UTILISATION OF THE FEMALE CONDOM BY WOMEN IN CHAINDA CATCHMENT AREA OF LUSAKA DISTRICT, ZAMBIA

BY

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A research Thesis submitted in partial fulfillment of the requirements for The Degree of Master of Science in Midwifery and Women's Health

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DECLARATION

I, Modrine Shankwaya declare that the work presented in this Dissertation for the award of Master of Science Degree in Midwifery and Women Health to the University of Zambia is my original work and has not been presented in part or wholly for any qualification to any other University/Institution for consideration of any certification.

Signature: ……...…….. Date: …….

(Candidate)

CERTIFICATE OF COMPLETION

I, _____ having supervised and read through this Thesis, am satisfied that this is the original work of the author under whose name it is presented. I also confirm that the work has been completed satisfactorily and approve this Thesis for final submission.

Signature: _____ Date: _____

(Supervisor)

DEDICATION

This research project is dedicated to my husband Paul Simango, and my mother, Daisy Shankwaya for their endless and selfless support in my education. I also dedicate this work to the rest of my family and friends. They have all selflessly given me moral, spiritual and financial support in order to acquire University education

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
CBDs	Community based distributors
CHWs	Community Health Workers
CSO	Central statistics office
FGDs	Focused group discussions
FHI	Family health international
GBV	Gender based violence
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
IEC	Information, education and communication
KDHS	Kenya Demographic and Health survey
KNBS	Kenya national bureau of statistics
LDHO	Lusaka district Health Office
MoG	Ministry of Gender
MoH	Ministry of Health
NACC	National Aids Control Council
NDC	Netherlands development cooperation
NGOs	Non -governmental organisations
PLHIV	People living with HIV
PSI	Population Services International
SFH	Society for family health
SPSS	Statistical package for social sciences
STI	Sexually transmitted infections
UKDID	United Kingdom department for international development
UNAIDS	United Nations Programmes on HIV/Aids
UNFPA	United Nation Population Fund
USAID	United States agency for international development
US	United Nations
WHO	World Health Organizations
WPF	World population foundation
ZAMSTAT	Zambia statistics agency
ZDHS	Zambia Demographic Health Survey

ABSTRACT

The female condom is a dual protection tool for both prevention of HIV/ AIDs transmission and unwanted or unplanned pregnancies. The female condom is one of several overlooked and under-used reproductive health technologies having the potential to expand choice in family planning and prevention of Human Immunodeficiency Virus and sexually transmitted infections programmes. Nursing staff at Chainda health centre in Lusaka conduct health education on all family planning services at the clinic and in the community during outreach activities. However, data from Lusaka district health office (LDHO) show that female condom utilisation is very low in comparison to other family planning methods.

The aim of this study was to determine factors associated with utilisation of the female condom among women in Chainda catchment area.

A mixed method study design was used for this study. A semi structured questionnaire was used to collect quantitative data, while two focused group discussions (FGDs) were used to collect qualitative data. Statistical Package for Social Sciences (SPSS) version 23 was used for quantitative data analysis, and content analysis was used to analyse qualitative data. Chi square was used to test the association between the dependent and independent variables at 0.05 level of significance. The study population comprised of 384 randomly selected women, aged 15 to 49 years, living in Chainda catchment area of Lusaka district, and accessing health services from the health facility. Chainda catchment area was selected using purposive sampling, due to its dense and diverse population, being an accessible health facility, due to prior research indicating specific health concerns, established community engagement, relevant socioeconomic conditions, logistical ease, and alignment with funding or collaborative interests. These factors made it an ideal location for studying women's health and service utilisation.

The findings were that 31% of the respondents exhibited high knowledge of the female condoms while 41% had moderate knowledge, and 28% had low knowledge. The findings also showed that 90% of the respondents agreed to female condoms being available all the time, while 10% said the commodity was not available at all times. A small proportion (14%) of respondents had positive attitudes towards female condom utilisation, while 86% had negative attitudes. The association between knowledge and utilisation of female condoms was statistically significant with $p < 0.0001$. The association between availability and utilisation of the female condom was also statistically significant ($p=0.00$).

The association between attitudes and utilisation of the female condom was not statistically significant (p=0.447). Three themes (i) Knowledge about female condoms, (ii) Use of female condoms and (iii) Experiences of using female condoms emerged from the qualitative data. (iv) Availability of female condom and (v) where can one get a female condom?

Although female condoms are widely available, their utilisation remains low. Thus, the findings of the dissertation underscore the need for targeted education and awareness campaigns in the catchment area.

Key words: Female condom, Women, Utilisation, Catchment area

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CHAPTER ONE: INTRODUCTION

1.0 Introduction

Condoms are contraceptive tools designed to provide dual protection, and are offered in two variations, namely the male and female condoms (World Health Organisation [WHO], 2020). When condoms are used correctly and consistently, they are most effective in prevention of unwanted pregnancy and prevention of spread of Sexually Transmitted Infections (STIs) including Human Immunodeficiency Virus (HIV) / Acquired Immune deficiency Syndrome (AIDs). The female condom prevents conception of unwanted or unplanned pregnancy in similar proportion to that of male condom, which is 95% (Al-Mansour *et al*., 2020). Compared to a male condom, the female condom is a female empowerment tool that increases use for family planning and prevention of HIV/ AIDs, because the female partner has more control to negotiate its use than the male partner (WHO, 2020).

Programme for Appropriate Technology in Health (2019) highlights that, by 2020, there were 60 million female condoms distributed annually. This growth in popularity prompted the development of new female condom brands, such as the woman's condom, FC2, and pant condom. Decision-makers and healthcare professionals are now more interested in promoting and disseminating the device as a result. A contest for "female condom are - film contest" was established in 2020 and a global day was designated for it (WHO, 2020). This event drew many young women from all around South Africa, and many of those who had used the product expressed their stories. The female condom, an empowerment tool for women, played a crucial role in South African policy, which called for dual protection and contraception (PATH, 2015; 2016; 2017; 2018; 2019).

1.1 Background

Around the world, 220 million women have unmet family planning needs. (WHO, 2020). According to the United Nations Programme on HIV/AIDS (UNAIDS) increased access to family planning services would lead to a drop in unplanned pregnancies, a reduction in unsafe abortions by 75%, a reduction in maternal deaths by 69%, and a reduction in infant deaths by 57% UNAIDS (2019).

UNAIDS (2019) goes on to state that women in sub-Saharan Africa are at an increased risk of contracting STIs, including HIV, and are twice as likely to be living with HIV compared to men. Apart from protecting women from contracting STIs, female condoms can also be used as a family planning method and enable women to limit the sizes of their families by reducing rates of unintended pregnancies as well as reducing the need for unsafe abortions (WHO, 2018). Substantiating this notion, Trussell *et al.,* (2007) reported that in India, women from New Delhi and Chennai perceived the female condom to be a tool that empowers them through protection against unplanned or unwanted pregnancies, STIs, including HIV, and simple cleaning up after use. However, they recommended that the female condom designed in a way that eased insertion and increased sexual pleasure (Trussell *et al.,* 2007). In a similar study, some women reportedly feared the size and pain from the inner ring while others reported that the Indian government should carry out more promotion campaigns for the device (Bowling, *et al.*, 2018).

In Nigeria, the ability and acceptability to use a female condom for the first time was determined by what the users were told by those who had used it and their effectiveness in inserting the female condom (Ankomah, 2011). Repeated use of the female condom was rather determined by the first use experience; the women who were informed and supported by their counter parts reported consistent use while those who had reduced sexual pleasure and had little information on benefits of the device never repeated to use it (Ezire *et al.,* 2013). Another study on perceived confidence to use female condoms among students in tertiary institutions of a metropolitan city in Nigeria revealed that less than half of the study population felt bold and confident enough to negotiate and use the female condom (Olugbenga-Bello *et al.,* 2013). It is also important to note that most youths find it challenging to convince their partners to use the female condom, even though unmarried youths and teenagers are perceived to be more confident than older and married youths (Obembe *et al.*, 2017).

In Zeerust South Africa, female sex workers perceived the male condom to be better than the female condom (Scorgie *et al.,* 2013). Additionally female partner initiating negotiation on the use of female condom was seen to be against culture because women are expected to be submissive to their male partners, and hence, males were the initiators of anything related to intimacy. Such factors and practices that a woman is not expected to refuse a sexual act once the

male partner initiated. It led to low levels of utilisation of the female condom in South Africa (Chawatama, 2014).

A study on knowledge, acceptance and utilisation of the female condom among women of reproductive age in Ghana, revealed low levels of female condom acceptance and utilisation (Beksinska *et al.,* 2012). This was associated with limited access of the female condom in the shops and partner/ spouse refusal to use the commodity (Beksinska *et al.*, 2012). In another study participants reported that their husbands refused to approve use of the female condom, and if they used it, it was for prevention of unintended pregnancy rather than HIV AIDs transmission (Ananga *et al.*, 2017).

In Malawi, Limbani (2011) noted that health care providers who promoted use of the female condom and demonstrated correct techniques of inserting the commodity led to an increase in its use. The research also revealed that use of the female condom depended on where a woman got commodity from (Limbani, 2011). Those who received the female condom from reproductive health clinics used the commodity for family planning, and others for prevention of STIs (Limbani, 2011).

In Cameroon, high school female students reported that they felt guilty to use the female condom because of their religious teachings (Mantell et al., 2015). Those who reported to have used the female condom had used it to prevent transmission of HIV (Mantell *et al.*, 2015). Others reported not to have used the female condom due to lack of knowledge on the correct way of using the method. Some female students reported not being able to convince their partners to use the commodity (Tarkang & Bain, 2017).

In a study on awareness, attitude and willingness to use female condoms among college female students in Ethiopia, unavailability of the commodity, lack of knowledge on correct use and negative attitudes towards the commodity were associated barriers for willingness to use it (Dayan *et al.*, 2013). In South Africa, awareness of the female condom was associated with the locality where an individual came from, their age and marital status (Scorgie *et al.,* 2013). Married females were aware of the female condom being a family planning method, and were more likely to use compared to single females (Scorgie *et al., 2013*).

Guerra & Simbayi (2014) recommended that governments should intervene by conducting rigorous campaigns to promote use of female condoms and increase the availability in health facilities and clinics for easy access.

According to the WHO (2023) report, women are more likely to get infected with STIs than men. They are also likely to suffer the consequences of unplanned pregnancies due to their biological make up and female youths are vulnerable to sexual abuse especially after abuse of substances such as alcohol. In the same report, theWHO estimated that 39 % of youths in Kenya accounted for HIV/AIDs new infections, with assistance and support of the joint United Nations Program on HIV and AIDS (UNAIDS), the public and private funders and some manufacturers, more than 90 developing countries, including Kenya, have introduced female Condoms to the public (UNAIDS, 2010). In Kenya, the female condoms are distributed through the Ministry of Health (MoH) facilities, community-based distributors (CBDs) and non - governmental organisations (NGOs), as well as through bars, lodges and colleges, and at any other place where casual or commercial sex may occur (National AIDS Control Council [NACC], 2014).

