified concerning STI testing were the psychological effects of STI testing.

- **Self-Efficacy**

This refers to the perception that one can successfully perform a health-related behaviour (Kim & Kim, 2020). Those that belief that they can execute health or preventive behaviour to minimise the effect of the infection will most likely adhere to recommended health behaviours (Brannon et al., 2018). In this study, the factors motivating students to test for STIs were identified. It was further confirmed that the perceived efficacy or ability to consult for STI testing was associated with more STI testing, with those who have tested reporting that they have tested more than once due to the realisation of their self-efficacy.

- **Cues to Action**

Cues to action refer to a range of triggers for an individual to take a health action, comprising internal factors (i.e. physical symptoms) and external factors (i.e. media campaigns) and recommendations from others (Gurung, 2019). Additional cues are STI testing programmes, and health practitioners, among others. Cues to action regarding STI testing can be noted on an infected person, or the health status of a sexual partner, which could encourage an individual to consider STI testing necessary. In addition, worry by people surrounding an individual could influence an individual to engage in a recommended health behaviour. In this study, personal factors motivating students to test for STIs were identified, with some revealing that they consulted for

STI testing following experiences of STI symptoms and others after being encouraged by others, e.g. former school principal.

Table 1: The six HBM factors' definitions, application, and implications in this study.

The six factors	Definitions	The application to and implication in this study
Perceived susceptibility	An individual's assessment of health-related risks.	The perceived possibility of having or becoming infected win an STI.
Perceived severity	An assessment of the seriousness of the condition and the possible health consequences.	The perceived severity and health consequences of STIs.
Perceived benefits	The benefit or the value that arises when performing a health behaviour.	The perceived benefit of STI testing. For example, prevention of complications.
Perceived barriers	An assessment of possible obstacles to performing a health behaviour.	The perceived barriers to STI testing.
Self-Efficacy	This refers to the perception that one can successfully perform a health-related behaviour.	The confidence in the capacity to successfully undergo the STI testing process.
The cues to Action	A range of triggers for an individual to take a health action.	Internal factors (symptoms of STIs) and external factors (media campaigns and recommendations to test).

The HBM provided the framework for this study as it is a model that provides a basis upon which to predict health-related behaviours among people. It could be used in predicting whether an individual will engage in a particular behaviour or attempt to prevent health consequences or not. The model foregrounds the belief and perception of an individual about the seriousness of the infection or condition. It also highlights the benefit associated with the preventive activity and the person's ability to perform the preventive activity (Ofori, 2019). An individual's perceived susceptibility to the infection or disease, perceived severity of the infection or disease, perceived benefit for the preventive action, perceived barriers against the preventive action, the person's self-efficacy and certain cues to perform the preventive action, all interact to determine whether an individual will engage in health-related behaviour or not.

In applying the HBM to STI testing, it was concluded that individuals are likely to engage in STI detection activity by attending STI testing clinics or programmes if they belief that they are susceptible to STIs and that STIs are severe. Additionally, people could take an STI test if they belief that the preventive activity, in this instance, consulting for STI testing, is beneficial and that the STI testing facilities are available, accessible, affordable and ensure confidentiality. Additionally, people would be keen on taking an STI test if they were guaranteed self-efficacy that is, having the confidence in their ability to perform a preventive activity, which should be accompanied by triggers or encouragement to attend testing programmes, cues to action.

The combination of the above-discussed favourable factors encourages people to engage in health behaviour or take preventive action, such as consulting for STI testing. In contrast, the perception of low susceptibility to STIs, the perception that STIs are not severe, lack of benefits for taking preventive action such as STI testing, barriers to the use of STI testing facilities, perceived lack of self-efficacy and lack of triggers (cues to action), lead to failure to consult for STI testing. However, it is noteworthy that factors such as the educational level, marital status, ethnicity, and gender could influence an individual's behaviour and the decision on whether to perform preventive activities or not.

3.3 Summary of the chapter

This chapter presented the model through which the perceptions of students towards STI testing could be understood. The Heath Belief Model was discussed and how it assisted the researcher to view and understand the motivation to perform health-related behaviour (STI testing) was explained. The HBM provided a systematic way to explore and understand the perceptions of students towards STI testing.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

The chapter outlines the research method utilised in the study. Research methodology refers to the totality of how the researcher is going to undertake research, the research approach that will be used, the epistemological position of the research and the specific research methods the researcher will choose, e.g. interviews or questionnaires (Whittaker, 2012). This chapter discusses the research approach employed, research design, sampling, data collection, data analysis, data management, quality criteria used to guide and conduct the study, and the ethical rules that the researcher adhered to throughout the study.

4.2 Research approach

This study adopted the qualitative research approach. Qualitative research refers to concepts, characteristics, meanings, metaphors, definitions, and symbols (Lune & Berg, 2017). It offers the researcher a comprehensive perspective because it enables him or her to go directly to the social phenomenon under study and observe it as much as possible, and subsequently develop a deeper understanding of it. The qualitative method produces quality data and explores meanings, experiences, language, processes, and values (D'Cruz and Jones, 2014).

The qualitative approach was preferred in this study because it values the depth of meanings and individuals' subjective experiences, including the processes through which they make meanings (Leavy, 2017). It further allows the researcher to understand, unpack meanings people ascribe to situations, activities, objects, circumstances, and people. D'Cruz and Jones (2014) further stated that the qualitative method mainly relies on open-ended questions or themes to elicit responses during an interview. Statistics, tables, graphs, and numbers are not the main form of data sought in a qualitative study.

4.3 Research design

The researcher followed a phenomenological research design. Astalin (2013) defined phenomenology as the study of phenomena, such as experiences, situations, and events. Phenomenological research raises awareness, increases insight, and develops knowledge about the phenomena. The phenomenological research design assisted the researcher to describe the perceptions towards STI testing and afforded the researcher the latitude to raise awareness, increase the insight, and knowledge about perceptions towards STI testing.

4.4 Sampling

4.4.1 Population

According to Whittaker (2012), population refers to the total group of people or other units that are being researched. For this study, the target population was second-year Psychology students at the University of Limpopo. The research participants ranged from 20 to 25 years of age and consisted of fifteen participants with eight females and seven males. The participants differ from the rest of the population in that they are students at an institution of higher education. Therefore, they are more knowledgeable than a person who is not a university student. A detailed explanation of the demographic information of the research participants is provided in Chapter 5.

4.4.2 Area of study

This research project was conducted at the University of Limpopo (Turfloop Campus) in the Mankweng area. The University is located approximately 30 kilometres East of Polokwane City within the Capricorn District of Limpopo Province in South Africa. The University was previously known as the University of the North until 2005 when the then University of the North was merged with the Medical University of South Africa (MEDUNSA). The two institutions combined to form the Turfloop and the MEDUNSA Campuses of the institution. However, the institution split in 2015, following which the MEDUNSA Campus became Sefako Makgatho Health Sciences University (SMU).

Figure 1: The map of the Polokwane area showing the location of the University of Limpopo (area of study).

4.4.3 Sampling method

According to Whittaker (2012), sampling refers to the process of selecting the participants or sources of data that will be involved in the study. Additionally, research participants have to be recruited based on the purpose of the study and its questions (Leavy, 2017). In this study, a non-probability sampling method was utilised, wherein the purposive sampling technique was used. According to D'Cruz and Jones (2014), non-probability sampling does not allow the researcher to generalise the findings and is favoured by qualitative researchers. Purposive sampling refers to a process where the researcher selects participants who are more likely to produce relevant information and is based on the knowledge and experience of the participants (Whittaker, 2012). This study sampled 15 second-year Psychology students at the University of Limpopo.

The study purposively sampled research participants, therefore the target population or people who met the sampling criteria were professionally approached and the study was advertised and elaborated to them. Those that felt comfortable and were willing to partake in the study were interviewed. The sampling criteria were that: the participant had to be (1) a second-year psychology student at UL and (2) had to express willingness to take part in the study and also consent in writing.

