STUDENTS' PERCEPTIONS REGARDING THE USE OF FEMALE CONDOMS AT THE UNIVERSITY OF VENDA, IN LIMPOPO PROVINCE, SOUTH AFRICA

BY

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A mini-dissertation submitted in fulfilment of the requirement for the degree:

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Faculty of Health Sciences

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DECLARATION

I, Ramawa Mulweli Cyril, hereby declare that the mini-dissertation titled: ***"Students' perceptions regarding the use of female condoms at the University of Venda, in Limpopo province, South Africa,"*** submitted by me, has not been submitted previously for a degree at this or any other university, that it is my work in design and execution, and that all reference material contained therein has been duly acknowledged.

Signature:  **Date: 23 April 2025**

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PREFACE

This dissertation is presented in article format and is divided into three sections. Section A includes an outline of the study, introduction and background, the study purpose and objectives, research methods, and ethical considerations. Section B comprises two manuscripts, while Section C contains the study's summary, conclusions, limitations, and recommendations based on the research findings. The dissertation outline is as follows:

Section A: Dissertation Overview

Section A of this dissertation presents the outline of the study, background and introduction, problem statement, the study's primary aim and objectives, study design and methodology, and ethical considerations.

Section B: Manuscripts

There are two manuscripts in this section:

The First manuscript is titled: "Examining the Interplay of Social, cultural, and Personal Factors in Shaping Students' Perceptions of female condom Usage: A Systematic Review."

The second manuscript is titled: "Investigating the Perceptions and attitudes of tertiary students towards female condom use in South Africa: A quantitative study."

Section C: Summary, Conclusions, Recommendations, and Dissertation Limitations

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DEDICATION

I dedicate this work to my beautiful family. To my beautiful, lovely mother, Tendani Sibede Melbra, who taught me that failure does not define me, motivated me when I felt like quitting, and thank you for raising me as a son and dear friend. To my father, Makondelela Eliezer Ramawa, who encouraged me to further my studies and became a role model for me to get a master's degree like him. To my partner Modiba Tshilidzi Julia, who helped me and encouraged me to keep going and show me the light that anything is possible if you focus. I will forever be thankful.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired immune deficiency syndrome.
ARV	Antiretroviral
CDC	Centers for Disease Control and Prevention
HIV	Human Immunodeficiency Virus
PLWHA	People Living with HIV/AIDS
PTB	Pulmonary Tuberculosis
STIs	sexually transmitted Infections
UK	United Kingdom
UNAIDS	United Nations Programme on HIV/AIDS
UN	United Nations
WHO	World Health Organization
STDs	Sexually transmitted diseases
SPSS	Statistical Package for the Social Sciences
Stats SA	Stats South Africa
TVET	Technical and Vocational Education and Training
FM	Female condom
SSA	Sub-Saharan Africa
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analysis
NGO	Non-government organisations

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ABSTRACT

South Africa is a nation severely impacted by sexually transmitted diseases, HIV/AIDS, and unwanted pregnancy among youth. Even though the public sector has made female condom programmes that also help distribute female condoms, there is still mixed reaction between male and female students towards female condoms. This study aimed to describe cultural perceptions, identify personal perceptions, and determine social perceptions towards female condoms. This study utilised a quantitative, descriptive, cross-sectional survey approach. The study was conducted at the University of Venda in Limpopo province. A systematic sampling method was used to sample the respondents. The study's intended sampling size was 398 respondents, but only 386 students' questionnaires were included. This is the case as other respondents did not respond to some of the questions in the survey. The questionnaire instrument used had closed-ended questions. To ensure validity and reliability, the researcher presented the study proposal to the Department of Public Health, where suggestions were made, and the supervisor was involved in the study and questionnaire development. The researcher did a pretest first to ensure the data collected was adjusted so that the questions given to respondents were made clear and to ensure that the data was reliable and high-quality. The University of Venda Research Ethics Committee approved the study, and permission to conduct the study was obtained from the director of student affairs. The data was analysed using the Statistical Package of Social Science (SPSS) version 29.0.2.0. The data was presented in tables and histogram. The study findings revealed insufficient knowledge regarding the female condom, negative attitudes towards its discussion, gender inequality, misconceptions, and inadequate access to female condoms at tertiary institutions. The study suggested recommendations based on the findings and addressed the limitations of this study.

Keywords: Female condoms, HIV/AIDS, Perceptions, Selected tertiary institution, STIs, and Unwanted Pregnancy.

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SECTION A: AN OUTLINE OF THE STUDY

Section A: Dissertation Overview

Outlines the study's background, problems, purpose, objectives, and key concepts. It also details the research design, methodology, and ethical considerations.

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INTRODUCTION

The female condom was introduced by Lasse Hessel and approved in 1993 to reduce unwanted pregnancies and sexually transmitted infections (STIs) occurring during sexual intercourse (UNAIDS, 2016). According to Gwala (2019), the prime purpose of female condoms is to provide women with the power and platform to safeguard themselves against STIs, STDs, and unplanned pregnancies. According to the Centers for Disease Control and Prevention (CDC, 2018), several additional factors also contribute to women's susceptibility to diseases and infections. For example, age-related thinning and dryness of the vagina may be linked to risk factors for HIV infection in women compared to their male counterparts. The use of female condoms in South Africa, as in many parts of the world, has been promoted as part of efforts to reduce the spread of sexually transmitted diseases (STIs) and unexpected pregnancies (Gray & Vawda, 2020). Female condoms have been promoted as a tool to help individuals protect themselves against HIV transmission during sexual intercourse (Gwala, 2019). The South African government, along with healthcare organisations and various NGOs, have launched campaigns to increase awareness about female condoms and promote their use. These initiatives aim to provide access to female condoms, educate people on their correct usage, and reduce the stigma associated with them (Mbelle, Mabaso, Setswe & Sifunda, 2018). However, the perspectives of students regarding the use of women's condoms have not been intensively researched in South Africa. Therefore, this study investigated students' perceptions of the use of female condoms at the selected tertiary institution of higher education in Limpopo, South Africa.

This section outlined the background, problem statement, and rationale. Furthermore, the goal and relevance of the research have been explained. The study defines critical concepts and the research methodology in the following section.

1.1 BACKGROUND

As per UNAIDS (2023), of 39 million individuals are living with HIV, 16,7 million of that population are men, and 20 million are females, being the largest gender of the population living with HIV. According to UNAIDS (2022), it is estimated that young people aged 15 to 24 comprise 27% of the 3.37 million new HIV infections worldwide. This denotes that many people are contracting sexually transmitted diseases due to various factors.

According to Kola (2018), female condoms were introduced in Central America to reduce HIV/AIDS transmission among sex workers and their clients. According to Kola (2018), in 2007,

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2010, and 2012, the global availability and distribution of female condoms quadrupled from 25 million to 50 million and 60 million, respectively. Research findings indicate that a mere 27.1% of youths engage in condom use, with male condoms being the more prevalent choice at 55.8% compared to female condoms at 18.5% (Kanda & Mash, 2018). However, the distribution of female condoms accounts for only 1.6% of the overall condom distribution worldwide (Fasehun, Lewinger, Fasehun & Brooks, 2022). This means that sex workers in Central America were susceptible to HIV/AIDS infection. However, the only propagation of sexually transmitted illnesses and conditions remains the condoms, including both women and male condoms. According to CDC (2023), the incidence of sexually transmitted infections among young people is increasing rapidly. Over 53% of the STI cases in the USA yearly were among young individuals aged 15-24 (Centers for Disease Control and Prevention, 2023). This highlights a concern about the number of females using female condoms and those who are aware of it and its significance in relationships and their health in general. Therefore, these initiatives aim to enable women to take charge of their sexual health and provide them with alternative options for the prevention of unplanned pregnancies and STIs.

This above assertion is also following the results of the study undertaken in five Chinese cities, which revealed that sex workers had rates of gonorrhoea and chlamydia of 26% and 41%, respectively, with female condom use dependent on male cooperation and behaviour (Workowski, Bachmann, Chan, Johnston, Muzny, Park, Reno, Zenilman, & Bolan, 2021). College students have experienced yearly growth rates ranging from 30% to 50%, and roughly ten college students have been infected with HIV over the last few years (China Centers for Disease Control and Prevention CDC, 2020). Furthermore, a study conducted in China showcased that 91.2% of international students do not routinely use condoms when having vaginal or oral sex alongside their everyday companions (Zhou, Weizi, Shen, Goldsamt, Jiang, et al., 2022). It was discovered that a lower rate of condom use among international female students in comparison to male students may be associated with gender power inequality (Zhou et al., 2022). Therefore, this depicts a need for initiatives aimed at empowering women to take charge of their sexual health and provide them with alternative options to prevent unwanted pregnancies and STIs. This also demonstrates a discrepancy in women's attitudes and opinions about the usage of female condoms.

In Nigeria, around 1.9 million individuals are living with HIV/AIDS. The incidence of sexually transmitted diseases among Nigerian female teens is as high as 17%, with a startlingly low percentage of male condom usage at around 25% and 11% for sexually active men and women,

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respectively (Archibon & Goshen, 2023; Adebowale, Ajiboye & Arulogun, 2013). According to WHO (2022), only 25% of Nigerian males and 11% of females who are sexually active use condoms. According to a study by Uchendu, Adeyera, and Owoaje (2019), 1.9% of undergraduate students at Edo State had used condoms, while the rural dwelling women had never used them. The impression of reduced sexual satisfaction, the male-dominated societal norms, hormonal birth control pills, and parental disapproval are significant reasons women are less likely to use female condoms (Mbachu, Agu & Obayi, 2021). This is also prevalent in Malawi, where most women have a negative attitude and perspective toward the use of female condoms (Obembe, Adebowale, & Odebunmi, 2017). In this manner, the promotion of female condom usage and other means of contraception to improve sexual and reproductive health outcomes for females and their partners was necessary. Additionally, involving local communities, cultural leaders, and healthcare providers in advocacy and education efforts is crucial to help foster positive attitudes toward female condoms while respecting cultural sensitivities. These include fostering positive attitudes among students at institutions of higher learning.

In Sub-Saharan Africa, over 60% of the world's population living with HIV are females, and HIV-related diseases account for the majority of mortality among women aged 15 to 49 years (Obembe et al., 2017). According to Beksinska, Wong, and Smit (2020), this may be impacted by the fact that Sub-Saharan Africa (SSA) is the world's poorest and least developed region. South Africa is among the nations that are badly impacted by STIs and HIV/AIDS outbreaks (Kola, 2018). The high incidence of HIV/AIDS and unplanned pregnancies among young people symbolises a significant public health concern in South Africa (Mbelle, Mabaso, Setswe & Sifunda, 2018). This entails that several factors influence the attitudes towards female condoms, including gender dynamics, stigma, and religious and moral beliefs. Therefore, proper education and training on using female condoms are crucial to ensure their effective and consistent use. Inadequate knowledge about insertion and removal can lead to improper use, reducing its efficacy (Sitonga et al., 2023). This training is necessary for the use of feminine condoms as male condoms have been more widely available and promoted for a longer time, leading to a preference for this contraceptive method among both men and women. Subsequently, this preference can impact the demand and the usage of female condoms, as well as people's views on using female condoms.

According to Stats SA (2022), the population is projected to reach 60.6 million, and the number of persons with sexual infections has grown from an expected 3.68 million in 2002 to 8.45 million

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in 2022. South Africa first launched the female condom in 1998, and currently, female condoms are used at a lower rate than male condoms among people under the age of twenty years, only 8% of young women and 6% of young males (Mantell, Exner, Bai, et al., 2020). However, it is crucial to recognise that attitudes are dynamic and can change with proper education, awareness, and resource access. Subsequently, it is essential to explore some factors that may influence cultural attitudes toward female condoms, including gender dynamics, stigma, and religious and moral beliefs.

This is necessary because female condoms, compared to male condoms, are unpopular and less commonly used. As a result, HIV prevalence and unintended births among teens appear to continue (Mbelle et al., 2018). Nonetheless, female condoms are still less standard and utilised than male condoms, which means that HIV prevalence and unintended births among young people appear to be continuing (Mbelle et al., 2018). The cultural norms of male dominance in the home and in relationships expose women to less control or participation in making decisions to use condoms during sexual activity (Gray & Vawda, 2020). Another viewpoint that leaves women open to risk factors for STIs, STDs, and unintended pregnancies is the notion that using a condom while having sex with your spouse is not recommended after you are married (Gray & Vawda, 2020). A survey of Technical and Vocational Education and Training (TVET) institutions in South Africa found that students understood the need to use female condoms regularly to avoid the spread of STIs and HIV (Mbelle et al., 2018).

In terms of demography, married adolescents use female condoms less frequently than single youths (Bernard, 2017). Female students who view condoms as reducing HIV transmission are more inclined to negotiate their usage (Gwala, 2019). This denotes that successful implementation requires a multifaceted approach that considers the unique characteristics and needs of the student population. It is also essential to involve students themselves in the planning and execution of the program to ensure their voices are heard and their preferences are considered.

The study done by Boraya, Githae, Atandi, and Cachau (2018), among students at TVET institutions across South Africa indicated that most students are encouraged by their friends to participate in risky behaviour that endangers their health or lives in general. Most students in tertiary institutions are assumed to understand the significance of using a condom during sexual encounters. This also includes understanding the significance of female condoms, which empower women to defend themselves against STIs and STDs if their male partners refuse to

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use a male condom (Mbelle et al., 2018). In 2020, Vhembe District had 64 327 persons who had HIV and Aids, which is about 19,5 % of HIV-positive individuals in Limpopo province (Risenga & Mboweni, 2022). In 2020, teenage pregnancies estimated to have given birth were 5954 in Limpopo, with ages varying between ten and seventeen years old (Risenga & Mboweni, 2022). According to a report done at Mopani District, about 37 students were pregnant in 2017, and two teenagers between the ages of 14 and 16 were found pregnant at Mopani Primary School (Risenga & Mboweni, 2022). According to the study done at the University of Limpopo by Shiburi (2021), students show interest in the usage of female condoms, but their inaccessibility in comparison to male condoms, lack of awareness about the usage of female condoms and cots and procurement in pharmacy have led to under usage of female condom at the tertiary institutions. South Africa's National Female Condom Programme (SANFCP) experienced rapid growth as one of the world's most prominent programs (South African National AIDS COUNCIL, 2019). In South Africa, female condoms distributed in 2016 exceeded the annual strategic plan target of 25 million, which was exceeded by 2 million, totalling approximately 27 million female condoms distributed (National Department of Health Annual Report, 2022). This includes addressing the harmful effects of alcohol and drugs on young people's health (National Department of Health Annual Report, 2022). South Africa initiated programmes addressing the social and structural factors exposing young girls and boys to vulnerability and increased risky behaviours. The initiated programmes include She Conquers, YOLO, and Zazi as development programmes facilitated by the Department of Social Development (SANAC, 2019). However, more proper education and training on using female condoms are still needed to ensure their effective and consistent use. Inadequate knowledge about insertion and removal can lead to improper use, reducing efficacy. This is necessary because a lack of adequate knowledge can lead to negative perceptions or attitudes toward the usage of female condoms among students.

This is regardless of the efforts put in by the South African National Condom Programme, which has multiplied to the extent that female condom distribution exceeded the planned annual target (Mbelle et al., 2018). There are programmes such as "SHE CONQUERS" and non-governmental organisations giving health education and free distribution of female condoms, empowering women and encouraging safe sexual behaviour amongst youth. This denotes that successful implementation requires a multifaceted approach that considers the unique characteristics and needs of the student population. This is the case because public perceptions and acceptance of female condoms may vary depending on the community's openness to

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discussing sexual health issues. This is influenced by varying social attitudes towards South African women's condom use, which differ significantly from one community to another (Mbelle et al., 2018). Therefore, it is essential to involve students in the planning and execution of the program to ensure their voices are heard and their preferences are considered. This has led to this research investigating the perceptions of students on female condom usage at a selected university in Limpopo province, South Africa. This study helped the students to be exposed to available additional contraceptive options that they can control, and it also empowered women to make decisions regarding their sexual health and protect themselves from potential risks.

1.2 PROBLEM STATEMENT

Healthcare workers have outreach programmes in which they provide health education on the feminine condom and the significance of using it. Women condoms distributed in female toilets in most tertiary education institutions are readily available. Despite the availability of all these programmes and the free availability of female condoms, the statistics of youth with HIV, teenage pregnancy, and other STIs are still high (Statistics South Africa, 2020). The delivery rate of children by youth between 10 and 19 years increased from 13.5% to 14.9% (District Health Barometer 2018). Termination of pregnancy of youth under 20 years in 2017 to 2019 increased from 12.1% to 12.9 %, the highest being in Limpopo province, from 16.7% to 18.8% (Statistics SA, 2020). Teenage pregnancy proportions increased from 2% at 15 years to 27% at 19 years, with 71% being unwanted pregnancies and 29% wanting pregnancy (Limpopo Provincial Health Research, 2012). Kola (2018) contends that despite the intervention techniques and programs put in place to combat the spread of STIs and STDs, the rapid growth in infection rates continues to skyrocket. According to a sentinel surveillance report, clients between the ages of 18 and 20 who used sampled amenities in the district of Vhembe had between 1046 and 1932 new STIs. This large amount is problematic in a region of 1,393,949 people (Kularatne, Radebe, Kufa-Chakezha, Mbulawa, Lewis, 2017; Vhembe District Health Information System, 2018). In this view, the study explored students' perspectives about the use of female condoms. This project examined techniques for giving relevant stakeholders the planning and implementation of programs and strategies that will enable the distribution of female condoms at institutions of higher education aimed at eradicating misinformed perceptions about female condoms.

1.3 RATIONALE OF THE STUDY

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There is a dearth of data regarding students' perceptions of the use of female condoms in South Africa. The majority of research undertaken in South Africa centred around challenges regarding using condoms for both men and women, factors contributing to STIs, teenage pregnancy, attitudes, sexual behaviour regarding adolescent pregnancy and reproductive problems, and students at Training College engaging in dangerous sexual conduct (Davids, 2019; Murudi, Mashau & Ramathuba, 2018). However, there was a study that was done at the University of Limpopo focusing on the perspective of female condom usage among postgraduate students. This study revealed that the reported discarding and abuse of women's condoms among students is connected with a lack of information and views about it. It further discovered effective initiatives and campaigns to promote student understanding are required to reduce unnecessary costs in the acquisition and delivery of female condoms (Shiburi, 2021). As a result, this investigation seeks to fill this gap by exploring the perceptions of students (undergraduate and postgraduate) on the usage of women's condoms in institutions of higher education and at the University of Venda in particular.

1.4 SIGNIFICANCE OF THE STUDY

The findings of this investigation may contribute to the current body of literature to assist the Department of Higher Education in developing and carrying out initiatives and policies to raise awareness about the usage of female condoms at higher education institutions. This study may help the Department of Higher Education to modify the policies for HIV, STIs, and teenage pregnancy programs. The study may also be helpful to healthcare workers at tertiary institutions in addressing the barriers to the use of female condoms. Students at large could benefit from this study by understanding the perceptions and significance of using female condoms. The management of institutions of higher learning may gain a deep understanding of how the students perceive the usage of female condoms. The findings of this research could aid individuals involved in creating and executing initiatives and regulations to encourage the usage of female condoms in higher education institutions to clarify misunderstandings about them. The contribution will be made through policy briefing at the selected institution for this study and through publications to benefit other stakeholders.

1.5 PURPOSE OF THE STUDY

This study aimed to investigate students' perceptions regarding the use of female condoms at the University of Venda in Limpopo province.

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1.6 OBJECTIVES OF THE STUDY

The objectives of this study were to:

- Describe the cultural perceptions of students regarding the use of female condoms at the University of Venda.
- Identify the personal perceptions of students regarding the use of female condoms at the University of Venda.
- Determine the social perceptions of students regarding the use of female condoms at the University of Venda.

1.7 DEFINITION OF KEY TERMS

Female condom

A flexible pouch called a female condom, also known by the brand name FC2, comprises a smooth, loose sheath and two adaptable polyurethanes, with one ring lying inside the female reproductive tract at the closed-off part of the sheath and serving as an insertion process and internal anchor (Schreiber, Creinin, Atrio, Sonalkar, Ratcliffe, & Barnhart, 2018). In this research, a female condom relates to a barrier method used by females during sexual intercourse to prevent HIV, STIs, and unintended pregnancies.

