PERCEPTIONS OF THE FEMALE CONDOMS USE AS A CONTRACEPTIVE METHOD AMONG WOMEN ATTENDING POSTNATAL CARE AT MAKOLE HEALTH CENTER IN DODOMA

William Lucas (BA PPM&CD)

Master of Public Health Dissertation

Muhimbili University of Health and Allied Sciences

October, 2024

Muhimbili University of Health and Allied Sciences

School of Public Health and Social Sciences

PERCEPTIONS OF THE FEMALE CONDOMS USE AS A CONTRACEPTIVE METHOD AMONG WOMEN ATTENDING POSTNATAL CARE AT MAKOLE HEALTH CENTER IN DODOMA

By

William Lucas (BA PPM&CD)

A Dissertation submitted in (partial) Fulfilment of the Requirements for the Degree of Master of Public Health of Muhimbili University of Muhimbili University of Health and Allied Sciences

October, 2024

CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance of the dissertation entitled **Perceptions of the female condoms use as a contraceptive method among women attending postnatal care at Makole health center in Dodoma City** in fulfillment of the requirements for the degree of Master of Public Health of Muhimbili University of Health and Allied Sciences.

_____

Main supervisor: Dr. Idda H. Mosha (PhD)

_____

Date

_____

Co-Supervisor: Winfrida O. Akyoo

_____

Date

DECLARATION

I, **William Lucas,** declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature……..…… Date…….

This dissertation is a copyright material protected under the Berne Convention, the Copyright Act 1999 and other international and national enactments, in that behalf, on intellectual property. It may not be reproduced by any means, in full or in part, except for short extracts in fair dealing, for research or private study, critical scholarly review or discourse with an acknowledgement, without the written permission of the Directorate of Postgraduate Studies, on behalf of both the author and the Muhimbili University of Health and Allied Sciences.

AKNOWLEDGEMENTS

I would like to express my deepest gratitude to all those who have supported me throughout the completion of this dissertation.

First and foremost, I am profoundly grateful to God for providing me with the strength, guidance, and perseverance needed to undertake and complete this journey.

My heartfelt thanks go to my parents, whose unwavering belief in me and constant support have been my greatest motivation. Your encouragement and faith have been the cornerstone of my achievements.

I extend my sincere appreciation to my Supervisor, Dr. Idda Mosha, for her invaluable guidance, insightful feedback, and continuous support. Your expertise and dedication have been instrumental in shaping this work. To my co-supervisor, Ms Winfrida Onesmo Akyoo, I am deeply thankful for your constructive advice, encouragement, and the time you invested in helping me refine this dissertation.

A special note of gratitude to my beautiful wife, Agness Richard Mtui. Your love, patience, and constant encouragement have been my source of strength. You have been my rock and my inspiration throughout this journey.

To my three amazing children, Godbless, Gracious, and Giovanni, thank you for being my source of joy and motivation. Your love and support have been essential in my pursuit of this goal.

Finally, I would like to acknowledge all my friends, colleagues, and everyone who has contributed, directly or indirectly, to the completion of this dissertation. Your support and encouragement have been greatly appreciated.

Thank you all for making this achievement possible.

DEDICATION

To my precious mother, Elizabeth Ntabhuhegwa William Mishita: your love and support have been my greatest blessings. This dissertation is dedicated to you with all my heart, I love you.

ABSTRACT

Background*:* The use of contraception is critical for reproductive health, allowing individuals to manage childbearing effectively, thus enhancing women's well-being. Despite global advancements in contraceptive methods, the prevalence of modern contraceptive use in sub-Saharan Africa remains low, therefore high rates of unintended pregnancies and maternal deaths.

Objective: To explore perceived attitudes, social norms and behavioral control on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

Methods: This cross-sectional, exploratory study employed a case study design to gather data at a specific point in time. A purposive sampling was used to select study participants. The in-depth interview guide was used to collect data. Interviews were digitally recorded and transcribed verbatim. The thematic analysis by Cresswell et al method was used to analyze data.

Findings: The study illuminated various perceptions surrounding the use of female condoms as a contraceptive method. Participants expressed a range of attitudes shaped by their knowledge and awareness, which significantly influenced their perceptions of female condoms. Many conveyed positive perceptions, often linked to an understanding of the benefits, such as dual protection and the empowerment of women in managing their sexual health. Additionally, social norms influenced their perceptions, with insights drawn from family, partners, peers, and religious communities shaping their views on female condoms. Overall, addressing these diverse perceptions is essential for effectively promoting the use of female condoms.

Conclusion and recommendation: This study reveals that women attending postnatal care at Makole Health Center in Dodoma City have mixed perceptions about female condom use, shaped by attitudes, social norms, and perceived behavioral control. While some women recognize its benefits, barriers such as cultural stigma and misinformation hinder broader adoption. Addressing these challenges through targeted educational interventions and improved access could empower women and enhance female condom utilization.

TABLE OF CONTENTS

CERTIFICATION i
DECLARATION ii
AKNOWLEDGEMENTS iii
DEDICATION iv
ABSTRACT v
LIST OF TABLES ix
LIST OF FIGURES x
LIST OF ABBREVIATIONS xi
DEFINITION OF KEY TERMS xiii
CHAPTER ONE 1
1.0 INTRODUCTION 1
1.1 Background of the Study 1
1.2 Statement of the Problem 2
1.3 Conceptual Framework 3
1.4 Study Rationale 5
1.5 Research Questions 5
1.5.1 Main research question 5
1.5.2 Specific Research Questions 6
1.6 Objective of the Study 6
1.6.1 General Objective 6
1.6.2 Specific Objectives 6
CHAPTER TWO 7
2.0 LITERATURE REVIEW 7
2.1 Subjective norms on the use of female condoms 7
2.2 Attitudes of women on using the female condom as a contraceptive method 8
2.3 Perceived behaviour control on the use of female condoms as a contraceptive method 9
2.4 Knowledge Gap 11
CHAPTER THREE 12

3.0 METHODOLOGY 12
3.1 Study design 12
3.2 Study Area 12
3.3 Study Population 13
3.4 Sampling technique and sample size 13
3.5 Data Collection Method 14
3.6 Data collection procedures 14
3.6.1 Trustworthiness 15
3.6.2 Credibility 15
3.6.3 Dependability 15
3.6.4 Confirmability 16
3.6.5 Transferability 16
3.7 Data management and Analysis 16
3.7.1 Data Management 16
3.7.2 Data Analysis 17
3.8 Ethical Considerations 17
CHAPTER FOUR 19
4.0 FINDINGS 19
4.1 Demographic characteristics of participants 19
4.2 Perceived Attitudes on the Use of Female Condoms as a Contraceptive Method 22
4.2.1 Negative Attitude 22
4.2.2 Knowledge and awareness 23
4.2.3 Perceived Benefits 24
4.3 Perceived Social Norms on Women's Use of Female Condoms as a Contraceptive Method 25
4.3.1 Covert use of female condom 25
4.3.2 Cultural Norms 27
4.4 Perceived Behavioral Control Contribution to Women's Use of Female Condoms as a Contraceptive Method 28
4.4.1 Availability 28
4.4.2 Ease of Use of female condoms 29

4.4.3 Education and Training 29
4.4.4 Health Concerns 30
CHAPTER FIVE 32
5.0 DISCUSSION 32
5.1 Attitudes of Women on the Use of Female Condoms as a Contraceptive Method 32
5.2 Perceived Social Norms on the Use of Female Condoms as a Contraceptive Method 33
5.3 Perceived Behavior Control Influence on Women's Use of Female Condoms as a Contraceptive Method 34
5.4 Limitations and Mitigation of the study 35
5.4.1 Strengths of the Study 36
CHAPTER SIX 37
6.0 CONCLUSIONS AND RECOMMENDATIONS 37
6.1 Discussions 37
6.2 Recommendations 37
7.0 REFERENCES 39
8.0 APPENDICES 47
8.1 Appendix 1: Interview Guide English 47
8.2 Appendix 2: Interview Guide Swahili 49
8.3 Appendix 3: Informed consent form- English 52
8.4 Appendix 4: Informed consent form- Swahili 55
8.5 Appendix 5: Ethical Clearance 58
8.6 Appendix 6: Introduction letter from Muhimbili University 60
8.7 Appendix 7: Approval for data collection from Regional Administration 61
8.8 Appendix 8: Approval for data collection from Dodoma City Council 62

LIST OF TABLES

Table 1: Demographic characteristics of participants.....19
Table 2: Identified themes, sub-themes and examples of Quotes.....20

LIST OF FIGURES

Figure 1: Conceptual framework of the Theory of Planned Behavior. Adapted and modified by the researcher from Organizational Behavior and Human Decision Process by Ajzen (1991), (19) 4

LIST OF ABBREVIATIONS

APHRC	African Population and Health Research Centre
CDC	Center for Disease Control
CONRAD	Contraceptive Research and Development
CSWs	Commercial Sex Workers
DHS	Demographic and Health Survey
FC	Female Condom
FGDs	Focus Group Discussions
FHI	Family Health International
HIV/AIDS	Human Immunodeficiency Virus–Acquired Immune Deficiency Syndrome
IDI	In-Depth Interview
IUCD	Intra-Uterine Contraceptive Device
MoH	Ministry of Health
PSI	Population Service International
RAS	Regional Administrative Secretary
RHRU	Reproductive Health Research Unit
STDs	Sexually Transmitted Diseases
TPB	Theory of Planned Behavior
UNAIDS	United Nations Program on HIV and AIDS Sexually Transmitted Diseases

UNDESA	The United Nations Department of Economic and Social Affairs
USAID	United States Agency for International Development
URT	United Republic of Tanzania
USFDA	United States Food and Drug Administration World Health Organization
WHO	World Health Organization
ZNACP	Zimbabwe National AIDS Co-ordination Program

DEFINITION OF KEY TERMS

Female condom: Female condom, also known as the internal condom is a condom designed to be worn on the inside of the body, providing hormone-free and latex-free protection against unintended pregnancy and sexually transmitted infections (STIs) (1).

Contraceptive: A contraceptive is a method or device used to prevent pregnancy due to a condom interfering with the process of fertilization or implantation. It includes various methods such as hormonal contraceptives (e.g., oral pills, patches, injections), intrauterine devices (IUDs), barrier methods (e.g., condoms), and fertility awareness-based methods (2).

Perceptions: This refers to how women view, understand, and interpret the use of the female condom as a method of contraception. It encompasses their attitudes, subjective norms, and behavior control towards the female condom (3).

Attitude: This study focuses on what women aged 18-49 think about using female condoms as a contraceptive method. It examines their beliefs about the cognitive, affective, and conative aspects of using female condoms, and was conducted among women attending postnatal care (3)

Perceived Behavioral Control: refers to women's beliefs about the ease or difficulty of using female condoms as a contraceptive method postnatally. It includes control beliefs, which are their perceptions of the resources available (e.g., accessibility, affordability) and barriers (e.g., physical comfort, practicality) related to using female condoms (4).

Subjective Norm: refers to women's perceptions of the social expectations and pressures surrounding the use of female condoms after childbirth. It includes normative beliefs, which are their beliefs about whether important others, such as partners, family members, or healthcare providers, approve or disapprove of using female condoms during postnatal period (4).

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

The use of contraception is a crucial aspect of reproductive health and family planning, allowing individuals and couples to make informed decisions about when to have children and how many children to have (5). Contraceptive methods offer women the opportunity to take control of their reproductive choices, promoting their overall well-being and empowering them to participate fully in social, economic, and educational activities (6). Globally, the use of any contraceptive method among women aged 15–49 increased from 47.7% in 2000 to 49.0% in 20202 (7). Contraception plays a significant role in reducing unintended pregnancies, maternal mortality rates, and unsafe abortions. It enables women to space their pregnancies and determine the timing of childbearing, which has been linked to positive outcomes such as improved maternal and child health, increased educational attainment for women, and enhanced economic opportunities for families (5,6,8).