4.5 Data collection

The researcher used semi-structured interviews to collect data. Interviews are processes through which one person asks questions and the other person answers them (D'Cruz & Jones 2014). Whittaker (2012) asserted that semi-structured interviews involve developing an interview schedule, which encapsulates questions that enable the researcher to adequately structure and facilitate data collection. Furthermore, semi-structured interviews are usually formal, research participants may be asked to complete informed consent forms, and they have a timeframe (D'Cruz & Jones, 2014). Leavy (2017) added that semi-structured interviews are inductive and usually use open-ended questions. Hence, in this study, individual semi-structured interviews were conducted using an interview schedule. Semi-structured interviews were used because they allowed the researcher to probe further when the participants answered the questions. In light of consulted literature on the perceptions of students towards STI testing, the researcher compiled a set of predetermined questions on an interview schedule. The questions were used to collect data in this study. In addition, the interview schedule consisted of seven open-ended questions. The English language was used as the medium of instruction, especially because all research participants could comprehend and respond in the English language without difficulty.

4.5.1 Data collection procedure

The researcher had one interview session with each participant. Questions were asked about the perceptions of students towards STI testing. Interviews with the participants were held in a conducive environment, and all data collected was stored in the form of transcripts. Transcripts are formally written responses and audiotaped recordings (Creswell, 2007). The researcher recorded the participants' responses after the participants gave their consent to be interviewed and recorded. The average duration of an actual interview was nine minutes taking into consideration Severe

Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) protocols which prohibited extended periods of contact. Further SARS-CoV-2 protocols such as confirming that the researcher and participants were not experiencing SARS-CoV-2 related symptoms, keeping and maintaining recommended social distance, wearing masks properly, and sanitising were strictly adhered to throughout the interview sessions.

4.6 Data analysis

Data analysis refers to making sense of collected data and searching for deeper meanings of the content (Whittaker, 2012). Data were analysed using thematic content analysis. Thematic content analysis entails identifying themes in qualitative information. A theme refers to an important aspect identified from the collected information and relates to the questions of the study (Maguire and Delahunt, 2017). It involves a detailed and careful interpretation as well as the examination of the material to identify themes, patterns, meanings, and assumptions (Lune & Berg, 2017). For a proper thematic analysis, the researcher needs to go through data repeatedly and familiarise himself or herself with the tapes and transcripts. It further requires the researcher to start with coding, followed by analysing it by breaking it up into data themes.

Thematic content analysis is the most popular approach in qualitative research and has six main steps of analysing data, which were followed by the researcher thus:

- **Step one: Becoming familiar with the data**

The first step of thematic analysis is reading and rereading the transcripts. Here, the researcher familiarises himself or herself with the data collected (Maguire & Delahunt, 2017). In this study, the researcher made notes and read the data repeatedly before interpreting and analysing it, to ensure that all questions were answered, and that the analysis was error-free.

- **Step two: Generate initial codes**

According to Maguire and Delahunt (2017), during this second step, the researcher starts to organise the data. In this study, the researcher reduced a large amount of data into small and understandable meanings. The researcher further coded all the data relevant to the study and concerning the research questions.

- **Step three: Search for themes**

In this stage, the researcher identifies themes based on their significance (Maguire & Delahunt, 2017). The researcher organised codes and identified themes that spoke to the research questions.

- **Step four: Review themes**

During this stage, the researcher reviews, modifies and develops the themes that have been identified in the previous step to establish if they make sense. Furthermore, the researcher groups data according to relevant themes (Maguire & Delahunt, 2017). The researcher carefully examined data, ensured that the data supported the themes and was assigned to the right theme.

- **Step five: Define themes**

According to Maguire and Delahunt (2017), during this fifth stage, the aim is to identify what each theme is all about, how the subthemes are relevant to the main themes, and how the themes relate to each other. After developing themes, the researcher established how they related to one another and how subthemes within them related to main themes.

- **Step six: Writing up**

This sixth and last step of thematic analysis involves writing up the analysis and dissertation (Maguire & Delahunt, 2017). The researcher identified information from data collected and available literature that was relevant to each theme and subtheme to write up the research report.

4.7 Data management

Data management in qualitative research is defined as a designed structure for categorising, systematising, and filing the research materials to make them retrievable and duplicable (Li-Chen, 2019). While Sanjeeva (2018) define it as the effective handling of data that is created in the course of research. Chigwada et al. (2017) explained data management aims to ensure reliable verification of results. It further permits new and innovative research built on existing information. Moreover, it encompasses activities related to the documentation, organisation, and dissemination

of data (Borghi et el., 2018). In addition, it encompasses topics such as the protection of human subjects and confidentiality (ethical consideration), data storage and record-keeping, preservation, data ownership, retrieval, and data sharing (Sanjeeva, 2018; Li-Chen, 2019).

According to Li-Chen (2019), the conversion of data which represents the interaction between the researcher and the participants into written reports forms part of managing data. The proper management of data enables the researcher to accumulate data in various forms while maintaining data security. This process may involve interviews while taking notes, revising notes taken, and listening to recordings.

In this study, data was managed following the below themes:

4.7.1 Confidentiality

Li-Chen (2019) defined confidentiality as the responsibility for information obtained in the interaction between the professional and the client. It further entails the protection of data collected from the participant by the researcher. Moreover, confidentiality is a professional commitment to the participants by the researcher, therefore, the privacy of information gathered from research participants must be respected and maintained. In the current study, procedures were put in place to protect the personal information obtained from study participants. The privacy of participants was protected by preparing data in a way that reduced the possibility of identifying research participants. Ways to achieve confidentiality included altering the forms of documentation and changing personal details such as their names. The pseudo names were used to represent participants (i.e Participants 1). In addition, strict precautions were put in place to ensure that their personal information in audio tapes and informed consent is not disclosed.

4.7.2 Protecting human subjects

Human subjects are the most important part of a research study and researchers must protect them in all possible ways (L-Chen, 2019). Building rapport or professional work relationships with participants is vital because it assists in developing a non-hierarchical relationship and trust between the researcher and the participants. If not handled properly, the information obtained could have a psychological impact on participants. In this study, the researcher informed participants that data will be

respected, and privacy will be maintained. Storing data properly ensures that researchers maintain the integrity of data and the sharing of data of human subjects must be approved by the review board of the institution first (Borghi et al., 2018). This stud study will not be shared with the public without the permission of the institution. Furthermore, participants were made aware of the potential risks and possible consequences involved in participating in the study. Hence, they were provided with options, such as withdrawal from the study in event that they wish to do so. Furthermore, the researcher was open-minded, respectful and sensitive towards participants.

4.7.3 Data storage

In a qualitative study, an enormous amount of data may accumulate during the study (Li-Chen, 2019). Therefore, data storage is a key factor in enabling effective data sharing (Borghi et al., 2018). Data management ensures that information is stored, retained, made accessible for use and reuse (Chigwada et al., 2017). Data might be stored in different forms such as original hard copies, computer files, or photocopies among others (Li-Chen, 2019). In this study, the researcher used hard copies, a tape recorder, and a notebook. Following interviews, data was saved and kept safe to prevent possible loss. Hard copies were bound and kept safe together with notebooks, while audiotapes were transcribed soon following interviews.

4.7.4 Data sharing

Research data is shared to advance knowledge (Li-Chen, 2019). It is further shared to broaden, build new theories, validate, and generalise findings. It is vital because it promotes innovation, facilitates collaboration among data users, make scientific debate possible, promotes transparency, and helps to ensure that duplication is avoided (Chigwada et al., 2017). Data sharing grants other researchers the opportunity to interpret, discover, reuse the data and possibly build based on the shared information. However, research data should be finalised before is shared with the public and the researcher decide with whom to share the findings. As it applies to this study, the researcher has shared the data with the supervisor only, for supervision and assessment.

4.7.5 Data ownership

According to Li-Chen (2019), the researcher must be clear as to who owns data. However, in a qualitative study, data usually result from the interaction between the researcher and the participant, but the researcher has the right and responsibility to use and manage the data. However, the owner of the data could be both the researcher and research participants. The training institution also possesses the power to claim the ownership of data. Therefore, the researcher had to clarify the ownership of the data collected to avoid possible confusion and/or conflict. In the case of this qualitative study, data is owned by both the researcher and the participants interviewed, although the researcher had the right and responsibility to use and manage it properly.

4.8 Quality criteria

D'Cruz and Jones (2014) stated that alternative criteria to ascertain the trustworthiness of research are: credibility (for validity), transferability (for generalisability), dependability (for reliability) and confirmability (for objectivity).