The Kenya Demographic and Health Survey (KDHS) report, conducted by the Kenya National Bureau of Statistics (KNBS) in collaboration with the MoH and other partners indicated that contraceptive prevalence reached its peaks among married women in the 30 to 34 years and was at its lowest among age groups 15 and 19 years, in the year 2016 (KNBS,2016). The report also revealed that, levels of teenage childbearing were highest in Nyanza (27%) and Coast (26%) provinces, and lowest in Central province (10%). NACC (2014) estimated HIV infection to be highest among youths who cohabited, followed by married couples who did not know the HIV status of their partners, and HIV prevalence was highest in the lake region of Kenya with Kisumu County on the lead, followed by Siaya and Migori Counties. The KNBS (2016) report further stated that, the number of people living with HIV (PLHIV) had increased from 1.4 million in 2009 to 1.6 million in 2013, Countrywide, 2.1 % of youths aged 15 – 19 years were using male condoms, while less than 1% of the same age group used female condoms (KNBS,2016). The same report reported that in Migori, 44 % of the youths aged 15 -19 years used contraception; while 55.4 % did not use any method of contraception. Of those who used contraceptives, 3.1% used male condoms, while 0.3 % used female condoms (KNBS, 2016).

Knowledge on comprehensive HIV/AIDs prevention, and prevention of unplanned pregnancies was estimated to be high in young men than young women; nevertheless the level of knowledge on HIV/AIDs prevention was below 50% in both sexes (WHO, 2014).

Migori County strategised to reduce new HIV infections and, improve health outcomes and wellness of all PLHIV, by using the human rights approach to facilitate access to services to, key populations and other priority groups in all sectors, and strengthen research and innovation to inform the County's mission (Migori County, 2016). Although the youths were reportedly informed about the benefits of female condom use, the 2016 KNBS report showed that the female condom was the least used method of barrier contraception (KDHS, 2016). Nyanza region was reported to have the highest HIV/ AIDs prevalence in Kenya at 15.1%, in the year 2012; the prevalence was reported to be higher among women (16.1%) than men (13.9%) in all regions (KNBS, 2016).

In Zambia, donors and organisations that have been providing female condom funding include United Nation Population Fund (UNFPA), the United States Agency for International Development (USAID), the United Kingdom Department for International Development (DFID), Society for family Health (SFH), and the Netherlands Development Cooperation (NDC). Organisations such as the World Population Foundation (WPF) and Family Health International (FHI) play a significant role in advocacy and research related to the female condom. Population Services International (PSI), Marie Stopes International (MSI), and Deep. K. Tyagi (DKT) International applies social marketing or community distribution in the private sector and support female condom distribution programmes (UNAIDS, 2011).

Similar to findings from a survey that was conducted in Zambia by the National AIDS Council (NAC, aimed at identifying factors impeding use of the female condom and suggesting strategies that could increase its use (NAC, 2018), a number of studies also indicate low utilisation of the female condom. The low utilisation of the female condom compared to the male condom attributed to erratic availability (NAC, 2018). Other findings are that the female condom has not been adequately promoted and thus, information is not readily available in any form of media (NAC, 2018). Hence, NAC recommended that Zambia needed to do more to ensure that female condoms were easily accessible**.**

According to the MoH (2021), majority of women suffered a disproportionate impact of HIV/AIDS. The Ministry went on to say that these conditions had implications for the well-being of women because the female condoms are the only technology available that women could use as an alternative to the male condoms. Although the Zambian government has demonstrated a strong commitment to expanding family planning services; consistent overall female condom use is low (Central Statistics Agency [ZamStat], 2022. In an attempt to improve utilisation of the female condom, the 2014 Zambia Demographic Health Survey (ZDHS) report revealed that the Zambian government through the Ministry of Gender (MoG) was committed to protecting women's rights, fight gender based violence (GBV) and reduce gender inequalities by conducting national promotional campaigns that helped to identify successful approaches, and altering the social environment that might support female condom uptake (Central Statistical Office [CSO], 2014)

Despite the knowledge about female condoms being almost universal, its utilisation among women is still low (UNFPA, 2019). Zambia in 2019 hosted a media round table discussion, which attracted both local and international influential media professionals covering public health, and development of foreign affairs issues to provide guidelines and tools that would bring the female condom into their reporting (UNFPA, 2019). This was in order to increase awareness of its benefits and putting women's health first. According to UNFPA (2019) only 40 to 50 million female condoms were being procured every year and distributed worldwide. This is a small number to cater for all the women in the world. If female condoms are provided in sufficient quantities, with proper education on their use, women and couples would have more options for protection against STIs and unwanted pregnancies, and thus saving lives in the process. In line with policies and guidelines on family planning use in Zambia, Chainda health centre in Lusaka district provides different types of family planning services, including the female condom. However, among the family planning services being provided, the female condom has remained to be the least choice among both married and unmarried women (Lusaka District Health Office [LDHO], 2018).

1.2 Statement of the Problem

Chainda Health Centre staffs in Lusaka are dedicated to providing information, education, and communication (IEC) regarding various family planning services, both on-site and during community outreach efforts. However, an analysis of data obtained from LDHO revealed a significant disparity in the utilisation of family planning methods, with the female condom consistently ranking as the least preferred option, as depicted in Table 1. The factors underpinning this striking preference discrepancy were unclear, prompting the initiation of this study. Beyond this, it was crucial to highlight the potential consequences of not using a female condom, including heightened risks of unintended pregnancies and STIs. This is of paramount importance due to its direct impact on public health and individual well-being. Furthermore, the financial costs associated with inadequate utilisation of female condoms, such as increased healthcare expenditures for treating unintended pregnancies and STIs, underscore the urgency of addressing this problem. The research aimed to shed light on utilisation of female condoms, ultimately contributing valuable insights to enhance family planning programmes, reduce healthcare costs, and improve the overall sexual and reproductive health outcomes in the catchment area.

Table 1: Chainda Health Centre Family Planning.

Methods	**2018**	**2019**	**2020**
Intrauterine contraceptive device	330/1000 (33%)	340 / 1000 (34 %)	440 /1200 (37 %)
Jadelle	1290/1500 (86%)	1092/1300 (84 %)	750 /1000 (75 %)
Depo Provera	2000 / 2000 (100%)	2000 / 2000 (100%)	1500 / 1500 (100%)
Noristerent	1080 /1200 (90%)	840/1000 (84 %)	730 / 1000 (73 %)
Microgynon	2412 /3600 (67%) (1200 boxes*3cycles each)	1728/2400 (72%) (800 boxes*3cycles each)	636/1200 (53 %) (400 boxes*3cycles each)
Microlut	1134 /1800 (63 %) (600 boxes*3cycles each)	4243/900 (47 %) (300 boxes*3cycles each)	123 / 300 (41 %) (100 boxes*3cycles each)
Male condom	50boxes*144 pieces each =7200 (100%)	30boxes*144 pieces each =4320 (100 %)	30boxes*144 pieces each =4320 (100 %)
Female condom	28 /500 pieces (5.6 %)	34/472 pieces (7.2 %)	14/400 pieces (3.5 %)

Source: (lDHO, 2020)

1.3 Conceptual Framework

The Health Belief Model (HBM) was used to guide this study which sought to determine factors associated with, utilisation of female condom by women in Chainda catchment area.The HBM was developed in the 1950s by social psychologists Rosenstock, Hochbaum and Kegeles (Leventhal, 2016). It is described as a tool that can be used to explain and predict health behaviours, focusing on attitudes and beliefs of individuals (Glanz *et al*., 2008). Based on the model, an individual's willingness to change behavior, and follow health recommendations is determined by personal beliefs or perceptions about a disease (Boskey, 2010). The theory has six major constructs that play important roles in influencing people's decisions, and these include:

- Perceived susceptibility
- Perceived severity
- Perceived benefits
- Perceived barriers
- Cue to Action
- Self

1.3.1 Application of the Model to the Study.

a. Perceived Susceptibility

Personal risk or susceptibility is one of the more powerful perceptions in prompting individuals to adopt healthier behaviour or undertake risk-prevention measures (Boskey, 2010). This implies that the greater the perceived risk, the greater the likelihood of engaging in behaviours that decrease the risk. The concept of perceived susceptibility is a powerful motivator when it comes to encouraging individuals, particularly women, to adopt healthier behavior, like using female condoms. To promote female condoms effectively, it's crucial to address individuals' perceptions of their personal risk, provide education and information, and create an environment that supports the use of female condoms as an important protective measure against unwanted pregnancies and STIs.

Perceived Seriousness

This construct is about an individual's belief about the gravity or severity of a disease and its consequences (Clark et al., 2009). This implies that if women believe that not using the female condom can expose them to threats such as HIV/AIDS, STIs, unplanned and unwanted pregnancies etc. then they will be prompted to utilise the method.

Perceived Benefits

The construct relates to an individual's opinion about the value or usefulness of a new behaviour in decreasing the risk of developing a disease (Boskey, 2010). Individuals adopt healthier behaviours when they believe the behaviours will decrease their risk of developing a disease. In relation to this study, women are expected to utilise the female condom when they understand the family planning method's benefits, such as prevention from STIs and unwanted pregnancies.

Perceived Barriers

For a new behaviour to be adopted, an individual needs to believe that the benefits of the new behaviour outweigh the consequences of continuing the old behavior (Boskey, 2010) If many women in Chainda catchment area come to an understanding that the benefits of utilising the female condom outweigh the barriers, then they would be prompted to use the family planning method.

Cues to Action.