In Africa, the perceptions of women of reproductive age regarding the use of female condoms as a contraceptive method are varied (6). A study conducted in Ghana found that less than half (48.4%) of the women were aware of the female condom (9). Another study observed that there is a low level of acceptance and utilization of the female condom and limited access to them from nearby shops/pharmacies (1.8%) and health centers (7.4%) (10). In sub-Saharan Africa, research evidence consistently reports a low prevalence of the use of modern contraception, which translates to a high incidence of unintended pregnancies, unsafe abortions, and maternal deaths (5). While some women know that female condoms are protective, some feel that female condoms are not suitable for them as they are all the same size hence they are too big for them and their particular bodily size and shape (11).

Perceptions of women of reproductive age in Tanzania on the use of female condoms as a contraceptive method are situated within a complex interplay of cultural, social, and

healthcare dynamics (12). Traditional gender roles and cultural beliefs significantly impact reproductive choices, shaping women's attitudes towards contraception (13). Understanding the historical context of contraceptive methods, including the emergence of female condoms, is crucial (5). The National Multi-Sectoral Condom Strategy emphasizes the uptake of female condoms (12). Similarly, to the National Guidelines for the Management of HIV and AIDS also, the National Plan for Reproductive, Maternal, Newborn, Child and Adolescent Health & Nutrition III, emphasize that women should receive guidance on the continuous utilization of dependable, extended-acting contraceptives, and/or the implementation of effective dual contraception alongside condoms (14). However, the use of female condoms is too low despite being on the market for almost 20 years, female condoms have not been as successful as initially hoped (15). There is a limited understanding regarding the female condom perceptions in Dodoma City where only 6.2% of the respondents reported having used female condoms while 26.3% of them have never seen the packages of female condoms (4). Therefore, this study explores perceived attitudes, social norms and behavioral control on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

1.2 Statement of the Problem

In Tanzania, the uptake of female condoms remains critically low, reflecting a significant public health concern (4). Other contraceptive methods exhibit similarly low usage, with female sterilization at 2.9%, male sterilization at 0.0%, Intrauterine Devices (IUDs) at 0.4%, injectables at 7.4%, implants at 17.3%, pills at 5.5%, male condoms at 2.4%, and emergency contraception at 0.2% (15). Specifically in Dodoma City, reports indicate a 0.0% uptake of female condoms, which is particularly concerning given the proven efficacy of these methods (11,16) This increases the risk of unwanted pregnancies and sexually transmitted infections (STIs) and HIV/AIDS because when the female condom is used correctly and consistently it reduces the risk of HIV infection by 94–97% (9,17).

Some studies conducted on female condoms indicate that knowledge of contraceptive methods is universal; 99% of currently married women aged 15-49 and 100% of currently married men aged 15-49 know at least one method of contraception. Among currently married women, the most used methods are injectables (13%), followed by implants (7%) and pills (6%). Among sexually active unmarried women, male condoms and injectables are the most commonly used methods (15% each), followed by implants (8%) and pills (6%) (16). In Dodoma City study conducted among students on female condom use, in high learning institutions revealed that there is low knowledge and understanding regarding the female condom; only 6.2% of the respondents reported having used female condoms while 26.3% of them have not ever seen packages of female condoms (4). Due to this Center for Disease Control (CDC) established "Thamini Uhai" in the Dodoma region to promote the benefits and use of contraceptive methods and maternal health. However, despite these initiatives, Dodoma City still has a low rate of contraceptive use, with only a small percentage of women aged 15 to 49 utilizing family planning methods to prevent unplanned pregnancies (18).

The previous studies did not investigate women's perceptions of using female condoms as a contraceptive method. Therefore, this study aimed to bridge that gap by using the Theory of Planned Behavior. It examined how women between the ages of 18 to 49 perceive the use of female condoms as a contraceptive method in terms of attitude, subjective social norms, and behavior control. This study focused specifically on women attending postnatal care at the Makole Health Center in Dodoma District.

1.3 Conceptual Framework

The conceptual framework guiding this study is rooted in the Theory of Planned Behavior (TPB), which intricately weaves together attitudes, subjective norms, and perceived behavioral control (19). This framework is particularly relevant for exploring women’s perceptions and the nuanced decision-making processes surrounding the use of female condoms. Within the TPB, attitudes reflect women's subjective evaluations and emotional responses to female condoms, while subjective norms illuminate the influence of social and

cultural expectations on their perceptions. Additionally, perceived behavioral control encompasses women's beliefs about their ability to effectively use female condoms, including factors like accessibility, knowledge, and self-efficacy.

Focusing on these qualitative dimensions is crucial, as they shape women's perceptions and significantly influence their intentions and behaviors regarding female condom usage. Positive attitudes, combined with perceptions of social acceptance and a strong sense of behavioral control, are likely to foster greater intentions to use female condoms. Conversely, negative attitudes and perceived social disapproval can hinder these intentions. By examining these interconnected factors, this study aims to illuminate how women's perceptions inform their decisions about female condom use, highlighting the need to identify barriers and facilitators that can enhance uptake and promote effective strategies within the target population.

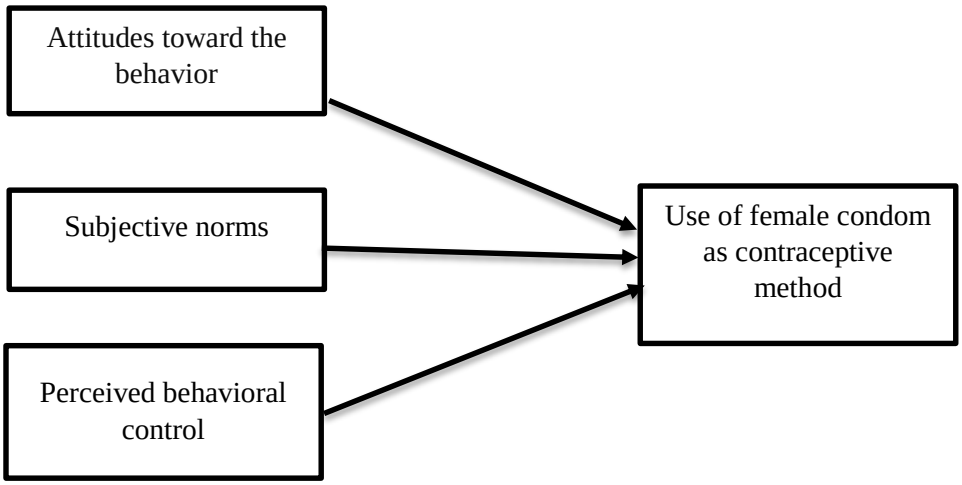


Figure 1: Conceptual framework of the Theory of Planned Behavior. Adapted and modified by the researcher from Organizational Behavior and Human Decision Process by Ajzen (1991), (20).

1.4 Study Rationale

The study findings can significantly enhance knowledge by providing a deeper understanding of the barriers and factors influencing women's perceptions and utilization of female condoms in Dodoma City. This knowledge can be used to improve educational campaigns and health promotion initiatives, ensuring that women receive accurate and comprehensive information about female condoms. By addressing misconceptions and cultural barriers, healthcare providers and educators can develop more effective communication strategies to increase awareness and acceptance of female condoms as a viable contraceptive option.

In terms of policy, the study findings offer critical insights that can inform the development of targeted interventions and strategies to promote female condom use. Policymakers and program planners can utilize this data to design and implement policies that address the specific needs and challenges faced by women in Dodoma City. This includes improving access to female condoms, enhancing reproductive health services, and providing training and support to healthcare providers. By incorporating these findings into policy-making, stakeholders can create an enabling environment that empowers women to make informed reproductive choices, thereby promoting gender equality and autonomy. Additionally, the study's contribution to the understanding of women's attitudes towards female condoms can influence international reproductive health policies and programs, fostering a more inclusive and comprehensive approach to family planning and reproductive health.

1.5 Research Questions

1.5.1 Main research question

What is the perceived attitude, social norms and behavioral control on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care?

1.5.2 Specific Research Questions

1. What are the perceived attitudes on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care?

2. To what extent do perceived social norms contribute to the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care?

3. How does perceived behavioral control contribute to women on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care?

1.6 Objective of the Study

1.6.1 General Objective

To explore perceived attitudes, social norms and behavioral control on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

1.6.2 Specific Objectives

1. To explore the perceived attitudes on the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

2. To explore the perceived social norms that contribute to the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

3. To assess the perceived behavioral control that contributes to the use of female condoms as a contraceptive method among women aged 18-49 attending postnatal care.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Subjective norms on the use of female condoms

Globally, subjective norms regarding female condom use are shaped by individuals' perceptions of social expectations or pressures to use condoms (4). These norms significantly influence a woman's decision to adopt female condoms, often being affected by social factors such as the attitudes of friends and family (21). Interventions that employ positive language about sex, including discussions around sexual pleasure, have proven effective in increasing female condom use (2). This positive framing helps normalize the use of female condoms and reduce the stigma associated with them (22). The United Nations Department of Economic and Social Affairs (UNDESA) plays a crucial role in advancing reproductive health by providing evidence-based insights and resources for policymakers, healthcare professionals, and researchers, which aid in developing strategies and programs that promote the use of female condoms as a contraceptive option while highlighting global trends, challenges, and factors influencing their utilization (23). USAID has been instrumental in promoting the correct and consistent use of female condoms within HIV prevention programming, highlighting their significance in reducing the risk of HIV and other sexually transmitted infections (STIs), as well as preventing unintended pregnancies, through the use of condom-compatible lubricants, despite no barrier method offering 100 percent protection (24).

In Africa, studies show that women engaged in commercial sex work generally accept female condoms, recognizing their value in preventing unintended pregnancies and STIs, including HIV/AIDS, while also feeling empowered to manage their sexual health and negotiate safer practices with clients (25). However, further study highlighted significant barriers hindering the widespread use of female condoms among women engaged in commercial sex work, with access and cost being major challenges, as these condoms were often neither readily available nor affordable, limiting their ability to use them consistently as a preventive measure (26).

In Tanzania, subjective norms surrounding the use of female condoms are influenced by cultural, social, and community dynamics that shape individual behaviors and attitudes, with traditional gender roles and expectations significantly impacting these norms, often subjecting women to societal pressure to conform to specific behaviors related to reproductive health and contraception (21). The use of female condoms is perceived as challenging traditional norms where men are typically expected to initiate and control contraceptive methods (27). Another study conducted in Tanzania revealed that important referents, such as parents, friends, teachers, and religious leaders, significantly influence adolescents' intentions to use condoms; when adolescents believe these key figures expect them to engage in safe sex practices and feel motivated to comply, they are more likely to intend to use condoms; however, the study also found that subjective norms had only indirect effects on intentions and reported condom use (28).

2.2 Attitudes of women on using the female condom as a contraceptive method

Several studies conducted globally have enhanced understanding of women's perceptions and experiences regarding the use of female condoms as a contraceptive method, with the CDC preparing demonstrations on correct insertion techniques to address low levels of understanding and to shift attitudes towards their use (29). The WHO explains that when used correctly and consistently according to instructions, female condoms are safe and highly effective in preventing both sexually transmitted infections (STIs) and HIV, as well as in preventing unplanned pregnancies, underscoring the importance of educating women about the dual protection that female condoms provide (30).

In Africa, women perceive the female condom as an empowering contraceptive option that provides them with control over their reproductive health decisions and protection against STIs, generally expressing positive attitudes toward its use; a key factor influencing this positive perception is the recognition of female condoms as a protective measure against STIs, including HIV/AIDS, which resonates strongly with women and serves as a motivating factor for their willingness to use them (9, 31). However, challenges associated with female condom

use include difficulties with correct and consistent application, as well as concerns about social stigma and negative reactions from sexual partners, emphasizing the need for ongoing education and support to address these issues; enhancing the acceptability of female condoms and promoting sustained use requires comprehensive education and awareness campaigns to dispel misconceptions and negative attitudes (32).