4.8.1 Credibility

Credibility, also known as internal validity, affirms that the subject was described and identified accurately (De Vos et al., 2014). It further emphasises the truth of the findings of the study. Hence, the researcher did not manipulate or alter the responses of the participants to ensure credibility. In addition, the researcher ensured credibility through adequate engagements with participants. The researcher provided the research participants with ample time to respond to the research questions.

4.8.2 Transferability

This refers to the ability to transfer or apply the findings of the study from one context to another context (Leavy, 2017). The findings regarding this qualitative study were specific to a small number of students at the University of Limpopo. Transferability was ensured through the selection of participants who have information that is genuine and relevant to the study. It was further ensured by providing a detailed and accurate description of the research study to the research participants.

4.8.3 Dependability

Dependability is a well audited and logical process in which the researcher attempts to account for the changing conditions in the research project (De Vos et al., 2014). In this study, there were no changes that the researcher had to account for or explain, especially changes that would affect the findings of the study, alter the conducive environment, and thus limit the study.

4.8.4 Confirmability

Confirmability ensures that the study is objective, and affirmatively answers the question of whether the researcher provides evidence that supports the responses given by the participants (De Vos et al., 2014). The researcher recorded the participants' responses and wrote descriptive field notes during and after the interview with every participant to ensure that the data presented was a true reflection of the knowledge of the participants. The researcher further ensured that the findings are not influenced by the researcher's bias.

4.9 Ethical consideration

The researcher adhered to research ethics prescribed by the Turfloop Research Ethics Committee (TREC) at the University of Limpopo. The researcher did not violate the rights of the participants. On the contrary, serious attention was paid to ethical issues throughout the research project.

4.9.1 Informed consent and voluntary participation

In this study, the research participants voluntarily took part in the study, no participant was manipulated, unfairly induced, or forced to take part in the study (Lune & Berg, 2017). The researcher informed the participants about what was to be studied. Before conducting interviews with research participants, consent forms were handed out to the participants and were written in a language that was clear enough for the participants to understand. In addition, the forms were free from grammatical errors and used cautious language. In addition, the research participants were not forced to complete the consent forms, rather they completed them voluntarily.

4.9.2 Confidentiality and anonymity

Confidentiality refers to removing elements that indicate the identity of the subjects from the research (Lune & Berg, 2017). Anonymity refers to ensuring that research participants remain nameless. There was an agreement between the researcher and the participants that other people, except the researcher and the Supervisor, will not access the information provided by the research participants. To ensure confidentiality and anonymity in this study, data was not linked to the real names of the participants; instead, the participants were assigned code names (e.g participant 1). It was further ensured that their biographical information was not disclosed. Moreover, their names and contact information were not included in the research report.

4.9.3 Avoidance of harm

This ethical rule stipulates that no harm, emotional, physical or otherwise, should come to the subjects of the study (Leavy, 2017). Participants were informed about the possible harm of the study to allow the subjects to withdraw in case they were no longer willing to participate. The researcher asked the participants if they were comfortable and willing to take part in the study. The researcher further respected the cultural and religious beliefs of the participants. As such, the participants were not forced to talk about issues they found culturally and religiously insensitive.

4.9.4 Deception of participants

Deception involves offering inaccurate information in an attempt to convince the participants to take part in the study (De Vos et al., 2014). The researcher did not deceive the participants in any way and explained the research project to the participants, for the participants to know what they were partaking in.

4.9.5 Compensation

According to Leavy (2017), research participants should not be compensated and should be informed that they will not be compensated for their participation in the research study. Participants were not promised any reward for participating in the study in an attempt to lure them to partake in the study.

4.10 Summary of the chapter

This chapter discussed the research methodology adopted in this study. Included in this chapter were the research approach, research design, sampling, data collection, data analysis, data management, quality criteria, and ethical considerations.

CHAPTER 5: STUDY RESULTS AND ANALYSIS

5.1 Introduction

This chapter presents and analyses qualitative data on the perceptions of second-year Psychology students at the University of Limpopo towards STI testing. Data was collected through semi-structured interviews. The sample consisted of 15 participants, all of whom were interviewed. Data saturation was reached after the 9th participant was interviewed. The data was analysed using thematic content analysis. The analysis of the findings relied on the following themes: perceptions towards STI testing and the importance of STI testing.

5.2 Demographic details of participants

5.2.1 Age of participants

Table 2: Age of participants

Age of participants	**Number of participants (N)**	**Percentages (%)**
20 years old	3	20%
21 years old	6	40%
22 years old	2	13%
23 years old	0	0%
24 years old	3	20%
25 years old	1	7%
Total	**15**	**100%**

The above table indicates that the mode of the participants (n=6) was 21 years old and constituted 40% of the sample, followed by those that were 20 and 24 years old who constituted 20% of the sample, respectively. According to Ogden (2019), in 1993, national testing programmes were developed, specifically for individuals aged 40 to 75 years, whereas in some Western countries contracts that included mandatory tasks to test patients over 75 years of age were developed.

5.2.2 Gender of participants

Table 3: Gender of participants

Gender of participants	Number of participants (N)	Percentages (%)
Male	7	47%
Female	8	53%
Total	**15**	**100%**

The above table indicates that the majority of the participants were females (n=8), with 7 females reporting that they had tested for STIs before and 5 males reporting that they had tested in the past as well. Cuffe et al. (2016) reported that the level of testing is higher among women compared to men. MacPhail et al. (2017) concurred that women are significantly more likely to take an STI test than men. Hill-Tout et al. (2018) added that men are poor healthcare services users because of cultures that view visiting healthcare facilities as a sign of weakness. The findings of this study confirmed that females outnumber males in terms of consulting for STI testing.

5.3 Presentation and analysis of study results

The study adopted the thematic content analysis to analyse the research findings. Two main themes were developed based on the objectives of the study: namely, (1) perceptions towards STI testing, and (2) the importance of STI testing. Three subthemes and four subthemes emerged from the data, with the former main theme having three and the latter having four. The responses of the participants were recorded and transcribed verbatim. Under the category of subthemes, direct quotations of the participants' responses and literature that concurred and/or contrasted with the participants' responses were provided to fortify the analysis.

Table 4: Themes and subthemes

Themes	Subthemes
Perceptions towards STI testing.	The understanding of STI testing.
	The psychological effects of testing for STIs.
	The most important aspects learned about STI testing.
The importance of testing for STIs.	Have you ever been tested for STIs? Provide reasons or motivation for STI testing.
	The experience with STI testing.
	Reasons for reluctance to go get tested for an STI.
	Additional responses about STIs and STI testing.

5.3.1 Theme 1: The perceptions towards STI testing

This section aimed to establish the perceptions of second-year Psychology students at the University of Limpopo towards STI testing. Risenga and Davhana-Maselesele (2017) defined perception as the process of attaining awareness or understanding of sensory information. However, due to a lack of knowledge, STIs are highly stigmatised infections which is a barrier to people accessing testing facilities (Spence et al., 2020). This, in turn, influences people's perceptions towards STIs testing.

* Subtheme 1: The understanding of STI testing

STI testing refers to the process where a practitioner draws an individual's saliva or blood and performs a laboratory test (Gumede, 2017). MacPhail et al. (2017) report that students, especially in urban areas possess adequate knowledge about STIs and STI testing. In contrast, young people in rural areas are not knowledgeable about STIs, their epidemiology, how they are transmitted and lack knowledge about safe sex practices. The participants in this current study displayed relevant knowledge regarding STI testing, which correlates with the findings by MacPhail et al. (2017), that students have adequate knowledge about STIs.

The research participants described their understanding of STI testing as follows:

"Is a confirmation to check which kind of sexually transmitted infection is in your blood stream" Participant 1.

"Is a process in which people are tested for sexually transmitted infections" Participant 5.

"STI is done to detect the disease and treat it as soon as possible and prevent complications" Participant 7.

"I think this is when you are testing for sexually transmitted infections, maybe if you have been in sexual contact with someone who is having those things you have to confirm if you have contracted them or not" Participant 9.

"I understand that it is a test they do to check if there are infections that are transmitted sexually so" Participant 11.

"Is when they test the person for sexually transmitted infections, that can hamper with the reproductive system" Participant 12.

"Is a sexually transmitted infection…it is an infection that you get after having sexual intercourse with your partner especially if the partner is not faithful and has multiple partners, and testing is when you go to hospital and test for that infection" Participant 14.