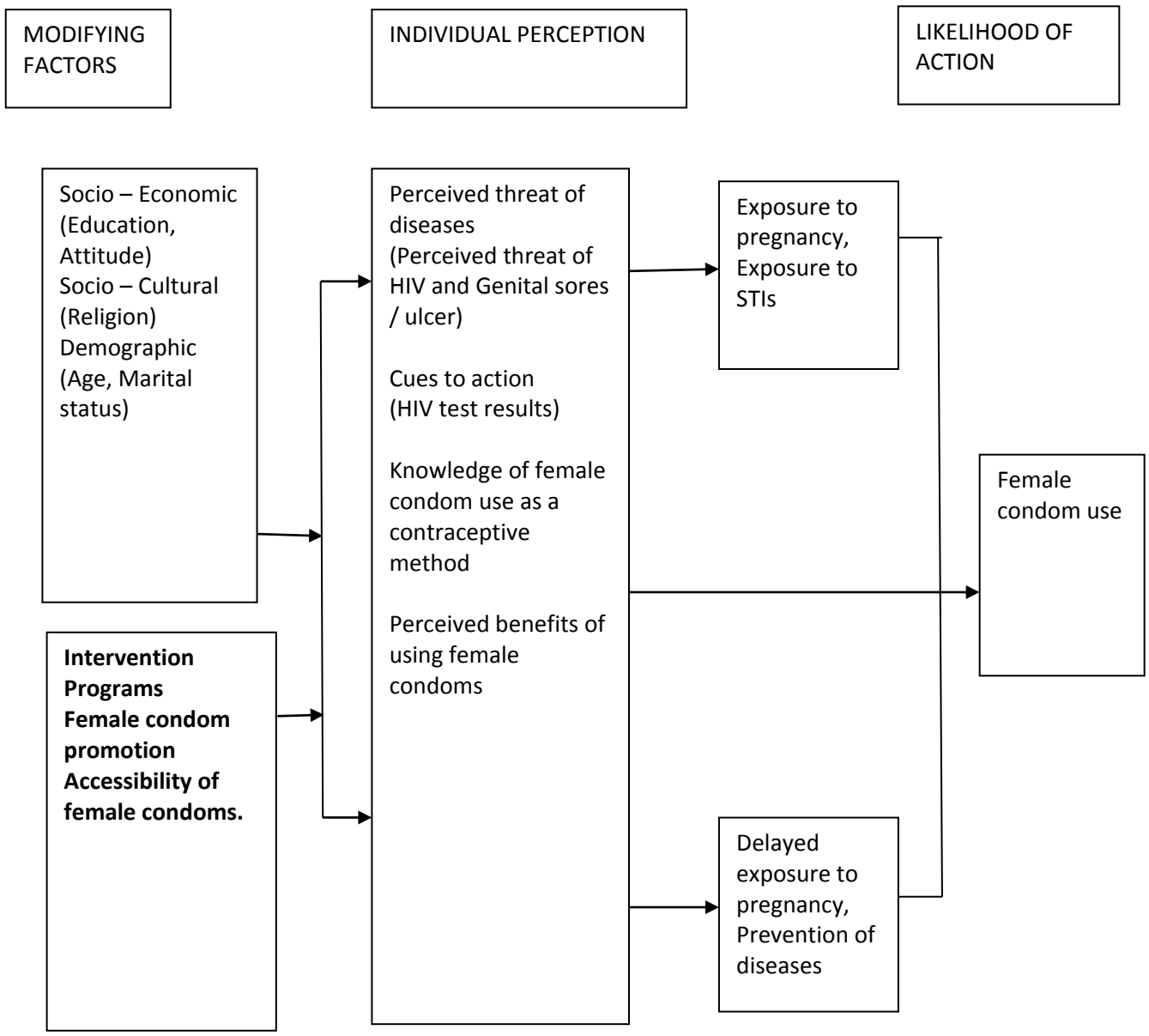
This refers to specific stimuli or cues that prompt individual to take action to reduce the threat of illness. These cues can be internal (such as personal experience or symptoms) or external (such as media messages, health education or physician recommendations). This implies that individuals are more likely to take preventive health actions if they perceive a specific cue or stimuli that prompt them to do so (Rosenstock *et al.,* 1960).

In this construct, women will be able to utilise the female condom or make decision to change behavior after receiving information on female condom use as a contraceptive method; this could be through the media, posters, and from healthcare workers such as doctors, midwives and nurses.

Self-efficacy

In this construct an individual sets higher goals and becomes more committed and their behaviour becomes more favourable (Bandura, 2004). Women would be confident to use female condoms and successfully negotiate the use if they are backed by information.

1.3.2 Modified Conceptual Framework (Adapted From the Health Belief Model)



1.4 Justification of the Study

A successful promotion and sustained use of female condoms necessitates ongoing support and collaboration from a diverse array of stakeholders, encompassing government bodies, community leaders, religious institutions, community-based organizations, peer educators, and potential users. The findings from this study offer valuable insights into the utilization of female condoms among female residents in the Chainda catchment area. These insights serve as a foundation for healthcare providers, especially those offering family planning services within the Chainda catchment area, to formulate improved strategies for the delivery of this essential service, including the development of more effective social marketing approaches. As a result, it is anticipated that the female condom will emerge as a preferred family planning choice for a larger portion of clients, subsequently leading to a reduction in unwanted pregnancies and a decrease in cases of sexually transmitted infections (STIs) within the catchment area. Key strategies emerging from the study for health workers include targeted education and awareness campaigns, involving community leaders and the church in advocacy efforts, ensuring the availability and affordability of female condoms, and fostering a supportive and non-judgmental environment for potential users seeking family planning services.

1.5 Objectives

1.5.1 General Objective

The general objective of this study was to determine factors associated with utilisation of the female condom among women in Chainda catchment area

1.5.2 Specific Objectives

The specific objectives were to:

a. Assess knowledge levels of women in Chainda catchment area regarding utilisation of the female condom

b. Appraise women of Chainda catchment area's attitude towards utilisation of the female condom as a family planning method of choice

c. Evaluate women of Chainda catchment area's practices in relation to utilisation of the female condom as a family planning method of choice.

d. Investigate the factors influencing the utilisation of the female condom among women in the Chainda catchment area, with a focus on identifying barriers and facilitators.

1.6 Research Question

What are the factors associated with utilisation of the female condom by women in Chainda catchment area?

1.7 Conceptual Definition of Terms

Female condom - female condom is a barrier method of contraception worn inside the vagina (WHO, 2010)

Availability: It refers to the degree to which a particular resource, such as information or physical asset, is accessible or obtainable when needed (Oxford Dictionary, 2022).

Knowledge: Understanding, awareness, and information that an individual or organisation possesses about a particular subject or area (Oxford Dictionary, 2023)

Attitude: It refers to a person's or organisations mental or emotional disposition towards a particular idea, object, or situation (Collins English dictionary, 2024).

Utilisation: It means effective and efficient use of resources to achieve a particular goal or objective (WHO, 2024).

Cost: The value of something in terms of the resources that must be given up to obtain it (Oxford Dictionary, 2022).

1.8 Operational Definition of Terms

Female condom - Female condom is a device that is used during sexual intercourse as a barrier contraceptive to reduce the risk of STI and unintended pregnancy

Knowledge – It is understanding of information about a subject which has been obtained by experience or study, and which is either in a person's mind or possessed by people generally.

Attitude – Attitude refers to an individual's perspective, feelings, or emotions towards something.

Utilisation – An act of using or employ something for a specific purpose.

1.9 Variables

The dependent and independent variables that were used in this study were:

1.9.1 Dependent Variable

The dependent variable for this study was utilisation of the female condom.

1.9.2 Independent Variables

The independent variables were:

- Knowledge
- Attitudes
- Cost of female condom
- Demographic characteristics such as age, Marital status, Education level
- Service related factors e.g. availability of female condom

1.10 Variable, Indicator and Cut off Points

Variable	Indicator	Cut off point	Question No
Dependent Variable Utilisation	 Agree Disagree	Scores of 20 -10 Scores of 9 and below	9-12
Independent Variables Knowledge	 High Medium Low	 Scores of 25-20 on knowledge questions Scores of 19-13 on knowledge questions Scores of 12 and below on knowledge questions	13-17
Attitude	Positive Negative	Scores of 90 to 45 on attitude questions Scores of 44 and below on attitude questions	20-36
Availability of condom	Agree disagree	Score 1 Zero score	18
Cost of condoms	Agree Disagree	Score 1 Zero score	19

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This literature review delves into an in-depth exploration of factors influencing the accessibility and utilisation of the female condom, and it is structured under the following robust subheadings: Global Overview of Factors Impacting Access and Utilisation of the Female Condom, Understanding Knowledge Levels Concerning the Female Condom, Analysing Attitudes towards Female Condoms, and Examining the Practical Utilisation of Female Condoms. The sources of literature harnessed for this review encompass peer-reviewed journals, health facility registers, esteemed databases like PubMed and Google Scholar, and authoritative materials from the WHO. Notably, our review draws from a diverse spectrum of both qualitative and quantitative studies, thereby providing a comprehensive and commanding synthesis of existing knowledge on the subject matter. The overarching purpose of this literature review is to unearth the collective wisdom and insights already amassed, culminating in a panoramic understanding of the topic's current state of knowledge.

2.1 Global Overview of Factors That Affect Access and Utilisation of the Female Condom

In a study conducted in the United States (US), 409 women were recruited from selected family planning clinics in northern California in a randomised controlled trial (Mandy, 2020). In the study, women were randomly assigned and put in an experimental four session female condom skills training intervention in which all the participants received condom use instructions at baseline and male and female condoms. At about three and six months, all the women in the experimental group were found to be more likely to have used the female condom at least once in the prior three months than those in the comparison group. Among the reasons cited for high utilisation was knowledge of the female condom (Mandy, 2020). The study established that the increase in the percentage of sexual acts protected by female condoms from baseline to the six months follow-up was greater for the experimental group; the percentage of sexual acts during which any condom was employed was higher in the experimental group at six months; and use of the female condom was hampered by partners' negative attitudes, discomfort and a lack of knowledge about female condoms (Mandy, 2020).

In Brazil, a study conducted by Rodriguez (2010) found that many sex workers had a negative attitude towards the use of the female condom. The factors that were cited were: challenges inserting the condom dislike of the female condom by clients, and socio and cultural beliefs, such as female condoms may cause cancer. However, despite the challenges, the efficacy was found to be high if the device was used consistently and correctly (Rodriguez, 2010).

A study done by Paulo (2013) on factors that affect utilisation of the female condom among female University students in Jamaica found that a lack of knowledge about the female condom was one of the challenges. In the study, 30% of the women said the device was comfortable, about 20% said that the device had a negative impact on sexual mood, and 15% indicated that the device got easily torn. Despite the challenges that the female folks encountered in using it, they agreed that it helped prevent pregnancy and other STIs in women (Paulo, 2013).

2.3 Knowledge of the Female Condom

Mark *et al*., (2017) conducted a study on knowledge, acceptance and utilisation of the female condom among women of reproductive age in Ghana. The study findings revealed low level of female condom awareness, knowledge, acceptance and utilisation (Mark *et al.*, 2017). The researchers recommended the need for increased public education on the female condom and its benefits to women in preventing unwanted pregnancies and STIs. In East Africa, Tanzania a research conducted on knowledge, attitude and use of female condoms among female undergraduate students at the University of Dar-es-Salaam showed that 96.6% of the students had heard about female condoms, and out of 371 students, 73% heard from the mass media, 15.4% heard from health care providers, 4.31% admitted to have used the female condom at least once, 12% did not like the female condom, 26.7% preferred female condom as a means of HIV and STIs prevention, and 46% had positive attitudes towards use of the female condom compared to the male condom (Mtayangulwa & Kayombo, 2015).