In Tanzania, the level of knowledge towards modern contraceptives, including female condoms, among high-learning students is minimal (33). The majority of female condom users were well-informed women with positive attitudes who lived off-campus and had received prior sexual and reproductive health instruction, with the adoption of condom use among female students in higher education institutions influenced by training exposure, peer interactions, partner pressure, interactive communications, and knowledge diffusion, although the study concluded that a negative attitude towards female condom use persists among these students (4).

2.3 Perceived behaviour control on the use of female condoms as a contraceptive method

Perceived behavioural control, which refers to an individual's belief in their ability to use a condom correctly and consistently, significantly influences the adoption and utilization of female condoms; the United Nations Population Fund (UNFPA) has emphasized the importance of enhancing this perception to increase condom use and prevent the spread of sexually transmitted infections (STIs) and unintended pregnancies (34). To this end, the World Health Organization (WHO) and UNFPA have established the Condom Quality Assurance tool to ensure that the female condoms available in the market are of high quality and effectively protect users against STIs and unintended pregnancies (35). The United Nations Department of Economic and Social Affairs (UNDESA) has identified several factors influencing the use of female condoms, which contribute to advancing reproductive health and family planning efforts globally, including cultural, social, and economic determinants that shape women's perceptions and utilization of female condoms (23).

Some studies conducted in various African countries have shed light on the cultural, social, and economic factors influencing women's perceptions and utilization of female condoms (27,36,37). For instance, a study in Nigeria explored the influence of cultural beliefs and gender power dynamics on women's decision-making and utilization of female condoms, revealing that cultural norms and beliefs surrounding sexuality, gender roles, and contraceptive use significantly impact women's attitudes towards female condoms; these cultural beliefs often stigmatize discussions about sexual health and contraception, making it challenging for women to openly express their needs and preferences, thereby creating barriers to the acceptance and adoption of female condoms (27).

Gender power dynamics also emerged as a critical factor affecting women's use of female condoms, as unequal power relations between women and their male partners influence the negotiation and acceptance of female condom use; when women encounter resistance or opposition from their partners, they often feel compelled to prioritize their partners' desires over their own reproductive health needs, which limits their agency and autonomy in making decisions about contraceptive methods, including the use of female condoms (36). Older women with higher education and income levels are more likely to use contraceptives, as financial stability and knowledge provide them with the necessary resources, while those who have supportive partners and open communication about family planning are also more inclined to use contraceptives, emphasizing the need for positive relationships in promoting contraceptive use (36). Factors such as knowledge, socio-economic status, spousal support, and access to healthcare services, provide insights that can inform interventions and programs aimed at increasing contraceptive utilization among women (37).

In Tanzania, the determinants of contraceptive use among married women indicate that higher levels of education and socio-economic status are associated with increased contraceptive use. Women from wealthier households and with higher occupational status are more likely to use contraceptives, suggesting that economic stability and empowerment facilitate access to and affordability of contraceptive methods (38). Spousal communication and support significantly

influence contraceptive use, as women who openly discuss family planning with their partners are more likely to use contraceptives, highlighting the importance of partner involvement and positive interpersonal dynamics in shaping women's perceptions and experiences with female condoms (28). The CDC adds to the existing body of knowledge regarding reproductive health in Tanzania and highlights the importance of addressing the gaps in contraceptive use to improve women's reproductive health outcomes (29).

In summary, the 2014 Kigoma Reproductive Health Survey conducted by the CDC in the Kigoma Region of Tanzania offers important insights into the rates of contraceptive use among women (39). It is relevance to the present study lies in providing a broader understanding of the reproductive health landscape in Tanzania and informing the exploration of factors influencing contraceptive use among women of reproductive age in Dodoma City.

2.4 Knowledge Gap

Several gaps in the existing literature regarding the use of female condoms among women of reproductive age are apparent. Existing studies on female condoms have predominantly focused on utilization, awareness, knowledge, and cultural influences. However, there remains a significant gap in research specifically investigating women's perceptions of female condom use. Additionally, there is a notable scarcity of studies employing the Theory of Planned Behavior (TPB) to qualitatively examine the use of female condoms among women aged 18-49 years in Dodoma City, Tanzania.

This study uniquely explored the personal perceptions of women regarding female condoms, providing a deeper insight into their attitudes subjective social norms, and behaviour control, which have been overlooked in previous research. By applying the TPB framework, this study offers a structured qualitative examination perception of female condom use, including attitudes, subjective norms, and perceived behavioral control, specifically among women aged 18-49 years in Dodoma City.

CHAPTER THREE

3.0 METHODOLOGY

3.1 Study design

This cross-sectional, exploratory study employed a case study design to gather data at a specific point in time. The cross-sectional approach was chosen to capture a snapshot of women's attitudes and perceptions during their postnatal care visits, while the qualitative case study design allowed for in-depth exploration of individual experiences and perspectives. This approach enabled the researcher to conduct interviews with women aged 18-49 attending postnatal care at Makole Health Center. The aim was to understand their social norms, behavioral control, and attitudes towards female condoms, including the perspectives of those without personal experience using them. The qualitative design was particularly suited for uncovering nuanced insights that may not emerge through quantitative methods (40,41). Data collection was done in June 2024.

3.2 Study Area

This study was conducted in Dodoma City, the Capital of Tanzania. The city has a diverse population comprising various ethnic groups, including the Gogo, Sukuma, and Nyaturu. The population of Dodoma City is estimated to be around 765,179 of which women comprise 391,739 (51.1%) with women of reproductive age forming a significant portion of the population growth rate which is 6.4% (42). The City has 35 public health facilities that provide family planning services of which two are hospitals, one is a health centre and thirty-two (32) are dispensaries (16). This is the population that contains women of reproductive age and associated with sexual practices where the application of female condoms is highly encouraged to prevent unwanted pregnancies.

Furthermore, the contained ethnic groups fall under a patriarchal society where females have no obligation to use female condoms but also their levels of socio-economic are still low. Moreover, in this society, most females are not given a chance to attend school and dominated

by cultural practices that prohibit women from making decisions with a lot of gender-based violence, which serves as a vital hub for women accessing essential postnatal care. Dodoma City, being the country's capital, draws guests from diverse backgrounds, each bringing their unique cultural heritage and beliefs. This cultural richness presents a valuable opportunity to explore perceptions regarding the use of female condoms as a contraceptive method within the local cultural context (43).

Cultural practices, norms, and beliefs have considerable influence in shaping individuals' attitudes and behaviors, including their perspectives on contraception. As highlighted understanding the cultural context is essential for research as it provides insights into the socio-cultural factors that influence people's lives and decision-making processes (40).

3.3 Study Population

The targeted population was women aged 18-49 attending Postnatal Care Services (PNC) at Makole Health Center in Dodoma City. This demographic group represents a pivotal group where discussions on family planning and contraceptive options are often initiated or reinforced. Makole Health Center's centrality ensures accessibility to a diverse urban and peri-urban population, facilitating comprehensive recruitment. Women receiving postnatal care are likely to have recent healthcare experiences, making their perspectives on female condoms particularly relevant within the context of reproductive health discussions.

3.4 Sampling technique and sample size

A purposeful sampling was used to select participants aged 18-49 years attending postnatal care services at Makole Health Center in Dodoma City. Dodoma City and Makole Health Center were purposively selected based on their strategic location and capacity to provide comprehensive postnatal care services. Dodoma, as the capital of Tanzania, offers a diverse urban setting with accessible healthcare facilities. The Makole Health Center in Dodoma City was specifically chosen for its reputation and capability to support the study's research objectives, ensuring access to a suitable demographic of women aged 18-49 attending postnatal care services. These factors facilitated the collection of relevant and comprehensive

data from the targeted population (44). Sample size relied on the saturation point, whereby respondents had no new information even when the questions were asked in another style or when additional information added no value (45).

3.5 Data Collection Method

Data was collected through an in-depth interview (IDI) guide, initially in English and translated into Kiswahili. This method created a confidential and non-threatening environment, allowing participants to discuss sensitive or personal topics freely, and provided valuable qualitative data for understanding cultural, social, and healthcare factors influencing women's perceptions of female condoms (40). The principal researcher conducted interviews in Kiswahili with twenty-three women when data saturation was achieved (46). The interview guide covered topics such as knowledge and awareness of female condoms, perceived benefits and drawbacks, personal experiences, cultural and social influences, and accessibility. Each interview lasted about 30-60 minutes. On average three interviews were conducted per day, depending on participant availability and scheduling (45). All interviews were recorded using digital voice recorders after seeking consent from study participants.

3.6 Data collection procedures

In this study, interviews were conducted at Makole Health Center. Before commencing data collection, the principal researcher presented an introduction letter from the Muhimbili University of Health and Allied Sciences to the Regional Administrative Secretary to request permission to collect data in the Dodoma Region at Makole Health Center. The Regional Administrative Secretary granted permission and provided an introduction letter to be presented to the Director of Dodoma City Council. The Director then introduced the researcher to the management of Makole Health Center. Prior to interacting with participants, the researcher introduced the data collection process to the Makole Health Center management, who then introduced the researcher to the PNC In-charge. The In-charge subsequently introduced the researcher to the participants before allowing data collection to proceed.

Participants were selected based on their attendance at PNC services and their willingness to participate in the study. The PNC In-charge assisted in identifying potential participants who fit the study criteria which is women who attend their first vaccination visit and ensuring they had relevant experiences and perceptions to share. Each interview lasted between 30 to 60 minutes, and a total of three participants were interviewed per day until 23 participants were reached, at which point data saturation was achieved. During data collection, the principal researcher engaged and interacted with participants by probing in interviews to encourage participants to elaborate on their experiences and perceptions regarding the use of female condoms as a contraceptive method, to gather rich and contextualized data as suggested (47).

3.6.1 Trustworthiness

This study placed significant emphasis on ensuring the trustworthiness of both collected and analyzed data, aiming to establish the validity and reliability of the research findings (41). Key concepts like credibility, dependability, conformability, and transferability were thoroughly examined. Validity ensures that the conclusions drawn from the data are trustworthy and reflect the reality of the phenomenon under study, while reliability ensures that the findings are replicable and not influenced by random variability or errors in measurement (47).

3.6.2 Credibility

To ensure credibility, participants were purposefully selected based on specific criteria age (18-49) and attendance at postnatal services at Makole Health Center in Dodoma City. Detailed information about the research aims, procedures and potential implications was provided to participants beforehand, fostering transparency and building trust. In-depth interviews were conducted with each participant, recordings were made, and meticulous notes were taken to ensure all responses were accurately captured and analyzed.

3.6.3 Dependability

Dependability was achieved through rigorous adherence to standardized interview protocols. Interview guides were accurately crafted and consistently administered to all participants to

ensure uniformity in data collection. Audio recordings of interviews were used to preserve the integrity of participants' responses, and transcripts were transcribed verbatim to minimize interpretation bias and ensure the reliability of data for analysis.

3.6.4 Confirmability

Confirmability was maintained by systematically addressing potential researcher biases throughout the study. Reflexivity was practiced to acknowledge and manage any personal biases that could influence data collection and interpretation. An audit trail documented all stages of the research process, including data collection, analysis, and interpretation, ensuring transparency and allowing for scrutiny of findings. This rigorous approach aimed to ensure that the conclusions drawn from the data accurately reflected participants' perspectives and experiences rather than the researcher's preconceptions.

3.6.5 Transferability

To enhance transferability, the study provided comprehensive descriptions of the study context, participant demographics, and research methods. These details enable readers to assess the relevance of findings to similar settings or populations facing comparable challenges. By presenting a clear methodology and contextual background, the study aimed to facilitate the application of its findings beyond the specific environment of Makole Health Center in Dodoma City, promoting broader insights and potential implications for similar healthcare contexts.