The researcher found that the understanding of STIs among students correlates with the findings of Martin-Smith et al. (2018), who indicated that students have extensive knowledge regarding STIs and STI testing, with male students being more knowledgeable than female students. A study by Zizza et al. (2021) also confirmed that, in the Northern Cape Province of South Africa, the respondents possessed ample knowledge about STIs. Zin et al. (2019) added that the most known STI is HIV. For instance, 95% of people reported that they were knowledgeable about it whereas 67% knew about syphilis, 43% knew about gonorrhoea, 30% knew about genital herpes, 27% knew about chlamydia, 13% knew about urethritis, 5% knew about scabies, another 5% knew about dengue fever, and 2% knew about brucellosis.

* Subtheme 2: The psychological effects of testing for STIs

The psychological factors associated with positive test results are fear of death and self-inadequacy (Evangeli et al., 2016). Ogden (2019) averred that inviting people to attend STI testing programmes may influence both an individuals' behaviour and their psychological state. Ogden (ibid) went to say that some studies revealed that there is no significant increase in psychological morbidity following an invitation to attend testing programmes. This is because receiving a testing invitation may cause anxiety, although research reveals that it is not always the case. In this study, participants reported becoming stressed, depressed, terrified, anxious, and suicidal thoughts, as some of the psychological effects of testing for STIs.

These were the responses from the participants:

"It would cause stress which could lead to depression…or some psychological disorders" Participant 1.

"I think if I find out that I'm infected I would become stressed and wonder as to how come I have an STI" Participant 2.

"You could be scared thinking what if I'm sick, what if the disease is not curable…feeling terrified could happen, but anxiety would be dominant" Participant 4.

"Well, the first one could be feeling or experiencing stress, I think some would even become depressed and in an event that they test positive they might commit suicide" Participant 5.

Based on the foregoing responses, it is evident that the participants have similar knowledge regarding the psychological effects of STI testing, citing various psychological sequalae due to STI testing. These findings are in line with what Ogden (2019) found, which was that the diagnosis of an STI may cause a detrimental impact on an individual's psychological functioning. The participants also said:

"In the event that you test positive it might lead to anxiety and depression because your mind was not prepared for that, I think it can also lead to insomnia" Participant 7.

"You can have a post, pre, and intra while you are testing, before testing you will be overwhelmed with fear and anxiety and things like that, then while you are waiting for the results you will have fear again…like you will panic, then if they are positive you will be stressed and have depression, but if results are negative you will be fine" Participant 13.

"When you think that you cannot have an erection it may cause depression, for the female is even worse because they no longer bear babies" Participant 14.

"If they test you and find that you are positive it can affect you and make you think you are going to die, and you may wonder as to where did you get it" Participant 15.

Studies report that an estimated 55% of people who receive an invitation to attend a testing programme reported feeling worried and anxious (Ogden, 2019). In addition, the receipt of a positive result can be associated with a variety of negative emotions that range from worry, anxiety to shock. Positive test results may generate anxiety, morbidity and even terror. Additionally, levels of depression are higher in those labelled as STI positive. However, Cushman et al. (2019) established that for women, anxiety becomes lower after receiving negative results. The researcher established that the psychological effects of STI testing by the participants are similar to those that were established by the afore-cited authors.

* Subtheme 3: The most important aspects learned about STI testing

The practice of STI testing has become a vital and effective means to detect STIs before symptoms manifest in the twentieth century (Ogden, 2019). The drive to detect an illness at an asymptomatic stage of its development (also known as secondary prevention) is highly practiced across the globe (Wilson et al., 2017). Almost all the research participants were able to report a variety of important aspects they have learnt about STI testing.

Below are some of the responses from the participants:

"I have learned that the more people test the more we minimise the damage or gain control over the STI pandemic" Participant 1.

"I have learned that you could receive early treatment for the cause or disease before the disease progress" Participant 2.

"It is important to test so that you can get early treatment because some of the sexually transmitted infections can spread, so it's better if you can get early treatment" Participant 3.

"It helps in the pregnant woman when you give birth if they know early that you have STIs they can prevent your baby from becoming blind, it also protects from cervical cancer" Participant 8.

The researcher noted that students possess knowledge about the important aspects of STI testing. This is supported by Spence et al. (2020) who also established that STI testing remains crucial in reducing the impact of STI by ensuring that people receive treatment soon after infection and reducing the chances and risks of infecting others. The participants further shared having learned that:

"The early detection of infection, the earlier you can get treatment, therefore prolong and save lives" Participant 12.

"They are trying to detect early like they want to diagnose early if you have the STIs so that they can take measures as soon as possible so that they can prevent complications" Participant 13.

"I have learnt that whenever we are done having sexual intercourse we must go get tested because there is a possibility that we are infected and symptoms do not manifest immediately, it might take time" Participant 15.

The participants had learnt that not testing for STIs may lead to delayed treatment. This is in line with Oluwole's et al. (2021) findings, who reported that over half of the respondents knew that it was possible to live with an STI without symptoms. Gumede (2017) concurred that STIs symptoms do not always manifest, especially during their earliest stages; hence, treatment may be delayed if an individual does not take an STI test to facilitate early detection and treatment.

5.3.2 Theme 2: The importance of testing for STIs

* Subtheme 1: Have you ever been tested for STIs? Provide reasons or motivation for STI testing

According to Gumede (2017), testing for STIs regularly with or without symptoms is a vital health behaviour. If the treatment is delayed, STIs can have a detrimental effect on an individual's health, causing such conditions as infertility and pelvic inflammatory disease (Martin-Smith et al., 2018; Nyasulu et al., 2018). Van Wees et al. (2018) added that STIs may cause reproductive complications such as ectopic pregnancy if not detected and treated early. The majority of the research participants revealed that they have consulted a health care professional for STI testing, with some reporting having been tested more than once in the past.

Although the majority of the participants reported that they had tested, two of them revealed that they have never been tested, and even those who had been tested shared differing reasons for testing. Below are some of the reasons for testing for STIs:

"Yes, I once tested for sexually transmitted infection, so that I could know my status and prevent other people from an infection, and to get treatment for sexually transmitted infection if I have one" Participant 1.

"Yes, I tested back then when I was in high school after being encouraged by the school principal to do so, it is important because they are life-threatening if not treated" Participant 5.

"Yes, so that you do not transmit it to others so that you can get cure if is curable" Participant 10.

The above reasons for testing are similar in that they express the motive for testing as stemming from an understanding that STIs could be cured, treated, or managed if detected early, and thus prolong life. Gumede (2017) agreed that various STIs, other than HIV, can be cured when detected in their early stages and relevant treatment is adhered to. Ogden (2019) added that there is evidence in favour of testing as a benefit to the patient, in terms of detecting a treatable infection and enabling the individual's life to be prolonged or enhanced. Other research participants explained reasons for STI testing in the following way:

"Yes, when I was pregnant, in a pregnant woman I think it's important because it can be transmitted to the foetus, it can lead to premature death, and the baby might have deformities as a result" Participant 7.

"Yes, I was tested twice when I was pregnant, I think it is important to test for it especially if you are pregnant or if you have multiple partners to protect yourself from the effects and the adverse effects of STIs" Participant 8.

There were participants who, due to their STI testing experience when they were pregnant, reported that they belief that STI testing is important for pregnant women as it ensures that mother-to-child transmission does not occur. STI testing may aid in facilitating the prevention of mother-to-child transmission by commencing with treatment before STI symptoms manifest (Gumede, 2017). The participants added:

"No, because I don't have symptoms and there is nothing wrong with my genitalia that would make me consider consulting for STI testing" Participant 2.

"Yes, I was tested before, in my case I was experiencing signs and symptoms of STI, and I saw a need to get tested" Participant 4.

"Yes, because everyone has to know their status because some people are asymptomatic and can infect others without knowing" Participant 13.

The above responses emphasise that the reason for testing is that it is the only way to confirm the diagnosis of an STI, especially during their earliest stage before symptoms manifest. One of the participants revealed that the reason for not testing was the absence of STI related symptoms. Nyasulu et al. (2018) established that the majority of young people have a low perception of risk due to the asymptomatic nature of some STIs during their earliest stages, hence there is an estimated 15% of people living with STIs unknowingly. One of the participants responded in the following way:

"No, but I understand that it will help me to know whether I'm having that infection or not because if I'm having that infection, I can transmit it to my partner or someone, so I think it is important to prevent the transmission" Participant 15.