Research conducted in the Sub-Saharan region and other parts of the world have identified several factors associated with the acceptance and utilisation of the female condom among women of reproductive age.

For example, a research conducted by Chipfuwa *et al.*, (2014) on levels of awareness and uptake of the female condom in women aged 18 to 49 years in Zimbabwe revealed that there was generally low level of knowledge about the female condom

among Zimbabwean women of reproductive age; 36.3% had low knowledge of the female condom, 54% had negative attitudes towards using it as a method of HIV prevention, and 83.5% reported to have never used the contraceptive device. The study further revealed that unavailability of the female condom and male partners' refusals were the key determinants of use. These results were supported by findings from a study on Dominican sex workers in which clients and their partners revealed that male partner objection was the most common factor preventing initial and continued use of the female condom (Van Dijk et al., 2013). In a study on prevalence of knowledge and use of the female condom in South Africa, low usage of the female condom was reported among South African women over 15 years of age despite high knowledge of the female condom (Guerra & Simbayi, 2014).

Mbarushimana & Ntaganira, (2013) conducted a study on knowledge and attitude towards female condom use among undergraduates at Kigali Health Institute. The study revealed that 79% of the students were aware of the female condom, but only 24% knew how to use the device. Most students (78%) believed that the female condom could prevent unplanned pregnancies, and 81% believed that it could prevent STIs and HIV. Mbarushimana & Ntaganira (2013), went on to say that 8% of the students had never tried to use the female condom, and less than 3% cited it as their contraceptive method. The study further reported that, female condom awareness was high, but few students knew how to use the female condom (Mbarushimana & Ntaganira, 2013).

A research conducted in Kumba, Cameroon on knowledge, attitudes and utilisation of the female condom among high school female students revealed that 67.3% of the students knew about female condoms and 75.6% knew that correct and consistent use of female condoms during sexual intercourse could prevent HIV transmission; however, lack of knowledge on how to correctly fit the female condom was seen in 68.1% of the students in which case, 64.8% of students' main source of information with regards to female condom was through mass media, television, radio, magazine and newspaper (Tarkang & Bain, 2014).

The health providers who were expected to take a leading role on education and dissemination of information on the female condom were among the least sources of information at about 13%.

Tarkang & Bain, (2014) further revealed that only 38.7% of the female students felt that female condoms were readily available and the percentage from sexually experienced female students who had never used a female condom during sexual intercourse was as low as 8% (Tarkang & Bain, 2014).

2.4 Attitudes towards Female Condoms

A study on awareness, acceptability, and use of female condoms among university students in Nigeria: implications for STI/HIV prevention by Tobin-West et al., (2014) revealed that despite good knowledge of the existence of female condoms and the advantages they offer, their acceptability and use among young people has remained poor, especially among youths in tertiary institutions in Nigeria. Tobin-West, *et al*., (2014) revealed that 89.3% of the students were aware of female condoms, but only 8.9% had ever used one due to unavailability, high cost and difficulty with its insertion. Nevertheless 53.8% of the students expressed willingness to use female condoms if offered, while 69.4% would recommend the female condoms to friends and peers (Tobin-West *et al*., 2021). The researchers recommended deliberate efforts using social marketing strategies, youth – friendly publicity, and peer education to be exerted to provide affordable female condoms and promote usage.

Sobze *et al*., (2013) conducted a study on condom perceptions and prevention of HIV/AIDS infection in Cameroon: appraisal of knowledge, attitudes and practices among level one students of the University of Dschang. The study revealed that 75.7% of the students were aware of the female condom, 34.5% failed to use the condom during sexual intercourse, and 69% were not in favour of the use of the female condom due to decreasing sexual pleasure (Sobze *et al*, 2013). Despite the existing knowledge, the perceptions of the female condom were still very poor among students, and lack of familiarity to the device both among female and male students was the major drawback (Sobze *et al.*, 2013).

2.5 Utilization of Female Condoms

A study among women of reproductive age in Ghana on the trends of contraceptive usage and practices showed that condom use was the least reported contraceptive practice, as most women preferred to use unobservable contraceptives such as Depot Medroxyprogesterone (Amu & Nyarko, 2013).

The study does not mention female condom utilisation, however it indicates that female condoms offer the safest and most effective protection against STIs and unwanted pregnancies.

Roth (2011) conducted a study on factors associated with female condom use in India. The study findings provided some insights on the need to address issues of privacy regarding female condom purchase and use. Lack of privacy in many stores and the social stigma associated with female condom use were indicated as the most significant factors associated with its use (Ross, 2011).

UNAIDS (2006), concluded from available literature that despite efforts to empower women through female condom use, they may still not be able to negotiate for its use with their sexual partners. Collumbien *et al*., (2012), conducted a cross-sectional population-based survey in four coastal districts of Orissa, a state in India with poor reproductive health and low use of female condoms among married women. Among 2,087 men aged 18-35 years, female condoms were used during 2% of marital sex acts and 10% of non-marital sex acts (Collumbien *et al*., 2012). The conclusions were that female condoms should be promoted differently among different target groups as an effective way to prevent HIV and STIs among the minority of men who engage in high-risk sexual behaviours, and as a means of preventing pregnancy (Collumbien *et al*., 2012).

A study by Tobin-West *et al.,* (2013) showed discordance between awareness and the use of female condoms. Most of the students in the study had heard about the female condom and its benefits in protecting individuals against STIs and unwanted pregnancies, however, only a few had ever used the method. The high level of awareness about female condoms did not translate into positive attitudes towards use (Tobin-West *et al.*, 2013). A study by Mtayangulwa & Kayombo (2015), among female undergraduate students in Tanzania showed that only 4.3% had ever used the female condom as prevention against HIV, STIs and unwanted pregnancy.

Kamya and Limwame (2013), conducted a study on factors associated with female condom use in an urban village of Kampala, Uganda, which revealed that consistent female condom use was one of the lowest at about 1%. The study further revealed that lack of education about proper use and effectiveness of female condoms was a major problem.

Participants did not use the female condom as they believed that it could disappear inside a woman and thus, she had to be operated on for it to be removed. They also believed that female condoms have small holes that could allow a germ to go through (Kamya & Limwame, 2013). These finding revealed misconceptions on the part of the users and local communities to have influenced the use of female condoms. A study in Zimbabwe found that women and men were reluctant to use the female condom due to its perceived low effectiveness for STI and also because of low perceived risk of contracting HIV/AIDS (Dominique & Richte, 2012). The researchers went on to state that lack of easy availability and a reliable supply of quality condoms were some of the factors associated with lower utilisation among couples in Zimbabwe as the ability to practice safer sex depends on confidence, communication and trust in the partner and the relationship (Dominique & Richte, 2012).

In Cambodia, women feel reluctant to speak to their partners about protection, as partners object use of female condoms (Busza & Baker, 2013). In addition there is still stigma associated with female condoms due to the fact that women face challenges in most African societies with regard to making decisions regarding safer sex (Elliot & James, 2013). A survey conducted by the NAC (2014) revealed that female condom use in Zambia is still very low. The survey aimed at identifying factors that are impeding the use of the female condom and suggest strategies that can increase its use. According to the findings of the survey, the low use was attributed to the female condom not being readily available as compared to the male condom, and other findings were that the female condom was not readily promoted and information on it was not readily available in any form of media (NAC, 2014).

2.6 Summary

The accessed literature revealed that despite the knowledge of the female condom being universal and the efforts to empower women through its use, its usage was generally low.

Studies indicated that condoms were effective in reducing the incidence of unwanted pregnancies including associated complications and the transmission of HIV (Amu & Nyarko, 2013; Paulo, 2013; Rodriguez, 2010; Mark *et al.,* 2017). Having low knowledge on the usage and benefits of female condoms amounted to low utilisation. (Mandy, 2015; Mtayangulwa & Kayombo, 2015; Mark, *et al.,* 2015; Chipfuwa *et al*., 2014; Guerra & Simbayi, 2014). Other studies however found that despite having adequate knowledge, utilisation was low (Sobze *et al.,* 2013; Mbarushimana & Ntaganira, 2013; Tarkang & Bain, 2014). According to literature searched knowledge was an important factor associated with utilisation of female condoms. Having high level of awareness about female condoms did not translate into positive attitudes towards use (Tobin-West *et al.,* 2013). Studies have shown that attitudes are an independent and important factor to utilisation of female condoms.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

This study utilised a mixed-methods approach to investigate the utilisation of female condoms by women in the Chainda catchment area of Lusaka District, Zambia. Quantitative data was collected through structured questionnaires administered to a representative sample of women aged 18-49 years, providing statistical insights into usage patterns and demographic factors. Complementing this, qualitative data were gathered through focused group discussions and in-depth interviews, offering a deeper understanding of the personal experiences, cultural beliefs, and social dynamics that influence female condom use. This integrated approach ensured a comprehensive analysis of both the prevalence and the contextual factors affecting female condom utilisation in the community.

3.1 Research Setting and Study Population

The study was conducted at Chainda health facility, situated in the eastern part of Lusaka, approximately 26km from the city center and 24km from LDHO, and 3km from Great East Road (Ministry of Lands, 2018). The clinic shares boundaries with Chelstone and St Agnes clinics and serves a catchment population of 55,818 (CSO, 2019). Women aged 15 to 49 years old residing in the Chainda catchment area of Lusaka District constituted the study population, with a specific focus on those seeking family planning services from Chainda health facility.

3.2 Research Approach

A research approach was outlined, encompassing procedures, assumptions, and specifics of data gathering techniques. It comprised two major categories, deductive and inductive, and also included abduction (Bryman & Bell, 2015). The study generated new findings and transitioned from generic to particular, and simultaneously from particular to generic, in examining the utilisation of female condoms by women in the Chainda catchment area of Lusaka District, Zambia. The research used a survey method, collecting data through structured questionnaires and semi-structured interviews. This mixed-methods approach, incorporating both deductive and inductive elements, allowed for a detailed examination of statistical trends in female condom use and exploration of specific personal experiences and social influences that impacted this usage.