Perception

Perception is defined as peoples' recognition and interpretation of sensory information, including how they respond to the information and interact with the environment (Twedt & Proffitt, 2019). In this study, perception relates to the thoughts or beliefs held by students at the selected tertiary on the usage of female condoms.

Tertiary institution

This refers to any organisation that, as defined by this legislation, is registered or temporarily classified as an autonomous tertiary institution and offers higher education full-time, part-time, or remotely (South Africa Higher Education Act No. 101 of 1997). In this research, a tertiary institution is interpreted as the University of Venda, which is situated in Limpopo province, South Africa.

Students

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Any person enrolled as a student at an institution of higher learning falls under this category (South Africa Higher Education Act 101 of 1997). In this research, a student has been defined as someone who is registered at the University of Venda.

2. RESEARCH METHODOLOGY

Research methodology is a systematic approach that allows researchers to describe, clarify and forecast occurrences (Goundar, 2019). In the research methodology, the researcher discussed the research strategy, research design, study environment, study population, sample, and data-collecting device utilised. The research methodology described the steps to assure the dependability of the study's conclusions, data gathering technique, data analysis, and ethics.

2.1 Research Approach

This study utilised quantitative research to obtain answers relating to the questions by applying scientific procedures. Quantitative research examines objective ideas by evaluating the connection between variables, usually using instruments, so numerical data may be assessed with statistical methods (Leavy, 2017). It also improves reliability and lack of bias. The researcher chose a quantitative study to determine students' perceptions regarding the usage of female condoms at the University of Venda in Limpopo province. The quantitative approach enabled the researcher to obtain data from a large population, ensuring the generalisability of the findings.

2.2 Research Design

The research study design relates to the procedures or rational steps the researcher uses in responding to their research question (Brink, Van Der Walt & Van Rensburg, 2018). The researcher used a cross-sectional descriptive design. According to Brink et al. (2018), cross-sectional studies look at data at a single moment in time, and the data is gathered just once with different respondents rather than many times with the same respondents. The researcher distributed the questionnaire to each respondent simultaneously while employing this technique. This enabled the researcher to reach a large population quickly while obtaining relevant data to achieve the research objectives. Descriptive designs focus on acquiring information from an accurately representative sample and defining the variables to answer the research question

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(Brink et al., 2018). The researcher explained the perceptions of tertiary students regarding female condom use.

2.3 Study Setting

The study setting is a particular place where information will be gathered, such as a real-life circumstance or environment (Kumar, 2019). The study was carried out at the institution of higher learning in Venda in Limpopo province. Limpopo Province is one of South Africa's nine provinces, with just two universities. Limpopo is located in the northern region of South Africa. Limpopo province covers 10.3% (125,755 square kilometres) of South Africa's total land area. There are five regions: Capricorn, Mopani, Sekhukhune, Vhembe, and Waterberg. The Limpopo provincial economy is the sixth biggest in the entire nation, with a GDP of R224 billion, outperforming the Northwest, Free State, and Northern Cape provinces. Limpopo province has a population of 5.8 million. These three districts have comparatively higher human development because of the density of economic activity.

On the other hand, Limpopo has less human development than other provinces due to its rural nature. Teenage pregnancy proportions increased from 2% at 15 years to 27% at 19 years, with 71% being unwanted pregnancies and 29% wanting pregnancy (Limpopo Provincial Health Research, 2017). Limpopo had a termination of youth pregnancies from 12.1% to 12.9% between the years 2017 and 2019 (Statistics South Africa, 2022). Limpopo province has 91.66% of individuals diagnosed with HIV, and 73,26% of those individuals are on Anti-retroviral treatment (Low & Macdonell, 2019).

The University of Venda has four faculties and 13 residences, accommodating about 3,826 male and female students on campus. There are accredited residents outside the campus that accommodate other students. The University of Venda has 14,949 students (Annual Report, 2023). The University of Venda has one leading clinic that provides primary healthcare services. There are private and public healthcare facilities close to the campus.

2.4 Research population

Brink et al. (2018) define the population in question as all the groups or items that the investigator is curious about or that fit the study parameters. Those who participated in this study are students registered at the University of Venda in Limpopo province. The target population was 3826 students residing on campus, both male and female students, as shown in Table 1.

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2.4.1 Population frame

The complete population or cohort that a researcher is interested in studying and examining is known as the population frame (Brink et al., 2018). The population frame for this investigation was all female and male students currently registered with the University of Venda and residing inside the campus residences. Students who stay inside the campus share the same characteristics. The total number of students was taken from the wardens of each residence. This is the total population residing at each resident in 2024.

Table 1.: Population frame

Name of residents	Gender	Population
A1	Female	129
B1	Female	116
B2	Female	55
C1	Female	113
C2	Female	904
D1	Female	324
E1	Male	369
E2	Male	308
E3	Male and female	256
F1	Male	880
F2	Female	372
TOTAL		3826

2.5 Sample and Sampling

The sample is a portion of a larger set the researcher has chosen or a subset of the entire set (Brink et al., 2018). Sampling in statistical analysis is the process of choosing a certain number of observations from a larger sample of people (Creswell, 2017). The researcher used a systematic method or sample at intervals. Systematic sampling is used to select elements at equal spacing, such as every fifth, eighth, or twentieth component (Brink et al., 2018).

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2.5.1 Sample size

The total number of individual samples or observations in any statistical scenario, such as a scientific experiment or a public perception survey, is what Creswell and Creswell (2017) define as the sample size. The researcher employed Slovin's formula to calculate the sample size. The calculation equation was n=N/ (1+Ne2). The researcher used a confidence level of 95%, and the total student population residing on campus was determined after ethical clearance. After Slovin's recommended sample size, the researcher added 10% to the given sample size. Adding 10% was vital to cover the respondents who did not finish the questionnaire and to improve and strengthen the validity and dependability of the outcomes. The small letter n symbolises the sample size, N reflects the population size of 3826 students who resided on campus, and e denotes a margin error of 0,05.

$N= 3826/ (1+(3826) (0,05)^2$ N=362,139

N=362

10% of 362=36.2

The sample size was 398.

2.5.2 Systematic interval

To determine the sampling interval (K), the researcher used the formula K=size of population/sample size, represented as K=N/n. The interval of the study was calculated as follows:

K=3826/398=9,613

K=9

Therefore, the interval was 9.

2.5.3 Inclusion and Exclusion Criteria

2.5.3.1 Inclusion criteria

To be included in this study, respondents had to meet the following criteria:

- They had to be registered as students at the selected university and stay on campus.

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- They had to be 18 years old and above.
- They had to provide a signed consent form.

2.5.3.2 Exclusion criteria

To be excluded from this study, the following criteria were used:

- Respondents who refused to sign a consent form.
- Respondents who choose not to respond to the questionnaire.
- Registered students residing at off-campus residences.

2.5.4 Sampling Frame

A list that identifies every student in the research population is called a sampling frame (Kumar, 2019), as shown in Table 2.

The researcher omitted the names of the residents and used the alphabet; the researcher kept the names of the residents in a safe place. The table below indicates the proportional sample calculated per res. Proportional sample =sample size/total residence population x population per res block.

Table 2: Sampling frame

Names of residents	Gender	Population	Proportional sample
A1	Female	129	398/3826x129= 13
B1	Female	116	398/3826x116= 12
B2	Female	55	398/3826x55=6
C1	Female	113	398/3826x113= 12
C2	Female	904	398/3826x904= 94
D1	Female	324	398/3826x324= 33
E1	Male	369	398/3826x3369= 38
E2	Male	308	398/3826x308= 32

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E3	Male and female	256	398/3826x256= 27
F1	Male	880	398/3826x880= 92
F2	Female	372	398/3826x372= 39
TOTAL		3826	398

2.6 Sampling Procedure

The researcher focused on all residences of both females and males within the campus. The researcher used a door-to-door approach to collect data. The respondents were selected using an interval of 9. The first room was chosen randomly for each resident, and then every 9th room was selected. When the 9th room chosen did not have respondents, the researcher then decided on the following room and continued using the interval of the 9th room until the proportional sampling size was reached in each residence. Moreover, in cases where students were sharing a room, both of them were included to participate as they were in a sampled room for participation in the study.

2.7 DATA COLLECTION INSTRUMENT

The researcher used structured questionnaires to gather data for this investigation. The respondent, who serves as the evaluation unit in this procedure, fills out a printed document with their written responses to the questions (Brink et al., 2018). The reason for this questionnaire was to gather pertinent data for the study concerning tertiary students' opinions about the usage of female condoms at the University of Venda. Considering this was considered a cross-sectional study, data was obtained fairly rapidly, which enabled the researcher to address a wide range of respondents in time (Creswell & Creswell, 2017). The study's objectives informed the development of the self-administered questionnaire, formulated after a review of related literature. The researcher developed the questionnaire using English, the medium of instruction at the selected tertiary institution. It was made up of four sections: Section A: Demographic characteristics of respondents; Section B: Cultural perceptions of students regarding the usage of female condoms; Section C: Social perceptions of students regarding the usage of female condoms; Section D: Personal perceptions of students regarding the usage of female condoms.

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2.8 VALIDITY AND RELIABILITY

The following is how the researcher ensured the validity and reliability of the instrument.

2.8.1 Validity

A valid instrument is one that can measure what it is supposed to measure (Kumar, 2019). In order to make sure the questionnaire measures what it is intended to assess, the researcher logically connected the questions to the objectives. The greater the link of questions to the study's objectives, the greater the face validity of the instrument. The researcher used face and content validity. To ensure content validity was established, the supervisors examined whether the questions covered areas under the study. Healthcare workers and health youth representatives assessed the questionnaires to make sure the questionnaire covered the area under study. The researcher used the comments from the questionnaire's validity assessment to modify it to measure the intended parameters.

2.8.2 Reliability

When an instrument is used frequently, as time goes by on the same participants or by two researchers, it is said to be reliable if it can be relied upon to produce consistent results (Creswell & Creswell, 2017). The researcher used the test re-test method to measure the instrument's reliability and ensure that the instrument yielded reliable answers. The researcher distributed the questionnaire to 10% (36 students) who did not form part of the study. The questionnaire was distributed to the same respondents on two occasions five days apart to avoid memorising the answers. The researcher checked whether the respondents' responses were missing or wrong by measuring the degree of relationship through the correlation coefficient. This also helped in measuring the constituency of the instrument. The lower the difference and the greater the ratio, the higher the instrument's reliability (Kumar, 2019). The researcher used the Cronbach alpha test to assess the device's reliability by measuring the correlation coefficient. The correlation coefficient was tested with Cronbach's alpha; the results were 0.725, indicating the questionnaire's reliability.

2.9 PRE-TEST

Before beginning with the data collection process, the pre-test, according to Brink (2018), verifies that the study instrument can collect data and ensures that the guidelines are comprehended. The researcher's objective on the pretest was to test the clarity of the questionnaire. A 10% (36 students) pre-testing of the sample was conducted, and survey questions were handed to those students. These students did not become a constituent of the

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final study. The researcher ensured the quality of results by distributing the questionnaire to 36 female and male students residing at off-campus residences since they had traits in common with the research population and were also from the same university. The researcher administered questionnaires to the selected 36 students and made appointments with them that were suitable for those students, and the researcher ensured privacy. The respondents communicated the venue and time when they were available. This activity was intended to pre-test the instrument's applicability and feasibility. It assisted the researcher in determining which questions were too complex to comprehend and required revision before the main study and ensuring that the objectives were covered. The results obtained from the pre-test study were used to support the researcher in modifying the data-gathering tool and identifying the gaps before conducting the primary research study. It also helped improve the quality and efficiency of the questionnaire. However, the pre-test results were not included in the main study as they were utilised to raise the standard of the study tools and instruments.

2.10 DATA COLLECTION PROCEDURE

According to Creswell & Creswell (2017), the systematic process of gathering, calculating, and interpreting precise research insights using accepted, verified methods is known as data collection. The sole tool the researcher used to gather data was a questionnaire. Before data collection, the researcher obtained ethical clearance from the University's Research Ethics Committee and approval to conduct the study. The researcher obtained a permission letter from the director of student affairs to collect data. The researcher requested permission from the student's representative council to communicate about his visitation to the residence via social media, either Facebook or block rep WhatsApp groups. The permission letter was used to enter the students' residence. The researcher went door to door to the respondents' rooms, giving them informed consent, and read the information letter. The researcher also went to the female residences accompanied by a female student representative to ensure safety so the respondents could feel free. The respondents were given informed consent to sign first. The respondents who chose to form part of the study were given a questionnaire and a black pen to respond, and then the filled questionnaires were inserted inside an envelope and sealed by the respondents. The researcher distributed and set a date and time for the questionnaire collection. The researcher collected data during the day on weekends, as other respondents may be attending classes during weekdays.

2.11 PLAN FOR DATA MANAGEMENT AND ANALYSIS

The following is how the researcher managed data and analysed data.

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2.11.1 Data Management

The data-management plan covers creating, sharing, and preserving study information of any kind, including text, spreadsheets, photos, recordings, models, algorithms, and software. It also describes how researchers deal with their data before and after a project (Cox & Verbaan, 2018).

The researcher went through all the questionnaires to ensure they were complete. The researcher then removed all those that were incomplete. The researcher kept the memory disc private for this investigation, and data were securely stored in a secured cabinet. Only codes, not responder names, were connected to the data. All the campus residents' names were hidden and used as codes.

2.11.2 Data analysis

According to Creswell & Creswell (2017), data analysis is the process of gathering, modelling, and evaluating data to derive insights that aid in decision-making. The researcher in this study described and summarised data in useful and relevant ways using descriptive statistics through the Statistical Package for the Social Sciences (SPSS) version 29.0.2.0. Descriptive statistics were employed to explain and summarise data and show how the data set was organised. To give the data some significance, these statistics organise and condense data collected into a well-organised visual representation (Bless, 2018). The researcher analysed data using frequency distribution, relationship, and central tendency measures. Frequency distribution was used to analyse data and summarise the results' occurrence.

2.12 ETHICAL CONSIDERATIONS

A collection of moral precepts and directives for medical research involving human subjects is known as the proclamation of the Declaration of Helsinki. It has been utilised in health research since the World Medical Association (WMA) accepted it in 1964 (Slack, Singh, Strode, & Essack, 2012). Kumar (2019) posits that ethical dilemmas arise from the moral principles of professional behaviour that are deemed appropriate for effective professional work. The ethical considerations that this study adhered to show the morality of humanity and demonstrated whether the approach used was proper. For this study, the following moral guidelines were considered:

2.12.1 Institutional protocol

The researcher sent the proposal for quality evaluation to the Faculty of Health Sciences and the Department of Public Health. The plan was sent to the University Ethical Committee for

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review and ethical clearance (FHS/23/PH45/3011). The committee issued an ethical clearance. The UHDC also approved this study.

2.12.2 Permission to conduct the study.

The researcher wrote to the university registrar to request permission to perform the study. The university registrar granted the researcher permission to conduct the study after obtaining the ethical clearance certificate. The primary study paper attached the letter (Annexure E) requesting authorisation to access respondents' on-campus housing to gather data.

The researcher applied for the authorisation to gather data from the University of Venda in writing. An ethical clearance and research proposal accompanied the request. After obtaining the approval letter from the management of the chosen tertiary institution, permission to access the residents was requested from the director of student affairs of the University of Venda.

2.12.3 Informed consent

Put, "consent" is the act of one person willingly accepting another's offer or wants (Kumar, 2019). The process of informing prospective respondents about the main components of a study and the activities in which they will be included is known as informed consent.

Brink et al. (2018) state that informed consent may be delivered orally, in writing, or recorded. The respondents were informed that responding to the survey was completely voluntary and that they could stop answering the questionnaire at any time if it caused discomfort. They can voice concerns on the questionnaire if they need clarification on any points. Following an appropriate interaction between the researcher and the respondents, each respondent received and signed a consent form attesting to their readiness to engage in the study (Annexure C). The responders were informed precisely of what was expected of them by the researcher. They were also given the freedom to choose whether or not to participate and made sure they felt comfortable when doing so.

2.11.3 Protection of Participants from any Harm

In research, deceit occurs when respondents are unaware of the study's objectives. In addition, this method allows for valuable insight into characteristics that would remain undiscovered if every aspect and factor were apparent to study respondents (Creswell & Creswell, 2017). The researcher shared all information with respondents without telling lies and noted down all the data from the respondents without misinterpreting it. Furthermore, to avoid participants' exposure to such risks, the researcher's ethical responsibility was ensured by ensuring the

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respondents did not experience any physical, emotional, or psychological harm during their participation. This study was not invasive, so it did not involve any invasive procedures that could cause damage to respondents. The research question was phrased in a manner that did not inflict psychological harm on the respondents. The researcher protected the respondents from emotional harm by making sure they were given space alone to respond to the questionnaire by standing outside when they were responding. The researcher visited the female residences with a female representative to ensure respondents felt safe.

2.12.4 Confidentiality

According to Pilot & Beck (2017), participants should be guaranteed that no information will be shared with third parties not directly associated with the study to protect respondents' privacy. The investigator ensured that respondents in this research project were aware that the information they submitted would remain unidentified. Also, the researcher ensured that no other persons accessed the data with the identity of the respondents. The researcher undertaking the study was the only one with access to the confidential data gathered via the questionnaire.

2.12.5 Anonymity

According to Polit & Beck (2017), being anonymous occurs when the examiner avoids linking data to a particular respondent. In this study, the researcher ensured that the data gathered from the respondents was not associated with any respondent's name. Codes were utilised in place of names to guarantee that the information supplied in reports, presentations, and other distribution formats cannot be associated with the actual respondents. The signed informed consent forms were separated from the questionnaire to avoid linking names with the respondents.

2.12.6 Beneficence

This refers to securing the respondent's well-being and providing protection from harm and discomfort by giving good clinical judgment so that they can manage the interviews in the study (Polit & Beck, 2017). The researcher ensured that the questionnaire was constructed clearly and carefully to avoid causing damage to one's cognitive functioning or emotions, such as anxiety, to the study's respondents. The researcher ensured that the respondents' well-being was the priority and that it protected them from harm and discomfort.

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2.13 PLAN FOR DISSEMINATION AND IMPLEMENTATION OF RESULTS

The researcher will circulate and share dissertation copies with all stakeholders upon completing this research project. The electronic copies of the survey will be sent to the selected tertiary institution library and the online research database for students and other researchers to access. Manuscripts were submitted for publication in peer-reviewed DHET-accredited journals.

2.14 STRUCTURE OF THE MINI DISSERTATION

This mini-dissertation titled **"STUDENTS' PERCEPTIONS REGARDING THE USE OF FEMALE AT THE UNIVERSITY OF VENDA, IN LIMPOPO PROVINCE, SOUTH AFRICA"** is organised into three sections and written in an article manner. The first section was the outline of the study, which consisted of the background, problem statement, rationale, significance, purpose of the study, objectives, and definition of the study's concepts. This section also includes the methodology for fully describing the research approach, study setting, sampling, data collection, analysis, and ethical consideration.

The second section includes two manuscripts:

1. The first manuscript is a systematic review titled "**Examining the Interplay of Social, cultural, and Personal Factors in Shaping Student's Perceptions of female condom usage: A Systematic Review," which is under** review, and journal guidelines have been attached.
2. The second manuscript is titled **"Investigating the Perceptions and Attitudes of Tertiary Students towards female condom use in South Africa: A Quantitative Study."** It is still under Review, and journal guidelines have been attached.

The study's conclusion and all of its facets are covered in the third section. An overview of the publications, research implications, strengths and limitations, conclusions, and recommendations are included in this section.

2.15 SUMMARY

An overview of the research, which examined the students' perceptions regarding the use of females at the University of Venda in Limpopo province, South Africa, was presented. The focus of this section was to outline the introduction and background, problem statement, rationale, significance, purpose, objectives and definition of the concepts of the study. Additionally, the methodology was described, encompassing the pre-test, validity, reliability, design, sampling,

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data collection, analysis, and ethical considerations in addition to the study technique. An outline of the entire study is given in this section. The literature review is provided in section B below.