The preceding response was from a participant that had never been tested for STIs but was willing to be tested. Nyasulu et al. (2018) stated that those who are willing to be tested receive early treatment and thus prevent others from getting infected.

* Subtheme 2: The experience of STI testing

According to Powell et al. (2016), minor anxiety is reported while waiting for STI test results. Some individuals are even concerned about test accuracy. But the most severe anxiety is experienced upon receiving positive test results. It was noted that anxiety-related attack was the most dominant experience among students before, during, and even after STI testing for some students. The participants said:

"I was anxious about the outcome of the test but was also thinking it was a better choice, however after the test I was relieved because I now know my status" Participant 1.

"I was scared thinking I had a condition which is not curable and thinking I'm going to die as a result, but in the end, I got helped, therefore after testing I was happy because I got help" Participant 4.

"I was very scared because I did not know if I was having them or not because I was engaging in unprotected sex" Participant 9.

"It was not an easy journey, especially testing for HIV. I was overwhelmed with anxiety and fear" Participant 12.

"It was a bit awkward, but it was good, I was scared in the beginning and needed counselling but in the end, I felt good because things went well" Participant 14.

The participant reported feeling anxious, overwhelmed, scared, experiencing fear, finding the process awkward, and anticipating death in event of testing positive for an incurable STI, as their experiences of STI testing. These findings are similar to those revealed by Powell et al. (2016), who established that the process of testing is also found to be worrisome and intimidating. Spence et al. (2020) added that some participants experience anxiety about needles and interacting with health practitioners in a face-to-face encounter. While others experience fear of death and self-inadequacy, especially upon testing positive for HIV (incurable condition) (Evangeli et al., 2016). To this end, one participant said:

"It was embarrassing but I had to do it, but I will never go to the hospital and say I want to be tested for it" Participant 8.

One of the participants reported the experience of feeling embarrassed about testing for STIs. Powell et al. (2016) established that some people regard visiting a clinic as a highly embarrassing experience. Spence et al. (2020) concurred that many people feel embarrassed, ashamed, and anxious about the possibility of other people seeing them attending or discovering that they have attended an STI testing programme.

* Subtheme 3: Reasons for reluctance to go get tested for STIs

According to MacPhail et al. (2017), reasons for not going for STI testing include assumptions that one is not at the risk of contracting STIs and lack of access to sexual health services, such as STI testing campaigns and STI testing programmes. Other barriers are fear of stigma, isolation, shame, vulnerability, loss of social status, and loss of sexual relationship following testing positive for an STI (Hill-Tout et al., 2018).

The responses from participants were that:

‘‘The high rate of sexually transmitted infections in the country and world at large gives students the fear of saying what if I also have an STI because safe sexual intercourse is not practised’’ Participant 1.

‘‘Having an STI is a very scary thing, so they don’t want to know if they have it or not’’ Participant 10.

‘‘Because we have copulation without condom and obviously you are at great risk of contracting STIs, and we are scared to find out’’ Participant 11.

According to Chernenko (2014), individuals have the fear of positive results and expect a negative reaction from other members of society. Participants confirmed that students are not willing to be tested, largely because they are afraid of positive test results and fear of the unknown. Further reasons for reluctancy to consult for STI testing are:

‘‘The attitude of the nurses, sometimes the nurses are judgemental especially if you are a teenager, they may insult you and question why you are sexually active and why are you not using protection. So, I think they are just afraid of the attitude of the nurses’’ Participant 3.

‘‘More often exposure to STIs due to unprotected sex without knowing the status of the partner may cause doubt about one’s health status, therefore fear to find out through testing… the attitude of the nurses as well’’ Participant 12.

‘‘They are scared of being judged, some nurses are rude, some are asked why they have not used protection when having sexual intercourse’’ Participant 15.

There were research participants who revealed and emphasised the judgemental attitude from nurses as a barrier to STI testing. This is following the findings of Aicken et al. (2016) who revealed that young people are afraid of the judgemental attitudes of health professionals, which in turn has an impact on their willingness to seek STI testing services. Ogden (2019) added that health professionals’ behaviour and beliefs about the consultation could influence the patient’s decision about whether to take a test or not. Participants added that:

‘‘First of all, they don’t know and not aware of STIs, some they think is not important or serious’’ Participant 4.

‘‘They are not ready because…it’s not easy to go get tested, also lack information about STI testing’’ Participant 7.

The participants reported factors such as not considering STI testing as important and lack of knowledge or information as reasons for not testing. This is similar to what was reported by MacPhail et al. (2017), who revealed that young people in rural areas and remote regions are at high risk of contracting STIs due to their lack of relevant information regarding safe sex practices and consequences thereof. Van Wees et al. (2019) concurred that people who lack STI related knowledge are less likely to consult or follow up for STI testing. Another participant revealed that:

‘‘They are just afraid of going for testing, some they just don’t take it seriously; they don’t think they can get an STI’’ Participant 6.

This is in line with the findings of Ogden (2019), who established that students tend to deny that they could be infected or diagnosed with an STI. Hence, they do not attend STI testing programmes. However, MacPhail et al. (2017) reported that the longer the students spend at university, the higher the risk of becoming infected with STIs. One participant responded as follows:

‘‘Some is because of lack of information, some are afraid to see their results because they engage in unprotected sex, also fear for being stigmatised in event that they test positive’’ Participant 13.

Powell et al. (2016) and Risenga and Davhana-Maselesele (2017) concurred with Participant 13 by stating that STI testing programmes are highly associated with and negatively affected by the high levels of stigma attached to STIs. Wilson et al. (2017) affirmed that reasons for an unwillingness to be tested include being afraid of the stigma attached to STIs, and discrimination due to STI diagnosis.

* Subtheme 4: Additional responses about STIs and STI testing

The participants were allowed to add something that they thought the researcher should know about before the conclusion of each interview. Not all the participants had additional responses. Only seven participants provided additional information. The following were some of the additional responses provided by the participants:

‘‘Testing must have more counselling before people test to address the issue of stigma and help them understand that testing can bring about STI free generation and is not only about you but also about other people in the world, and also understand that if we practice testing, we can protect everyone. We must also respect the procedures of sexually transmitted infection testing and not see it as a bad thing. This would ensure that STIs do not become a pandemic, and we also need to support each other in the fight against STIs’’ Participant 1.

‘‘Because testing is not easy, therefore when you test them you must counsel them first because for a lot of people the results, they get are not what they had expected, therefore counsel them regarding positive results’’ Participant 12.

This is supported by the findings of Wilson et al. (2017), who established that the reasons for unwillingness to be tested include being afraid of the stigma attached to STIs, discrimination due to STI diagnosis, fear of receiving positive results and lack of treatment or cure for some STIs. Therefore, constructive counselling targeting negative thoughts, fear of discrimination, and fear of receiving positive results could lead to an increase in the number of people who consult for STI testing.

The research participants appeared to possess positive attitudes and to be in favour of STI testing. Two of the research participants gave the following responses:

"I think we have to do STI testing to rule out infection related to sexual intercourse because we don't use condoms as youth and there are chances of us getting infected because we are not sure if the partner sleeps with me only or also sleep with other persons" Participant 2.

"Even though you trust your partner just go and test, some people trust their partner and they don't know what their partners do in their absence, so they should go get tested and not wait for symptoms to manifest" Participant 15.

According to AL-Maliki (2014), the majority of the student population possess a good attitude towards STI testing. Martin-Smith et al. (2018) revealed that the majority of the students report having taken an STI test in the past and that students above the age of 25 years are more likely to consult for STI testing. In contrast, Wilson et al. (2017) established that an estimated quarter of the student population has never attended an STI testing programme, while about half of the student population has not tested in a year. The findings of this study indicate that students are willing to be tested, although they rarely consult for STI testing, especially voluntarily. Other participants added that:

"I think STI testing is vital, testing means one will receive treatment early to avoid infertility and complications. Another thing is that it's important to get tested now and then" Participant 4.

"I think it is important for everyone to test for STIs so that they can be able to know if they have them or not when you engage with someone in unprotected sex you cannot transmit them, or you can just protect yourself because when STIs are not treated they can extend to some diseases" Participant 9.

"Even though you trust your partner just go and test, some people trust their partner and they don't know what their partners do in their absence, so they should go get tested and not wait for symptoms to manifest" Participant 15.