3.7 Data management and Analysis

3.7.1 Data Management

Data management is effective practices for producing credible findings and facilitating meaningful interpretations of qualitative data (47). It involves the systematic organization, analysis, and interpretation of qualitative data, such as interview transcripts, field notes, and audio recordings. Collected data were securely stored with measures to protect participant confidentiality and comply with data protection policy. The researcher conducted daily

thorough checks to verify data accuracy, debriefing, completeness, and reliability, using techniques such as triangulation and member checking to enhance validity (47).

3.7.2 Data Analysis

A thematic analysis approach was employed. The thematic analysis method was employed, following Creswell's five-step process, which includes preparing and organizing the data, reviewing and exploring the data to create initial codes, reviewing, revising, and combining themes, and finally presenting the results (41). The data analysis process for this qualitative study involved Creswell steps to ensure thorough examination and interpretation of the collected data. Initially, audio recordings of interviews were transcribed verbatim and reviewed multiple times to ensure accuracy. Open coding was then conducted, where descriptive codes were assigned to segments of the data, followed by axial coding to group these codes into broader categories. Three Core themes emerged through constant comparison, reflecting major patterns related to participants' attitudes, social norms, and perceived behavioral control regarding female condom use. Peer debriefing and maintaining an audit trail further ensured the dependability and confirmability of the study.

3.8 Ethical Considerations

Ethical clearance to conduct this study was granted by the Institutional Review Board (IRB) of the Muhimbili University of Health and Allied Sciences (MUHAS) with reference number (MUHAS-REC-05-2024-2273). Further permissions to conduct the study were obtained from the Regional Administrative Secretary (RAS), reference number (HA.107/249/017/55) and from the Dodoma City Council administration, reference number (HJD/A.20/VoLIV/139). These approvals allowed the researcher to proceed with data collection.

Ethical considerations are of paramount importance in conducting research involving human subjects, and this study adhered to ethical guidelines and regulations to ensure the rights, well-being, and privacy of the participants (46). Throughout the research process, ethical considerations were given high priority by securing informed consent from all participants, ensuring they received clear and comprehensive information about the study objectives,

procedures, potential risks and benefits, and their right to withdraw at any time without consequences.

Participation was entirely voluntary, with no coercion or undue influence exerted on potential participants, allowing them to decline or withdraw without facing negative consequences. Confidentiality of participants' information was strictly maintained, with all data treated confidentially and anonymized or coded to protect identities. Privacy and data security measures were implemented to respect participants' privacy during data collection, and researchers behaved themselves with integrity and professionalism, upholding research ethics principles and protecting participants' rights and well-being. These ethical considerations were observed to ensure the ethical conduct of research and uphold the principles of respect, beneficence, and justice.

CHAPTER FOUR

4.0 FINDINGS

4.1 Demographic characteristics of participants

The study surveyed a diverse age range of women attending postnatal care at Makole Health Center. The majority of study participants were aged between 31 and 35 years (30.4%). Most participants had completed primary education (43.5%) and were predominantly married (82.6%).

Table 1: Demographic characteristics of participants

Participant	Age (Years)	Education Level	Marital Status	Economic Activity
1	20	Primary	Married	Small-scale farming
2	19	Primary	Married	Retail business
3	27	Upper Secondary	Married	Government employee
4	30	Primary	Married	Small-scale farming
5	30	Primary	Never Married	Unemployed
6	23	Higher Education	Married	Teacher
7	34	Primary	Married	Retail business
8	39	Upper Secondary	Married	Trader
9	35	No Schooling	Married	Housewife
10	40	Primary	Never Married	Tailor
11	43	Higher Education	Married	Government employee
12	33	Primary	Married	Small-scale farming
13	23	Upper Secondary	Married	Retail business
14	40	Primary	Married	Housewife
15	31	Higher Education	Married	Teacher
16	29	Primary	Married	Small-scale farming
17	25	No Schooling	Married	Housewife
18	30	Primary	Never Married	Unemployed
19	28	Upper Secondary	Married	Retail business
20	32	Higher Education	Married	Government employee
21	33	Primary	Never Married	Tailor
22	30	Primary	Married	Small-scale farming
23	33	No schooling	Married	Trader

In exploring women's attitudes towards the use of female condoms as a contraceptive method, the analysis identified three main themes, each encompassing multiple sub-themes that offer a nuanced understanding of their perspectives as presented in Table 2 below.

Table 2: Identified themes, sub-themes and examples of Quotes

Main Theme	Sub-Themes	Description	Quotes e.g.
1. Attitudes of Women Towards the Use of Female Condoms as a Contraceptive Method	1. Positive Attitude	Reflects a favourable perception of female condoms as a contraceptive method.	*"The way the world is now and with technology, you might think I'm lying, but honestly, I've never seen a female condom. Today is the first time I've heard about them from you. I think it would be good because they don't stay in the body like other methods that can cause problems and have chemicals that affect women's health. If these female condoms exist or are coming, they would be good because they don't have side effects like injections. They will let a person enjoy life with their partner without issues (laughs*) (P-06)".
	2. Negative Attitude	Highlights any reservations or unfavorable views regarding the use of female condoms.	
	3. Knowledge and Awareness	Focuses on the level of understanding and information women have about female condoms.	
	4. Perceived Benefits	Addresses the advantages women associate with using female condoms compared to other methods.	
2. Perceived Social Norms Contribute to Women's Use of Female Condoms as a Contraceptive Method	5. Partner Influence	Explores how partners' opinions or behaviours impact women's choices regarding female condoms.	*"Since our culture recommends having as many children as we can, sometimes we keep it a secret from parents when trying to use any form of contraceptive. If they knew, they might disapprove because they believe in large families as a sign of prosperity and continuity in our clan. This makes it difficult for women like me to openly discuss or seek advice on contraception, including female condoms, which I personally find beneficial for controlling the*
	6. Friends and Peers Influence	Examines how social circles affect attitudes and decisions about contraception.	
	7. Cultural Norms	Discusses how cultural expectations and beliefs	

		shape women's decisions about contraceptive use.	*number of children and spacing births for better health and economic stability. Despite these benefits, the fear of family disapproval often forces us to hide our choices, which can be stressful and challenging*." (IDI, P-11)
	8. Religious Beliefs	Investigates how religious teachings or practices influence the acceptance and use of female condoms.	
3. Perceived Behavioral Control Contributes to Women's Use of Female Condoms as a Contraceptive Method	9. Availability	Looks at how accessible female condoms are in the community and its effect on usage.	*"Because of our anatomy, there is a fear that the condom could get stuck inside, especially if someone deliberately pushes it in. There are also concerns about its effectiveness and safety, particularly regarding allergies or discomfort. Additionally, female condoms are not readily available in our community; I have never seen them in local health centres or pharmacies. This lack of accessibility contributes to the misconception that they are not a viable option for contraception. If they were more widely distributed and if there were better education about their proper use and benefits, more women might consider using them despite these initial concerns."* (IDI, P-17)
	10. Ease of Use	Considers how simple or complicated women perceive the use of female condoms to be.	
	11. Education and Training	Focuses on the need for proper information and instruction regarding female condom use.	
	12. Health Concerns	Addresses fears or misconceptions about health risks associated with female condoms.	

4.2 Perceived Attitudes on the Use of Female Condoms as a Contraceptive Method

Positive Attitude

Most participants expressed positive attitudes towards female condoms, appreciating the control it provides over contraception. They highlighted the benefits of using female condoms such as dual protection against pregnancy and STIs and indicated a willingness to try female condoms if given sufficient education and resources. For instance, one participant had this to share:

> *"Yes, I might start using it when I have enough education about its benefits. Since female condoms are forms of family planning and are designed for a woman, I think it will be good and am going to try it (laughing). I could consider using them instead of injections or implants. I've never used any family planning method until I had my child*." (P- 20).

Another participant had this to add on the fact that she had not seen a female condom before: She said:

> *... "I have not previously encountered a female condom, and today is the first time I have felt positively informed about them. I believe they could be beneficial because, unlike other contraceptive methods, they do not remain inside the body and do not involve chemicals that might negatively affect women's health. If female condoms are available or will soon be introduced, they could serve as a good alternative, as they do not produce side effects like certain contraceptive injections. Additionally, they would allow individuals to maintain a healthy relationship with their partners without concerns about health complications." (P-06).*

4.2.1 Negative Attitude

Some study participants had negative views about female condoms. Common reasons for their unfavourable perceptions included physical discomfort, irritation, cultural biases, and the

belief that female condoms are cumbersome and less effective compared to other contraceptive methods. For instance, one participant responded:

> *"You mean me using a female condom? No, I am not ready to use that because I have methods that I have learned about family planning and they give me good results. So, I don't think I need to know about it and to use it, maybe to instruct someone else who might use it, but for me, the method I am using gives me better outcomes."* (P-15).

Some participants indicated negative perceptions regarding the use of female condoms, citing issues such as irritation and general discomfort. These experiences have led to reluctance among certain individuals to adopt this contraceptive method. The concerns about physical discomfort have significantly impacted their willingness to use female condoms, with many expressing a preference for their male partners to wear condoms instead. One participant explained that:

> *"... I mean female condoms, when I use them, they cause me a lot of irritation therefore I don't think this if I will ever try to use it. For sure I will never use a female condom it is not good for women. Only men should wear their condoms but not us."* (P-01).

4.2.2 Knowledge and awareness

Participants who had received education on female condoms were more able to explain their advantages and feel confident in using them. Participants with education about the correct use, benefits, and availability of female condoms also had positive attitudes towards female condoms. This awareness often stemmed from various sources, such as healthcare providers, educational campaigns, and peer information. Conversely, a lack of knowledge was reported to often result in misconceptions and reluctance to adopt female condom use as a method of contraception. One participant had this to share:

> *"I have heard some friends discuss female condoms, but I don't know exactly how it looks like and I don't know how to use or wear them, but once I have education on*

> *how to use it, I can use it since it protects against sexually transmitted infections so I think I will use a female condom if they are available. Right now, am trying to find a better family planning method that won't hurt me like injections or swallowing pills; I don't want, I need something better for me like the female condom but I need more education*." (P-04).

Some participants who had no prior knowledge and had never heard about female condoms indicated hesitancy in using them. However, once they became aware of its potential benefits, including its non-hormonal nature and ability to empower women in sexual health decisions, expressed a willingness to start using female condoms. For instance, one participant had this to share:

> *"I don't know; I want to answer, but I don't know. Maybe if I had heard about them for some time, my mind would have understood better and started using female condoms. Since I'm hearing about it for the first time, I don't know, but I think am going to find it and start using it however at this time let us start with other methods since they are already available."* (P-06, 20).

4.2.3 Perceived Benefits

Some of the study participants highlighted enhanced protection against sexually transmitted infections (STIs) and unintended pregnancies, which may contribute to overall sexual health and well-being. They mentioned female condoms offer a greater sense of control and empowerment in contraceptive choices, particularly for women who wish to take an active role in their reproductive health.

For example, one participant had this to share:

> *"It is good for young girls to use female condoms. You know there are many sexually transmitted diseases nowadays. For example, my child can meet a strange man at a bar, and they have sex without any protection it may end up acquiring diseases, so it is very important to let young girls to be familiar with the female condom so they can*

lead sexual activity since the female condom will put a girl as in -charge to control sexual activity (laughing). My advice also come here that you need to visit our streets to educate about these female condoms not just in hospitals. We have many girls who could benefit from this education. For example, just three days ago, I brought my daughter here at the hospital and met with a standard seven-year-old girl who was pregnant. Her mother was crying, saying that she had just had an abortion two months ago and now she is pregnant again. This incident happened in Kikuyu Street, so you need to come in the street to educate our girls about the benefits of using female condoms." (P-08).

4.3 Perceived Social Norms on Women's Use of Female Condoms as a Contraceptive Method

The second theme examines the influence of perceived social norms, highlighting the impact of family, partners, friends, cultural norms, religious beliefs, and social stigma. Social norms play a pivotal role in shaping women's decisions regarding contraception. Support or opposition from family members and partners encourage or discourage the use of female condoms. Additionally, broader cultural and religious beliefs, as well as social stigma associated with the use of female condoms, significantly influence women's choices.