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2.16 LIST OF REFERENCES

1. Adebowale, A., Ajiboye, B. and Arulogun, O. (09 2013) 'Patterns and correlates of condom use among unmarried male youths in Nigeria: NDHS 2008', African Journal of Reproductive health, 17, pp. 149–159.
2. Archibong, E. B, & Goshem, M. D. (2023). A review of current trends in HIV epidemiology, surveillance, and control in Nigeria. Annals of Medicine and Surgery, Publish Ahead of Print (5). https://doi.org/10.1097/ms9.0000000000000604.
3. Beksinska, M., Wong, R., & Smit, J. (2020). Male and female condoms: Their key role in pregnancy and STI/HIV prevention. Best Practice & Research Clinical Obstetrics & Gynaecology, 66, 55–67.
4. Bernard, M., Simon, I., Charles, M., Charles, K., Ghislain, M., Albert, M., Benjamin, K., & Prosper, K. (2017). Evaluation of female condom use among students at the University of Lubumbashi: Knowledge, attitude, and practice on university cities. Open Access Library Journal, 4, 1–9.
5. Bless, D. (Ed.). (2015). Research in Practice: Applied methods for social sciences. Cape Town: University of Cape Town Press.
6. Boraya, J. O., Githae, C., Atandi, T. A., & Gachau, A. (2018). Social and psychological factors affecting utilization of female condoms among youths in Migori County, Kenya. Health Psychology Open, 5(2), 205510291881533. https://doi.org/10.1177/2055102918815336.
7. Brink, H., Van de Walt, C., & Van Rensburg, G. (2018). Fundamentals of Research Methodology for Healthcare Professionals. Juda and Co. Ltd., Cape Town.
8. Centers for Disease Control and Prevention. (2023, February 3). Reported STDs in the United States, 2020. Www.cdc.gov. https://www.cdc.gov/nchhstp/newsroom/fact-sheets/std/std-us-2020.html.
9. Centers for Disease Control and Prevention. (2023, February 3). Reported STDs in the United States, 2020. Www.cdc.gov. https://www.cdc.gov/nchhstp/newsroom/fact-sheets/std/std-us-2020.html
10. Centers for Disease Control and Prevention (CDC). (2018). Preexposure prophylaxis for the prevention of HIV infection in the United States: A clinical practice guideline. The USA.
11. Cox, A. M., & Verbaan, E. (2018). Exploring Research Data Management. London: Facets Publishing.
12. Creswell, J. W., & Creswell, J. D. (2017). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches (4th ed.). Sage, Newbury Park.

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13. Davids, L. (2019). Knowledge, attitudes and practices of contraception amongst adolescent girls from selected high schools in a low socio-economic community in Cape Town. Etd.uwc.ac.za. http://hdl.handle.net/11394/7615.
14. District Health Barometer. (2018). Retrieved from https://www.hst.org.za/publications/District%20Health%20Barometers/District+Health+Barometer+2018-19+Web.pdf.
15. Fasehun, L.-K., Lewinger, S., Fasehun, O., & Brooks, M. (2022). Barriers and Facilitators to Acceptability of the Female Condom in Low- and Middle-Income Countries: A Systematic Review. Annals of Global Health, 88(1). https://doi.org/10.5334/aogh.3612.
16. Gray, A., & Vawda, Y. (2020). Health Policy and Legislation. South African Health Review. Durban: Health Systems Trust.
17. Gwala, N., & Maharaj, P. (2019). Factors influencing consistency of condom use among college students in Durban, South Africa. University of Kwazulu-Natal: Durban.
18. Goundar, S. (2012). Chapter 3 - Research Methodology and Research Method.
19. Kanda, L., & Mash, R. (2018). Reasons for inconsistent condom use by young adults in Mahalapye, Botswana. African Journal of Primary Health Care & Family Medicine, 10(1). https://doi.org/10.4102/phcfm.v10i1.1492.
20. Kola, B. N. (2018). Understanding the attitudes, perceptions and practices towards condom use in preventing HIV among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape. Etd.uwc.ac.za. http://hdl.handle.net/11394/5969.
21. Kularatne, R., Radebe, F., Kufa-Chakezha, T., Mbulawa, Z., & Lewis, D. (2017). Sentinel Surveillance of Sexually Transmitted Infection Syndrome aetiologies and HPV genotypes among patients attending Primary Health Care Facilities in South Africa. https://platform.who.int/docs/default-source/mca-documents/policy-documents/operational-guidance/ZAF-RH-43-03-OPERATIONAL-GUIDANCE-2017-eng-Sentinel-Surveillance-of-Sexually-Transmitted-Infection-Syndrome-aetiologies-and-HPV-genotypes-among-patients-attending-Primary-Health-Care-Facilities-NICD.pdf.
22. Kumar, R. (2019). Research Methodology: A Step-by-Step Guide for Beginners. London: Sage.
23. Leavy, P. (2017). Research Design: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches. New York, NY: Guilford Press.
24. Low, M., & MacDonell, S. (2019, August 5). Graphs that tell the story of HIV in South Africa's provinces. Spotlight. https://www.spotlightnsp.co.za/2019/08/05/graphs-that-tell-the-story-of-hiv-in-south-africas-provinces.

© University of Venda

25. Limpopo Provincial Health Research. (2012). Factors associated with teenage pregnancy in Limpopo province provincial health research day 2012 population and development directorate. (2012). http://policyresearch.limpopo.gov.za/bitstream/handle/123456789/810/FACTORS%20ASSOCIATED%20WITH%20TEENAGE%20PREGNANCY%20IN%20LIMPOPO%20PROVINCE.pdf?sequence=1.
26. Mantell, J. E., Exner, T. M., Bai, D., Leu, C.-S., Beksinska, M., Mabude, Z., Hoffman, S., & Smit, J. A. (2020). Perceived male partner attitudes toward the female condom predict female university students' use of the female condom. International Journal of STD & AIDS, 31(8), 753–762. https://doi.org/10.1177/0956462420912986.
27. Mbachu, C. O., Agu, I. C., & Obayi, C. (2021). Beliefs and misconceptions about contraception and condom use among adolescents in south-east Nigeria. Reproductive Health, 18, 7.
28. Mbelle, N., Mabaso, M., Setswe, G., & Sifunda, S. (2018). Predictors of unplanned pregnancies among female students at South African Technical and Vocational Education and Training colleges: Findings from the 2014 Higher Education and Training HIV and AIDS survey. South African Medical Journal, 108(6), 511. https://doi.org/10.7196/samj.2018.v108i6.12744.
29. Murudi-Manganye, N. S, Mashau, N. S., & Ramathuba, D. U. (2020). Factors Associated with Risky Sexual Behaviour Amongst Students at a Training College in Limpopo Province, South Africa. https://doi.org/10.21203/rs.3.rs-136350/v1.
30. National Department of Health Annual Report. (2022). Strategic plan. Available at: https://www.health.gov.za/wp-content/uploads/2023/10/Annual-Report-2022-2023.pdf.
31. Obembe, T. A., Adebowale, A. S., & Odebunmi, K. O. (2017). Perceived confidence to use female condoms among students in Tertiary Institutions of a Metropolitan City, Southwestern, Nigeria. BMC Research Notes, 10(1). https://doi.org/10.1186/s13104-017-2730-6.
32. Polit, D. F., & Beck, C. T. (2017). Nursing Research: Generating and Assessing Evidence for Nursing Practice (10th ed.). Philadelphia, Wolters Kluwer Health.
33. Risenga, P. R., & Mboweni, S. H. (2022). Adolescent Girls' Experiences Regarding Teenage Pregnancy in the Rural Villages of Limpopo Province, South Africa. Adolescents, 3(1), 60–71. https://doi.org/10.3390/adolescents3010004.
34. South African National AIDS COUNCIL (SANAC). (2019). Provincial Implementation Plans Progress Update: Limpopo. SANAC. https://sanac.org.za/provincial-implementation-plans-progress-update-limpopo/.

© University of Venda

35. South Africa Higher Education Act 101 of 1997. F. (1997). Available at: https://www.gov.za/sites/default/files/gcis_document/201409/a101-97.pdf.
36. Schreiber, C. A., Creinin, M. D., Atrio, J., Sonalkar, S., Ratcliffe, S. J., & Barnhart, K. T. (2018). Mifepristone Pretreatment for the Medical Management of Early Pregnancy Loss. The New England Journal of Medicine, 378(23), 2161–2170. https://doi.org/10.1056/NEJMoa1715726.
37. Shiburi, G. (2021). the perceptions of postgraduate students about female condoms at the University of Limpopo. http://ulspace.ul.ac.za/bitstream/handle/10386/3787/shiburi_mg_2021.pdf?sequence=1.
38. Sitonga, N., Nomatshila, S. C., Phalane, M., Chitha, W. W., & Mabunda, S. A. (2023). Knowledge, Attitudes, and Practices of Sex Workers of Three South African Towns towards Female Condom Use and Contraceptives. Healthcare, 11(9), 1271. https://doi.org/10.3390/healthcare11091271.
39. Slack, C., Singh, P., Strode, A., & Z Essack. (2022). Compensation for research-related injury in South Africa: A critique of the good clinical practice (GCP) guidelines. South African Journal of Bioethics and Law, 5(2), 91–94. http://www.sajbl.org.za/index.php/sajbl/article/view/211/231.
40. Statistics South Africa. (2022). Mid-year population estimates. Available at https://www.statssa.gov.za/publications/03-09-15/03-09-152022.pdf.
41. Twedt, E., Rainey, R. M., & Proffitt, D. R. (2019). Beyond nature: The roles of visual appeal and individual differences in perceived restorative potential. Journal of Environmental Psychology, 65, 101322. https://doi.org/10.1016/j.jenvp.2019.101322.
42. Uchendu, O. C., Adeyera, O., & Owoaje, E. T. (2019). Awareness and utilization of female condoms among street youths in Ibadan, an urban setting in South-West Nigeria. Pan African Medical Journal, 33. https://doi.org/10.11604/pamj.2019.33.168.12733.
43. UNAIDS. (2023). Global HIV statistics. in UNAIDS 2022. World AIDS day 2023. https://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf
44. UNAIDS. (2016). HIV prevention among adolescent girls and young women Putting HIV prevention among adolescent girls and young women on the Fast-Track and engaging men and boys. http://www.unaids.org/sites/default/files/media_asset/UNAIDS_HIV_prevention_among_adolescent_girls_and_young_women.pdf.
45. University of Venda. (2023). Annual report 2022. https://www.univen.ac.za/. Retrieved from https://www.univen.ac.za/wp-content/uploads/2023/11/UNIVEN-2022-Annual-Report.pdf.

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46. Vhembe District Health Information System. (2018). Annual report. Pretoria: Government Printer 2018/2019.
47. Workowski, K. A. (2021). Sexually Transmitted Infections Treatment Guidelines, 2021. MMWR. Recommendations and Reports, 70(4). https://doi.org/10.15585/mmwr.rr7004a1.
48. United Nations Population Fund (UNFPA), World Health Organization (WHO), & UNAIDS. (2015). UNFPA, WHO and UNAIDS: Position statement on condoms and the prevention of HIV, other sexually transmitted infections and unintended pregnancy. Retrieved from https://www.unaids.org/en/resources/presscentre/featurestories/2015/july/20150702_condoms_prevention.
49. United Nations Programme on HIV/AIDS (UNAIDS). (2022). With new infections 1 million higher than the 2020 target, UNAIDS and partners convene an emergency meeting on HIV prevention. Retrieved July 9, 2024, from https://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2022/october/20221010_stop-new-infections.
50. Zhou, Q., Wu, W., Yi, M., Shen, Y., Goldsamt, L., Alkhatib, A., Jiang, W., & Li, X. (2022). HIV knowledge, sexual practices, condom use and its associated factors among international students in one province of China: a cross-sectional study. BMJ Open, 12(8), e058108. https://doi.org/10.1136/bmjopen-2021-058108.

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SECTION B MANUSCRIPTS

Manuscript One – Systematic Review:

Explores how social, cultural, and personal factors shape students' perceptions of female condom usage. It identifies key barriers, such as gender norms, misconceptions, and lack of awareness, using literature from 2017–2023.

Manuscript Two – Quantitative Study:

Investigates the actual perceptions and attitudes of students at the University of Venda through a cross-sectional survey. It highlights findings such as poor access, negative attitudes, and limited knowledge about female condoms among students.

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2.1 Manuscript One

Title: Examining the Interplay of Social, cultural, and Personal Factors in Shaping Students' perceptions of female condom usage: A Systematic Review. (Under review)

The manuscript was prepared based on the "MethodsX journal; author guidelines are found at the following link: https://www.sciencedirect.com/journal/methodsx/publish/guide-for-authors.

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Examining the interplay of social, cultural, and personal factors in shaping student's perceptions of female condom usage

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Abstract

A systematic review focused on students' perceptions aimed to examine how social, cultural, and personal factors influence female condom usage among tertiary students. Female condoms prevent unintended births among young people; however, they appear to be misunderstood in contrast to male condoms. The researcher searched three purposely selected databases, PubMed, ProQuest and Google Scholar, from 2017 to 2023. The PRISMA was used in this study to guide and for reproducible reporting of the review process. This study identified seven themes from the discussed findings. The CASP was used to study appraisal. This study identified seven themes from the discussed findings. Sociocultural factors influence the usage of female condoms. Socio-cultural issues that affect female condom use, difficulties in using female condoms and attitudes towards female condom use at higher education institutions were one of the main concerns that came out as the focus of this systematic study. The review acknowledged that female condoms are excellent at preventing STDs and unexpected pregnancies. This review reveals significant barriers rooted in cultural norms, gender dynamics, and personal preferences. This systematic review provides essential insights into our understanding of female condom awareness and the development of overall strategies.

Keywords: Female condoms; Sexual health; Systematic literature review; and Tertiary institution

Review Highlights

- Prisma strategy for study selection
- Thematic analysis for study outcomes
- complex dynamics of social, cultural, and personal factors that shape attitudes towards female condoms.

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Table 2.1: Specifications table

Subject area	Medicine and Dentistry
More specific subject area	Reproductive health
Name of the reviewed methodology	Systematic literature review
Keywords	Female condoms; Sexual health; Systematic literature review; Perceptions; and Tertiary institution.
Resource availability	Pro Quest, Google Scholar, and PubMed
Review question	What are the social, cultural, and personal factors influence students' perceptions of female condoms?

Background

Sexually transmitted infections and the human immunodeficiency virus/acquired immune deficiency syndrome (AIDS/HIV) are two major issues affecting South Africa (Kola, 2018). According to Mbelle and Mabaso (2018), South Africa's high rate of HIV/AIDS and unintended pregnancies among young people pose a serious threat to public health. Women make up around 60% of those having HIV worldwide, particularly in Sub-Saharan Africa. The majority of mortality among women between the ages of 15 and 49 is caused by HIV-related infections (Obembe, 2017). The fact that Africa's Sub-Saharan Region (SSA) is the world's most disadvantaged and lowest-income region could impact this. South Africa's nationwide public sector condom distribution project is a response to the HIV epidemic and sexually transmitted infections.

Lasse Hessel first introduced the female condom in 1984. He developed it in response to information that women had few options for taking complete responsibility for their health to prevent HIV/AIDS (Obembe et al., 2017). Condoms, both male and female, are provided free of charge under the South African public health system. According to several surveys, the majority of young South Africans are aware that one of the best dual measures for preventing HIV, STIs, and unexpected pregnancies is the use of female condoms (Kola, 2018). Still, according to Mbelle et al. (2018), since female condom usage and prevalence are still lower than those of male condoms, it appears that HIV prevalence and unplanned pregnancies among young people remain continuing difficulties. Mugadza et al. (2016) claim that there is a concomitant rise in STI rates among university students and an upsurge in the prevalence of HIV/AIDS. As to the findings

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of Shisana et al. (2014), the high HIV prevalence among young individuals aged 15-24 in 2012 was 7.1%. This indicates that persons in this range of ages have a higher risk of contracting HIV due to their potentially hazardous lifestyles and sexual behaviour.

Gambir et al. (2019) revealed that over 200 million women worldwide face barriers to access to family planning. Sexual pressure, influenced by factors such as age, sex, and peer pressure, significantly affects women's use of contraceptives despite the availability of effective alternatives (Tukue, Gebremeskel, Gebremaria, Aregawi, Hagos, Gebremichael et al., 2017). There is evidence that culture has both beneficial and detrimental effects on sexual health, such as the beliefs and values that individuals portray with their expectations in heterosexual relationships, with males being given tremendous power (Airhihenbuwa, 2004). Women's reproductive health concerns may not be fully understood due to the dominance of male condoms in the market, supply, and uptake of female condoms (Cassidy, Groot Bruinderink, Janssens & Morsink, 2021). Despite awareness of the benefits of female condoms, their acceptance among Nigerian youth, particularly those in tertiary institutions, remains low (Okunlola, Morhason-Bello, Oworikoko & Adekunle, 2006). This study highlights the interaction between social, cultural, and personal factors in shaping students' perceptions of female condom usage and how it leads to low utilisation of female condoms.

Purpose of the study

This systematic review aims to examine how social, cultural, and personal factors influence female condom usage among tertiary students.

METHODS DETAILS

The researcher used PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analysis) to structure the review. The researcher used a search of three purposely selected databases: ProQuest, Google Scholar, and PubMed. The exact keywords were used to retrieve studies from these three databases. The first set is a student, which was used so that studies that are found be based on the population of students; the second set is a tertiary institution where all the studies should have been conducted at a tertiary institution. The third word used is perception; the researcher wanted to find all the variety of perceptions the students have with regard to female condoms. The last word is female condoms in order to have the studies focus on female condoms rather than perceptions of male condom usage. Limits were applied to the database instrument to conduct investigations under eligibility criteria. English was used as a limit. The researcher

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started by including studies conducted in the past five years as a limit. However, only a few studies were found. The researcher then decided to expand the limit to 10 years. On Google Scholar, the instrument had an option for peer-reviewed studies, which the researcher chose so that those studies were accurate and for the quality of other scholars and members of the same profession.

Eligibility criteria

The researcher studied the research literature of explanations and evaluations of research that involved or included perceptions of students on female condoms. The literature included in this study is relevant to the interplay of social, cultural, and personal factors in shaping student's perceptions of female condom usage. Only studies that were composed in the English language were included in this study.

Inclusion criteria

- The study needs to be published in English.
- The study has to be conducted from 2013 to 2023.
- The study needs to include the perceptions of students on female condoms.
- The study has to be focused on the population of tertiary students.

Exclusion criteria

- The researcher excluded all the studies that do not address or discuss female condom use among students and with a high risk of bias.
- Studies conducted before 2013 but focused on the interplay of social, cultural, and personal factors in shaping student's perceptions of female condom usage.
- Articles published in other languages other than English.

The researcher chose a specific period to ensure the current relevance of the systematic review and to ensure the current overall knowledge of female condoms is current since there has been a change in tertiary institutions regarding sexual health as the Department of Health and the stakeholders involved in sexual health in tertiary institutions keep addressing the challenges associated with sexual health.

Study Selection

The researchers followed the PRISMA guidelines (McKenzie et al., 2020) and utilised the PRISMA to generate a flow diagram to conduct the systematic review. The diagram was used to select

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which research will be included. The review was exclusionary. Figure 2.1, modified from the PRISMA flow diagram generator, depicts the study selection process.