3.3 Deductive and Inductive

This research was developed using both deductive and inductive methods. The deductive approach began with a theoretical hypothesis and subsequently gathered data from the sample to construct findings on the utilisation of female condoms by women in the Chainda catchment area of Lusaka District, Zambia. The deductive method included constructing hypotheses based on current literature and validating them through quantitative data gathering and evaluation, examining the theoretical connections influencing female condom use. Concurrently, the inductive approach involved collecting qualitative data via observations and interviews to gain insights into the personal narratives and views of women regarding female condom usage. Ultimately, this contributed to conceptual development and improvement. Combining both methods offered a thorough comprehension of the study subject by triangulating results and providing a rich evaluation through the complementary strengths of quantitative and qualitative data (Burney & Saleem, 2008).

3.4 Methodological Choice

This research utilised a mixed-methods approach, incorporating both qualitative and quantitative methods. Mixed research involved the collection, evaluation, and explanation of quantitative and qualitative elements within a single study to achieve a comprehensive understanding (Cameron, 2015). Women in the Chainda catchment area of Lusaka District were the target for data gathering and were included in this study based on the required sample size. Quantitative methods involved structured questionnaires to gather statistical data on the utilisation of female condoms. Concurrently, qualitative methods involved semi-structured interviews to gain deeper insights into personal experiences, cultural beliefs, and social dynamics influencing female condom use. This approach ensured a robust analysis by triangulating results, combining the numerical data from surveys with the rich, detailed narratives from interviews. This mixed-methods approach was well-suited for examining the utilisation of female condoms, as it allowed for a comprehensive understanding of both the prevalence and the contextual factors affecting their use in the Chainda catchment area.

3.5 Time Horizon

The study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, a cross-sectional study design was employed. This design involved collecting data at a single point in time from a sample of women within the study area to address the research question. Cross-sectional studies are observational in nature and measure both exposures and outcomes simultaneously for participants, as noted by Setia (2016). This approach was chosen because it was cost-effective and efficient, allowing for timely data collection without the need for repeated measurements over an extended period, which is characteristic of longitudinal research designs (Ployhart & Vandenberg, 2010). Moreover, a cross-sectional design was well-suited to our research objectives and framework, as it focused on understanding current practices and perceptions related to female condom use among women in the Chainda catchment area, without requiring behavioral comparisons over time.

3.6 Qualitative Data Collection Techniques

The study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, qualitative data was collected through semi-structured interviews. This method was chosen to allow flexibility in gathering insights from participants regarding their attitudes, behaviors, and experiences related to female condom use. Unlike structured interviews, which follow a rigid format, semi-structured interviews involved a series of open-ended questions that facilitated deeper exploration of respondents' perspectives and allowed for follow-up inquiries to delve into specific aspects of their responses. The interview guide provided a framework for consistency while enabling the researcher to adapt and probe further based on participants' answers, aligning well with the exploratory nature of our research. Similar methods have been effective in related studies, such as those by Aman and Hussin (2018), which investigated comparable topics in similar settings, emphasising the effectiveness of semi-structured interviews in capturing in-depth insights from a targeted sample. In our research, interviews were administered by the researcher to ensure quality control and relevance to the research objectives, aiming to facilitate comprehensive data collection and analysis to understand the factors influencing female condom utilization in the Chainda catchment area.

3.7 Quantitative Data Collection Techniques

In our study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, quantitative data were collected using structured questionnaires. This method was chosen for its ability to efficiently gather standardized responses from a large sample of women in the study area. Structured questionnaires consist of predefined questions with a fixed format, ensuring consistency in data collection and making it easier to administer across a broad participant base. This approach was particularly suitable for our research, allowing for cost-effective data collection and facilitating straightforward analysis of responses concerning attitudes, behaviors, and factors influencing female condom use among women in Chainda. Similar methodologies have been successfully employed in related studies, such as Alsaif's (2016), research on the same topic under consideration, which utilized structured questionnaires to gather quantitative data and draw conclusions about female condoms. This methodological choice aligns with our aim to systematically explore and understand the complexities of female condom utilisation in our specific research context.

3.8 Sampling Plan - Qualitative Study

The qualitative study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, will employ a non-probability sampling method, specifically purposeful sampling. This approach is chosen for its suitability in selecting participants from the local community who can provide detailed insights into the factors influencing female condom use. By focusing on women in Chainda, the study aims to explore attitudes, behaviors, and socio-cultural determinants affecting condom adoption. This methodological choice is cost-effective and efficient, allowing the research to gather targeted data necessary for a thorough examination of female condom utilization patterns in the study area.

3.9 Sampling Plan - Quantitative Study

In our study focusing on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, a non-probability sampling method, specifically purposive sampling, was employed for the quantitative aspect.

This methodological choice was well-suited for selecting participants who could provide relevant and detailed information on female condom use within the specific community context. Purposive sampling ensured that women from diverse backgrounds and experiences within the Chainda catchment area were

included in the study, allowing for a comprehensive exploration of attitudes, behaviors, and socio-cultural factors influencing female condom utilisation. This approach facilitated the systematic selection of participants based on their relevance to the research objectives, ensuring the study's findings could be interpreted within the context of the local population's perspectives on female condom use.

3.10 Sample Size - Qualitative Study

According to statistics from the period 2020 to 2023 provided by local authorities, the Chainda catchment area in Lusaka District, Zambia, was home to approximately 400 women who were actively using or had access to female condoms. For the qualitative study on the utilisation of female condoms among women in this area, semi-structured interviews were conducted with a targeted sample size of 60 participants. This approach ensured a comprehensive exploration of attitudes, behaviors, and contextual factors that influenced female condom use. Therefore, the total sample size for the qualitative research in the Chainda catchment area was one hundred and twenty (120) women, selected to provide diverse perspectives and insights into the topic.

3.11 Sample Size-Quantitative Study

The total number of women who seek family planning services from the health facility exceeds 10,000; therefore, the sample size was obtained using Yamane *et al.* (1998) formula.

$N = Z2\ P\ (1 – P)/E2$

Where;

N = Sample size

Z = Standard normal deviation of 1.96 Corresponding to 95% confidence interval.

P = is the prevalence of female condom use will be taken as 0.5%

E = Standard error, which is 5%

$N = 1.962 \times 0.5\ (1 – 0.5)/0.052$

= 384

Thus, the sample size for quantitative component of this study was 384 respondents

3.12 Data Analysis

Data analysis methods defined in this section considered the design of the research. Since this was a mixed research, gaps from the quantitative research results are covered with the qualitative findings. The quantitative research was analysed using SPSS while the qualitative data was analysed using Google analytics. Quantitative research is the process of

collecting and analysing numeric data to find patterns and relationships between data variables while qualitative research is interpreting text and narrative findings (Creswell, 1998).The scale adopted for the Likert scales was five in order to increase response rate and also because it is mostly recommended by researchers. In this research 1 = "Strongly Disagree", 2 = "Disagree", 3 = "Neutral", 4 = "Agree", 5 = "Strongly Agree".

3.12.1 Quantitative Data Analysis

For the quantitative data analysis in our study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, descriptive statistics and frequency analysis were conducted using the SPSS statistical software package. This facilitated a comprehensive examination of data obtained from the sample. The analysis employed multivariate analysis tools to maximise a multiple-variable conceptual framework, specifically employing multivariate regression analysis to explore relationships between various factors influencing female condom use. This approach was chosen based on its ability, as highlighted by Murray (2014), to empirically test relationships among multiple variables within a complex framework.

3.12.2 Qualitative Data Analysis

The qualitative aspects of our research on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, were analysed through the interpretation of narratives obtained from semi-structured interviews. Textual data from interviews were transcribed using Amberscript for its efficient conversion capabilities and compatibility with data export to applications like Microsoft Excel.

Content Analysis was employed to systematically analyze and interpret the textual data, facilitated by Atlas.ti software, which supports in-depth qualitative data analysis. Additionally, graphical analysis using tools such as Google Analytics provided visual insights into trends and patterns related to attitudes, behaviors, and perceptions regarding female condom use among women in the study area. These analytical methods were crucial in uncovering and interpreting nuanced themes and findings derived from the qualitative data collected.

3.13. Reliability, Validity & Generalisability of Research Findings

3.13.1 Reliability

The research participants were informed of the purpose of the interviews and the need to respond truthfully. Additionally, a pilot study was conducted at Railway urban health Centre in order to examine accuracy of the questions, and elicit the information that was sought

Furthermore, corrections were made where necessary to make questions clear and provide information that was sought. The physical and psychological environment where data was collected was made comfortable by ensuring that there was privacy, confidentiality and general physical comfort

Ensuring the reliability of the data in our study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia, involved several strategies. Responses from structured questionnaires and semi-structured interviews were meticulously coded using SPSS to maintain consistency. Random samples of data were re-entered and cross-checked to ensure accuracy. Additionally, careful attention was paid to the wording of questions in both the questionnaire and interview schedule to minimize ambiguity and ensure clarity for participants (Bell & Waters, 2014).

3.13.2 Validity

To ensure validity, the research instrument was carefully evaluated by the researcher's supervisors. The research instrument was administered face to face by the researcher. Validity was ensured by accurate and careful phrasing of each question to avoid ambiguity and leading respondents to a particular answer

Validity in our research pertained to the extent to which our study design could credibly draw conclusions from the evidence gathered.

The researcher adhered to appropriate sampling procedures and employed data collection methods suitable for our research objectives. By designing our research as a survey, the researcher aimed to gather high-quality, context-specific data that accurately reflected the experiences and perspectives of women regarding female condom use in the Chainda catchment area. This approach ensured that our data could effectively measure and describe the phenomena under investigation (Bell & Waters, 2014).

3.13.3 Generalizability

Generalizability refers to the ability to apply research findings to other social contexts beyond the immediate study area. To enhance generalizability, our research utilised sampling techniques aimed at obtaining a representative sample of women within the Chainda catchment area. By employing random or probabilistic sampling methods, we sought to increase the likelihood that our findings could be extrapolated to similar populations or settings. This methodological choice was crucial in determining the broader applicability of our research findings beyond the specific study population (Bell & Waters, 2014).

3.14 Ethical & Access Issues

3.14.1 Accessibility

Accessibility was a critical consideration in our study on the utilisation of the female condom by women in the Chainda catchment area of Lusaka District, Zambia. Securing access to research sites and participants posed challenges, particularly due to gatekeepers who control entry and permissions. To address this, the researcher took a proactive approach by submitting formal written requests that clearly outlined the scope, objectives, and duration of the research. This upfront communication aimed to mitigate potential access barriers and ensure transparency in our research process, aligning with ethical standards and guidelines for conducting research (Creswell, 2014). By obtaining permissions and approvals in advance, the researcher sought to establish a cooperative relationship with gatekeepers and facilitate smooth access to the study sites and participants, thereby enhancing the credibility and ethical conduct of our research.