These findings resonate with those of Nyasulu et al. (2018), who has found that those who are willing to be tested reported that it allows for early detection and treatment to begin. Gumede (2017) agreed that testing for STIs regularly with or without symptoms is a vital health behaviour. One participant highlighted that:

"Find out about the age group mostly infected by the STIs and focus on that age group, but I think it could be the adolescence (age 15 to 24) because of the influence of the puberty stage, therefore automatically have sex without the relevant knowledge and lack of information and sexuality education" Participant 5.

Theis is similar to what was reported by Nigussie and Yosef (2020) who established that, among people under the age of 25 years more than 100 million new STI cases are reported per year. Oluwole et al. (2020) agreed that STIs largely affect young people and STI infection rates reach peak among people aged 15 to 24 years. Nyasulu et al. (2018) partially agreed with the above response by reporting that the prevalence of STIs in South Africa has increased from 15,3% to 17,9% among people aged 15 to 49 years. In the Northern Cape province, the prevalence of STIs is estimated to be 7.4% whereas a study among adolescents in the Eastern Cape province revealed that the prevalence of STIs is estimated to be 15,8%, with the declining age of sexual debut cited as an explanation for an increased number of STI cases. Another participant emphasised that:

"STIs exist and is not due to witchcraft or myth" Participant 11.

The participant added that STIs exist, neither are they a myth nor due to witchcraft. Sawal et al. (2016) averred that believing that STIs are a myth is one of the major contributors to the spread of STIs because, despite an improvement in STI awareness campaigns, there are still numerous STI related cases. Therefore, for effective control of STI transmission, it is important to target the myth by offering education among groups at high-risk. Another myth that needs to be targeted is that some groups belief they have a lower risk of being infected with STIs. This misleads them into engaging in unprotected sex.

5.4 Summary of the chapter

This chapter presented and analysed the findings of the research about the perceptions towards STI testing and the importance of STI testing. The results revealed that students have a variety of perceptions towards STI testing. For instance, they experience numerous psychological effects posed by STI testing and have different reasons on why they think STI testing is an important health behaviour. The aim and all the objectives of the study were achieved, all research participants managed to comprehend and respond to all the research questions.

CHAPTER 6: DISCUSSION OF RESULTS

6.1 Introduction

This chapter discusses the research results presented in the previous chapter and links them to the available literature on the topics related to this study. The objectives of the study were to establish perceptions towards STI testing and to determine the importance of STI testing. These objectives were met in Chapter 5. This chapter will further highlight the limitations of the study, the methodological strengths and weaknesses, and provide recommendations.

6.2 The perceptions towards STI testing

This was the first objective of the study. It aimed to establish perceptions towards STI testing and was guided by the participants' understanding of STI testing, the psychological effects of STI testing and the most important aspects learned about STI testing. Literature reviews also fortified the analysis of the perceptions.

6.2.1 The understanding of STI testing

The majority of the research participants displayed relevant knowledge, although they differed in their understanding of STI testing. Most participants viewed STI testing as a process in which people are tested for STIs. Some participants added that STIs are usually transmitted through unprotected sexual intercourse and could be detrimental to the human reproductive system (cf. Augustatis, 2017). Participants stated that STI testing is done to detect and treat an infection before it causes complications. Aicken et al. (2016) agreed that STI testing services aim to identify, diagnose, treat, and prevent medical complications associated with infections. The findings of the study revealed that students possess a relevant understanding of STI testing. This understanding could be emanating from their exposure to education. It could also be because they are in the institution of higher learning, where they are exposed to information about STIs, STI testing and preventive measures, as opposed to their peers who are not university students.

6.2.2 The psychological effects of STI testing

The possible psychological effects of STI testing revealed by the research participants included becoming stressed, depressed, terrified, anxious, and occurrences of suicidal thoughts upon testing positive for STIs, especially if the STI is incurable. Ogden (2019) stated that the consequences of testing include, distress, worry, shock, anger, distress, depression, and anxiety due to stigmata attached to STIs and that receiving positive STI test results tends to cause negative feelings. This study's findings also revealed that after receiving negative test results, the majority of the students recover their premorbid level of psychological functioning.

6.2.3 The important aspects learned about STI testing

The research participants revealed that the most important aspects they have learned about STI testing were that it facilitates early detection and the treatment of an STI before it causes health complications. It could facilitate gaining control over the pandemic and prevent mother-to-child transmission. Gumede (2017) averred that STI testing may aid in the prevention of mother-to-child transmission because it would ensure that pregnant women commence with treatment in advance. It was found that students have adequate knowledge about the important aspects of STI testing. This indicated that they have the motivation to consult with health professionals for STI testing because they know the benefits associated with STI testing and the health consequences associated with delayed detection and treatment of STIs. The HBM purports that, individuals will exhibit a health-related behaviour if they perceive benefits for engaging in preventive behaviour (Ofori, 2019). The participants in this study are more likely to consult for STI testing because they perceive the benefits associated with STI testing.

6.3 The importance of testing for STIs

The second objective was to determine the importance of STI testing. It intended to establish whether research participants had tested for STIs in the past, reasons or motivation for STI testing, the experience of STI testing, and reasons for reluctance to consult for STI testing. The participants were offered an opportunity to share what they deemed important for the researcher to know about, although not necessarily covered by the research objectives and questions. The questions asked included:

6.3.1 Have you ever been tested for STIs? Provide reasons or motivation for STI testing

The majority of the research participants revealed that they had consulted for STI testing in the past. Although most participants reported having been tested previously, there were two out of fifteen participants who reported that they had never been tested for STI. One participant even stated having never experienced STI related symptoms, which meant it was not necessary to consult for STI testing. Two participants disclosed that they tested because they were experiencing STI related symptoms. The HBM explains that cues for action, include experiencing physical symptoms that compel an individual to adopt a preventive health behaviour, for an example consulting for STI testing (Gurung, 2019). Another participant, despite having never consulted for STI testing, understood that STI testing could help to detect an infection and prevent the transmission to others unknowingly. The majority of the participants consider STI testing important because it facilitates the prevention of mother-to-child transmission, early detection, treatment, and it could save, enhance, and prolong lives (cf. Spence et al., 2020). The research findings revealed that the majority of the students consulted for STI testing in the past and understand the importance of getting tested.

6.3.2 The experience of STI testing

The experience of STI testing was described as difficult by almost all research participants, with overwhelming anxiety being the most reported experience, especially among those that were not confident that they would receive negative test results. In addition, others described it as embarrassing and would, therefore, never voluntarily consult for STI testing; instead, they would only go for an STI test when they feel compelled to do so. Aicken et al. (2016) agreed that young people tend to be afraid of embarrassment, which in turn has an impact on their willingness to seek sexual health care. This study's findings show that anxiety is the most dominant experience among all the participants during the process of STI testing. This indicates that constructive counselling is necessary for addressing anxieties that are caused by STI testing. The findings of Cushman et al. (2019) affirmed that individuals who take an STI test tend to experience various negative psychological consequences, such as anxiety and fear.

6.3.3 Reasons for reluctance to get tested for STIs

Various reasons were provided by the participants when asked about the reluctance to consult for STI testing. Having unprotected sexual intercourse and the knowledge about the high rate of STIs was reported to be one of the reasons people do not consult for STI testing. This creates uncertainty about one's health status and fear of discovering that one is infected. Additionally, the stigma, judgmental attitudes of health professionals, ignorance, and lack of information were also reported to be hampering people from testing for STIs. Aicken et al. (2016) agreed that young people are often afraid of judgemental attitudes, which in turn has an impact on their willingness to attend STI testing programmes. Hill-Tout et al. (2018) concurred that stigma, isolation, shame, and vulnerability hamper people from consulting for STI testing.

The study confirmed that stigma associated with STIs are still a barrier to STI testing. Spence et al. (2020) concurred that due to lack of knowledge, STIs are highly stigmatised, which prevents people from visiting testing facilities. Other participants revealed that some people do not consult for STI testing because they do not think they could be infected with an STI. A study by Nyasulu et al. (2018) revealed that the majority of young people have a low perception of risk due to the asymptomatic nature of some STIs during their earliest stages and about 15% of people are living with STIs unknowingly. The HBM also predicts that individuals with perceived low susceptibility to a condition will not adopt a preventive health behaviour (Brannon et al., 2018). In addition, the study discovered that lack of information is still a challenge, particularly in rural areas and among the illiterate population. MacPhail et al. (2017) agreed that lack of information about safe sex practises and health care services is a barrier to STI testing. However, the most concerning discovery were that the judgemental attitude of health professionals towards people who consult for STI testing is also a barrier to STI testing.