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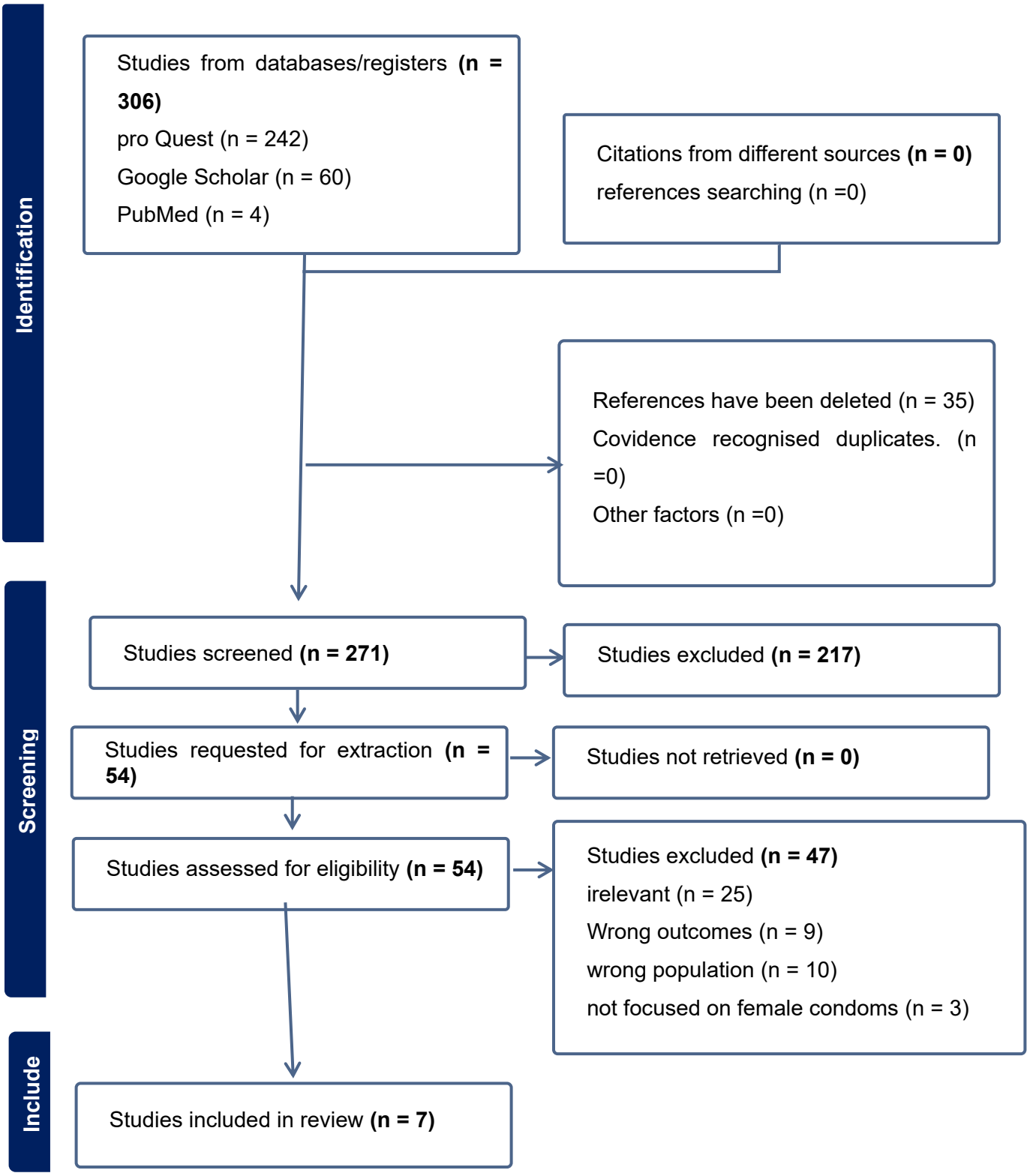
Figure 2.1: Prisma flow chart



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Study Selection Criteria

The database resulted in 306 studies from Africa in which the researcher transferred all the results to Covidence software to simplify screening and data extraction. The results from the database were 306, then 242 studies from Pro Quest, 60 from Google Scholar, and four from PubMed. The software removed 35 studies from the database, which were duplicates, and then 271 studies were abstract screened for relevance to the review. Studies were included for full-text screening, where 54 and 217 studies were excluded. Seven studies were eligible for data extraction after a full-text screen, and 47 were excluded.

Appraisal of the selected studies in this research

The Critical Appraisal Skills Programme (CASP) was used to evaluate the selected papers (CASP, 2018). The researcher used the CASP method to include the selected studies, assess the articles, and ensure their significance and credibility. The cohort study checklist evaluated the articles' relevance, solidity, and credibility. The cohort study checklist was used for cross-sectional study designs. The study that matched the checklist was then integrated into the study. The checklist contained twelve questions. The researcher divided the overall number of yes scores by the total number of questions. The results were then shown in Table 2.2 as percentages. The qualitative checklist was also used for studies such as exploratory designs. The checklist contained ten questions. The researcher divided the total number of yes by ten and changed it to percentage.

Table 2.2: Appraisal of Selected Studies

Authors	Study design	Study assessment
Mnguni (2016)	Qualitative	60%
Obembe et al. (2017).	Cross-sectional design	75%
Shitindi et al. (2023)	Cross-sectional design	90%
Tobin-West et al. (2014).	Cross-sectional design	65%
Ndlovu (2019)	Exploratory study design	75%
Boraya (2019)	Cross-sectional design	75%
Shiburi (2021)	Descriptive design: A qualitative study	80%

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Characteristics of the studies

The researcher extracted data by comparing the information that was collected. Data were extracted, analysed, and retrieved from all the research that satisfied the requirements. As stated in the inclusion and exclusion criteria, the researcher chose a period of 2013 to 2023 November to ensure the current relevance of the literature is up to date and to ensure the current overall knowledge of female condoms. The details extracted from studies are the authors, the year of release, the title of the topic, the location where the study was undertaken, the sample used in the study, the type of study, and the findings. Table 2.3 exhibits the characteristics of the study.

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Table 2.3: The summary of findings from publications selected used in this study						
Name of author	Title	year	Country	Methodology	Sample size	Findings
Shiburi.	The subject of the study is "the perceptions of postgraduate students about female condoms at the University of Limpopo" (Shiburi, 2021).	2021	South Africa	Qualitative research	10	• Easy access and lack of availability, as well as inadequate knowledge or experience using condoms among students, were the findings of this study. • The best way to use female condoms is not well understood. One barrier is the stigma from society and culture. Insertion requires a great deal of time and work.
Boraya	The subject of the study is "Utilization of the female condom among Youths in selected Tertiary Training institutions in Migori County, Kenya" (Boraya, 2019).	2019	KENYA	Quantitative and qualitative	385	• Their demographics and accessibility obstacles influence women's use of condoms. Culture and religion have an impact on how women use condoms.
Ndlovu	The subject of the study was "University of Johannesburg's Postgraduate Students' Perceptions	2019	South Africa	Qualitative approach	8	• Availability and access to female condoms.

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	and Awareness of Safe Sex Services and Activities" (Ndlovu, 2019).					• Power and control as prevention measures.
Tobin-West et al.	The subject of the study was "Awareness, acceptability, and use of female condoms among university students in Nigeria: Implications for STI/HIV prevention" (Tobin-West et al., 2014).	2013	Nigeria	Quantitative	770	• Obstacles to the accessibility, cost, and simplicity of insertion of female condoms were the findings of this study.
Shitindi et al.	The subject of the study was "Perceived motivators, knowledge, attitude, self-reported and intentional practice of female condom use among female students in higher training institutions in Dodoma, Tanzania" (Shitindi et al., 2023).	2023	Tanzania	Quantitative research	384	• Inadequate knowledge about and use of female condoms. • A tiny percentage of respondents said that they intended to resort to female condoms and had a good understanding and favourable attitudes.
Obembe et al.	The subject of the study was "Perceived confidence to use female condoms among students in Tertiary Institutions of a Metropolitan City, Southwestern Nigeria" (Obembe et al., 2017).	2017	Nigeria	Quantitative	388	• Few people seem confident enough to use a female condom. Perceptions about the device significantly impacted the confidence to wear a female condom.
Mnguni	The subject of the study was "Probing the sociocultural factors influencing	2016	South Africa	Qualitative research	19	• The perceived advantages of female condoms affected both

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	female condom use among heterosexual women in Clermont, Durban" (Mnguni, 2016).					men's and women's acceptance and continued use of them. Talks on safer sexual practices and the ability of women to navigate them are open and welcomed by males.

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Thematic analysis of the selected studies

The researcher used thematic analysis to analyse data using methods or steps highlighted by (Braun, Clarke, & Rance, 2015). All of the seven studies were included in the analysis. The researcher studied the papers in their entirety and became acquainted with the data, which all contained codes and were generated to answer the research questions. The researcher searched for themes by examining the code and data collected to check for patterns. These themes were combined to tell a detailed story of the research question. The researcher refined and reviewed these themes and finalised the thematic framework of the research as follows.

The themes are**:**

- The impact of sociocultural factors on the usage of female condoms (Shiburi, 2021; Mnguni, 2016; Boraya, 2019).
- Socio-cultural issues that influence female condom use (Shiburi, 2021; Ndlovu, 2019; Boraya, 2019; Mnguni, 2016; Obembe, 2017; Shiburi, 2021
- Perceptions towards female condoms at institutions of higher education (Shitindi et al., 2023; Obembe, 2017; Ndlovu, 2019; Boraya, 2019; Shiburi, 2021).
- Challenges with the usage of female condoms (Tobin-West et al., 2014; Mnguni, 2016; Shitindi et al., 2023; Shiburi, 2021).
- Female condoms at institutions of higher learning (Shiburi, 2021; Ndlovu, 2019; Boraya, 2019).

These subheadings provide the reader with a clear and concise overview of the research on female condoms that is the subject of this inquiry. Several knowledge gaps on the topics that surfaced throughout the analysis are indicated above based on the results of this systematic literature review study. Studies that have recently been published have not, however, entirely addressed the social, cultural, and other aspects that influence the use of female condoms. Condensed into a summary of the research findings, the comparison table 2.3 indicates the number of studies that reported particular outcomes for this corresponding journal review article.

Results

The five topics were created from the articles chosen for the study that discussed the factors that influence student perception of using female condoms.

The impact of sociocultural factors on the usage of female condoms

The female condom is a multipurpose preventative instrument with a clear covering that is intended to protect people against HIV, unintended pregnancies, and other STDs (Beksinska et

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al., 2020). To prevent HIV, STDs, and unplanned pregnancies, female condoms are a valuable and efficient instrument. Information taken from the 2014 Global Health Visions - Business Case for Female Condoms Report shows that using female condom distribution tactics has resulted in health advantages in other countries such as Cameroon, Kenya, and Nigeria. This was based on general population health indicators following the addition of the female condom as an additional method to the mix of contraceptive techniques. The South African government has endeavoured to enhance the accessibility of female condoms to the broader populace affected by the HIV/AIDS pandemic and to increase the range of contraceptive methods available to women (Global Health Visions - Business Case for Female Condoms Report, 2014).

The research refers to social, cultural, and behavioural requirements that characterise and define heterosexual partnerships. According to Hughes and Koehler (2002), culture is people's social heritage and the ways they are taught to act, feel, and think, passed down from generation to generation, including the ways embodied in tangible objects. According to Airhihenbuwa (2004), culture may have both a good and detrimental impact on people's health practices. Gender and behavioural norms have been identified as barriers to the sustained and ongoing use of female condoms in studies on their adoption and use.

The appropriate way to apply a female condom is dependent upon two consenting people. Several studies have reported that male attitudes influence the choice of female condom use (Boraya et al., 2019). According to a survey done by Boraya et al. (2019), 66.4% of males have reported they disliked female condoms, and this has led females to shy away from female condoms, thinking of how their male partners will react when they find out about the condom. Males who used female condoms said that they could stay longer during sex, which they appreciated, but others did not like that they could not stay long (Mnguni, 2016). A South African survey found that most men prefer to use branded condoms rather than the inexpensive ones available at the clinic. They also denigrate individuals who use clinic condoms, which puts pressure on men who cannot afford branded condoms (Mnguni, 2016).

Culturally, open purchase of female condoms is perceived as promiscuity, as stated by 85% of the participants in the study (Boraya, 2019). Some raised statements that initiating sexual matters is male responsibility; this has led to women being submissive to their men and accepting any decision they make, leaving their health at risk (Boraya, 2019).

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Socio-cultural issues that influence female condom use

Gender is a social and cultural construct that affects women's behaviour in seeking health care and has implications for their access to HIV prevention programs. Cultural beliefs, conventions, customs, and traditions greatly influence an individual's sexual behaviour. These factors can also have an impact on decisions about fertility and expose them to risks such as sexually transmitted illnesses. As a result, socio-cultural factors are potent predictors of adopting health promotion strategies (Shiburi, 2021).

According to the report, males continue to affect women's decision-making significantly when it comes to the use of condoms during sexual intercourse. This is mostly due to the fact that some women lack the self-assurance to bring up the topic of condom use with their spouses, even when they are accused of adultery. Additional factors include patriarchal beliefs around bride money payments, where males do not want to use condoms because they want their wives to satisfy their sexual needs (Leclerc-Madlala, Simbayi, & Cloete, 2009). Young women said that for a consistent partner to insist on condom use is perceived as a lack of respect and trust.

Violence against women has increased widespread in all civilisations, making women more vulnerable to diseases and unplanned childbirth. According to Zalewski (2010), in a marriage environment, African men appear to be less concerned with gender equality. Gender inequality and power disparities, as a result, make women more vulnerable to sexually transmitted diseases and unintended births. Gender inequalities have been blamed on cultural, societal, and religious standards (Gupta, 2002). Polygamy is considered unscriptural, unbiblical, and thus not Christian (Falaye, T. 2016). One of the findings from the participants verbalised that challenges faced by women in polygamy were practising unsafe sex and being unable to make decisions regarding sex, which led to dry sex leading to sexual organs being damaged (Gwatimba, Raselekoane, & Nwafor, 2020).

Long-term partnerships are associated with a lack of condom use. McPhail (2007) discovered that many couples reported using condoms at the start of heterosexual relationships, which frequently diminishes as the partnership develops. This behaviour has also been observed, particularly in teens. Due to the belief that a strong relationship guards against HIV and other STDs, this has also been seen in couples who are married or couples in long-lasting relationships when the usage of condoms is minimal or nonexistent. Most African nations do not require couples to use condoms, which is seen as an indication of adultery and a lack of trust (Leclerc-Madlala, 2009).

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Perceptions towards female condoms at institutions of higher education

Women often talk about the challenges they have when using female condoms. The challenges include men's preference for the male condom, partner rejection, unease during sex, excessive lubrication requirements, trouble using the device, unease inserting the condom, shortage and affordability, and men's distaste for the appearance. Education is an important indicator of the usage of female condoms, according to Uchendu (2019). People with higher and lower educational levels use them more frequently, although people with lower education levels are still reluctant to use them. Perceptions and affiliations with religion also negatively affect the usage of female condoms claim Mugadza et al. (2016).

According to Mbelle et al. (2018), people's negative opinions of the female condom stem from their disapproval of the original design. The present report claims that new female condoms are being produced to replace the FC2, which is widely disapproved. Even if the new condom is made of Synthex latex, it still has a bad image. One advantage of it is its low cost (Wiyeh et al., 2020).

In a study done in Kenya in selected tertiary institutions, 71.5% of students were found to be against female condoms, leading to the insignificant use of condoms (Boraya, 2019). Several studies showed 89.3% are aware of female condoms, while 76.5% demonstrated fair perception, then excellent and poor perception, 10.8% and 12.6%, which shows the need for this perception to be addressed. Research by Obembe et al. (2017) found that 41.7% of participants disapproved of the notion, and 39.7% of individuals would not feel satisfied using a female condom due to fears of adultery, while others are unable to support the female condom due to anger issues from their partners. According to Mnguni (2016), culture rendered women docile, which has led to females feeling powerless to ask their male spouses for personal usage of female condoms; they also trusted their relationships since they provided everything for them, which made females unable to communicate for safer sexual practices.

Challenges with the usage of female condoms

The need for women to negotiate with male companions is necessary; however, this has encountered resistance due to socio-cultural demands that are prevalent in African cultures. Men used condoms more frequently than women, who said they found it harder to use them because they had a more challenging time starting to use them (Gwala, 2019). Women are not allowed to introduce condoms, either male or female, into their relationships because of men's sexual and reproductive supremacy. Research by Koster et al. (2015) claims that males are seldom the focus of female condom campaigns and have historically been disregarded as study participants in

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female condom studies. In a sexual relationship, it might be challenging to discuss the use of a female condom as a preventative measure with male partners who often exhibit gender inequality and authority. Schuyler (2016) asserts that gender imbalances in a relationship rather than a lack of knowledge are one of the main causes of risky sexual behaviours. Ajayi (2017) claims that despite their awareness, many female students choose not to engage in safer sexual practices because they are unable to discuss the use of protection with their partners out of concern that they would forfeit the advantages of their relationships.

According to boraya et al. (2019), female condom utilisation was low at 3.7%; this was affected mainly by unavailability and the condom not being affordable. According to a study done at the University of Limpopo by Shiburi (2021), some students had challenges as their residence at the entrance had a box of male condoms instead of female condoms; subsequently, this has led to one type of condom being used. In a different study conducted at the University of Johannesburg, participants acknowledged that there are few free female condoms available on campus and even in public areas. However, the majority of students believed the value of female condoms in avoiding unintended pregnancies and STDs. In addition, the product's exorbitant cost, unavailability, and difficulty of insertion caused anxiety among both male and female students. Studies have reported that 90,3% of the youth have difficulty insertion the female condom, while some have raised concerns that one needs to put it on for 8 hours, and some raised that there is not enough knowledge regarding female condom use (Shiburi, 2021; Boraya, 2019).

Female condoms at institutions of higher learning

Peers in higher education frequently influence students to engage in activities that society as a whole and their parents would not support (Boraya et al., 2018). Students at South African Technical and Vocational Education and Training (TVET) institutions were surveyed, and the results showed that the students knew how important it is to regularly use female condoms as a method of avoiding the spread of STIs and HIV (Mbelle et al., 2018).

According to demographics, young adults who are married are less likely than young people who are single to use female condoms (Bernard, 2017). Gwala (2019), claims that female students are able to negotiate the usage of condoms and see them as a means of preventing HIV transmission. Boraya et al. (2018), state that some students look for transactional relationships or cash rewards from both sexual partners and relatives because they are unhappy with the financial assistance they receive from their guardians. The majority of students get financial aid

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from their legal guardians and parents, according to Boraya et al. (2018). Informal partnerships were prevalent among individuals who got support from partners and family.

Discussion of the findings

The results of the systematic review highlighted the intricate interaction of societal, cultural, and individual elements that shape students' perceptions of female condom use. The five themes identified illuminate diverse contexts and highlight challenges and opportunities for increasing the uptake of female condoms in diverse cultural contexts.

Socio-cultural influences: Recognition of the female condom as a preventive tool in opposition to HIV, sexually transmitted infections, and unexpected pregnancy highlights its potential public health benefits. Successful distribution strategies in nationals such as Cameroon, Kenya, Nigeria, South Africa, and low-income countries suggest that strategic interventions can positively affect health indicators (Mogo, Shanawaz, Ademola-Popoola, Iqbal et al., 2023). However, cultural factors, particularly the role of gender and behavioural norms, are significant barriers to women's continued use of condoms (Madiba & Ngwenya, 2017).

Men's attitudes and preferences: The influence of men's attitudes on women's condom use is an essential aspect of the discussion. The fact that a significant proportion of men reported dislike may lead to reluctance among women and highlights the need for targeted educational efforts. The preference for branded condoms over clinic-provided condoms reflects broader societal perceptions that may contribute to the stigma against female condoms (Moore, Beksinska, Rumphs, Festin & Gollub, 2015).

Cultural norms and perceptions: Cultural norms are essential in shaping women's perceptions on condom use. The relationship between purchasing female condoms and promiscuity reflects deep-seated social attitudes (Beksinska, Nkosi, Mabude, Mantell, Smit, Milford & Zulu, 2020). Gender inequality further exacerbates the problem, leaving women vulnerable to disease and unwanted pregnancies (Beksinska et al., 2020). Overcoming these cultural barriers requires a differentiated approach that considers individual and societal perspectives.

University recognition: Challenges faced by women, including discomfort, partner rejection, and men's preference for alternative contraceptive methods, highlight the complexity of promoting condom use among women (Fasehun, Lewinger, Fasehun & Brooks, 2022). The education level was a predictor, with higher levels of schooling increasing usage (Emerson, Carroll &

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Ramaswamy, 2018). Addressing negative perceptions, especially among students, requires targeted interventions considering individual and structural factors.

Challenges in using female condoms: The imbalance between men and women poses a significant challenge when in partnerships, discussing the usage of female condoms (Madiba & Ngwenya, 2017). The following difficulties have been reported; thus, issues such as poor access, affordability, and discomfort during sex highlight the need for comprehensive sexual health education (Madiba & Ngwenya, 2017). Overcoming these challenges requires dismantling gender norms and addressing structural issues that impede accessibility.

Use and awareness: Low rates of female condom use are due to several factors, including lack of awareness, difficulty in insertion, and misconceptions about the duration of use (Uchendu, Adeyera & Owoaje, 2019). Awareness efforts must also be accompanied by educational efforts to address these misconceptions. Additionally, addressing issues related to insertion difficulty and prolonged gestation time will help improve utilisation.