3.14.2 Research Ethics

The study followed the ethical principles guiding the use of human participants in research. Approval for the study was obtained from Excellence in Research Ethics and Science Converge (ERES) ethics Committee. The research requested written permission from National Health Research Authority – MoH, Lusaka District Health Director and the Medical Superintendent Chelstone Sub district.

Informed consent was obtained from respondents 18 years and above while assent was obtained from clients who were 15 – 17 years. The researcher emphasized voluntary participation, ensuring that individuals joined the study of their own accord without any form of coercion or inducement. Clear and comprehensive consent forms were provided to participants, outlining their rights and affirming their ability to withdraw from the study at any time without repercussions. To protect confidentiality, we used anonymised data collection methods and stored sensitive information securely, using codes or pseudonyms to replace personal identifiers. These ethical measures were essential in fostering trust and openness among participants, upholding their privacy, and ensuring the ethical conduct of our research in accordance with established guidelines.

3.15. Summary

This chapter explored the various research methodologies available and explained why those that have been chosen for the research were picked. Chapter Four will deal with the analysis of the findings of the research.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.0 Introduction

This chapter presents how the data were analyzed, and the findings of the study are presented in a summarized manner using frequency (1) tables, (2) pie charts, (3) graphs and (4) cross tabulations. This study is on utilisation of the female condom among women in Chainda catchment area of Lusaka district. This chapter will also discuss the Socio-demographic characteristics of respondent.

4.1 Data Processing and Analysis

4.1.1 Quantitative Study

4.1`.2 Data Processing Analysis

After data collection, the questionnaires were sorted, responses verified, coded and plotted on a data master sheet to allow for easier analysis. Questionnaire interviews data was entered in Microsoft excel for cleaning of data for any errors and later exported to SPSS V.23 for analysis. Each questionnaire was checked for completion. Closed ended questions were also coded and entered into the statistical package for social science (SPSS) version 23 for analysis. Chi-square test was also used to test association between the dependent variable and independent variables. The chi-square test was chosen for data analysis because it is well-suited for handling categorical data and assessing the association between different categorical variables. This statistical test is particularly valuable in cases where you are interested in determining if there is a significant relationship between your dependent and independent variables. It provides clear and easily interpretable results, making it a popular choice for many researchers. Given that your data likely includes responses from questionnaires and closed-ended questions, the chi-square test is well-suited for analysing the categorical nature of this data. Additionally, its compatibility with SPSS and its non-parametric nature make it a robust and versatile tool for a wide range of research scenarios, ensuring reliable and meaningful findings (Field, 2013).

4.1.2 Qualitative Study

Thematic analysis of data was used to analyse qualitative data and analysis of data occurred concurrently with data collection. It involved reading through a set of data and looking for patterns in the meaning of the data to find themes.

The themes that emerged during the discussions were (i) Knowledge about female condoms, (ii) Use of female condoms and (iii) Experiences of using female condoms.

Focus group discussion indicated high knowledge on both the benefits and usage of female condoms. The participants in the two separate focused group discussions indicated knowing the benefits of using female condoms both as a family planning method and as an option in the prevention against the transmission of HIV. The women responded in the affirmative to having learned about the benefit of female condom usage from the nursing staff during family planning clinic either at the center or in community during community outreach activities. They explained that the nursing staff took time to explain all the methods in family planning including female condoms. The participants had knowledge on how the condom was used. When asked, the participants explained correctly how to use the female condoms.

Participants said that the commodity was not consistently available at the facility. The none availability of the commodity prevented some of them from accessing it. They indicated that the commodity was available sometimes but it not being consistently there caused a disruption of the method hence they would opt for more consistent methods. Another set of women were not willing to access the commodity for fear of their spouses who would misunderstand. According to them, male spouses were not accorded the opportunity to be taught on the benefits of female condoms and hence they would be suspicious if the women came with condoms home. This made them to opt for alternative methods.

The attitude towards the use of female condoms as a family planning method and an HIV transmission option was mixed. Some women could not use the commodity because it was not available while others thought they may be in conflict with their spouse. Most of the women who feared the spouse had never had discussion concerning the usage of female condoms.

After data collection, the qualitative data from interviews were meticulously reviewed and organized. The responses were sorted and categorized into themes and sub-themes to facilitate a comprehensive analysis. Content analysis was employed to systematically interpret and code the textual data, allowing for the identification of patterns and significant themes. Initially, the data were transcribed and read multiple times to achieve a deep understanding. Key phrases and concepts were highlighted and coded, with similar codes grouped to form broader categories.

This process involved both inductive and deductive approaches, ensuring that emergent themes were captured while also aligning with predefined research objectives. The coded data were then analysed to draw meaningful conclusions, providing rich insights into the participants' perspectives and experiences. The systematic nature of content analysis ensures the reliability and validity of the qualitative findings; complementing the quantitative analysis performed using SPSS and the chi-square test.

4.2 Presentation Quantitative Findings

The data in this study is presented according to the sequence and sections in the interview schedule, Section A: Demographic data, Section B: Utilisation of female condom, Section C: Knowledge of female condom, Section D: Availability of female condom and Section E: Attitude towards female condom.

Frequency tables were presented for each of the independent variables to indicate proportions of categories within each respective variable.

The research results were presented in the forms of bar graphs, pie charts and frequency tables to summarize results of the study in a way that enables readers to understand findings easily.

Cross tabulations of variables were used to clearly show the relationship between variables. The tables and Charts have been clearly numbered and carefully labeled with self-explanatory headings.

FREQUENCY TABLES FOR THE VARIABLES

Utilisation of Female Condoms:	Number of respondents (n=384)
Yes	270
No	114
Total	384

Knowledge level	Number of respondents (n=384)
High	200
Moderate	120
Low	64
Total	384

Attitude towards female condoms	Number of respondents (n=384)
Positive	294
Negative	90
Total	384

Availability towards female condoms	Number of respondents (n=384)
Easily Available	244
Somewhat available	100
Not available	40
Total	384

4. 2.1 Socio-Demographic Characteristics of Respondents. (n=384)

4.2.2 Age

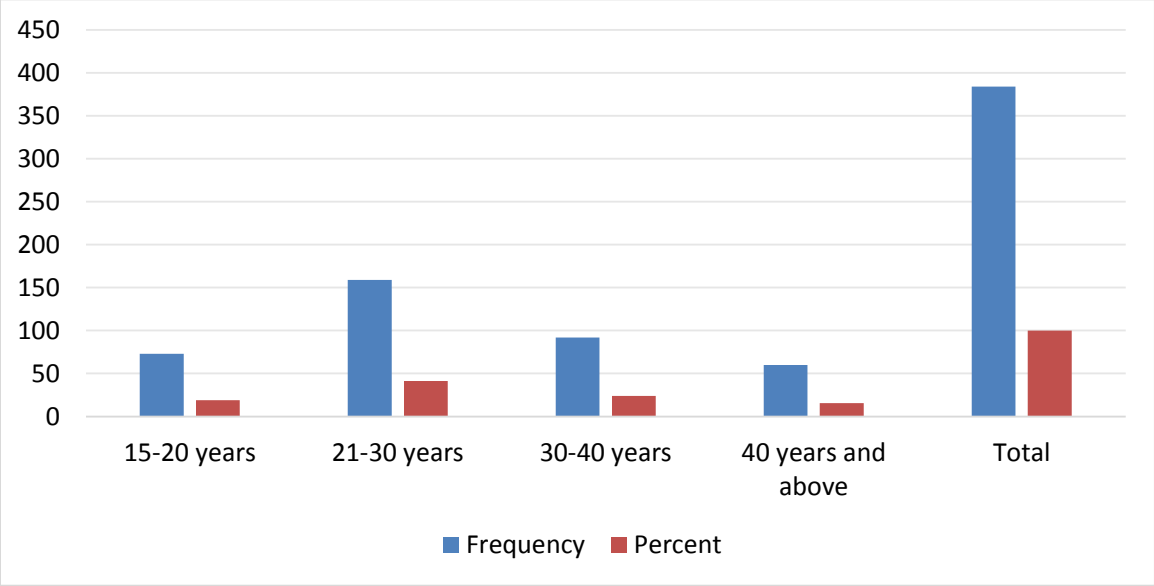


Figure 1.0: Age of Respondents

The age distribution of respondents in the study on the utilisation of the female condom by women in Chainda catchment area of Lusaka District, Zambia, reveals a diverse range of ages. The largest group of respondents, with a frequency of 41.4% (159), falls within the 21-30 years age range. This is followed by 24% (92) of respondents in the 30-40 years age range. The 15-20 years age groups were 19% (73) respondents while the smallest group, aged 40 years and above, consisted of 15.6% (60) respondents.

4.2.3 Marital Status (n=384)

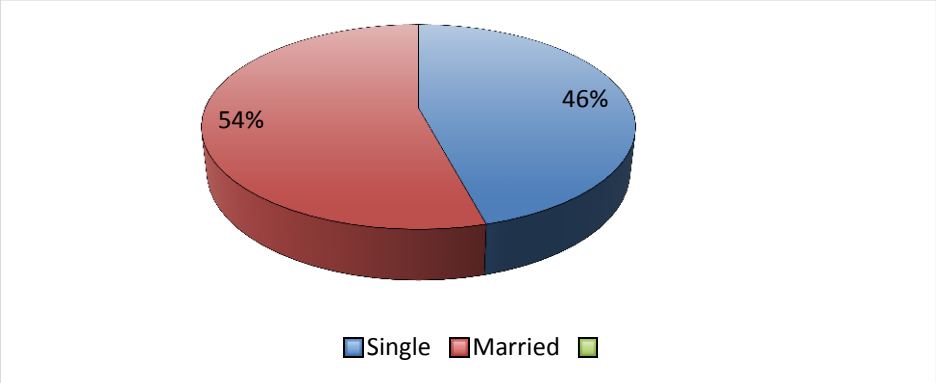


Figure1.1. Marital Status of Respondents

The marital status distribution revealed that the majority, 54.2% (208) were married. The remaining 45.8% (176) were single.