6.3.4 Additional responses about STIs and STI testing

After the interviews, the research participants were offered an opportunity to share what they deemed important for the researcher to know. Participants emphasised the importance of ensuring constructive counselling during STI testing. Others added that STI testing is vital, irrespective of whether one trusts his or her partner or not, and that STI testing regularly remains the most effective means through which one can detect

and treat an infection before it progresses. Another participant emphasised that STIs are not due to witchcraft or a myth, they exist. Sawal et al. (2016) indicated that believing that STIs are a myth is one of the major contributors to the spread of STIs. Hence, it is important to target myths associated with the existence of STIs. Constructive counselling was foregrounded as a necessity in STI testing. Furthermore, students recommended STI testing because it is a good preventive health behaviour. It was concerning to learn that there are people who still think STIs are due to witchcraft or a myth. This implied that people who hold such beliefs would not consult for STI testing and would not adopt the effective medical approach in event that they are infected.

6.4 Study findings contextualised within the Health Belief Model (HBM)

The HBM provided a framework through which the researcher was able to understand and explain the perception of students towards STI testing. Moreover, the model enabled the researcher to establish the reason(s) students engage in or fail to engage in recommended health behaviour to prevent STI related health consequences. The HBM was also beneficial in studying preventive behaviours and ascertaining factors that may influence individuals to improve their health behaviours. This model provided information about students' motivation and capabilities to change their health behaviours. The HBM predicts that motivation for individuals to engage in preventive behaviours depends on their beliefs about being susceptible to the infection, the severity of the disease, whether the recommended health intervention is beneficial or not, the barriers they must overcome to successfully engage in suggested health behaviour, the confidence in the ability to engage in healthy behaviour and the triggers to perform suggested preventive behaviour. The six factors of the HBM helped conceptualise the research findings. This study explained students' perceptions towards STI testing in relation to the factors purported by the HBM as motivations for an individual to perform a preventive behaviour.

6.4.1 Perceived susceptibility to STIs

Perceived susceptibility refers to the belief about the possibility of contracting an STI. The perception that an individual could be infected contributes to that individual engaging in the recommended health action, STI testing in this case. This study explored students' susceptibility to STIs to determine if the students that belief they

are susceptible to STIs engaged in behaviour (STI testing) to prevent or curb STI related health consequences. The research findings show that the participants were aware that they are at risk of contracting STIs. This awareness influenced them to consult for STI testing in the past. However, two participants reported that they had never consulted for STI testing, with one of them revealing a lack of STI related symptoms as a reason for not consulting for STI testing. The findings reveal that there was a relationship between the perception of the possibility of carrying infection and consulting for STI testing. Thirteen of the fifteen participants had tested in the past. They also highlighted that the reason people do not consult for STI testing is the belief that they are not at risk of contracting STIs.

6.4.2 Perceived severity of STIs

Perceived severity is the belief about the seriousness of an STI and the consequences associated with it. The susceptibility to an infection on its own might not influence an individual to take preventive actions. Understanding that the infection could result in severe negative health consequences may motivate an individual to perform a health behaviour to avoid those anticipated negative health consequences. All of the participants in this study were aware of the severity of some STIs. The findings of this study further revealed that some students' perceptions of severe health consequences of STIs, such as the possible complications, motivated them to seek STI testing after they had unprotected sex and having experienced symptoms that suggested that they had contracted an STI.

6.4.3 Perceived benefits of STI testing

Perceived benefits entail the belief that the recommended action could reduce the severity of an STI and/or cure it. The students had to belief that taking health actions would prevent health complications associated with STIs and such a belief, motivates an individual to engage in preventive behaviour due to the expected and desired outcomes associated with the preventive behaviour. In this study, it was confirmed that belief in the effectiveness of STI testing in preventing STI related health consequences was associated with regular STI testing by students. All of the participants in this study believed that STI testing is beneficial. The benefits identified in this study were: the prevention of infertility, saving and enhancing lives, prevention of STI transmission, early detection and treatment, and prevention of mother-to-child

transmission, among others. However, despite the perceived benefits, two participants never consulted for STI testing.

6.4.4 Perceived barriers to STI testing

Perceived barriers in this current study are beliefs in the inconveniences, duration, facility accessibility, unpleasantness of STI testing, and the psychological costs of STI testing. There were several barriers identified that affected students' decision to test for STIs. The identified barriers were: fear of embarrassment, stigma associated with STIs, the judgmental attitudes of health professionals, lack of knowledge, the belief that some STIs are a myth, and anxiety-related attacks experienced during STI testing. The aforementioned barriers hinder some students from consulting for STI testing.

6.4.5 Self-Efficacy for STI testing

Self-efficacy is the belief that an individual would be able to perform a preventive health behaviour (STI testing) and deal with the possible consequences. It is this confidence in one's ability that motivates one to initiate an action. In this study, self-efficacy refers to the students' belief in their ability to successfully consult for STI testing and successfully undergo the STI testing process, despite the psychological effects associated with it. This study sought to establish whether the selected students possessed the necessary confidence to attend STI testing clinics. It was found that despite having tested for STIs in the past, almost all research participants lacked confidence in their ability to consult for STI testing, especially dealing with the psychological effects of STI testing. Most participants stated that they experienced undesirable and overwhelming anxiety about STI testing, they felt embarrassed, stressed, and depressed.

6.4.6 Cues to action for STI testing

In the context of this study, the cues to action are triggers, such as symptoms of an STI or the influence of the media and other people that motivate an individual to consult for STI testing. In this study, the personal and interpersonal factors that motivated some of the research participants to consult for STI testing were identified. Some participants consulted for STI testing after experiencing STI related symptoms whereas one of the participants reported being influenced by the former secondary school principal to do so.

The six factors of the HBM were helpful to this study. The first two factors; namely, perceived susceptibility and perceived severity, enabled the researcher to understand perceptions of the threat of infection. In this study, these factors referred to the perceived threat posed by STIs, which may motivate an individual to consult for STI testing in view to reduce the risk of experiencing negative health consequences. Perceived benefits and perceived barriers, on the other hand, referred to the benefit and/or costs of performing health behaviour, which in this study, referred to the benefits and costs of STI testing. These factors highlighted the students' readiness to consult for STI testing. Self-efficacy referred to students' confidence in successfully executing recommended health behaviour, precisely STI testing. The sixth and last factor was the cues to action, which in this study referred to factors that trigger students to take actions or consult for STI testing.

6.5 Methodological strengths of the study

- This study employed a qualitative methodology because it allowed for the use of semi-structured interviews during the data collection process. The use of semi-structured interviews with open-ended questions offered the participants the opportunity to be expressive and elaborate on their responses.
- The open-ended questions further facilitated the gathering of findings that were not necessarily linked to the research questions.

6.6 Methodological weaknesses of the study

- The study was conducted at one university (the University of Limpopo) and only 15 participants were interviewed. Thus, the findings should not be generalised because some age groups and students from other fields and universities were not represented.
- Arranging and conducting multiple semi-structured interviews, especially amid Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) was difficult and time-consuming.

6.7 Limitations of the study

The study focused on a selected number of second-year Psychology students at the University of Limpopo. Therefore, the findings of the study should not be generalised to the rest of the student population or the general human population. In terms of the literature, there were insufficient studies conducted on a similar research topic in the South African context, especially within the past five years. The study's sample consisted of participants who were below the age of 26. Hence, the findings should not be generalised to individuals whose age group was not covered by the study, particularly those that are much older than the research participants.

6.8 Recommendations

6.8.1 Recommendations from this study

- Testing must be preceded and followed by constructive counselling. This will not only address issues of stigma associated with STIs, but will also prepare people for undesirable results. People need to be reassured that STI diagnosis is not a death sentence, and that medication is effective.
- STI programmes should continuously provide knowledge about the importance of STI testing in society, promote the understanding of STI testing, and emphasise that individuals should consult for STI testing, including those that refrain from testing because they trust their partners.
- Support groups should be implemented where people who have tested positive or are diagnosed with STIs share their challenges, learn coping strategies from others within the group and gain emotional and social support.
- Reassuring individuals about and emphasising confidentiality is a necessity. In addition, the attitude of health professionals has to improve, including how they handle confidential information. This can increase the number of people who attend testing programmes.
- Programmes to aid those living with STIs should be in place, where professionals can provide physical and mental health information to them to deal with the detrimental impact of living with an STI.