The impact of peer and interpersonal relationships in higher education: The effects of peer and interpersonal interactions within higher education institutions raise the need for targeted interventions in educational settings (Levy, Kaufman, Gidron, Deschepper & Olley, 2019; Schuyler, Masvawure, Smit, et al., 2016). Financial support and business relationships influence decision-making, highlighting the importance of considering socio-economic factors in promoting female condom use among students.

In conclusion, the results highlight the importance of considering and recognising socio-cultural nuances that influence women's perceptions of condom use. Targeted interventions need to not only focus on raising awareness but also challenge deeply ingrained cultural norms, empower women to negotiate safe sex practices, and address structural barriers to access. A holistic approach that considers individual, interpersonal, and social factors is essential to promoting positive attitudes toward female condom use among students and the broader cultural context.

Implications of the Findings

The results suggest targeted public health initiatives to encourage women to wear condoms, especially in areas with high HIV prevalence. Strategies should focus on removing cultural biases and misconceptions while considering socio-economic factors that impede accessibility. Given the impact of education on women's condom use, the goal of educational initiatives should be

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tailored to address knowledge gaps and negative perceptions (Pazol, Zapata, Tregear, Mautone-Smith & Gavin, 2015). Integrating comprehensive sexual health education into higher education institutions will empower students to make informed decisions and negotiate safe sex practices. Identifying gender differences in decision-making rights highlights the need for gender equality programs. Efforts should aim to empower women to confidently negotiate condom use and challenge social norms that contribute to gender inequalities in sexual health decision-making. Improving access to female condoms in healthcare settings is essential. Efforts should be made to ensure availability, affordability, and ease of access, especially in higher education institutions where students face unique challenges in obtaining contraceptives.

Cultural norms have a noteworthy effect on women's perceptions of condom usage (Madiba & Ngwenya, 2017). Culturally sensitive campaigns must be developed to combat negative stereotypes and address cultural barriers. Involving community leaders, influencers, and religious figures can increase the effectiveness of these campaigns. Interventions that target couples and relationship dynamics are essential. A relationship-focused approach is needed to address challenges such as discomfort, partner rejection, and preference for other contraceptive methods (Burton, Bedford, Graham & Nadarzynski, 2020). Couple-oriented counselling and communication training can be an integral part of such interventions.

Product innovation and marketing: Negative perceptions of female condoms, including issues regarding discomfort during intercourse, require product innovation (Burton et al., 2020). Research and development should focus on improving design, usability, and user satisfaction. An effective marketing strategy that highlights the benefits of female condoms can help change perceptions. Political advocacy is essential to support efforts to promote condom use among women. Governments should consider integrating female condoms into existing contraceptive programs to ensure affordability and challenge gender norms that impede access (Schuyler et al., 2016).

More methodologies should be used in future studies so that the information gaps regarding female condoms can be addressed. Studies should include diverse populations and consider age, socio-economic status, and geographic location factors. This contributes to a deeper comprehension of the elements influencing how women see condoms.

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Limitations

The researcher only focused on English-language articles from Africa; hence, only English papers were included in the systematic review. Papers published in languages other than English and from different continents were excluded, which would have affected this review.

Conclusions

This systematic literature review thoroughly investigates the various components that affect how female students perceive and cope with female condom usage. It focuses on the complex dynamics of cultural, social, and personal factors that shape attitudes towards female condoms. Although the efficacy of women condoms in preventing sexually transmitted infections and unexpected pregnancies is recognised, this study reveals significant barriers rooted in cultural norms, gender dynamics, and personal preferences. The influential role of men's perspectives, cultural perceptions of promiscuity, and gender inequality highlight the complexity of making decisions around sexual health. In the context of higher education, this report highlights the nuanced challenges faced by female students and highlights the importance of education in shaping perceptions. In recognising the valuable lessons learned, it is important to acknowledge limitations such as geographic focus, the possibility of bias, and the need for further intervention studies.

The ever-evolving nature of sexual health research suggests the need to continue exploring beyond the limits of research knowledge. In summary, this systematic review provides essential insights into understanding female condoms and the development of overall strategies, including targeted public health interventions and culturally sensitive approaches addressing these complexities. Stakeholders can work together to promote positive change in perceptions and practices regarding female condom use among diverse student populations, ultimately improving sexual health outcomes.

Ethics statement

Not applicable.

Credit authorship contribution statement.

RMC, a master's student, was responsible for conceptualising, methodology, and writing the draft paper. MNS was the student`s supervisor and was responsible for validating the results and proofreading the manuscript.

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Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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REFERENCE

1. Airhihenbuwa, C. O., & Webster, J. D. (2004). Culture and African contexts of HIV/AIDS prevention, care and support. SAHARA-J: Journal of Social Aspects of HIV/AIDS, 1(1), 4–13. https://doi.org/10.1080/17290376.2004.9724822.
2. Ajayi, A. I., Nwokocha, E. E., Adeniyi, O. V., Ter Goon, D., & Akpan, W. (2017). Unplanned amongst young women in Botswana. Curationis, 41(1), 1-6. https://doi.org/10.4102/curationis.v41i1.1807.
3. Aventin, Á., Gordon, S., Laurenzi, C., Rabie, S., Tomlinson, M., Lohan, M., Stewart, J., Thurston, A., Lohfeld, L., Melendez-Torres, G. J., Makhetha, M., Chideya, Y., & Skeen, S. (2021). Adolescent condom uses in Southern Africa: narrative systematic review and conceptual model of multilevel barriers and facilitators. BMC Public Health, 21(1), 1-18. https://doi.org/10.1186/s12889-021-11306-6.
4. Bernard, M. M. J. (2017). Evaluation of female condom use among students at the University of Lubumbashi: Knowledge, attitude, and practice on university cities. Open Access Library Journal, 4(11), 1-10. https://doi.org/10.4236/oalib.1104014.
5. Beksinska, M., Nkosi, P., Mabude, Z., Mantell, J. E., Zulu, B., Milford, C., & Smit, J. A. (2020). Lessons from the evaluation of the South African National Female Condom Programme. Plos One, 15(8), e0236984. https://doi.org/10.1371/journal.pone.0236984.
6. Boraya, J. O., Githae, C., Atandi, T. A., & Gachau, A. (2018). Social and psychological Cameroon. International Perspectives on Sexual and Reproductive Health, 41(3), 126-135. https://doi.org/10.1363/4112615.
7. Braun, V., Clarke, V., & Rance, N. (2015). How to use thematic analysis with interview data. In The Counselling and Psychotherapy Research Handbook (pp. 183-197). SAGE Publications Ltd, https://doi.org/10.4135/9781473909847.
8. Burton, J. M., Bedford, R., Graham, C. A., & Nadarzynski, T. (2020). Perceived barriers and facilitators to female condoms among UK based healthcare professionals. The European Journal of Contraception & Reproductive Health Care, 25(4), 299-304. https://doi.org/10.1080/13625187.2020.1810984.
9. Cassidy, R., Groot Bruinderink, M., Janssens, W., & Morsink, K. (2021). The power to protect: Household bargaining and female condom use. Journal of Development Economics, 153, 102745. https://doi.org/10.1016/j.jdeveco.2021.102745.
10. Critical Appraisal Skills Programme. (2018). CASP (Cohort Study) Checklist. [online] Available at: https://casp-uk.net/checklists/casp-qualitative-studies-checklist-fillable.pdf Accessed: 17 April 2024.

© University of Venda

11. Critical Appraisal Skills Programme. (2018). CASP (Cohort Study) Checklist. [online] Available at: https://casp-uk.net/checklists/casp-qualitative-studies-checklist-fillable.pdf Accessed: 17 April 2024.
12. Falaye, T. (2016). Global Journal of Arts Humanities and Social Sciences, 4(10), 18–28. https://eajournals.org/wp-content/uploads/Polygamy-and-Christianity-in-Africa.pdf.
13. Fasehun, L. K., Lewinger, S., Fasehun, O., & Brooks, M. (2022). Barriers and Facilitators to Acceptability of the Female Condom in Low- and Middle-Income Countries: A Systematic Review. Annals of global health, 88(1), 20. https://doi.org/10.5334/aogh.3612.
14. Gambir, K., Pinchoff, J., Obadeyi, O., & Ngo, T. D. (2019). Opportunities and challenges for the introduction of a new female condom among young adults in urban Zambia. Reproductive Health, 16(1). https://doi.org/10.1186/s12978-019-0839-x.
15. Global Health BUSINESS CASE FOR FEMALE CONDOMS. (2014). https://equipop.org/publications/business-case-female-condoms.pdf.
16. Gupta, G. R. (2002). How men's power over women fuels the HIV epidemic. British Medical Journal, 324(7331), 183-184.
17. Gwala, N., & Maharaj, P. (2019). Factors influencing consistency of condom use among college students in Durban, South Africa. University of Kwazulu-Natal: Durban.
18. Gwatimba, L., Raselekoane, N. R., & Nwafor, A. O. (2020). Obstacles to the realization of women's reproductive health rights in Zimbabwe. African Journal of Reproductive Health / La Revue Africaine de La Santé Reproductive, 24(3), 146–153. https://www.jstor.org/stable/27086549.
19. Hughes, M., Kroehler, C. J., & Zanden, J. W. V. (2002). Sociology: The Core. In Google Books. Retrieved from https://books.google.co.za/books/about/Sociology.html?id=oCWmPwAACAAJ&redir_esc=y.
20. Kola, B. N. (2018). Understanding the attitudes, perceptions and practices towards condom use in preventing HIV among university students: A qualitative exploratory study at a tertiary institution, Cape Metropole, Western Cape. Etd.uwc.ac.za. http://hdl.handle.net/11394/5969.
21. Koster, W., Bruinderink, M. G., & Janssens, W. (2015). Empowering Women or Pleasing Men? Analyzing Male Views on Female Condom Use in Zimbabwe, Nigeria, and Cameroon. International Perspectives on Sexual and Reproductive Health, 41(3), 126–135. https://doi.org/10.1363/4112615.
22. Leclerc-Madlala, S. M., Simbayi, L. C., & Cloete, A. (2009). The Sociocultural Aspects of HIV/AIDS in South Africa.

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23. Levy, E., Kaufman, M. R., Gidron, Y., Deschepper, R., & Olley, B. O. (2019). Interventions targeting social cognitive determinants of condom use in the general Sub-Saharan population: A Systematic Review. Cogent Psychology, 6(1). https://doi.org/10.1080/23311908.2019.1637167.
24. MacPhail, C., Pettifor, A. E., Pascoe, S., & Rees, H. V. (2007). Contraception use and pregnancy among 15-24-year-old South African women: a nationally representative cross-sectional survey. BMC Med., 5, 31.
25. Madiba, S., & Ngwenya, N. (2017). Cultural practices, gender inequality, and inconsistent condom use increase vulnerability to HIV infection: narratives from married and cohabiting women in rural communities in Mpumalanga province, South Africa: Global Health Action, 10(sup2), 1341597.
26. Mbelle, N., Mabaso, M., Setswe, G., & Sifunda, S. (2018). Predictors of unplanned pregnancies among female students at South African Technical and Vocational Education and Training colleges: findings from the 2014 Higher Education and Training HIV and AIDS survey. Repository.hsrc.ac.za. https://repository.hsrc.ac.za/handle/20.500.11910/12314.
27. Mnguni, N. (2016). Probing the sociocultural factors influencing female condom use among heterosexual women in Clermont, Durban. Researchspace.ukzn.ac.za. https://researchspace.ukzn.ac.za/items/02e98b74-d876-4028-b888-42d6604bd5d6/full.
28. Mogo, E. R. I., Shanawaz, S., Ademola-Popoola, O., Iqbal, N., Aghedo, O., Ademola, M., Onyemaobi, N., Eniayewun, A., Ademusire, B., Adaramola, T., Ugwu, A., Obi, A., Lerno, A., Nwagbara, J., Uwimana, A., Gbadamosi, E., Adebisi, A., & Sako, B. (2023). A strategic analysis of health behaviour change initiatives in Africa. Global health action, 16(1), 2202931. https://doi.org/10.1080/16549716.2023.2202931.
29. Moore, L., Beksinska, M., Rumphs, A., Festin, M., & Gollub, E. L. (2015). Knowledge, attitudes, practices and behaviors associated with female condoms in developing countries: a scoping review. Open access journal of contraception, 6, 125–142. https://doi.org/10.2147/OAJC.S55041.
30. Mugadza, G., Krumpen, P., & Matilda, Z. (2016). Female condom: Knowledge, perception, and practices among female college students. Journal of Medical and Dental Science Research, 3(1), 10-15. Available at: https://www.questjournals.org/jmdsr/papers/vol3-issue1/B311015.pdf.
31. Ndlovu, M. (2019) University of Johannesburg's postgraduate students' perceptions and awareness of safe sex services and activities. University of Johannesburg. [online]. Available

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from: https://ujcontent.uj.ac.za/esploro/outputs/graduate/University-of-Johannesburgs-postgraduate-students-perceptions/9913856707691#file-0.

32. Obembe, T. A., Adebowale, A. S., & Odebunmi, K. O. (2017). Perceived confidence to use female condoms among students in Tertiary Institutions of a Metropolitan City, Southwestern, Nigeria. BMC Research Notes, 10(1). https://doi.org/10.1186/s13104-017-2730-6.
33. Okunlola, M. A., Morhason-Bello, I. O., Owonikoko, K. M., & Adekunle, A. O. (2006). Female condom awareness, use and concerns among Nigerian female undergraduates. Journal of Obstetrics and Gynaecology, 26(4), 353–356. https://doi.org/10.1080/01443610600613516.
34. Omwenga, J. (2020). Utilization of the Female Condom among Youths in Selected Tertiary Training Institutions in Migori County, Kenya. Ku.ac.ke. http://ir-library.ku.ac.ke/handle/123456789/20515.
35. Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., & McGuinness, L. A. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. British Medical Journal, 372(71). https://doi.org/10.1136/bmj.n71.
36. Pazol, K., Zapata, L. B., Tregear, S. J., Mautone-Smith, N., & Gavin, L. E. (2015). Impact of Contraceptive Education on Contraceptive Knowledge and Decision Making: A Systematic Review. American Journal of Preventive Medicine, 49(2 Suppl 1), S46–S56. https://doi.org/10.1016/j.amepre.2015.03.031.
37. Ramaswamy, B., Jones, J., & Carroll, C. (2018). Exercise for people with Parkinson's: a practical approach. Practical neurology, 18(5), 399–406. https://doi.org/10.1136/practneurol-2018-001930.
38. Schuyler, A. C., Masvawure, T. B., Smit, J. A., Beksinska, M., Mabude, Z., Ngoloyi, C., & Mantell, J. E. (2016). Building young women's knowledge and skills in female condom use: lessons learned from a South African intervention. Health Education Research, 31(2), 260–272.
39. Shiburi, G. (2021). THE PERCEPTIONS OF POSTGRADUATE STUDENTS ABOUT FEMALE CONDOMS AT THE UNIVERSITY OF LIMPOPO. http://ulspace.ul.ac.za/bitstream/handle/10386/3787/shiburi_mg_2021.pdf?sequence=1.
40. Shisana, O., Rehle, T., Simbayi, L. C., Zuma, K., Jooste, S., Zungu, N., Labadarios, D., & Onoya, D. (2012). South African National HIV Prevalence, Incidence and Behaviour Survey, 2012. Hsrc.ac.za. https://doi.org/978076924551.

© University of Venda

41. Shitindi, G. W., Millanzi, W. C., & Herman, P. Z. (2023). Perceived motivators, knowledge, attitude, self-reported and intentional practice of female condom use among female students in higher training institutions in Dodoma, Tanzania. Contraception and Reproductive Medicine, 8(1). https://doi.org/10.1186/s40834-022-00208-6.
42. Tobin-West, C. I., Maduka, O., Onyekwere, V. N., & Tella, A. O. (2014). Awareness, acceptability, and use of female condoms among university students in Nigeria: implications for STI/HIV prevention. International Journal of Adolescent Medicine and Health, 26(2), 259–265. https://doi.org/10.1515/ijamh-2013-0300.
43. Tukue, D., Gebremeskel, T. G., Gebremariam, L., Aregawi, B., Hagos, M. G., Gebremichael, T., Tesfay, H. N., & Arefaine, Z. G. (2020). Prevalence and determinants of modern contraceptive utilization among women in the reproductive age group in Edaga-hamus Town, Eastern zone, Tigray region, Ethiopia, June 2017. PLOS ONE, 15(3), e0227795. https://doi.org/10.1371/journal.pone.0227795.
44. Uchendu, O. C., Adeyera, O., & Owoaje, E. T. (2019). Awareness and utilization of female condoms among street youths in Ibadan, an urban setting in South-West Nigeria.
45. Wiyeh, A. B., Mome, R. K. B., Mahasha, P. W., Kongnyuy, E. J., & Wiysonge, C. S. (2020). Effectiveness of the female condom in preventing HIV and sexually transmitted infections: a systematic review and meta-analysis. BMC Public Health, 20(1), 319. https://doi.org/10.1186/s12889-020-8384-7.
46. Zalewski, M. (2010). Feminist International Relations: Making Sense - Gender Matters in Global Politics. London: Routledge.

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2.2 Manuscript two

Manuscript title: **Investigating the perceptions and attitudes of tertiary students towards female condom use in South Africa: A quantitative study.** (Under Review)

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Investigating the perceptions and attitudes of tertiary students towards female condom use in South Africa: a quantitative study.

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Highlights

- Condom usage was found to be 52,43% (225); male condom usage was 45,55%, and female condom usage was found to be 6.88%.
- Students showed negative perceptions about discussing with their parents or guardians how to use a female condom, with 74.4% saying no.
- Most respondents felt they could not collect female condoms in front of people (60.4%).
- Peer dynamics influence perceptions of female condom usage in higher education settings significantly.
- The majority of students do not prefer using a female condom.

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ABSTRACT

Background: Female condom usage is low, and factors such as cultural norms of male dominance in the home and relationships expose women to less control in the decision-making process during sexual activity. Therefore, the study aimed to fill the gaps by exploring the perceptions of students on the usage of female condoms in institutions of higher education in South Africa.

Objectives: To describe the cultural perceptions, Identify the personal perceptions, and determine the social perceptions of students regarding the use of female condoms at the University of Venda

Methods: The researcher used a cross-sectional descriptive design spanning February 2022 until April 2024. The study was conducted at a tertiary institution in Limpopo province. The researcher used a systematic or interval sampling method. Students' data was gathered via a self-administered questionnaire (n= 386) respondent. The researcher employed the Statistical Package for the Social Sciences (SPSS) to describe and summarise data.

Results: Total condom usage was found to be 52,43% (225); male condoms had higher usage, 45,55%, which is six times more used than female condoms, 6.88% (34). Most respondents had a negative perception of discussing with their parents or guardians how to use a female condom. Most respondents (76.7%) are not aware of using a female condom correctly.

Conclusion: This study highlighted a significant literature gap in the engagement of discussing female condoms with their guardians/parents, indicating reluctance in conversations about sexual matters with elders.

Keywords: Condom usage, Female condom, Perception, Sexually Active, STIs and tertiary institution

Abbreviations

STI	Sexual transmitted infections
STD	Sexual transmitted diseases

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INTRODUCTION

Lasse Hessel invented the female condom, which was authorised in 1993 to prevent sexually transmitted infections (STIs) and unintended pregnancies during sexual activity.[34] The prime purpose of female condoms is to provide women with the power and platform to shield themselves against Sexually Transmitted Infections (STIs), Sexually Transmitted Diseases (STDs), and unplanned pregnancies.[10] The use of female condoms in South Africa, as in many parts of the world, has been promoted as part of efforts to decrease the number of STIs and unwanted pregnancies.[9] The South African government, along with healthcare organisations and various NGOs, has launched campaigns to increase awareness about female condoms and promote their use. These initiatives aim to provide access to female condoms, educate people on their correct usage, and reduce the stigma associated with them.[20] According to the World Health Organization (WHO), 39,4 million HIV-positive individuals; 16,9 million of that population were men, and 19,7 million were females, which makes them the largest population living with HIV.[37] South Africa first launched the female condom in 1998; currently, female condoms are used at a lower rate than male condoms by people under the age of twenty years. An estimated 8% of young women and 6% of young males are found to prefer using female condoms.[16] However, it is crucial to recognise that attitudes are dynamic and can change with proper education, awareness, and resource access. Subsequently, it is essential to explore some factors that may influence cultural attitudes toward female condoms, including gender dynamics, stigma, and religious and moral beliefs.