4.3.1 Covert use of female condom

Family members, especially parents, and older relatives, were reported to have a significant impact on women's perceptions of using female condoms. Some study participants reported that when they use female condoms secretly they do not discuss it openly because of the culture of having many children as a sign of continuity. Study participants further affirmed that the female condom is good for spacing and controlling the number of children but because of social disapproval of the female condom, some of them use it secretly.

One participant shared this:

> *"Since our culture recommends having as many children as we can, sometimes we keep it a secret from parents when trying to use any form of contraceptive. If they knew, they might disapprove because they believe in large families as a sign of prosperity and continuity in our clan. This makes it difficult for women like me to openly discuss or seek advice on contraception, including female condoms, which I find beneficial for controlling the number of children and spacing births for better health and economic stability. Despite these benefits, the fear of family disapproval often forces us to hide our choices, which can be stressful and challenging*." (P-11).

Partner Influence

The findings revealed opinions and behaviours of partners significantly impact women's decisions about using female condoms. In many cases, supportive partners play a crucial role by encouraging and actively participating in the choice to use this contraceptive method. However, societal stigma and partner perceptions also create barriers. Some male partners may associate the use of female condoms with negative stereotypes, such as promiscuity or infidelity. This stigma makes it challenging for women to openly use female condoms.

One participant highlighted this issue:

> *"Bringing a female condom to my boyfriend makes me feel like I'm being judged as promiscuous. In our society, women who carry condoms are often unfairly labelled as unfaithful or prostitutes. It would be much easier if my partner were the one to bring male condoms instead. This way, I wouldn't have to face these negative perceptions. I'm simply trying to be responsible and safeguard our health, but the stigma attached to women initiating condom use makes me feel that it's safer and more socially acceptable for him to take the lead in bringing condoms." (P-03).*

4.3.2 Cultural Norms

Some study participants reported that people in their society relate condom use and prostitution, thus hindering women from using female condoms. Study participants further narrated that education on female condom use is needed to disentangle the norms surrounding female condom use. For example, some participants reported that;

> *"I still think education is important because education is the key that opens everything. If a person is educated, they have a broad understanding that helps them. If someone is just told, "This is a female condom," they might wonder, "So what?" Especially considering our culture, it's not something widely known; it's something foreign and people are not given time to discuss contraceptives. But if you educate them and they understand, people will decide to use that method. However, in our culture, the final decision to use a condom still often lies with the man. I think more efforts should be made to provide education so people can understand it better*." (P-15).

One study participant had this to lament regarding cultural norms on female condom use among women:

> *"A man might purchase condoms without much concern, a woman often feels uncomfortable doing so, fearing that others might perceive her as a prostitute. This stigma makes it challenging for women to openly purchase female condoms, as the social environment and prevailing attitudes contribute to their hesitation. Consequently, these societal judgments create barriers for women who wish to use female condoms but are put off by the potential for negative perceptions."* (P-09).

Religious teachings and beliefs influenced attitudes towards female condom use. Endorsements or prohibitions from religious authorities significantly affected behaviours and perceptions about contraception. Participants' views on female condoms were shaped by their religious beliefs and faith leaders' stance.

For example, one participant shared this:

> *"Honestly, I can't lie because I haven't explored the topic of female condoms in-depth, but from what I understand of Islamic teachings, using any form of family planning or contraception is considered haram. This religious belief makes it difficult for me to consider using female condoms, as the prohibition against any form of protection is deeply fixed in my faith. For me, sticking to these religious principles means that using female condoms would go against my beliefs, as any form of contraception is viewed as impermissible within Islam. I feel that adhering to these religious guidelines prohibits me from using female condoms."* (P-03).

4.4 Perceived Behavioral Control Contribution to Women's Use of Female Condoms as a Contraceptive Method

4.4.1 Availability

The study participants revealed that the availability of female condoms at health centers, pharmacies, and shops is crucial for enabling women to use them, thus enhancing their perceived behavioral control. Limited access is a significant barrier, while widespread availability increases women's confidence and control over their contraceptive choices. One participant expressed:

> *"Female condoms should be always available in hospitals and pharmacies. It's frustrating when you decide to use them, only to find out they are out of stock or not carried by most places. If female condoms were consistently available, women would feel more in control of their contraceptive choices and more likely to use them regularly. Increasing their availability would also help normalize their use and reduce the stigma." (P-03).*

Participants also emphasized the role of education at health centres in boosting confidence and perceived control. The consistent availability of female condoms in public and private

facilities would support women in feeling more empowered to use them. As one participant suggested:

> *"Providing education and making female condoms available in hospitals like male condoms would help women feel more confident and in control of their contraceptive choices." (P-04).*

4.4.2 Ease of Use of female condoms

The majority of study participants mentioned factors related to the ease of use the female condoms, including the initial learning curve required to correctly insert and use the female condom. The study participants further recounted that they felt that mastering the physical skills involved in wearing the female condom was challenging and required some practice. The study participants lamented that this could discourage some women from consistent use of female condoms. Participants suggested that if female condoms were easy to wear and adapted to different sexual encounters then that would attract many women to use them. For example, one participant had this to say:

> *"The initial process of inserting a female condom can be awkward and challenging, which might deter first-time users. If female condoms were easier to use and adapted to various sexual activities, more women might feel confident and inclined to use them." (P-09).*

Comfort during use is another significant factor. One participant commented that:

> *"The female condom is not my preferred choice as I find it uncomfortable and restrictive, particularly during various sexual positions. This discomfort makes me hesitant to use it regularly, despite being aware of its benefits." (P-09).*

4.4.3 Education and Training

Participants reported that comprehensive education programs played a crucial role in providing accurate information about female condoms, addressing common concerns, and

dispelling misconceptions. Access to demonstrations and instructional materials related to female condom use, such as brochures, videos, and hands-on workshops, significantly enhanced women's understanding and confidence in using female condoms. By using these will reduce the perceived difficulty and uncertainty associated with using female condoms.

One participant suggested:

> *"It is good to provide education, especially in schools, particularly secondary schools. There's a lot of misleading information in the community about the use of female condoms. Community information is unclear; people might start saying that condoms can tear off or cause cancer, so it's better to provide school-based education. Many young people are afraid due to street gossip that the condom could get stuck inside, so education should be provided. Based on female anatomy, people might think the condom could get lost inside or get broken. Societal opinions are unreliable sources of information, and listening to it might make you afraid to use it." (P-17).*

4.4.4 Health Concerns

Some study participants reported that some women are reluctant to use the female condom because of a prevailing myth that it may get pushed inside and remain in their bodies during intercourse. This myth stems from the fact that the female condom is inserted into the reproductive organ. Women fear that the condom may get pushed further inside their bodies when the male ejaculates.

One participant had this to share:

> *"Because of our anatomy, there is a fear that the condom could get stuck inside, especially if someone deliberately pushes it in. There are also concerns about its effectiveness and safety, particularly regarding allergies or discomfort. Additionally, female condoms are not readily available in our community; I have never seen them in local health centres or pharmacies."* (P-17).

On the other hand, some study participants express concerns about the health implications of using female condoms. For instance, one participant had this to say:

> *"No, I think lubricants in female condoms are not good because they say it causes diseases like cancer and others. The idea of having lubrication makes me worry about the chemicals and what they might do to my body in the long run. I have heard stories and rumors that using these kinds of products regularly could lead to health problems, so I prefer to avoid them altogether. If there were more information about the safety and research-backed evidence showing that they are safe for regular use, I might reconsider. Right now, though, I don't feel comfortable taking that risk."* (P-22).

CHAPTER FIVE

5.0 DISCUSSION

5.1 Attitudes of Women on the Use of Female Condoms as a Contraceptive Method

This study aimed to explore perceptions of female condom use as a contraceptive method among women attending Postnatal Care at Makole Health Center in Dodoma City. Participants expressed positive attitudes toward female condoms and appreciated their potential for providing dual protection against pregnancy and sexually transmitted infections (STIs), highlighting terms like empowerment and autonomy. These women viewed female condoms as a means of taking control over their reproductive health. Their positive attitudes align with findings with global trends, who reported that women with higher awareness of contraceptive options were more likely to use female condoms (7). Positive perceptions are often enhanced by proper education and partner support, thus encouraging the adoption of the method.

The study shows negative attitudes towards female condoms, describing them as uncomfortable and inconvenient. These participants often preferred other contraceptive methods they were more familiar with, viewing female condoms as redundant or difficult to use. A study in Tanzania found similar results, where initial discomfort and unfamiliarity were significant barriers to adoption (48). Such negative attitudes are often deeply rooted in limited exposure and insufficient guidance, indicating a gap in supportive interventions.

This study's findings revealed that participant's knowledge and awareness played a critical role in shaping their views on female condoms. Women who were well-informed about the method were more open and likely to adopt it. This finding is aligned with another study findings conducted in Bangladesh on the importance of education in improving contraceptive acceptance and use; higher knowledge positively influenced women’s openness to trying female condoms (49).

Additionally, perceived benefits such as enhanced STI protection and greater empowerment in sexual health decisions were noted as significant advantages. This resonates with study in Tanzania, that personal experiences and anecdotes played a crucial role, with positive experiences leading to greater acceptance and negative ones resulting in reluctance (50). This underscores the importance of addressing practical concerns through improved product design and targeted awareness programs to enhance the usability and appeal of female condoms.

5.2 Perceived Social Norms on the Use of Female Condoms as a Contraceptive Method

A multitude of socio-cultural factors on a global scale shapes the utilization of female condoms. The findings from this study revealed that the covert use of female condoms among family members, heavily influenced by cultural norms that promote larger families, often discourages women from openly discussing or using them. This aligns with existing literature in Ghana and Tanzania that emphasizes the significant impact of family dynamics on contraceptive decisions (6,51), that family support can catalyze usage, while opposition often stems from cultural norms that prioritize fertility and reinforce traditional gender roles. Consequently, navigating these socio-cultural landscapes is crucial for fostering an environment where women feel empowered to utilize female condoms openly, thereby enhancing their reproductive autonomy and health. Supportive partners can facilitate acceptance, while negative attitudes toward condom use discourage women from adopting them (6,24).

Furthermore, peer influence has been noted as a significant factor in promoting female condom use. Social networks, particularly friends and peers, also played an influential role. Women whose friends viewed female condoms favorably were more likely to consider using them, while those whose peers had negative opinions expressed reluctance observed. Similar in the studies conducted in Dodoma and South Africa reported a similar pattern, where peer influence significantly shaped contraceptive behaviors (32,48).

The study findings reveal that cultural norms particularly around fertility and family size, profoundly influenced women's attitudes. Some participants perceived societal pressure to prioritize childbearing over contraceptive use, which negatively affected their view of female condoms. This is consistent with other studies that emphasize the influence of cultural norms on contraceptive use. For example, research on the factors affecting contraceptive use among married women has demonstrated that conservative norms and beliefs can significantly shape attitudes toward female condoms, mirroring the findings of this study (53).

5.3 Perceived Behavior Control Influence on Women's Use of Female Condoms as a Contraceptive Method

The study highlights that consistent availability of female condoms at health centres, pharmacies, and shops, along with educational support, significantly enhances women's perceived behavioral control and confidence in using them as a contraceptive method. This was similar to the global perspective revealed in other studies that the use of female condoms indeed faces challenges and opportunities influenced by access, ease of use, education, health concerns, and environmental factors (30). Also, the studies in developing countries indicated that the availability and accessibility of female condoms significantly impact their use. Limited access due to supply chain issues and lack of awareness hinders their adoption, while readily available and well-promoted female condoms lead to increased usage among women seeking effective contraceptive options (24, 54). Comprehensive training on the correct usage and demonstration of female condoms by health workers enhances women's confidence and promotes effective use.