- The ignorance, downplaying the seriousness of STIs, the assumption(s) that one is not at risk of getting infected, and the beliefs that STIs are a myth, need to be targeted and addressed.
- STI testing is recommended because it facilitates early detection of the infection and encourages commencement of treatment in time, and thus prevents health-related complications.
- The negative attitude people possess towards people living with STIs and the use of medication has to be targeted and addressed.
- Community outreach and distribution of STI related knowledge are necessary for improving the number of people who test for STIs. Moreover, the resources and facilities necessary for STI testing need to be erected, especially in rural areas.

6.8.2 Recommendations for future research

- Health education about STIs and intensive research about STIs are a necessity because they will address irrelevant and misleading information about STIs and STI testing.
- Future studies should be conducted among students in other universities and among the general population to cover the remaining gap and limitation of this study.
- Research should be conducted on the measures individuals take after STI testing, especially after receiving positive STI test results.
- Future research should focus on the age group mostly infected by the STIs so that they can be empowered with the knowledge and skills necessary to prevent the transmission of STIs.
- Research should be conducted to identify the age group most willing to consult for STI testing and the age group with a negative attitude towards STI testing to identify the age group that STI testing campaigns should focus on.

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Appendix A: Interview guide

Section A: Demographical information of participants.

1. Age

2. Gender

Section B: The perceptions of students towards STI testing

1. What is your understanding of STI testing?

2. What are the psychological effects of testing for STIs?

3. Discuss the most important aspects you have learned about STI testing?

Section C: Why is it important to test for STIs?

1. Have you ever been tested for STIs? Provide reasons or motivation for STI testing.

2. Tell me about your experience with STI testing.

3. Many students are very reluctant to go get tested for STIs. What do you think might be the reasons for that?

4. Would you like to add anything else that you think I should know about?

Table 5: Table showing the alignment of interview guide questions with objectives

Objectives	Interview questions
1. To establish the perceptions of second-year Psychology students at the University of Limpopo towards STI testing.	a) What is your understanding of STI testing?
	b) What are the psychological effects of testing for STIs?
	c) Discuss the most important aspects you have learned about STI testing.
2. To determine the importance of STI testing among second-year Psychology students at the University of Limpopo.	a) Have you ever been tested for STIs? Provide reasons or motivation for STI testing.
	b) Tell me about your experience with STI testing.
	c) Many students are very reluctant to go get tested for STIs. What do you think might be the reasons for that?
	d) Would you like to add anything else that you think I should know about?

Appendix B: Consent form

Consent form

I_____ hereby agree to participate in a Master's research project that focuses on the perceptions of second year Psychology students at the University of Limpopo towards Sexually Transmitted Infection (STI) testing.

The research information has been fully explained to me and I have been allowed to ask questions about the study and the significance of my participation. Furthermore, I understand that I am participating voluntarily and without being compelled in any way to take part in the study. I also understand that I can terminate my participation in this study at any point, should I wish to do so, and that this decision will not affect me negatively in any way.

I understand that this is a research project whose purpose is not necessarily to benefit me personally. I further understand that my details as they appear in this consent form will not be linked to the interview schedule and that my answers will remain confidential. I understand that accepting to participate in the study, it means I am willing to be interviewed by the researcher.

It has been explained and I understand that:

- The information I provide will be kept confidential.
- Participation is voluntary and I can withdraw at any time without any punishment if I no longer want to continue participating in the study.
- I know I will be treated with respect and dignity.

Signature: _____

Date: _____

Appendix C: School endorsement letter

University of Limpopo
Faculty of Humanities
Office of the Director
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 2683/2230. Email: sello.sithole@ul.ac.za

DATE: 09 October 2020

NAME OF STUDENT: MAHASHA T
DEPARTMENT: PSYCHOLOGY
SCHOOL: SOCIAL SCIENCES
QUALIFICATION – MA IN CLINICAL PSYCHOLOGY

Dear Student

SCHOOL APPROVAL OF PROPOSAL (Mini Dissertation)
I have pleasure in informing you that your MA proposal served at the School Senior Degrees meeting held on 2 October 2020 and your title was approved as follows:
TITLE: Exploring perceptions of second year psychology students at the University of Limpopo towards sexually transmitted infections (STI) testing.

Note the following:

Ethical Clearance	Tick One
In principle, the study requires no ethical clearance but will need a TREC permission letter before proceeding with the study	
Requires ethical clearance (Human) (TREC) (apply online) Proceed with the study only after receipt of ethical clearance certificate	√
Requires ethical clearance (Animal) (AREC) Proceed with the study only after receipt of ethical clearance certificate	

Yours faithfully
SL Sithole

Director: School of Sciences
Supervisor: Prof S Govender

Appendix D: Application for approval

University of Limpopo
Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
Tel: (015) 268 3766, Fax: (015) 268 2306, Email:Makoetja.ramusi@ul.ac.za

Dear Mr/Ms **T Mahasha**
RE-APPLICATION FOR ETHICS APPROVAL

Title: Exploring perceptions of second year psychology students at the University of Limpopo towards Sexually Transmitted Infection (STI) testing

Degree: Master of Arts in Clinical Psychology

THIS IS TO CONFIRM THAT YOUR PROPOSAL SERVED AT TREC.

The proposal requires some corrections/amendments to be able to satisfy the requirements for ethical clearance.

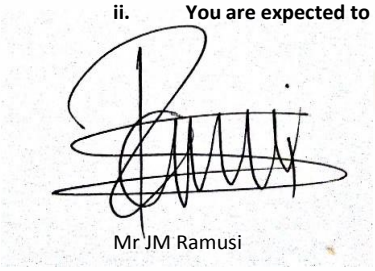
The required corrections /amendments are hereunder:

1. The word "exploring" at the beginning of title must be removed.
2. As the objectives have been stated, the researcher must check the first objective and to use descriptive verb for it to be achievable.
3. Informed consent not adequately described and not indicated how it will be ensured. The researcher must check for spelling errors that changes the intended meaning of the informed consent.
4. Ethical considerations not well arranged using subheadings, especially the following ethical aspects: confidentiality, privacy and anonymity.
5. It is NOT described how risk of harm will be minimised and the study has potential for psychological harm.

NOTE:

i. **This is not a Clearance Certificate and thus cannot allow you to proceed with data collection.**

ii. **You are expected to send the corrected proposal for the finalisation of your ethical clearance.**



Mr JM Ramusi

Secretary: Turfloop Research Ethics Committee
CC: Prof P Masoko: Chairperson: Turfloop Research Ethics Committee

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Appendix E: Ethics clearance certificate

University of Limpopo
Department of Research Administration and Development
Private Bag X1106, Sovenga, 0727, South Africa
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TURFLOOP RESEARCH ETHICS COMMITTEE

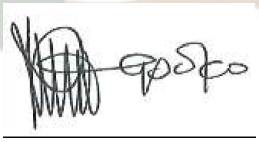
ETHICS CLEARANCE CERTIFICATE

MEETING: **10 December 2020**

PROJECT NUMBER: **TREC/396/2020: PG**

PROJECT:

Title:	Perceptions of second year psychology students at the University of Limpopo towards Sexually Transmitted Infection (STI) testing
Researcher:	T Mahasha
Supervisor:	Prof S Govender
Co-Supervisor/s:	N/A
School:	Social Sciences
Degree:	Master of Arts in Clinical Psychology



PROF P MASOKO
CHAIRPERSON: TURFLOOP RESEARCH ETHICS COMMITTEE
The Turfloop Research Ethics Committee (TREC) is registered with the National Health Research Ethics Council, Registration Number: **REC-0310111-031**

Note:

i) **This Ethics Clearance Certificate will be valid for one (1) year, as from the abovementioned date. Application for annual renewal (or annual review) need to be received by TREC one month before lapse of this period.**

ii) **Should any departure be contemplated from the research procedure as approved, the researcher(s) must re-submit the protocol to the committee, together with the Application for Amendment form.**

iii) **PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES.**

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