The cultural norms of male dominance in the home and in relationships expose women to less control or participation in making decisions on the use of condoms during sexual activity.[9] Another viewpoint that leaves women open to risk factors for STIs, STDs, and unintended pregnancies is the notion that using a condom while having sex with your spouse is when one is married.[9] Female students view condoms as reducing HIV transmission and are more inclined to negotiate their usage.[10] This denotes that successful implementation requires a multifaceted approach that considers the unique characteristics and needs of the student population. It's also essential to involve students themselves in the planning and execution of the program to ensure their voices are heard and their preferences are considered.

Most students in tertiary institutions are assumed to understand the significance of using a condom during sexual encounters, as well as the significance of female condoms, which is to empower women to defend themselves against STIs and STDs if their male partners refuse to use a male condom.[20] In 2020, Vhembe District had 64 327 persons who had HIV and Aids, with Limpopo reporting 5954 teenage pregnancies birthed by teens between ten and seventeen years old.[26]

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According to a report done at Mopani, about 37 students were pregnant in 2017, and two teenagers between the ages of 14 and 16 were found pregnant at Mopani Primary School.[26] According to a study done at the University of Limpopo, students show interest in the usage of women's condoms; however, their inaccessibility in comparison to male condoms, lack of awareness about the usage of female condoms, cost and procurement in pharmacy has led to under usage of female condom at the tertiary institution.[28] South Africa initiated programmes addressing the social and structural factors exposing young girls and boys to vulnerability and increased risky behaviours. These programmes include She Conquers, YOLO, and Zazi, which are development programmes facilitated by the Department of Social Development.[30] However, more proper education and training on using female condoms are still needed to ensure their effective and consistent use.

There is a dearth of data regarding students' perceptions on the use of female condoms in South Africa. Most of the research undertaken in South Africa centred around challenges regarding using condoms for both men and women, factors contributing to STIs, teenage pregnancy, attitudes, sexual behaviour regarding adolescent pregnancy and reproductive problems, and students at Training College engaging in risky sexual conduct.[7,25] However, there is a study that was done at the University of Limpopo focusing on the perspective of female condom usage among postgraduate students. This study revealed that the reported discarding and abuse of women's condoms among students relates to a lack of information and views about it. It further discovered that effective initiatives and campaigns to promote student understanding are required to reduce unnecessary costs in the acquisition and delivery of female condoms.[28] As a result, this study was conducted to fill this gap by exploring the perceptions of students (undergraduate and postgraduate) on the usage of female condoms in institutions of higher education at the selected tertiary institution.

METHODS

Study Design

In this study, the researcher employed a quantitative analysis to ascertain the perceptions of students about the usage of female condoms. The researcher employed a cross-sectional descriptive design to gather data quickly and reach a wide population.

Study Setting

The study was conducted at the institution of higher learning in Limpopo province. Limpopo Province is one of South Africa's nine provinces, with two universities. Limpopo is located in the northern region of South Africa. Limpopo province covers 10.3% (125,755 square kilometres) of South Africa's total land area. There are five regions: Capricorn, Mopani, Sekhukhune, Vhembe,

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and Waterberg. The Limpopo provincial economy is the sixth biggest in the entire nation, with a GDP of R224 billion.

On the other hand, Limpopo has less human development than other provinces due to its rural nature. Teenage pregnancy proportions increased from 2% at 15 years to 27% at 19 years, with 71% being unwanted pregnancies and 29% wanting pregnancy.[14] Limpopo had a termination of youth pregnancy from 12.1% to 12.9% between the years 2017 and 2019.[24] Limpopo province has 91.66% of individuals diagnosed with HIV, and 73,26% of those individuals are on Anti-retroviral treatment.[15]

The selected tertiary institution has four faculties and 13 residences, accommodating about 3,826 male and female students on campus. There are accredited residents outside the campus that accommodate other students. The selected tertiary institution encompasses 21,000 km and has 14,949 students.[35] The chosen tertiary institution has one leading clinic that provides primary healthcare services, and private and public healthcare facilities are close to campus.

Population

The target population is 3826 male and female students residing on campus. The population-based frame used in this study was all female and male students currently enrolled with the selected tertiary institution and residing inside the campus residences. These students stay inside the campus and share the same characteristics.

Sampling

The researcher used a systematic or interval sampling method. Using Slovin's formula, the researcher calculated the sampling size. The calculation formula used was n=N/ (1+Ne2). The researcher was using a confidence level of 95%. After Slovin's recommended sample size, the researcher added 10% to the given sample size. The addition of 10% was necessary so that it could cover the respondents who may not have finished the questionnaire and improve and strengthen the reliability and validity of the findings. The sample size found was 398. The interval of the study was calculated as 9.

Inclusion criteria

In order to be enrolled in this research, each responder had to be registered as a student at the selected University staying on campus,18 years old and above, and provide a signed consent form.

Exclusion criteria

In this study, all respondents who refused to sign a consent form, decided not to answer the questionnaire and resided off-campus were excluded.

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Data collection

The instrument the researcher used to gather data was a questionnaire. Before data collection, the researcher obtained ethical clearance and a permission letter from the director of residents. The permission letter was used to enter the students' residence. The researcher went door to door to the respondents' rooms, gave them informed consent, and read the information letter. The researcher went to female residences accompanied by a female student representative to ensure safety so the respondents could feel free. The researcher distributed questionnaires and set a date and time for collecting questionnaires. The researcher collected data during the day on weekends, as other respondents may have attended weekday classes. The questionnaire was composed of 40 items.

Data analysis

In this study, descriptive statistics was employed by the researcher through Statistical Package for the Social Sciences (SPSS) version 29.0.2.0 to describe and summarise data in meaningful and valuable ways. The researcher used frequency distribution, relationship measures, and central tendency measures to analyse data. Frequency distribution was used to analyse data and summarise the results' occurrence.

Ethical considerations

The researcher presented the proposal to the supervisor and the public health department. The research was then assessed at the Faculty of Health Science for quality standards. The ethical clearance (FHS\23\PH\45\3011) was obtained from the selected university. With the approval of the student affairs, informed consent was given by the researcher to the respondents to sign and read the information letter.

Results

Demographic characteristics of respondents

In totality, 398 questionnaires were handed out to the respondents in different residences at the selected tertiary institution campus. A total of 386 questionnaires were captured using SPSS version 29.0.2.0; some of the questionnaires were not included as some were not fully answered. The mean age of respondents was 20.88, while 53,4% (206) of respondents were females and 46,6% (180) were males. The youngest respondents were 17, and the oldest was 26. Three hundred forty-six students were found to be single. Most respondents were first-year students, with 40.9% followed by second-year students. Approximately 287 students were found to be sexually active, and 99 students were found to be not sexually active. Religiously, most participants were Christians (72,5%). Undergraduates (78%) were the most dominant respondents who answered

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questionnaires. Most respondents were from the faculty of science, agriculture, and engineering, with 37.6% (145), followed by the faculty of humanities, with 31.1% (124). Table 1 provides the demographic distribution of the respondents involved in the study.

Table 1: Demographic information of the respondents

Demographic and clinical characteristics (NO = 386)			
Characteristics		NO	Percentage
Gender:	Male	180	46,6%
	Female	206	53,4%
	Other	0	
Marital status:	Single	346	89,6%
	Never married	40	10,4%
Level of study:	1st level	158	40,9%
	2nd level	121	31,3%
	3rd level	87	22,5%
	4th level	20	5,2%
Religion:	1. None	40	10,4%
	2. Christianity	280	72,5%
	3. African tradition	54	14,0%
	4. Other	12	12%
Type of degree:	1. Postgraduate.	85	22,0%
	2. Undergraduate	301	78,0%
Field of Study:	1. Faculty of Health	47	12,2%
	2. Faculty humanities, social and educational	124	31,1%
	3. Faculty of management	70	18,1%
	4. faculty of science, Agric and engineering	145	37,6%
Sexually active:	Yes	287	74,4%
	No	99	25,6%
Method of contraception:	1. Female condom	34	6,88%
	2. Male condom	225	45.55%

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	3. Contraceptive injection	15	3,04%
	4. Contraceptive pills	12	2,43%
	5. Withdrawal method	63	12,75%
	6. Morning after pill	38	7,69%
	7. Does not prevent	77	15,59%
	8. Other	30	6,07%

Table 2: Age of respondents

Age	Frequency	Percentage %	Cumulative Percent
17	15	3.9%	3.9
18	51	13.2%	17.1
19	73	18.9%	36.0
20	60	15.5%	51.6
21	53	13.7%	65.3
22	46	11.9%	77.2
23	17	4.4%	81.6
24	10	2.6%	84.2
25	44	11.4%	95.6
26	17	4.4%	100.0
TOTAL	386	100.0%	

Figure 1: Histogram of the age of respondents

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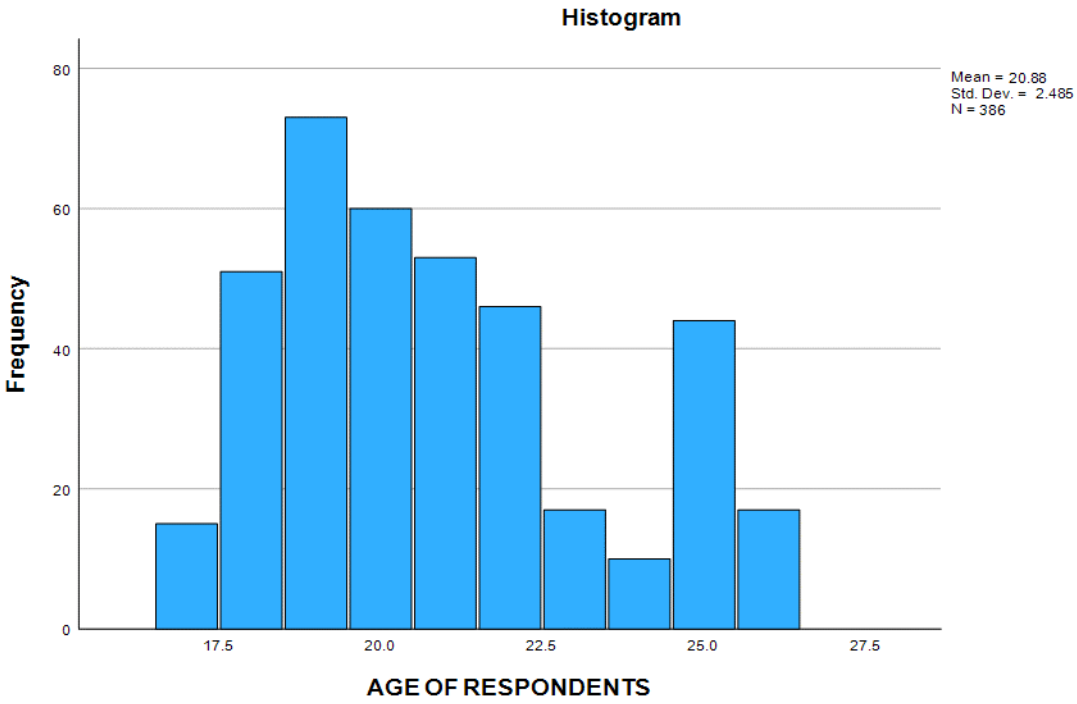

Table 3: Descriptive statistics summary of the age of respondents

N	Valid data	386
	Missing data	0
Mean		20.88
Std. Error of Mean		.126
Median		20.00
Mode		19
Std. Deviation		2.485
Variance		6.177
Range		9
Minimum		17
Maximum		26

Condom usage

Total condom usage was found to be 52,43% (225), and male condoms had higher usage, 45,55%, which is six times more used than female condoms at 6,88% (34). Female condom usage is

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exceptionally low compared to the number of male condoms used. The male condom was found to be the most used preventive method compared to other contraceptives. Students who did not engage in preventive methods were 15.59% (77), which can also be attributed to the number of students who are not sexually active. Students who engaged in the withdrawal method were 12.75% (63), meaning they engaged in risky sexual behaviour. Most of these respondents were found to be single, which means they may have more than one partner as they were found to be engaged more in sexual intercourse. Refer to Table 1.

This study used the weighted average compared to the item to make decisions regarding respondents' perceptions. The weighted average value for the items was divided by the total number of items. Any weighted average higher than the weighted average equal to the average is considered high perception for items with a low weighted average, which is taken as low perception. For the Likert scale questionnaires, the researcher used a range of means for the item to fall under strongly agree. The required mean values are as follows: strongly disagree 3.25–4, disagree 2.50-3.24, agree 1.75–2.49), and highly agree 1.00–1.74.

Cultural perception

Most respondents had negative perceptions about discussing with their parents or guardians how to use a female condom, with 74.4% saying no, refer to Table 4. Table 5 indicates that most of the respondents strongly disagree with the notion of discussing sexual matters with their parents. Respondents had a low perception and disagreed with the statement of not discussing sexual issues with elders as it is deemed secret. The respondents also disagreed that if you are married, you cannot use a condom. Respondents had strong disagreement that the power to use a condom lies in the man's hands.

Table 4: Cultural perceptions of respondents towards guardians

	1. yes	2.no	3. unsure
1. Can you ask your parents/Guardian how to use a female condom?	55 (14,25%)	287 (74,4%)	44(11,4%)

Table 5: Cultural perceptions of respondents

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	1 Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree	Mean	Standard deviation	decision
1. I discuss sexual matters with my parents.	28(7,3%)	60(15,5%)	147(38,1%)	151(39,1%)	3.09	.911	High perception
2. Sex is something secret that should not be discussed with elders.	69(17,9%)	110(28,5%)	131(33,9%)	76(19,7%)	2.55	1.000	Low perception
3. If you are married, you cannot use a condom.	52(13,5%)	96(24,9%)	129(33,4%)	109(28,2%)	2.76	1.008	Low perception
4. The power to use a condom lies in the man's hands.	39(10,1%)	52(13,5%)	122(31,6%)	173(44,8%)	3.11	.989	High perception

Weight average = sum of mean/number of items

Weighted average= 2, 88

Social Perception

In Table 6, data analysis of respondents in social perceptions, most respondents felt they could not collect female condoms in front of people (60.4%), and 86.8% of students indicated peer opinions or behaviours had never influenced them regarding the usage of a female condom. Students showed a high perception of the comfortability of giving female condoms to friends. Overall, there is a moderate level of comfort among respondents regarding sharing female condoms with friends. Respondents, on average, disagree with the statement of friends suggesting not to use condoms to build trust; they disagree with the notion that female condoms have the potential to become stuck in the vagina but show a low perception of the statement as the mean is lower than the weighted average. Refer to table 7.

Table 6: Social perception of respondents towards peers

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	1. yes	2.no	3. unsure	mean	Standard deviation
1. Can you collect female condoms in front of people?	233 (60,4%)	109 (28,2%)	44 (11,4%)	1.51	.692
2. Have you ever felt influenced by peer opinions or behaviours regarding the use of a female condom?	39 (10,1%)	335 (86,8%)	12 (3,1%)	1.93	.357
3. Are you comfortable giving female condoms to friends?	185 (47,9%)	115 (29,8%)	86 (22,3%)	1.74	.799

Weighted average= 1, 73

Table 7: Cultural perceptions of respondents

	1. Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree	mean	Standard deviation	decision
1. Have friends ever suggested that to build trust in a relationship, you must not use condoms with your partner	43 (11,1%)	49 (12,7%)	198 (51,3%)	96 (24,9%)	2.90	.902	High perception
2. Female condoms can get stuck inside the vagina	21 (5,4%)	152 (39,4%)	170 (44,0%)	43 (11,1%)	2.61	.756	Low perception

Weighted average= 2, 76

Personal perception

In the data analysis of personal perception in Table 8, 88,9% of respondents responded that they had never initiated the usage of a female condom on their first encounter, and 76,7 respondents were not aware of how to use a female condom. Most respondents showed that they are not afraid of using female condoms even if their partners may think they have STI/HIV. Respondents had a low perception regarding the statement, with 84.7% of respondents agreeing they had never faced

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any challenges in using female condoms. Respondents also disagreed that the female condom takes away sexual pleasure. The majority of students do not prefer using a female condom.

In Table 9, students mostly agree that they cannot suggest the usage of female condoms to their partners and also showed low perception but had a high perception of suggesting the usage of a female condom regarding the belief that their partners may think they have started to sleep around as mostly disagree. Students also disagreed that a submissive relationship led to them not using a condom; instead, they had a high perception of the statement. Students showed low perception knowledge of how to use the female condom, as they mostly also agreed they do not have any knowledge on how to use it.

In Table 10, 30,3% of students expressed that female condom awareness and availability is moderately effectively addressed within their tertiary institution. In Table 11, students indicated that peer dynamics influence perceptions of female condom usage in higher education settings significantly, and 33,9% of students believe gender inequality moderately contributes to challenges in female condom usage. The majority of respondents showed fair perceptions of the belief that men's attitudes moderately influence female condom usage among females.

Table 8: Personal experience of respondents to female condom

	1. Yes	2.No	mean	Standard deviation
1. Have you ever initiated the use of a female condom on your first encounter?	43(11,1%)	343(88,9%)	1.89	.315
2. Are you currently aware of how to use a female condom	90(23,3%)	296(76,7%)	1.77	.423
3. I can't use a female condom because my partner may think I have STI/HIV.	47(12,2%)	339(87,8%)	1.88	.327
4. Have you personally faced any challenges in using female condoms	59(15,3%)	327(84,7%)	1.85	.360
5. Do you believe that a female condom takes away pleasure during sex	143(37,0%)	243(63,0%)	1.63	.484

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6. Do you prefer a female condom	53(13,7%)	333(86,3%)	1.86	.345

Table 9: Personal perceptions of respondents towards partners

	1. Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree	mean	Standard deviation	decision
1. I cannot suggest and initiate the use of a female condom to my partner	34 (8,8)	145 (37,6)	142 (36,8)	65 (16,8)	2.62	.867	High perception
2. If I suggest the use of a female condom, they may think I have started to sleep around	56 (14,5%)	94 (24,4%)	170 (44,0%)	66 (17,1%)	2.64	.930	High perception
3. Being in a submissive relationship led to me not using a condom	51 (13,2%)	87 (22,5%)	162 (42,0%)	86 (22,3%)	2.73	.953	High perception
4. I don't have any knowledge of how to use the female condom	85 (22,0%)	140 (36,3%)	105 (27,2%)	56 (14,5%)	2.34	.979	Low perception

Weighted average= 2, 58

Table 10: Awareness and availability of female condom

	Very effectively	moderately effective	Ineffectively	Not addressed at all
How is female condom awareness and availability addressed within your tertiary institution?	90 (23,3%)	117 (30,3%)	79 (20,5%)	100 (25,9%)

Table 11: Personal perception of respondents

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	Significantly	moderately	Slightly	Not at all	Mean	Standard deviation
1. What extent do you think peer dynamics influence perceptions of female condom usage in higher education settings?	118 (30.6%)	107 (27.7%)	71 (18.4%)	90 (23.3%)	2.34	1.143
2. What extent do you think gender inequality contributes to challenges in female condom usage	99 (25,6%)	131 (33,9%)	70 (18,1%)	86 (22,3%)	2.37	1.093
3. What extent do you believe men's attitudes influence female condom usage among females	71 (18,4%)	127 (32,9%)	120 (31,1%)	68 (17,6%)	2.48	.986

Weighted average= 2, 40

DISCUSSION

Tertiary institutions are essential members of the community as they contribute a lot to the number of people suffering from sexually transmitted diseases. Most students start to participate in sexual activities when they begin to move to university. It is essential to be knowledgeable about the female condom as this may assist them in preventing sexually transmitted infections. When students are knowledgeable about the female condom, it may help them change their attitudes towards the female condoms. In this study, the knowledge was insufficient, and some students carried a bad attitude towards the usage of female condoms.