Findings from the study revealed that education and training are critical components in enhancing the use of female condoms. The findings align with a study conducted in Tanzania, where participants emphasized the necessity for comprehensive and accurate information, particularly in schools and community settings, to dispel myths and alleviate fears surrounding female condom use, underscoring that comprehensive education and training are essential for enhancing utilization (48). Further study on the impact of contraceptive

education on contraceptive knowledge and decision-making reveal that educational initiatives in schools and community settings effectively dispel myths and reduce fears, thereby promoting greater acceptance and utilization of contraceptives (55).

The ease of use was another concern, with some women finding female condoms challenging to insert, especially without prior instruction. This aligns with the study in Metropolitan City, Southwestern, Nigeria that ease of use of female condoms remains a concern; women often perceive female condoms as challenging to use correctly, affecting their willingness to adopt this method (56). This study's findings are in the same line with another study conducted in the USA which revealed that improving ease of use through user-friendly designs and clear instructions can significantly enhance acceptance and consistent use among women (57). A study in Tanzania suggests that enhancing user-friendliness and providing clear instructions on female condom use significantly improve acceptability, thereby positively impacting their availability to women seeking contraception (48).

Concerns about health risks, such as irritation or allergic reactions, were mentioned by some women, deterring them from considering female condoms. The results of the study align with those of a separate study carried out in Uganda as well as other middle-income countries revealed that apprehensions regarding potential side effects play a substantial role in influencing decision-making processes (52,58). A study conducted in Tanzania highlighted the need for public health campaigns and policy initiatives to enhance access, affordability, and societal acceptance of female condoms, aiming to address existing barriers and promote their use as a safe and effective contraceptive method (26). It is crucial to tackle these obstacles through integrated health services, comprehensive education, and community engagement to improve female condom uptake and empower women in their reproductive health autonomy.

5.4 Limitations and Mitigation of the study

The relatively limited sample size may affect the broader applicability of the results. Including a wider group of participants could offer a more comprehensive understanding and strengthen

the findings. Efforts were made to ensure diversity within the study population. However, future research should consider a more extensive sample to improve the general relevance of the findings.

Another limitation was that this study focused on women attending postnatal care at Makole Health Center, which may not fully represent the perspectives of all women in Dodoma or Tanzania. This specific demographic could have unique experiences that do not reflect those of the wider population. The researcher included participants from various socioeconomic backgrounds and different areas within Dodoma. Future studies could expand the population to other regions.

5.4.1 Strengths of the Study

In-depth Exploration of Women's Perceptions: The qualitative case study design allowed for rich, in-depth insights into the attitudes, social norms, and perceived behavioral control of women regarding female condom use. This approach provided nuanced findings that may not have emerged through quantitative methods.

Purposeful Sampling for Relevance: The use of purposeful sampling ensured that participants had relevant experiences, specifically women attending postnatal care services. This increased the relevance and depth of the data collected.

Saturation in Data Collection: The sample size was determined by reaching saturation, ensuring that all significant themes were explored, and no new information would have emerged from additional participants. This enhances the credibility of the findings.

Ethical Considerations**:** The study adhered to stringent ethical guidelines, securing the necessary approvals, ensuring informed consent, maintaining participant confidentiality, and safeguarding their rights, which adds to the robustness and ethical integrity of the research.

CHAPTER SIX

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Discussions

The study reveals a nuanced and multifaceted understanding of women's attitudes toward female condoms as a contraceptive method. Participants expressed positive attitudes primarily due to feelings of autonomy and empowerment, with female condoms offering dual protection against pregnancy and STIs, as well as the absence of side effects associated with hormonal methods. However, deeply rooted cultural biases, physical discomfort, and misinformation were consistently identified as significant barriers. The role of social norms, including the influence of family, partners, and cultural or religious beliefs, was found to be pivotal in shaping women's perspectives, while practical concerns such as limited access, ease of use, and health-related apprehensions further complicated the adoption of female condoms.

6.2 Recommendations

Perceived attitudes towards female condom use could be strengthened through collaboration between the Local Government and the Ministry of Health (MoH). Health education programs in health centres should focus on informing both men and women about the benefits of female condoms. Additionally, local governments and the MoH should partner with local NGOs to create awareness campaigns that address misconceptions and promote the positive aspects of female condom use. Health centre staff could also play a key role by providing personalized counselling sessions to address concerns and build confidence in using female condoms, as well as offering clear demonstrations on their proper use during routine consultations.

To address social norms, health centre management should facilitate community engagement sessions that encourage open discussions about shared responsibilities in contraception between men and women. They should also incorporate conversations about female condom use into existing reproductive health services and consultations. Community leaders could collaborate with health centres to lead discussions promoting supportive relationships and

joint decision-making between partners regarding contraceptive use. Furthermore, religious and local leaders should be encouraged to speak positively about female condom use during community health talks.

In terms of behavioral control, it is essential for health centres, in collaboration with the Ministry of Health and the President's Office Regional Administration and Local Government (PO-RALG), to ensure that female condoms are consistently stocked, particularly in underserved areas. Efforts should also be made to provide subsidies or free distribution of female condoms to improve access for low-income individuals. Health centre staff, in collaboration with NGOs, could conduct practical training workshops to teach women how to properly use female condoms. Additionally, easy-to-understand pamphlets or posters with step-by-step instructions on female condom use should be distributed at health centres to enhance knowledge and confidence in their use.

7.0 REFERENCES

1. WHO. What Are Female Condoms ? 2019;(Family Planning: A Global Handbook for Providers):271–80.

2. WHO. Evidence brief Contraception enables people to make informed choices about their sexual and reproductive health. 2017;WHO/RHR/19(3).

3. Yambasu R, Chikanya V, Zoker M, Karim S, Bah C, Hawanatu Hassan H. Knowledge, attitudes and practices regarding the use of female condoms among undergraduate students of Africa University. 2022 Aug;

4. Shitindi GW, Millanzi WC, Herman PZ. Perceived motivators, knowledge, attitude, self-reported and intentional practice of female condom use among female students in higher training institutions in Dodoma, Tanzania. Contracept Reprod Med. 2023;8(1):1–14.

5. Beson P, Appiah R, Adomah-Afari A. Modern contraceptive use among reproductive-aged women in Ghana: Prevalence, predictors, and policy implications. BMC Womens Health. 2018;18(1):1–8.

6. Afriyie P, Tarkang EE. Factors influencing the use of modern contraception among married women in Ho West district, Ghana: Descriptive cross-sectional study. Pan Afr Med J. 2019;33:1–11.

7. WHO. Family Planning / Contraception Methods Key facts. World Heal Organ [Internet]. 2020;(November 2020):1–5. Available from: https://www.who.int/news-room/fact-sheets/detail/family-planning-contraception.

8. Burta FS. World health statistics 2018: Monitoring health for the SDGs, sustainable development goals. Geneva: World Health Organization. World Health Organization; 2018. 430–439 p.

9. Ananga MK, Kugbey N, Akporlu JM, Asante KO. Knowledge , acceptance and utilisation of the female condom among women of reproductive age in Ghana. Contracept Reprod Med. 2017;1–9.

10. Naidu M. Perceptions around second-generation female condoms: Reporting on women's experiences. Anthropol Notebooks. 2013;19(1):25–34.

11. Mbita G, Mwanamsangu A, Plotkin M, Casalini C, Shao A, Lija G, et al. Consistent Condom Use and Dual Protection Among Female Sex Workers: Surveillance Findings from a Large-Scale, Community-Based Combination HIV Prevention Program in Tanzania. AIDS Behav [Internet]. 2020;24(3):802–11. Available from: https://doi.org/10.1007/s10461-019-02642-1

12. URT. the United Republic of Tanzania the National Multi-Sectoral Condom Strategies. Report. 2019;Tanzania P(August).

13. Namasivayam A, Schluter PJ, Namutamba S, Lovell S. Understanding the contextual and cultural influences on women's modern contraceptive use in East Uganda: A qualitative study. PLOS Glob Public Heal [Internet]. 2022 Aug 15;2(8):e0000545. Available from: https://doi.org/10.1371/journal.pgph.0000545

14. NASP. National Guidelines for the Management of Hiv and Aids. Development. 2019;7(5,371,780,231.09):2,274,923,575.00-29.08.

15. TDHS-MIS. Demographic and Health Survey and Malaria Indicator Survey (TDHS-MIS) 2022. Report. 2022;(NBS).

16. TDHS-MIS. Tanzania 2022 Demographic and Health Survey and Malaria Indicator Survey Summary Report. 2022;(NBS).

17. Amalia Yunia Rahmawati. Uptake of female condoms still low - KNH Counselor Female condoms, which were first introduced in Kenya 25 years ago, are still

struggling in the market. In. Star. 2020;(July):1–23.

18. Munuo U, Moshi FV. Assessing motivators for utilizing family planning services among youth students in higher learning institutions in Dodoma, Tanzania: Protocol for analytical cross sectional study. PLoS One. 2023 Mar;18(3):e0282249.

19. Bosnjak M, Ajzen I, Schmidt P. The Theory of Planned Behavior: Selected Recent Advances and Applications. Eur J Psychol. 2020 Aug;16:352–6.

20. Vieira AH, Leles CR. Exploring motivations to seek and undergo prosthodontic care: An empirical approach using the theory of planned behaviour construct. Patient Prefer Adherence. 2014;8(September):1215–21.

21. Eggers SM, Aarø LE, Bos AER, Mathews C, Kaaya SF, Onya H, et al. Sociocognitive Predictors of Condom Use and Intentions Among Adolescents in Three Sub-Saharan Sites. Arch Sex Behav. 2016;45(2):353–65.

22. WHO. Condoms 20 The impact of condom use on the HIV epidemic. 2023;(Gates Open Res.1).

23. UNIDESA. World contraceptive use methodology. 2017;((POP/DB/CP/Rev2017)):1–5.

24. USAID. Condom fact sheet. Usaid [Internet]. 2015;26(April):1–2. Available from: https://2012-2017.usaid.gov/sites/default/files/documents/1864/condom-fact-sheet-January-2015.pdf

25. Beckham SW, Stockton M, Galai N, Davis W, Mwambo J, Likindikoki S, et al. Family planning use and correlates among female sex workers in a community empowerment HIV prevention intervention in Iringa, Tanzania: a case for tailored programming. BMC Public Health. 2021;21(1):1377.

26. Fasehun LK, Lewinger S, Fasehun O, Brooks M. Barriers and Facilitators to Acceptability of the Female Condom in Low- and Middle-Income Countries: A Systematic Review. Ann Glob Heal. 2022 Mar 10;88.

27. Uchendu OC, Adeyera O, Owoaje ET. Awareness and utilization of female condoms among street youths in Ibadan, an urban setting in south-west Nigeria. Pan Afr Med J. 2019;33:1–9.

28. Kalolo A, Kibusi SM. The influence of perceived behaviour control, attitude and empowerment on reported condom use and intention to use condoms among adolescents in rural Tanzania. Reprod Health [Internet]. 2015;12(1):105. Available from: https://doi.org/10.1186/s12978-015-0097-5

29. CDC. The Right Way To Use A Female * Condom Female Condom Dos and Donts How To Insert and Remove a Female Condom. 2017;(CDC).

30. WHO. Global health sector strategies on, respectively, HIV, viral hepatitis and sexually transmitted infections for the period 2022-2030. Geneva: World Health Organization. 2022. 2003–2005 p.

31. Imo CK, Okoronkwo E, Ukoji V. Interaction Effect of Knowledge and Use of Contraceptive Methods on Fertility among Umuahia Women of South-Eastern Nigeria. J Cult Soc Dev [Internet]. 2015;5:18–26. Available from: www.iiste.org

32. Mchunu G, Peltzer K, Tutshana B, Seutlwadi L. Adolescent pregnancy and associated factors in South African youth. Afr Health Sci. 2012;12(4):426–34.