4.2.4 Number of Children (n=384)

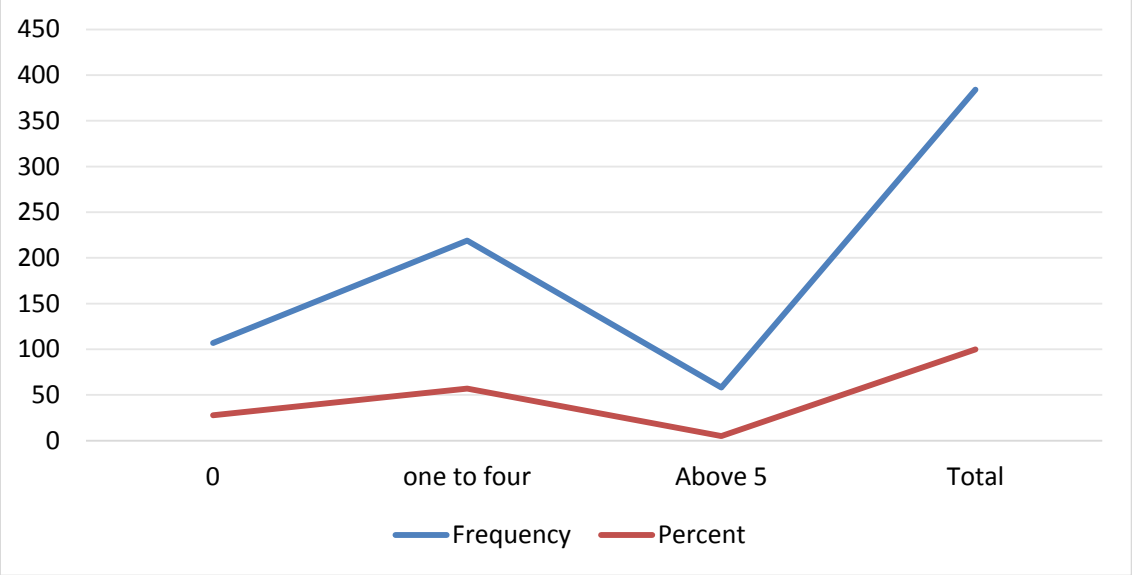


Figure 1.2: Number of Children of Respondents

The number of children distribution showed that majority, 57% (219) of the respondents have one to four children while those without children accounted for 27.9% (107) of the respondents. Smaller portions, 5.1% (58) had more than five children.

4.2.5 Year of the Last Child (n=384)

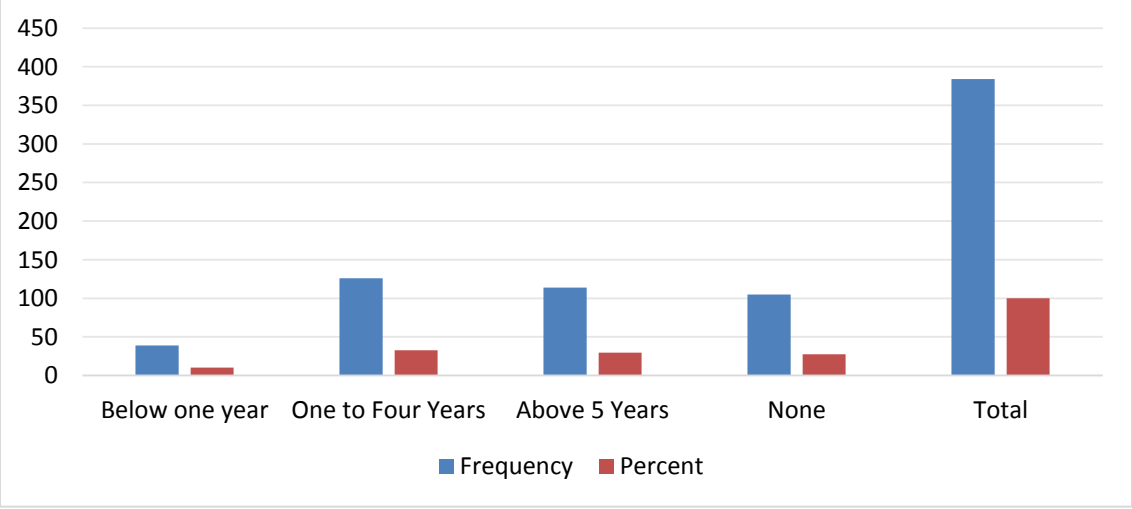


Figure 1.3: Year of last child of respondents

The distribution of the year of the last child indicates that the largest group, 32.8% (126), had their last child between one to four years ago. Those whose last child was born over five years ago were 29.7% (114). A smaller portion, 10.2% (39) had their last child less than one year ago. Additionally, 27.4% (105) respondents reported having no children.

4.2.6 Highest Level of Education (n=384)

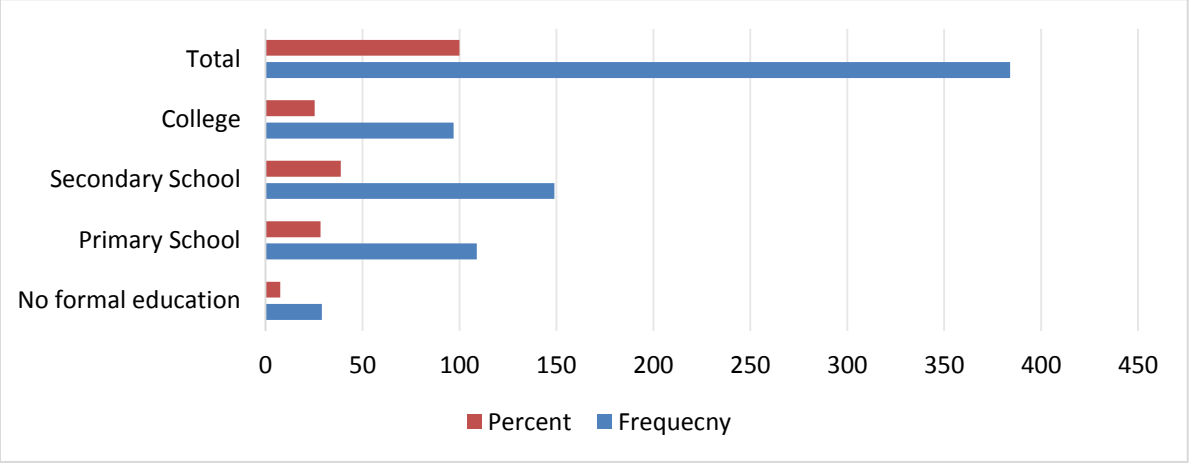


Figure 1.4: Highest level of education among respondents

The highest level of education among respondents showed that 38.8% (149) had completed secondary school. Those who completed primary school were 28.4% (109), while 25.3% (97) had attained a college education. A smaller group, 7.6% (29) reported having no formal education.

4.2.7 Employment Status (n=384)

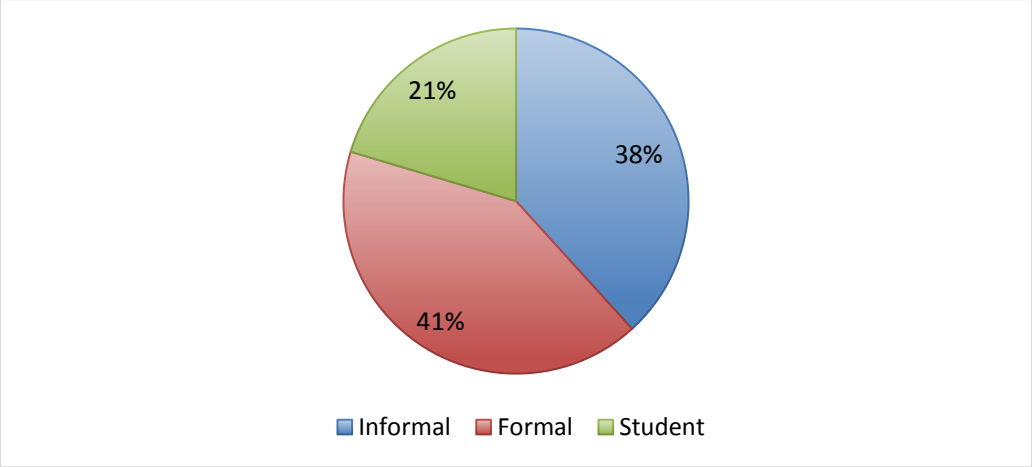


Figure 1.5: Employment Status of Respondents

The employment status indicated that 41.4% (159) were engaged in formal employment. Being in informal employment was reported by 38.3% (147), while 20.4% (78) were students.

4.2.8 Religion (n=384)

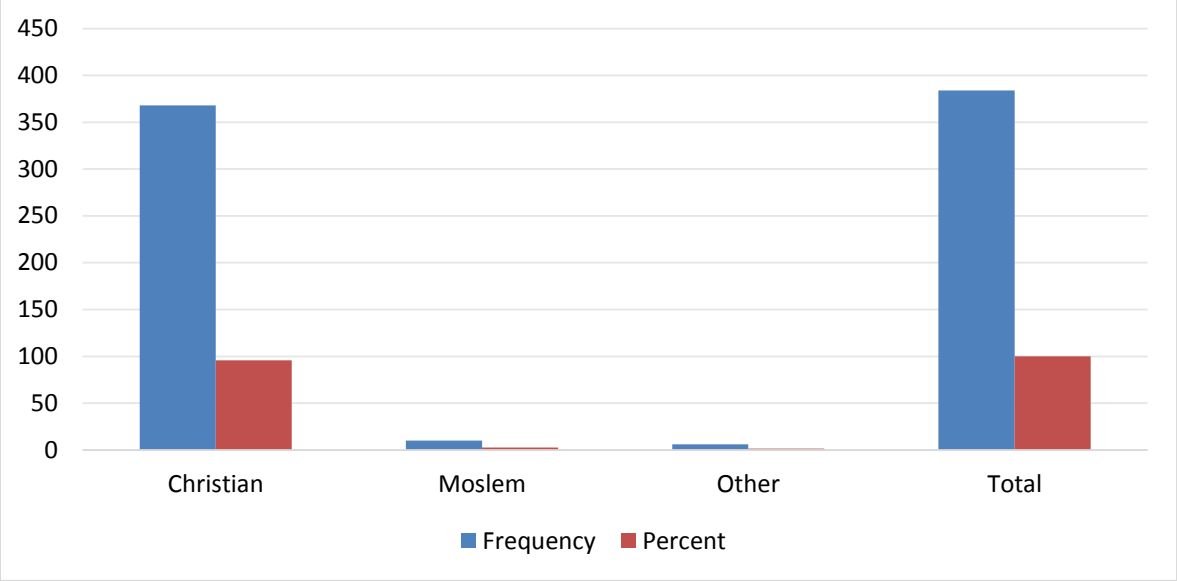


Figure 1.6: Religion of Respondents

Frequency and percentage distributions of religious affiliations indicated a predominantly Christian population of 95.8% (368). Muslims constituted a smaller proportion of 2.6% (10), while individuals identifying with other religions were 1.6% (6)

4.2.9 Utilisation of the Female Condom

Utilisation of the female condom was assessed using the following statements; I would use a female condom if I had sex with any sexual partner; I would use female condoms if I had sex with someone who told me that he has HIV/STIs; I would use female condom if I had sex with someone who has multiple sexual partners, and female condoms are easy to use.