This study noted that female condom usage was 6,88% and male condom usage 45,55%, which is six times more than female condoms. A study conducted in Nigeria found similar disparities in condom usage between genders.[33]

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Cultural perception

The study's findings showed that most respondents had a negative perception of discussing with their parents or guardians how to use female condoms, with 74.4% saying no. The data analysis in Table 4 indicates that most of the respondents strongly disagree with the notion of discussing sexual matters with their parents. This concurs with the study done on University of Sudan students, who reported that the respondents not being able to discuss sex with their parents as they were not close to them as friends.[8] Respondents had a low perception and disagreed with the statement of discussing sexual matters with elders as it is deemed secret. This concurs with a study done in Cameroon that reported that most of those surveyed were sexually experienced and had positive perceptions regarding the family-adolescent discussion on whether condoms were appropriate.[32] This suggests that students are not willing to discuss their sexuality with elders but do not have any cultural belief in not discussing sexual activities with their elders. The study also found that respondents also disagreed that if one is married, they cannot use a condom. This differs from the survey done six years ago that suggested that people in long-term relationships do not use condoms as it may show a lack of trust and faithfulness.[13] Respondents strongly disagreed that the power to use a condom lies in the man's hands. This supports the study by Firoza, who reported that female and male students had a positive attitude in negotiating condom usage.[11]

Social Perception

According to the survey, most of the respondents felt they could not collect female condoms in front of people (60.4%). This result differs from the analysis done 13 years ago that reported that female condom users who had positive experiences influenced others positively.[36] In the current study, 86.8% of students indicated that peer opinions or behaviours have never influenced them regarding the usage of a female condom. This concurs with the study conducted on African American women, which discovered that women are more inclined to use a female condom if they are aware of its benefits.[12] Students showed a high perception of the comfortability of giving female condoms to friends. Overall, there appears to be a moderate level of comfort among respondents regarding sharing female condoms with friends. This result concurs with the study in 2014, which revealed that 69.4% said they would propose it to friends and peers.[32]

Respondents, on average, disagree with the statement of friends suggesting not to use condoms to build trust; they also disagree with the belief that a female condom can get stuck inside the vagina. This study differs from the study conducted by Kenya high school students, who disclosed the existence of a close relationship between peer pressure and high-risk sexual behaviours among

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students.[23] Another study showcased that those ladies with a strong background in the insertion and usage of female condoms increased their utilisation.[27]

Personal perception

The study reported that 88,9% of respondents responded that they had never initiated the usage of a female condom on their first encounter, and 76,7% of respondents were not aware of how to use a female condom. This outcome is consistent with the study conducted in 1997, in which 231 people were instructed to use female condoms, and only 29% tried the condom, which showed most people are not open to trying the female condom on first encounter.[29] These results showed similarities to the study conducted in 2018, as it mentions that women often put condoms before engaging in sexual activity, and occasionally, males may not show up even after the women have done so.[4] Most respondents showed that they are not afraid of using female condoms even if their partners may think they have STI/HIV. This report agrees with a study conducted in 2016, which reported that most females used a condom when infidelity was suspected.[18] Respondents had a low perception regarding the statement, with 84.7% of respondents agreeing they had never faced any challenges in using female condoms. This result differs from the Italian study, which was conducted 16 years ago, as most respondents expressed difficulties with the insertion of female condoms, showing an inadequate understanding of their usage.[31] The high percentage of not facing challenges with the usage of female condoms could be associated with the results of most respondents not using female condoms in this current study. Respondents also disagreed that the female condom takes away pleasure. A study conducted at TVET College indicated that students discovered that using female condoms was harder and less intriguing.[20] Many students do not prefer using a female condom. A study conducted at KwaZulu-Natal reported that female condoms interfere with sexual pleasure, which brought inconsistency to the use of female condoms.[19]

The current study reported that students mostly agree that they cannot suggest the usage of a female condom to their partner and showed low perception. A study showcased that culturally open purchase of female condoms is perceived as promiscuity, as stated by 85% of the participants in the survey.[2] Some raised statements, such as initiating sexual matters is male responsibility, which has led to being submissive to their men and accepting any decision they made, leaving their health at risk.[2] High perception on suggesting the usage of female condoms regarding the belief that their partners may think they have started to sleep around mostly disagree. A study conducted in 2015 stated that the stigma attached to using female condoms fuels unfavourable opinions and may imply adultery in committed partnerships.[17] Students also disagreed that a submissive relationship led to them not using a condom. This result differs from a study conducted at Kenyatta University,

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where respondents expressed that it is male responsibility to initiate sexual matters, which makes women submissive to their men.[4] Students showed positive perception regarding knowledge on the usage of female condoms, as they mostly also agreed they do not have any knowledge on how to use them. Another study conducted in KwaZulu-Natal also concurs with these results, as it reported that women believed that there was a dearth of information and understanding about female condoms.[17]

The current study shows that 30,3% of students expressed that female condom awareness and availability is moderately effectively addressed within their tertiary institutions. This shows the similarity to a study done 11 years ago that University-age young adults continue to have mixed attitudes and understanding on condoms being made available among several populations at risk of HIV in South Africa, encompassing young people.[2] This result also concurs with the study done in 2019, which revealed one factor influencing usage was whether female condoms were available where one lived, as the study reported that 98% verbalised that female condoms were not readily available.[3]

In this study, students indicated that peer dynamics influence perceptions of female condom usage in higher education settings significantly, and 33,9% of students believe gender inequality moderately contributes to challenges related to female condom usage. According to Kenyan research, young women who believe their friends use contraceptives are more inclined to use another contemporary technique than not to use any at all.[6] In a study conducted in Zimbabwe, peer support can strongly encourage potential users to consider the female condom.[22] Many respondents showed fair perceptions of the belief that men's attitudes moderately influence female condom usage among females. A study done in 2019 reported that 66.4% of males have reported they disliked female condoms; this has led females to shy away from female condoms, thinking of how their male partners will react when they find out about the condom.[3]

CONCLUSION

This study highlighted a significant literature gap in the engagement of discussion of female condoms with their guardians/parents, indicating reluctance in conversations about sexual matters with elders. The respondents also contradicted the social standards that wedded people's ability to use condoms lies on men's hands. The study also showed a gap that there is discomfort in taking female condoms in public spaces. The mixed conception in the myth that female condoms can get stuck highlights that there is a literature gap. Lack of understanding of the female condom's usage led to the lower utilisation of female condoms.

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Limitations of the study

This study has limitations regarding the sample size of students in the selected tertiary institution. This led to the study analysis of the perception of a small percentage of the students. This study's findings represent the students at the selected tertiary institution, but further research with a large sample size of students and more diverse populations can yield national policy recommendations.

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Declaration of Competing Interests

The author declares that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Author contributions

MCR conducted this study while completing a master's in public health (occupational and environmental health) at the University of Limpopo. The researcher, M.C.R., contributed fully to the study's design and implementation, the analysis of the results, and the manuscript. MNS acted as a supervisor and participated in supervising all aspects of the study as well as revising, editing, and administering the study.

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Data availability

On reasonable request, the corresponding author of the paper can provide the data supporting the conclusions of this research. The data are not publicly available because they contain information that could compromise the privacy of research participants.

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Reference

1. Beksinska M, Nkosi P, Mabude Z, Mantell JE, Zulu B, Milford C, et al. Lessons from the evaluation of the South African National Female Condom Programme. PLoS One. 2020;15(8). https://doi.org/10.1371/journal.pone.0236984.

2. Beksinska ME, Smit JA, Mantell JE. Progress and challenges to male and female condom use in South Africa. Sexual Health [Internet]. 2012;9(1):51. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3286127/.

3. Boraya JO. A Thesis Submitted for the Degree of Master of Public Health (Reproductive Health Option) in the School of Public Health of Kenyatta University. November 2019. Available from: http://ir-library.ku.ac.ke/handle/123456789/20515.

4. Boraya J, Githae C, Atandi T, Cachau A. Social and psychological factors affecting utilisation of female condoms among youths in Migori County, Kenya. Health Psychol Open. 2018;5:205510291881533.

5. Bryan AD, Aiken LS, West SC. Young women's condom use: the influence of acceptance of sexuality, control over the sexual encounter, and perceived susceptibility to common STDs. Health Psychology. 1997 Sep 1;16(5):468–79.

6. Calhoun LM, Mirzoyants A, Thuku S, et al. Perceptions of peer contraceptive use and its influence on contraceptive method use and choice among young women and men in Kenya: a quantitative cross-sectional study. Reproductive Health. 2022 Jan 21;19(1).

7. Davids L. Knowledge, attitudes, and practices of contraception amongst adolescent girls from selected high schools in a low socio-economic community in Cape Town. etduwcacza [Internet]. 2019 [cited 2024 Apr 26]; Available from: http://hdl.handle.net/11394/7615.

8. Elshiekh HF, Hoving C, de Vries H. Exploring Determinants of Condom Use among University Students in Sudan. Arch Sex Behav. 2020; 49:1379–1391. DOI: https://doi.org/10.1007/s10508-019-01564-2

9. Gray, A., & Vawda, Y. Health Policy and Legislation. South African Health Review. Durban: Health Systems Trust. 2020.Available from: https://hdl.handle.net/10520/ejc-healthr-v2020-n1-a7.

10. Gwala, N., & Maharaj, P. Factors influencing consistency of condom use among college students in Durban, South Africa. University of Kwazulu-Natal: Durban. 2019.Available from: https://researchspace.ukzn.ac.za/server/api/core/bitstreams/479e4580-e131-459a-a136-c41b87d1e81b/content.

© University of Venda

11. Haffejee, F., Koorbanally, D., & Corona, R. Condom Use Among South African University Students in the Province of KwaZulu-Natal. Sexuality & Culture. 2018; 22:1279-1289.
12. Holmes L, Ogungbade GO, Ward DD, et al. Potential markers of female condom use among inner-city African American Women. AIDS Care. 2008 Apr;20(4):470–7.
13. Kanda L, Mash R. Reasons for inconsistent condom use by young adults in Mahalapye, Botswana. African Journal of Primary Health Care & Family Medicine [Internet]. 2018 May 24;10(1). Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6018458/.
14. Limpopo Provincial Health Research Day. Factors associated with teenage pregnancy in Limpopo province [Internet]. South Africa: Limpopo Province Department of Health; 2011. Available from:http://policyresearch.limpopo.gov.za/bitstream/handle/123456789/810/factors%20associated%20with%20teenage%20pregnancy%20in%20limpopo%20province.pdf?sequence=1.
15. Macdonell and Low. Graphs that tell the story of HIV in South Africa's provinces • Spotlight [Internet]. Spotlight. 2019. Available from: https://www.spotlightnsp.co.za/2019/08/05/graphs-that-tell-the-story-of-hiv-in-south-africas-provinces/.
16. Mantell JE, Exner TM, Bai D, et al. Perceived male partner attitudes toward the female condom predict female university students' use of the female condom. International Journal of STD. & AIDS. 2020;31(8):753-762.
17. Mahlalela NB, Maharaj P. Factors facilitating and inhibiting the use of female condoms among female university students in Durban, KwaZulu–Natal, South Africa. The European Journal of Contraception & Reproductive Health Care. 2015 Apr 17;20(5):379–86
18. Martin, de Lora, Rochat, Andes. Understanding Female Condom Use and Negotiation Among Young Women in Cape Town, South Africa. International Perspectives on Sexual and Reproductive Health. 2016;42(1):13.
19. Masvawure TB, Mantell JE, Mabude, Z, et al. "It's a Different Condom, Let's See How It Works": Young Men's Reactions to and Experiences of Female Condom Use During an Intervention Trial in South Africa. Journal of Sex Research. 2014 Jul 25;51(8):841–51.
20. Mbelle, N., Mabaso, M., Chauke, T., Sigida, S., Naidoo, D., & Sifunda, S. Perception and attitudes about male and female condom use amongst university and technical and vocational education and training (TVET) college students in South Africa: A qualitative inquiry of the 2014 higher education and training HIV/AIDS (HEAIDS) programme first things first campaign. BAOJ HIV. 2018;4(1):31.
21. Mbelle N, Setswe G, Sifunda S, Mabaso M, Maduna V. HIV and AIDS-related knowledge, attitudes and behaviours of students and staff at South African technical and vocational education and training colleges in South Africa, 2014 [Internet]. Repository.hsrc.ac.za. Higher Education and

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Training HIV and AIDS Programme (HEAIDS); 2015 [cited 2024 Apr 26]. Available from: https://repository.hsrc.ac.za/handle/20.500.11910/1914.

22. Meekers D, Richter K. Factors Associated with Use of the Female Condom in Zimbabwe. International Family Plann Perspect. 2005;31(1):30–37. Available from: http://www.jstor.org/stable/3649500.

23. Muraya AN, Koome P, Wachira W, Muraya A. Scholars Bulletin The influence of Peer Pressure on High-risk Sexual Behaviour among High School Students in Nakuru East Sub County, Kenya. 2018 [cited 2024 Apr 26]; Available from: https://saudijournals.com/media/articles/SB_47_618-622_c.pdf.

24. Maluleke R. Profiling health challenges faced by adolescents (10-19 years) in South Africa [Internet]. Statistics South Africa. Stats SA; 2015. Available from: https://www.statssa.gov.za/publications/03-09-15/03-09-152022.pdf.

25. Manganye NMS, Mashau NS, Ramathuba DU. Factors Associated with Risky Sexual Behaviour Amongst Students at a Training College in Limpopo Province, South Africa. 2020 Dec 31.

26. Risenga PR, Mboweni SH. Adolescent Girls' Experiences Regarding Teenage Pregnancy in the Rural Villages of Limpopo Province, South Africa. Adolescents. 2022 Dec 30;3(1):60–71.

27. Schuyler AC, Masvawure TB, Smit JA, et al. Building young women's knowledge and skills in female condom use: lessons learned from a South African intervention. Health Education Research [Internet]. 2016 Mar 8 [cited 2022 Dec 5];31(2):260–72. Available from: https://academic.oup.com/her/article/31/2/260/2363170.

28. Shiburi G. the perceptions of postgraduate students about female condoms at the university of limpopo [Internet]. 2021 [cited 2024 Apr 26]. Available from: http://ulspace.ul.ac.za/bitstream/handle/10386/3787/shiburi_mg_2021.pdf?sequence=1.

29. Sly DF, Quadagno D, Harrison DF, Eberstein IW, Riehman K. Factors Associated with Use of the Female Condom. Fam Plann Perspect. 1997;29(4):181–184. DOI: https://doi.org/10.2307/2953383.

30. South Africa's National Strategic Plan for HIV, TB and STIs. Let our actions count [Internet]. South Africa: Department of Health; 2017. Available from: https://sanac.org.za//wp-content/uploads/2017/06/NSP_FullDocument_FINAL-1.pdf.

31. Spizzichino L, Pedone G, Gattari P, et al. The female condom: knowledge, attitude, and willingness to use. The first Italian study. Annali dell'Istituto superiore di sanita [Internet]. 2007 Jan 1 [cited 2024 Apr 26];43(4):419–24. Available from: https://europepmc.org/article/MED/18209275.

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32. Tarkang, Elvis Enowbeyang. “Factors associated with the perception of risk of contracting HIV among secondary school female learners in Mbonge subdivision of rural Cameroon." The Pan African Medical Journal 17. 2014;17.

33. Tobin-West CI, Maduka O, Onyekwere VN, Tella AO. Awareness, acceptability, and use of female condoms among university students in Nigeria: implications for STI/HIV prevention. International Journal of Adolescent Medicine and Health. 2014 May 1;26(2):259–65.

34. UNAIDS. Putting HIV prevention among adolescent girls and young women on the Fast-Track and engaging men and boys [Internet]. 2016. Available from: https://www.unaids.org/sites/default/files/media_asset/UNAIDS_HIV_prevention_among_adolescent_girls_and_young_women.pdf.

35. University of Venda [Internet]. [cited 2024 Apr 26]. 2023. Available from: https://www.univen.ac.za/wp-content/uploads/2023/11/UNIVEN-2022-Annual-Report.pdf.

36. Weeks MR, Li J, Coman E, et al. Multilevel Social Influences on Female Condom Use and Adoption Among Women in the Urban United States. AIDS Patient Care and STDs. 2010 May;24(5):297–309.

37. WHO (World Health Organization). Feature stories [Internet]. www.unaids.org. [cited 2024 Apr 26]. Available from: http://www.unaids.org/en/resources/presscentre/featurestories/2015/july/20150702_condom.

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SECTION C STUDY SUMMARY, CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

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3.1 INTRODUCTION

The researcher's study, Students' Perceptions Regarding the Usage of Female Condoms at the Selected Tertiary Institution in Limpopo Province, South Africa, is discussed in this part, along with its strengths, limitations, conclusions, and recommendations. This section will summarise the study findings and their implication on the perceptions of students on the usage of female condoms in higher education. The purpose of this study was to find out how students perceive using female condoms. This part of the research aids in determining if the following objectives were met:

- The researcher described the cultural perceptions of students regarding the use of female condoms at the University of Venda.
- The researcher identified the personal perceptions of students regarding the use of female condoms at the University of Venda.
- The researcher determined the social perceptions of students regarding the use of female condoms at the University of Venda.

3.2 STUDY SUMMARY

Examining the interplay of social, cultural, and personal factors in shaping student's perceptions of female condom usage: A systematic review

The literature highlights the efficiency of female condoms in preventing unplanned deliveries and STDs; this study reveals significant barriers rooted in cultural norms, gender dynamics, and personal preferences. The influential role of men's perspectives, cultural perceptions of promiscuity, and gender inequality highlight the complexity of making decisions around sexual health. In the context of higher education, this report highlights the nuanced challenges faced by female students and highlights the importance of education in shaping perceptions. In recognising the valuable lessons learned, it is important to acknowledge restrictions such as geographic focus, the possibility of bias, and the need for further intervention studies. The ever-evolving nature of sexual health research suggests the need to continue exploring beyond the limits of research knowledge. Despite the study efforts, more practical approaches are needed to improve the perceptions of students regarding female condom usage at tertiary institutions. The perceptions of students on female condom usage remain a challenge that requires more strategies. The literature provides essential insights into our understanding of female condom awareness and overall strategy development, including targeted public health interventions and culturally sensitive approachable addressing these complexities. Stakeholders can work together to promote positive change in perceptions and

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practices regarding female condom use among diverse student populations, ultimately improving sexual health outcomes.

Investigating the perceptions and attitudes of tertiary students towards female condom use in South Africa.

This study concludes that there is a significant literature gap in the discussion relating to female condom use among students and their guardians/parents, indicating reluctance in conversations about sexual matters with elders. The respondents also contradicted the social standards that wedded people's ability to use condoms lies on men's hands. The study also showed a gap that there is discomfort in taking female condoms in public places. There is a lack of literature, as seen by the differing opinions on the myth that female condoms can become trapped. There was less use of female condoms since people did not know how to use them. The study highlights the need for effective educational awareness programs, easy access to female condoms, gender inequality needs to be addressed, evaluation of the sexual programs, and advanced orientation on students' perceptions regarding female condom usage.

3.3 ACHIEVEMENT AND IMPLICATIONS OF THE STUDY

In the study titled" Students' Perceptions regarding the Use of Females at the University of Venda, in Limpopo Province, South Africa", the following achievement and implications of research objectives are addressed.

3.3.1 Achievement of the research objectives

The study achieved its set objectives of describing the perceptions of the students. The study's objectives were achieved, the cultural perceptions were described, personal perceptions were identified, and the researcher determined social perceptions. The researcher distributed questionnaires to participants, and 386 respondents responded to the questionnaire, which had four sections. The results disclosed that the male condom is used six times more than the female condoms, meaning the usage of female condoms was low. The cultural perceptions result revealed that most respondents have negative perceptions of discussing the female condom contraceptive with their elders, parents, or guardians. However, the result revealed that they had a positive perception of the usage of condoms even when they are married and the belief of condom use power laying on the men's hands; this reveals that the previous perceptions were found in the literature review done by a researcher now differ with the result found by the researcher which is also a positive attitude being shown by the students. The personal perceptions determined were that students had a positive perception of collecting female condoms and also showed a positive

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perception that students do not feel peer opinions influence them on female condoms, which also differs from the literature review. The students also expressed a low perception of the statement that female condoms can get stuck, which shows that there is a knowledge gap. On personal perception, the study identified that men's attitudes and gender inequality influence female condom usage according to the student's perceptions. The students also had a moderate agreement that condom availability and awareness are still lacking in tertiary institutions, which shows a gap. The students had a low perception of the knowledge of using female condoms. Most students had unfavourable impressions of initiating the female condom, a preference for using a female condom, the belief that it takes away pleasure, and not being aware of how to use it personally. Other personal perceptions identified were that some had the positive perception that they may use a condom made for women without thinking that their partners felt they had HIV/STIs. The majority did not face any challenges with the use of female condoms. The study revealed that students identified that they had a positive perception of not being in submissive relationships, which may have led them not to use condoms, being able to use the female condom without their partners thinking that maybe they were sleeping around but had a low perception on not being knowledgeable about the usage of the female condom. The study assessed the student's perceptions regarding the use of female condoms at the selected tertiary institution by the researcher. When summing up the findings of the results, it has been found that there are disparities in condom usage between genders and reluctance to discuss sexual matters with parents. Different perceptions were explored by their researcher. The study revealed that there is a need to address misconceptions, promotion of awareness, and enhance access to female condoms among university students.