33. Mosha PE, Mgimwa CA, Msuya SM. Assessment of Knowledge and Perception Towards Modern Contraceptive Use Among Women of Reproductive Age in Mtwivila, Tanzania. Sci J Public Heal [Internet]. 2017;5:335. Available from: https://api.semanticscholar.org/CorpusID:41057375

34. UNAIDS. Developing effective condom programmes UNAIDS 2020. 2020;(UNFPA and UNAIDS).

35. WHO. WHO / United Nations Population Fund (UNFPA) Condom Quality Assurance (July 2019) Male Latex Condoms for Purchase by United Nations. 2019;(July):1–44.

36. Namanda C, Atuyambe L, Ssali S, Mukose A, Tumwesigye NM, Makumbi FE, et al. A qualitative study of influences on the uptake of contraceptive services among people of reproductive age in Uganda. BMC Womens Health [Internet]. 2023;23(1):130. Available from: https://doi.org/10.1186/s12905-023-02274-7

37. Asiimwe JB, Ndugga P, Mushomi J, Manyenye Ntozi JP. Factors associated with modern contraceptive use among young and older women in Uganda; a comparative analysis. BMC Public Health [Internet]. 2014;14(1):926. Available from: https://doi.org/10.1186/1471-2458-14-926

38. Massenga J, Noronha R, Awadhi B, Bishanga DR, Safari O, Njonge L, et al. Family Planning Uptake in Kagera and Mara Regions in Tanzania: A Cross-Sectional Community Survey. Vol. 18, International Journal of Environmental Research and Public Health. 2021.

39. Centers for Disease Control and Prevention. 2014 Kigoma Reproductive Health Survey Kigoma Region, Tanzania. Centers Dis Control Prev [Internet]. 2014; Available from: http://www.cdc.gov/reproductivehealth/Global/Publications/Surveys/Africa/Kigoma-Tanzania/index.htm.

40. Kothari C. R. Research Methodology, Methods and Techiniques. ISBN (13) : 978-81-224-2488-1 publishing for one world new age international (p) limited, publishers 4835/24, Ansari Road, Daryaganj, New Delhi - 110002 Visit us at www.newagepublishers.com; 2024.

41. Creswell JW. Qualitative Inquiry & Research Design: Choosing Among Five Approaches. 2nd Ed. Robinson LCSKGDSJ, editor. Vol. 114, Sage Publications. Califonia: SAGE Publications Inc; 2007. 179–186 p.

42. URT. The United Republic of Tanzania President's Office Regional Administration and Local Government Dodoma Region Investment Guide. 2019;(ISBN: 978-9987-664-00-9).

43. JICA. Country Gender Profile : Tanzania Final Report. 2016;(March).

44. Palinkas LA, Horwitz SM. Method Implementation Research Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. Adm Policy Ment Heal. 2013;(August 2014).

45. Takyi A, Sato M, Adjabeng M, Smith C. Factors that influence modern contraceptive use among women aged 35 to 49 years and their male partners in Gomoa West District, Ghana: a qualitative study. Trop Med Health [Internet]. 2023;51(1):40. Available from: https://doi.org/10.1186/s41182-023-00531-x

46. Ives, J. C. S., Dunn, M., & Cribb A. Empirical Bioethics: Theoretical and Practical Perspectives. (Cambridge Bioeth Law) Cambridge Univ Press. 2017;

47. Babbie E. The Practice of Social Research. Library of Congress Control Number: 2014944053 ISBN: 978-1-305-10494-5 Cengage Learning 20 Channel Center Street Boston, MA 02210 USA; 2016.

48. Shitindi GW, Millanzi WC, Herman PZ. Perceived motivators, knowledge, attitude, self-reported and intentional practice of female condom use among female students in higher training institutions in Dodoma, Tanzania. Contracept Reprod Med [Internet]. 2023;8(1):1–14. Available from: https://doi.org/10.1186/s40834-022-00208-6

49. Du KC, Mohosin AB, Amin A, Hasan T. Influence of education on sexual and

reproductive health service utilization for persons with disabilities in nationwide Bangladesh : an explanatory sequential mixed ‐ methods study. Reprod Health [Internet]. 2022;1–15. Available from: https://doi.org/10.1186/s12978-022-01352-7

50. Hoffman S, Mantell J, Exner T, Stein Z. The Future of the Female Condom. Int Fam Plan Perspect. 2004 Oct 1;30:139–45.

51. Mosha I, Ruben R, Kakoko D. Family planning decisions , perceptions and gender dynamics among couples in Mwanza , Tanzania : a qualitative study. BMC Public Health. 2013;

52. Maswanya ES, Moji K, Horiguchi I, Nagata K, Aoyagi K, Honda S, et al. Knowledge, risk perception of AIDS and reported sexual behaviour among students in secondary schools and colleges in Tanzania. Health Educ Res. 1999;14(2):185–96.

53. Anasel MG, Mlinga UJ. Determinants of contraceptive use among married women in Tanzania: Policy implication Résumé multinomiale et Binaire. African Popul Stud. 2014;28(2):978–88.

54. Moore L, Festin M, Gollub EL. Knowledge , attitudes , practices and behaviors associated with female condoms in developing countries : a scoping review. Dove Med Press Ltd. 2015;125–42.

55. Pazol K, Zapata LB, Tregear SJ, Gavin LE. Impact of Contraceptive Education on Contraceptive Knowledge and Decision Making. 2019;49:1–19.

56. Obembe TA, Adebowale AS, Odebunmi KO. Perceived confidence to use female condoms among students in Tertiary Institutions of a Metropolitan City, Southwestern, Nigeria. BMC Res Notes [Internet]. 2017;10(1):398. Available from: https://doi.org/10.1186/s13104-017-2730-6

57. Coffey PS, Kilbourne- M. Using human- - centred design to develop an innovative

female condom. BMJ. 2021;1–8.

58. Srikanthan A, Reid RL. Religious and Cultural Influences on Contraception. J Obstet Gynaecol Canada. 2008;30(2):129–37.

8.0 APPENDICES

8.1 Appendix 1: Interview Guide English

Perceptions on the use of female condoms as a contraceptive method among women aged 18-49 attending Postnatal Care at Makole Health Center in Dodoma City.

Greetings,

My name is William Lucas, a student at Muhimbili University of Health and Allied Science (MUHAS), conducting the above-mentioned study at Makole Health Center in Dodoma City Council. Since you are party of the target group, I hereby kindly ask you to respond by providing the required information. Your responses will be confidential and that is why your name is not mentioned in this session.

1. Demographic information

1. Participant ID:
2. Participant Age:
3. Education Level:
4. Occupation/Employment:
5. Marital Status:
6. Place of Residence:

7. Introductory Question.

1. How familiar are you with female condoms? **Probe on**: Did you ever seen, hear or using the female condom?
2. What are your initial impressions or knowledge regarding the use of female condoms for contraception?
3. Have you or anyone you know ever considered using female condoms as part of family planning?

4. **Attitudes:**

1. What are your feelings towards incorporating female condoms into your contraceptive practices? Have you considered using female condoms in the past, and if so, what factors influenced your decision?

2. How do you perceive the effectiveness of female condoms compared to other contraceptive methods available to you? Can you elaborate on any specific reasons why you hold this perception?
3. How do you think using female condoms as a contraceptive method might impact your sexual and reproductive health? Are there any concerns or expectations you have regarding the potential benefits or drawbacks of using female condoms?

4. Subjective Social Norms:

1. What societal norms do you believe shape women's decisions regarding the use of female condoms for contraception? Can you provide specific examples of how these norms impact women's attitudes towards female condom use?
2. How do you perceive the attitudes of your family, friends, or community members towards the use of female condoms as a contraceptive method? Have you witnessed instances where societal norms have influenced the acceptance or rejection of female condoms among women attending antenatal care?
3. Can you describe any cultural beliefs or traditions that may influence the acceptance or rejection of female condoms within your community? How do these beliefs intersect with modern healthcare practices, such as attending antenatal care?

4. Perceived Behavior Control

1. How confident do you feel about your ability to consistently use female condoms as a contraceptive method?
2. What factors do you believe contribute to your confidence or lack thereof in using female condoms effectively?
3. Can you describe any challenges or obstacles you encounter when attempting to use female condoms for contraception?
4. How do these challenges impact your perceived control over the use of female condoms?

8.2 Appendix 2: Interview Guide Swahili

Maswali ya Mahojiano

Maoni kuhusu matumizi ya kondomu za kike kama njia ya uzazi wa mpango miongoni mwa wanawake wenye umri wa miaka 18-49 wanaohudhuria Huduma ya Baada ya Kujifungua katika Kituo cha Afya cha Makole, Jijini Dodoma.

1. Taarifa za Mshiriki

1. Kitambulisho cha mshiriki:……..…….……
2. Umri wa Mshiriki:……..……...…….…..
3. Kiwango cha Elimu:……..……
4. Kazi/Ajira:…….....……..……
5. Haliya ndoa:……..……...
6. Mahala pa Makazi:……..……..

7. Maswali ya Utangulizi.

1. Je ulishawahi kusikia kuhusu njia za uzazi wa mpango? Kama ndio ulisikia wapi? Je unafahamu nini kuhusu njia za uzazi wa mpango? **Dodosa;** Je ni kitu gani unafahamu kuhusu kondomu za kike?
2. Je ni sehemu gani umewahi kusikia wakizungumzia kondomu za kike?
3. Kuna mtu yeyote umewahi kumsikia ambae anatumia kondomu ya kike kama njia ya uzazi wa mpango?Kama ndio alikuwa nani? Alisemaje kuhusu kondom za kike kama njia mojawapo ya uzazi wa mpango? Kwa maoni yako Ni faida gani unazoona katika kutumia kondomu za kike kama njia ya uzazi wa mpango??

4. Mtazamo (Attitude)

1. Je ni nini mtazamo wako kuhusu kutumia kondom za kike kama njia ya uzazi wa mpango?
2. Je, wewe binafsi una maoni gani kuhusu kujumuisha kondomu za kike katika njia zako za uzazi wa mpango?

1. **Dodosa**; Je, umewahi kufikiria kutumia kondomu za kike hapo awali? kama ndivyo, je uliitumia? Kama ndio; ni nini kilikufanya uitumie? Kama hapana; ni mambo gani yaliathiri uamuzi wako katika kuitumia?
2. Ni hisia gani unapata unaposikia au kuona kondomu za kike? Naomba tuelezee tafadhali. Kwa maoni yako kwa nini unapata hisia za namna hiyo?
3. Je utakuwa tayari kujaribu kutumia kondomu za kike katika siku zijazo? Dodosa; kama ndio nielezee ni kwanini kama hapana nielezee ni kwanini.

4. Kanuni za Kijamii Zinazodhaniwa (Perceived Social Norms)

1. Watu wa karibu yako wanazungumziaje Kuhusu Matumizi ya Kondomu za Kike kama njia mojawapo ya Uzazi wa Mpango? **Dodosa;** wana maoni gani kuhusu wewe kutumia kondomu za kike?
2. Marafiki na familia yako wanaonaje matumizi ya kondomu za kike kama njia mojawapo ya uzazi wa mpango?
3. Ni muhimu kiasi gani kwako mwenzi wako kuunga mkono matumizi yako ya kondomu za kike kama njia mojawapo ya uzazi wa mpango?Tafadhali elezea

4. Udhibiti wa Tabia Zinazodhaniwa (Perceived Behavioral Control)

1. Ni mambo gani yanayoweza kufanyika ili kufanya iwe rahisi kwako kutumia kondomu za kike? Tafadhali elezea
2. Ni vikwazo gani unavyoweza kukutana navyo katika matumizi ya kondomu za kike? Dodosa: Vikwazo binafsi kama kutojua namna ya kuivaa, vikwazo vya dini, tamaduni, kijamii, mazingira, upatikanaji wake etc
3. **Ulifundishwa wapi kuvaa kondom ya kike? Hebu elezea ni namna gani unatakiwa uvae kodnom ya kike**?Tafadhali fafanua
4. Ni nini **kinachokuzuia kutumia kondomu** za kike? Dodosa: ushirikiano unaoupata toka kwa mpenzi wako? maelezo uliyofundishwa nanma ya uvaaji na faida ya kutumia kondom ya kike? upatikanaji wa kondom za kike bure? urahisi wa kuvaa kondom ya kike, uvaaji wa kondomu ya kike bil aridhaa toka kwa mpenzi wako,
5. Unaweza kuelezea jinsi unavyoweza kushinda vikwazo vinavyoweza kujitokeza wakati wa kutumia kondomu za kike? Dodosa: Vikwazo binafsi- kutokuju maelekezo

sahii ya namna ya kuvaa, vikwazo vya dini, tamaduni, jamii, mazingira, upatikanaji wake etc

6. Kabla hatujamaliza mahojiano yetu kwa siku hii ya leo, Je una kitu kingine chochote ungetaka kushare na mimi kuhusu matumizi ya njia ya kondom ya kike kama njia mojawapo ya uzazi wa mpango kwa wanawake wa 18- 49? Kama ndio tafadhali karibu.
7. Tumefikia mwisho wa mahojiano yetu kwa siku hii ya leo. Asante sana kwa muda wako na kwa maelezo yako kuhusu matumizi ya kondom ya kike miongoni mwa wanawake wa miaka 18-49.

8.3 Appendix 3: Informed consent form- English

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES

DIRECTORATE OF RESEARCH AND PUBLICATIONS, INFORMED CONSENT FORM

ID NO: …….

Greetings,

My name is ……a student at the School of Public Health and Social Sciences at Muhimbili University of health and allied sciences in Dar Es Salaam.

Purpose of the study

Dear respondent, I would like to inform you that this is a research study titled "Perceptions on the use of female condoms as a contraceptive method among women aged 18-49 attending Postnatal Care at Makole Health Center in Dodoma City. This study seeks to explore the use of female condoms as a contraceptive method among women aged 18-49 attending Postnatal Care at Makole Health Center in Dodoma City. Kindly be honest and true for good results that could lead to better interventions and recommendations in future.

Confidentiality

We will protect and treat the information you provide with high confidentiality to the best of our knowledge. We will not write your name on the questionnaire or in any reports/documents that might let someone identify you. Your name will not be linked to research information in any way

The investigator will take care of information to be collected. However, final results after the analysis will be shared with national stakeholders and I will submit the manuscript for

publication in scientific journals.

Right and withdraw alternatives

Your participation is voluntary. You may decline participation to the study at any time even if you have consented to participate. Your decision to participate or not to participate will be associated with the right to get services in the facility. There is no penalty for refusing to participate in the study. You will not experience loss of your refusal to participate in this study

Benefits

The rationale of this study lies in its potential to contribute valuable insights and knowledge to various stakeholders involved in reproductive health and family planning efforts in Dodoma City. The findings of this study can have several implications: Informing Policy and Programs. The study's findings can provide evidence-based information for policymakers and program planners to develop targeted interventions and strategies to promote the use of female condoms as a contraceptive method. Understanding the specific barriers and factors influencing women's perceptions and utilization of female condoms can guide the design of effective policies and programs tailored to the needs of women in Dodoma City.

Risks

There is no harm in participating in the study. However, you are free to stop participating as the respondent at any time during the discussion in the event you feel uncomfortable.

Person to contact

If you have any questions about this study you should contact William Lucas, Mobile number 0762085189

If you have any questions about your participation rights please contact the supervisor, Dr Idda Mosha Mob: 0787122568 MUHAS Dar Es Salaam.

DECLARATION

I have read or being read by the researcher and understood the contents in this form. My questions have been answered. Do you agree?

Participant agreed ☐ Participant disagreed ☐

The above document describing benefits, risks and procedures for research titled "Use of female condoms as a contraceptive method among women aged 18-49 attending Postnatal Care at Makole Health Center in Dodoma City." I certify that the nature and purpose, the potential benefits and possible risks associated with participating in this study have been explained to me.

Signature or stamp of the respondent……Date……...

Signature of the researcher ……..…… date ……..

8.4 Appendix 4: Informed consent form- Swahili

FOMU YA RIDHAA

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES SCHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES

IDARA YA UTAFITI NA MACHAPISHO

FOMU YA RIDHAA

ID NO:……

Salaam,

Jina langu naitwa ……. Ni mwanafunzi wa Chuo Kikuu cha Tiba na Sayansi Muhimbili Jijini Dar es Salaam.

Madhumuni ya Utafiti

Ndugu Mhojiwa napenda kukujulisha kuwa somo hili la utafiti lenye jina " Matumizi ya kondomu za kike kama njia ya Uzazi wa Mpango miongoni mwa wanawake wenye umri wa miaka 18-49 wanaohudhuria huduma ya uzazi katika Kituo cha Afya cha Makole Jijini Dodoma. Lengo la Utafiti huu unalenga kupata mitazamo juu ya matumizi ya kondomu za kike kama njia ya uzazi wa mpango miongoni mwa wanawake wenye umri wa miaka 18-49 wanaohudhuria Huduma ya Baada ya kujifungua katika Kituo cha Afya cha Makole, Jijini Dodoma. Tafadhali kuwa mwaminifu na mkweli kwa matokeo mazuri ambayo yanaweza kuboresha utoaji wa huduma za afya za mama na mtoto siku zijazo.

Usiri

Sisi tutalinda na kuziweka taarifa zako kwa usiri wa hali ya juu na kadri ya uwezo wetu. Sisi hatutaandika jina lako katika ripoti yoyote/nyaraka ambazo zinaweza kuruhusu mtu

kukutambua wewe. Jina lako halitakuwa na mahusiano na habari za utafiti kwa njia yoyote.Watafiti watatunza takwimu na taarifa zitakazo kusanywa. Hata hivyo matokeo ya utafiti yatawasiliswa kwa ajili ya uchapishaji katika majarida ya kisayansi.

Haki na Kujitoa katika utafiti

Ushiriki wako ni wa hiari. Unaweza ukajiondoa katika ushiriki katika utafiti wakati wowote, wakati wa mahojiano hata kama ulikuwa umekubali kushiriki. Uamuzi wako wa kushiriki hautahusishwa na haki yako kuendelea na matibabu katika kituo. Hakuna adhabu ya kukataa kushiriki katika utafiti. Hutapata hasara yoyote kama ukikataa kushiriki katika utafiti huu.

Faida:

Utafiti huu utawawezesha wasimamizi wa maabara kutambua fursa kwa ajili ya kuboresha huduma zitolewazwo na Maabara. Hizi fursa kwa ajili ya kuboresha zitasababisha hatua za kuzuia na marekebisho.

Hatari:

Hakuna madhara kwa kushiriki katika utafiti. Hata hivyo wewe uko huru katika kuacha kushiriki kwa wakati wowote katika mahojiano haya katika tukio unalojihisi kuwa na wasiwasi.

Endapo utapata madhara:Hutegemei kupata madhara yoyote kutokana na ushiriki wako katika utafiti.

Nani wa kuwasiliana naye: Kama una maswali kuhusiana na utafiti huu tafadhali wasiliana na mtafiti mkuu, William Lucas (+255 762085189) wa Chuo Kikuu cha Tiba na sayansi Muhimbili,S.L.P 40022,Dar es Salaam.

Kama una swali juu ya haki zako za msingi kama mshiriki, unaweza kuwasiliana na Dr Idda Mosha (+255 787122568) MUHAS Dar Es Salaam ambaye ni msimamizi wa utafiti huu.

Je unakubali

Mshiriki anakubali……Mshiriki hakubali……...

Mimi nimesoma maelezo ya fomu hii.Nakubali kushiriki

katika utafiti huu.

Saini ya mshiriki……

Saini ya Mtafiti……...

Tarehe ya kusaini ……

8.5 Appendix 5: Ethical Clearance

UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES

OFFICE OF THE DIRECTOR – RESEARCH, PUBLICATIONS AND INNOVATIONS

Ref. No.DA.282/298/01.C/2273 Date: 31/05/2024

MUHAS-REC-05-2024-2273
WILLIAM LUCAS
SHOOL OF PUBLIC HEALTH AND SOCIAL SCIENCES
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: PERCEPTIONS ON THE USE OF FEMALE CONDOMS AS A CONTRACEPTIVE METHOD AMONG WOMEN AGED 18-49 ATTENDING POSTNATAL CARE AT MAKOLE HEALTH CENTER IN DODOMA CITY

Reference is made to the above heading,

I am pleased to inform you that the Chairperson has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 31/05/2024
EXPIRATION DATE OF APPROVAL: 31/05/2025

STUDY DESCRIPTION:
Purpose:
The purpose of this qualitative exploratory study is to explore the perceptions on the use of female condoms as a contraceptive method among women aged 18-49 attending Postnatal Care at Makole Health Center in Dodoma City

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%2015583.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain Data Transfer Agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain Material Transfer Agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country.
8. Apply for and obtain permission to publish the results from National Institute for Medical Research. The application should be before submitting to a publisher and not concurrently through the email publications@nimr.or.tz.
9. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
10. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
11. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Nahya Salim Masoud,
Chairperson, MUHAS Research and Ethics Committee

8.6 Appendix 6: Introduction letter from Muhimbili University

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

In reply quote;
Ref. No. HD/MUH/T.829/2022

04TH June, 2024

Regional Administrative Secretary,
P.O. Box 1249,
DODOMA

Re: INTRODUCTION LETTER WILLIAM LUCAS

We would like to inform you that the bearer of this letter is **William Lucas** with Reg. No. **HD/MUH/T.809/2022** is a student at Muhimbili University of Health and Allied Sciences (MUHAS) "pursuing **MPH-Executive Track.**

As part of his studies, he will be doing an elective research titled: "**Perceptions of the Use of Female Condoms as A Contraceptive Method Among Women Aged 18-49 Attending Postnatal Care at Makole Health Centre in Dodoma City".**

The research has been approved by the Chairman of University Senate.

Kindly provide him the necessary assistance to facilitate the conduct of his research.

We thank you for your cooperation.

Ms. Victoria Mwanhilwa
For: DIRECTOR, POSTGRADUATE STUDIES

c.c **William Lucas**

Received
6/6/2024

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015; Direct Line:+255-22-2151378;Telefax:+255-22-2150465;E-mail:dpgs@muhas.ac.tz;Web:https://www.muhas.ac.tz

8.7 Appendix 7: Approval for data collection from Regional Administration

THE UNITED REPUBLIC OF TANZANIA
PRESIDENT OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT

Dodoma Region
Telephone Number: REGCOM
Phone Number: 2324343/2324384
E-Mail No. ras@dodoma.go.tz
Fax No. 255 026 2320046
In reply please Quote:

Regional Commissioner's Office,
Mkapa House,
2 Hospital Road,
P.O. Box. 914,
41103DODOMA.

Kumb.Na. HA. 107/249/017/55

08th June, 2024

City Director,
Dodoma City Council,
P.O Box 1249,
DODOMA.

RE: RESEARCH PERMIT

This is to introduce to you Mr. William Lucas Student Muhimbili University of Health and Allied Sciences {MUHAS} and who is at the moment required to conduct research in Dodoma city.

The research title is *" **Perceptions of the use of female condom as contraceptive method among women aged 18-49 attending postnatal care at Makole health centre in Dodoma city.*** The period of which this permission has been granted is from June 2023 to September, 2024.

Please accord him with all necessary assistance to achieve research objectives.

Thank you for your cooperation.

Lucy J. Timba
For: **REGIONAL ADMNISTRATIVE SECRETARY**
DODOMA

Copy to: Director, Postgraduate Studies
MUHAS

Mr. William Lucas
Student- MUHAS

8.8 Appendix 8: Approval for data collection from Dodoma City Council