3.3.2 Implications of cultural perceptions of students on female condoms and recommendation for redress

The study investigated the cultural perceptions of students and revealed that most respondents (74.4%) have negative perceptions of discussing the female condom contraceptive with their elders, parents, or guardians. However, the result revealed that they had a positive perception (61.6%) of the usage of condoms even when they are married, and 76,4% disagreed that the use of condoms lies in men's hands. The study recommends that education and awareness must be suggested where there is a mission focused on the two understudies and guardians/parents to advance open conversations about sexual well-being and contraception, including female condoms.

3.3.3 Implications of social perceptions of students on female condoms and recommendation for redress

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The hesitancy and unfavourable attitudes toward discussing sexual problems with parents or elders suggest a considerable communication barrier. This barrier may result in a lack of appropriate knowledge, misunderstandings, and inhibitions about sexual health decisions, such as the usage of female condoms. The disagreement with the idea of not discussing sexual concerns with elders because they are considered private indicates underlying stigmas and taboos around sexual themes in specific cultural or social situations. This stigma can lead to a lack of openness and information regarding sexual health alternatives. The debate over the assumption that married people cannot use condoms reveals probable misunderstandings or cultural norms about contraception inside marriage. These myths may influence views regarding female condom use among married people or those in committed relationships. The substantial disagreement that the power to wear a condom rests primarily with males demonstrates changing gender relations and a realisation of shared responsibility in sexual health decisions. However, addressing any persistent misconceptions about gender roles and duties in contraception is critical to promoting informed decisions. The study suggests that sexual health education and awareness campaigns be culturally sensitive, considering different ideas and attitudes about sexuality. Including community leaders, cultural consultants, and peer educators to ensure that messages are received favourably and successfully is necessary. The report further suggests the facilitation of seminars or forums that enable parents, guardians, and students to talk openly about sexual health issues, such as female condom use. Implementation of comprehensive sexual education programs at educational institutions that not only include technical elements of contraception but also highlight the value of open communication. The study also recommends community engagement in promoting a supportive environment for youth to equip knowledge and guidance.

3.3.4 Implications of personal perceptions of students on female condoms and recommendation for redress

The large percentage of respondents who had never used a female condom on their first encounter, as well as the substantial number who were unsure how to use one, show a lack of experience and trust in this contraceptive strategy. This lack of introduction and understanding may result in the underuse of female condoms, notwithstanding their advantages. The fact that most respondents are not scared to use female condoms even if their partners know they have STI/HIV indicates a healthy attitude toward protecting themselves and others from sexually transmitted illnesses. However, it also emphasises the significance of increased STI and HIV prevention education and awareness. The low impression of confronting problems in using female condoms and the dispute that they take away pleasure. The findings on female condom awareness and availability in tertiary

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institutions indicate modest efficacy. Improving awareness campaigns, giving training sessions, and assuring access to female condoms on campus can help students gain understanding and comfort. The impact of peer dynamics and perceptions of gender inequity on female condom use emphasises the necessity of challenging societal norms, enabling people to make informed decisions, and creating a supportive atmosphere that promotes healthy behaviours and communication. The majority of students do not like female condoms and are unwilling to recommend their use to partners, indicating underlying problems such as societal conventions, communication difficulties, and maybe a lack of confidence in addressing sexual health issues openly. The study recommends that sexual programs in tertiary institutions provide comprehensive sexual education, ensure easy access to female condoms through the system of health centres, residential toilets, and toilets around classes, offer workshops and seminars on effective communication strategies, and use peer education programs to promote positive attitudes toward female condoms. The research advises the school to evaluate and enhance its efforts continuously based on student feedback and needs assessments.

3.4 STRENGTHS AND LIMITATIONS

The study objectives were achieved; however, some limitations were found during the research. The first limitation of this study is that the questionnaire is a closed-ended question in which there is no addition to the information by respondents, as most respondents expressed that they had so many questions about female condoms. This closed-ended question led to limited outcomes for the study. The study was also based on one university selected by the researcher and only a certain percentage of students; this means that this sample may not be representative of all students in all tertiary institutions in South Africa. There are limitations to this study regarding the sample size of students in the selected tertiary institution. This led to the study analysis of the perception of a small percentage of the students. In this literature review, the researcher only focused on English-language articles from Africa; hence, only English papers were included in the systematic review. Papers published in languages other than English and from different continents were excluded, which would have affected this review. If the literature review included the other language-coded studies, it could have yielded better data, which would have generated other gaps in perceptions of female condoms, which the researcher could have used to construct a better instrument for collecting data.

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3.5 CONCLUSION

The study revealed insufficient knowledge regarding the female condom, negative attitudes towards its discussion, gender inequality, misconceptions, and inadequate access to female condoms at tertiary institutions. Although studies have been done on the perceptions of students regarding the female condom, little has been done as misconceptions, lack of knowledge, and poor access to it persist. This study recommended strategies to combat these challenges presented by the students regarding female condoms. This study suggests that policy interventions be updated for the Department of Health and tertiary health institutions to improve the educational programmes on female condoms and all contraceptives.

3.6 RECOMMENDATIONS

With these three types of female condoms (FC2, Cupid1, and Cupid2), there is a need for educational awareness on addressing the students' misconceptions, addressing the access to female condoms, evaluation of sexual well-being programs in tertiary institutions, addressing gender inequality and addressing the barriers of female condom usage. This needs to be addressed to eradicate the negative perceptions the students have regarding female condoms. In light of the results of this research, the researcher believes there is a need for additional investigation. The researcher recommends that research be conducted on cross-cultural perspectives on condom usage among students from different cultural backgrounds and also technology and sexual health education.

3.7 SUMMARY

The study's background and purpose were stated in the first section. The study sought to evaluate students' perspectives on the usage of female condoms at the chosen tertiary institution in South Africa. The study design, sample, methods, data collecting, and data analysis were all fully documented in the methodology. A questionnaire was employed to conduct a quantitative analysis. Section two comprised two manuscripts that had been published in reputable publications. Finally, section three offered the study findings, conclusions, and recommendations, which were exclusively based on the data gathered for this study. This study's findings also led to recommendations for further research on students' perceptions of female condom use.

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ANNEXURES

ANNEXURE A: ETHICAL CLEARANCE

ETHICS APPROVAL CERTIFICATE

RESEARCH AND INNOVATION
OFFICE OF THE DIRECTOR

NAME OF RESEARCHER/INVESTIGATOR:
Mr MC Ramawa

STUDENT NO:
18001814

PROJECT TITLE: Students' Perceptions Regarding the Use of female Condoms at the University of Venda, in Limpopo Province, South Africa.

ETHICAL CLEARENCE NO: FHS/23/PH/45/3011

SUPERVISORS/ CO-RESEARCHERS/ CO-INVESTIGATORS

NAME	INSTITUTION & DEPARTMENT	ROLE
Prof NS Mashau	UNIVEN, Advanced Nursing Science	Supervisor
Mr MC Ramawa	UNIVEN, Advanced Nursing Science	Investigator – Student

Type: **master's research**
Risk: **Minimal risk to humans, animals, or environment (Category 2)**
Approval Period: **November 2023 – November 2024**

The Human and Clinical Trails Research Ethics Committee (HCTREC) hereby approves your project as indicated above.

General Conditions
While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, please note the following.

- The project leader (principal investigator) must report in the prescribed format to the REC:
  - Annually (or as otherwise requested) on the progress of the project, and upon completion of the project.
  - Within 48hrs in case of any adverse event (or any matter that interrupts sound ethical principles) during the course of the project.
  - Annually a number of projects may be randomly selected for an external audit.
- The approval applies strictly to the protocol as stipulated in the application form. Would any changes to the protocol be deemed necessary during the course of the project, the project leader must apply for approval of these changes at the REC. Would there be deviated from the project protocol without the necessary approval of such changes, the ethics approval is immediately and automatically forfeited.
- The date of approval indicates the first date that the project may be started. Would the project have to continue after the expiry date; a new application must be made to the REC and new approval received before or on the expiry date.
- In the interest of ethical responsibility, the REC retains the right to:
  - Request access to any information or data at any time during the course or after completion of the project,
  - To ask further questions; Seek additional information; Require further modification or monitor the conduct of your research or the informed consent process.
  - withdraw or postpone approval if:
  - Any unethical principles or practices of the project are revealed or suspected.
  - It becomes apparent that any relevant information was withheld from the REC or that information has been false or misrepresented.
  - The required annual report and reporting of adverse events was not done timely and accurately.
  - New institutional rules, national legislation or international conventions deem it necessary.

ISSUED BY:
UNIVERSITY OF VENDA, RESEARCH ETHICS COMMITTEE
Date Considered: October 2023

Name of the HCTREC Chairperson of the Committee: Prof MS Maputle

UNIVERSITY OF VENDA
OFFICE OF THE DIRECTOR
RESEARCH AND INNOVATION
2023 -11- 30
Private Bag X5050
Thohoyandou 0950

Signature: MSMaputle

University of Venda
PRIVATE BAG X5050, THOHOYANDOU, 0950, LIMPOPO PROVINCE, SOUTH AFRICA
TELEPHONE (015) 962 8364/8310 FAX (015) 962 0060
"A quality driven financially sustainable, rural-based Comprehensive University"

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ANNEXURE B: APPROVAL LETTER FROM THE DIRECTOR OF STUDENT AFFAIRS

P.O Box 241
Thohoyandou
0950
23 January 2024

University of Venda
Private Bag X5050
Thohoyandou
Limpopo
0950

UNIVERSITY OF VENDA
DIRECTOR: STUDENT AFFAIRS
25 -01- 2024
APPROVED
Sign:.....

To: Director of student affairs

Dear Sir//Madam

Request for permission to conduct research.

I am a master's student from the University of Venda, conducting research titled " Students' Perceptions Regarding the Use of Female Condoms at the University of Venda, In Limpopo Province, South Africa "as a partial requirement of the public master's degree.

The aim or purpose of this study is to investigate students' perceptions regarding the use of female condoms at selected tertiary institutions. Ramawa Mulweli Cyril will collect the data at the selected tertiary institution. Questionnaires will be given to respondents to answer them; however, if respondents feel uncomfortable taking part in the interview, they are allowed to raise their concerns, and they will not be penalized for that. The researcher will focus on all residences of both females and males within the campus. The researcher will do door-to-door collecting data. The respondents will be selected using an interval of 9. The first room will be selected randomly in each resident then every 9th room will be selected; if the 9th room selected doesn't have respondents, the researcher will choose the following room, then continue using the interval of the 9th room until the proportional sampling size is reached in each residence. Moreover, in cases where students are sharing a room, both of them will be included in participation as they are in a sampled room for participation in the study.

The information given will be kept safe and confidential. All information given will be used only for the study, and no names will be used when transcribing the questionnaire. With ethical clearance provided by the University of Venda Ethics Committee, permission to carry out the study will be asked of the director of housing. All the respondents will be asked to sign a consent form indicating

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their permission to participate in the study. However, if the respondents give consent, the researchers will appreciate the participation and information obtained; participation in this study will be voluntary, and there will be no direct benefit to anyone who participates.

Contact details.

We will be delighted to answer any questions or clarify issues the respondent may encounter during this study. If there are any concerns about the study, feel free to contact the researchers.

Ramawa M.C 0761303122/0634949794

Mulweli99cyril@gmail.com



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ANNEXURE C: LETTER OF INFORMATION AND INFORMED CONSENT

RESEARCH ETHICS COMMITTEE

UNIVEN Informed Consent

LETTER OF INFORMATION

Title of the Research Study: STUDENTS' PERCEPTIONS REGARDING THE USE OF FEMALE AT THE UNIVERSITY OF VENDA, IN LIMPOPO PROVINCE, SOUTH AFRICA

Principal Investigator/s/ researcher: RAMAWA MULWELI CYRIL**,** Baccalaureus Curationis Honours Degree in Nursing)

Co-Investigator/s/supervisor/s: DR MASHAU N, Diploma in general nursing science, Diploma in Midwifery science (Venda nursing college), Diploma in nursing science (primary health care, Diagnosis and treatment), BA(Cur)(Hons)(Unisa), MCur, PhD (Univen)

Brief Introduction and Purpose of the Study: Human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS) and sexually transmitted infections (STIs) are major issues in South Africa, among other nations (Kola, 2018). In South Africa, the high rate of HIV/AIDS and unintended pregnancies among young people is a major public health concern. However, compared to male condoms, female condoms are still less standard and less used, which means that youth HIV prevalence and unintended pregnancies appear to be persisting (Mbelle et al., 2018). The Department of Higher Education may find this study useful in updating its policies regarding teen pregnancy, STIs, and HIV/AIDS programs. The study, which addresses the obstacles to using female condoms, may also be beneficial to medical staff at the chosen postsecondary institution. This study could help students in general by illuminating the attitudes toward using female condoms. The purpose of this study is to find out how students feel about using female condoms at a particular tertiary institution in the province of Limpopo.

Outline of the Procedures: The questionnaire will be answered inside the campus of the selected tertiary institution. The researcher will introduce himself and his helper if there are visiting female residents; the purpose and significance of the study will be explained. The questionnaire will be given to the respondents, and any questions will be clarified to them. The ethical considerations will be described; for example, the respondent will be presented with the importance of telling the truth, having the right to withdraw at any time, and the risks and benefits involved. They will be required to sign a consent form after agreeing to participate.

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Risks or Discomforts to the Respondent: No risks will be directed to the respondent.

Benefits: Any misconception about female condoms and challenges will be addressed, and solutions will be given in a medically appropriate manner that will not harm the patient. The benefits of using female condoms will be clarified to the respondents.

Reason/s why the Respondent May Be Withdrawn from the study: Respondents might be withdrawn due to non-compliance, illness, not willing to answer the whole questionnaire, feeling inappropriate with answering sexual intercourse questionnaires, or not being available in their rooms during the day of the questionnaire, but there will be no adverse consequences for the respondent should they choose to withdraw.

Remuneration: The respondent will not receive any monetary or other types of remuneration

Costs of the Study: The respondent will not be expected to cover any cost towards the study.

Confidentiality: The questionnaires will be answered in the respondent room; the respondent will not explicitly state their names; we will use numbers, and the respondent will be expected to sign a consent form.

Research-related Injury: There will not be any risk related to the students.

Persons to Contact in the Event of Any Problems or Queries:

(Supervisor and details) Please contact the researcher (Tel no.0761303122/0634949794), my supervisor (Tel no.), or the University Research Ethics Committee Secretariat on 015 962 9058. Complaints can be reported to the Director of Research and Innovation, Prof GE Ekosse, on 015 962 8313 or Georges Ivo.Ekosse@univen.ac.za

General:

Potential respondents must be assured that participation is voluntary, and the approximate number of respondents to be included should be disclosed. A copy of the information letter should be issued to respondents. The information letter and consent form must be translated and provided in the primary spoken language of the research population.

CONSENT

Statement of Agreement to Participate in the Research Study:

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- I hereby confirm that I have been informed by the researcher, (*name of the researcher*), about the nature, conduct, benefits, and risks of this Study - Research Ethics Clearance Number: _,
- I have also received, read, and understood the above-written information (*Respondent Letter of Information*) regarding the study.
- I am aware that the study's results, including personal details regarding my sex, age, date of birth, initials, and diagnosis, will be anonymously processed into a study report.
- Given the research requirements, I agree that the researcher can process the data collected during this study in a computerised system.
- At any stage, I may withdraw my consent and participate in the study without prejudice.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- I understand that significant new findings developed during this research that may relate to my participation will be made available to me.

Full Name of Respondent Date Time Signature

I, …… …… …… ……..

(*Name of the researcher*) herewith confirms that the above respondent has been fully informed about the study's nature, conduct, and risks.

Full Name of Researcher: RAMAWA M.C…. Date…… Signature……

Full Name of Witness (If applicable) ……Date ……Signature……

Full Name of Legal Guardian (If applicable) ……Date…… Signature……

Please note the following:

Research details must be provided in a clear, simple, and culturally appropriate manner, and prospective respondents should be helped to arrive at an informed decision by using appropriate language (grade 10 level- use Flesch Reading Ease Scores on Microsoft Word), selecting a

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threatening environment for interaction and the availability of peer counselling (Department of Health, 2004)

If the potential respondent is unable to read/illiterate, then a right thumbprint is required, and an impartial witness who is literate and knows the respondent, e.g., parent, sibling, friend, pastor, etc., should verify in writing, duly signed that informed verbal consent was obtained (Department of Health, 2004).

If anyone makes a mistake completing this document, e.g., a wrong date or spelling mistake, a new document has to be completed. The incomplete original document has to be kept in the respondent's file and not thrown away, and copies thereof must be issued to the respondent.

References:

Department of Health: 2004. Ethics in Health Research: Principles, Structures and Processes.http://www.doh.gov.za/docs/factsheets/guidelines/ethnics/ Department of Health. 2006.: South African Good Clinical Practice Guidelines. 2nd Ed. Available athttp://www.nhrec.org.za/?page_id=14

ANNEXURE D: QUESTIONNAIRE

Section A

Code of student:

1. Age:

Gender: Male ☐ Female ☐ Other ☐

Marital status: Single ☐ Never married. ☐

Married ☐ Divorced ☐ Widow ☐ Widower ☐

LEVEL OF STUDY: 1st level ☐

2nd level ☐

3rd level ☐

4th level ☐

Type of degree 1. Postgraduate ☐

2. Undergraduate ☐

Religion: ☐

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8. Field of Study: 1. Faculty of Health ☐
   2. Faculty humanities, social, and educational ☐
   3. Faculty of management ☐
   4. faculty of science, Agric, and engineering ☐

9. Sexually active: Yes ☐ No ☐

10. Method of contraception: 1. Female condom: ☐
    2. Male condom ☐
    3. Contraceptive Injection ☐
    4. Contraceptive Pills ☐
    5. Withdrawal method ☐
    6. Morning after pill ☐
    7. Doesn't prevent. ☐
    8. Other ☐

Section B: Cultural Perception

	1. yes	2.no	3. unsure
1. Can you ask your parents/Guardian how to use a female condom?			

2

	1. Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree

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1. I discuss sexual matters with my parents.				
2. Sex is something secret that should not be discussed with elders.				
3. If you are married, you cannot use a condom.				
4. The power to use a condom lies in the man's hands.				

Section C: Social Perception

3

	1. yes	2.no	3. unsure
1. Can you collect female condoms in front of people?			
2. Have you ever felt influenced by peer opinions or behaviours regarding the use of a female condom?			
3. Are you comfortable giving female condoms to friends?			

4

	1. Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree
1. Have friends ever suggested that to build trust in a relationship, you must not use condoms with your partner				
2. Female condoms can get stuck inside the vagina				

Section D: personal perception

5

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	1. Yes	2.No
1. Have you ever initiated the use of a female condom on your first encounter?		
2. Are you currently aware of how to use a female condom		
3. I can't use a female condom because my partner may think I have STI/HIV.		
4. Have you personally faced any challenges in using female condoms		
5. Do you believe that a female condom takes away pleasure during sex		
6. Do you prefer a female condom		

6

	1. Strongly agree	2. Agree	3. Disagree	4. Strongly Disagree
1. I cannot suggest and initiate the use of a female condom to my partner				
2. If I suggest the use of a female condom, he may think I have started to sleep around				
3. Being in a submissive relationship led to me not using a condom				
4. I don't have any knowledge of how to use the female condom				

7. How is female condom awareness and availability addressed within your tertiary institution?

Very effectively () moderately () effective () Ineffectively () Not addressed at all ()

8. What extent do you think peer dynamics influence perceptions of female condom usage in higher education settings?

Significantly () Moderately () Slightly () Not at all ()

9. What extent do you think gender inequality contributes to challenges in female condom usage

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Significantly () moderately () Slightly () Not at all ()

10. What extent do you believe men's attitudes influence female condom usage among females

Significantly () moderately () Slightly () Not at all ()

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