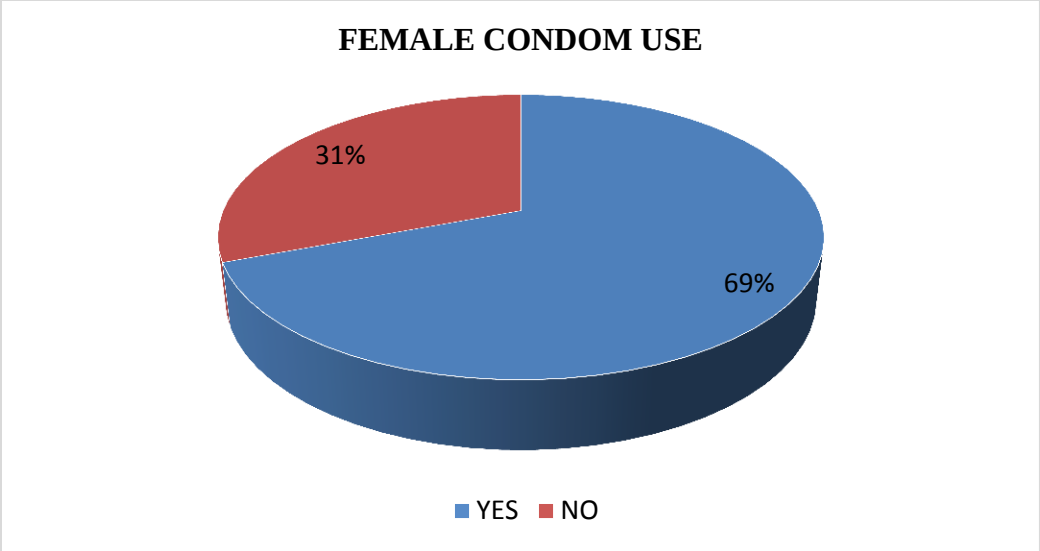


Figure 1: Female Condom use (n=384)

Figure 2 shows that 69.3% (266) of the women were of the view that female condoms were easy to use compared to the 30.7% (118) who were of the view that they were not easy to use.

Figure 2: Female condom use during sexual intercourse with any sexual partner. (n=384)

Figure 3 shows that 81.5% (313) would use the female condom when having sex with any partner compared to the 18.5% (71) who would not.

Table 4: Female condoms use with men who are HIV/ STIs positive (n=384)

Statement	Response	Frequency	Percent
I would use female condoms if I had sex with someone who told me that he has HIV/STIs.	Agree	173	45.1
	Disagree	40	10.4
	Somewhat Agree	9	2.3
	Strongly Agree	162	42.2
	Total	384	100

Table 4 shows that 10.4% (40) would not use a female condom if the male sexual partner disclosed that they had HIV/STIs while 45.1% (173) stated that they would use the female condom.

On the women using the female condom if their sex partner had many sexual partners, the responses are shown in Figure 4.

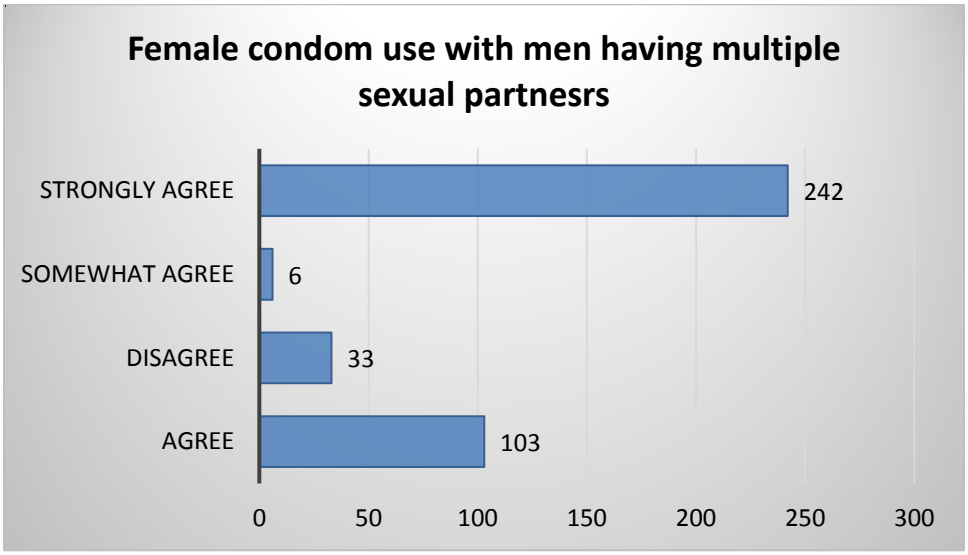


Figure 3: Female condom use with male partners having multiple sexual partners (n=384)

According to Figure 4, (91.4%) (351) respondents said that they would use a female condom when having sexual intercourse with a partner who has multiple sexual partners, while 8.6% (33) indicated that they would not.

4.3.0 Knowledge of Female Condom Use (n=384)

Table 5: Knowledge on female condom use

Statement	Response	Frequency	Percent
The benefits of using a female condom outweigh the cost of treating STIs or caring for unplanned child	Agree Disagree Somewhat agree Strongly agree	190 30 17 147	49.5 7.8 4.4 38.3
Using female condoms is part of taking care of my health	Agree Disagree Somewhat agree Strongly agree	190 13 9 172	49.5 3.4 2.3 44.8
If I have heard good things or information about female condoms, I would do everything I could to avoid STIs or unplanned pregnancies	Agree Disagree Somewhat agree Strongly agree	183 13 8 180	47.7 3.4 2.1 46.9
I feel confident to refuse sex with my partner(s) if they refuse to use condoms	Agree Disagree Somewhat agree Strongly agree	185 84 21 94	48.2 21.9 5.5 24.5
I believe I can recommend use of condoms to someone	Agree Disagree Somewhat agree Strongly agree	196 39 11 137	51.0 10.2 2.9 35.7

Regarding knowledge on female condom use, Table 5 shows that 92.2%(354) of the women knew that the benefits of using a female condom outweighed the cost of treating STIs and caring for an unplanned child,7.8% (30) disagreed while 4.4% (17) were not sure. Further, 96.6% (371) of the women knew that using female condom was part of taking care of their health, 2.3 % (9) were not sure while 3.4 % (13) disagreed. However 78.1% (300) of the women were confident that they would refuse to have sexual intercourse with their partner if they refused to use female condom, 5.5% (21) were not sure while 21.9% (84) said they would still go ahead and have sex even if their partner refused to use a female condom.

4.3.1 Affordability and Availability of the Female Condom

Availability of the female condoms was assessed by asking questions on cost and accessibility at the health facilities as shown in the Table 6 and Figure 5.

Table 6: Affordability of the female condom (n=384)

Statement	Response	Frequency	Percent
I believe a female condom is very expensive and this affects how often I use it	Agree	122	31.8
	Disagree	195	50.8
	Somewhat Agree	21	5.5
	Strongly Agree	46	12.0
	Total	384	100

From table 6 shows 43.8 % (168) of the women were of the view that female condoms were very expensive, 5.5 %(21) were not sure while 50.8 %(195) thought that female condoms were affordable.

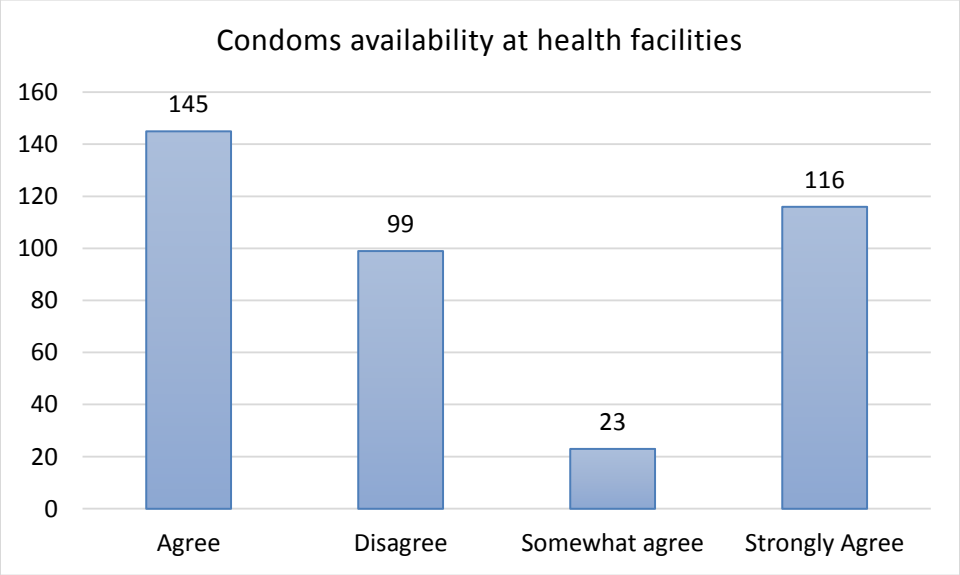


Figure 4 : Availability of the female condoms in health facilities (n=384)

Figure 5, 68% (261) of the women said that female condoms were available in health facilities, 6% (23) were not sure, 25.8% (99) said that female condoms were not available in health facilities while the other 0.3% (1) did not answer.**4.3.2 Attitudes towards Female Condom Use**

Attitudes towards female condom use are shown in the Table 7.

Table 7: The attitudes towards female condom use are shown in the table below (n=384)

STATEMENT	AGREE	DISAGREE	SOMEWHAT AGREE	STRONGLY AGREE	TOTAL
STIs and pregnancy possible for all including those who use female condoms	80	246	20	37	384
I believe that I will not get STIs or pregnant if I use if I use the condoms correctly	188	41	10	144	384
If I have heard good things or information about female condoms, i would do everything I could to avoid STIs and	201	65	18	99	384
I believe that if I use female condoms my spouse will end the relationship thinking I'm a prostitute	133	194	27	2	384
I believe my husband/partner would threaten to get a girlfriend or another wife If I use a condom during sexual intercourse with him	110	172	42	59	384
Female condoms have an unpleasant smell	86	214	56	28	384
Female condoms make noise when used during sexual intercourse	82	232	46	24	384
I believe my husband/partner would threaten to get a divorce if I use a condom during sexual intercourse with him	110	210	27	25	384
I believe the female condoms don't work well	79	251	29	25	384
Condom use decrease sexual pleasure	79	221	35	49	384
It would be difficult to insert a female condom because they are too big	113	179	28	64	384
It would be uncomfortable to wear a female condom	123	173	37	51	384
My partner objects female condom use during sexual intercourse	130	185	34	35	384
I believe there will be mistrust in our marriage/relationship if I use female condoms	145	171	36	35	384
I'm too young to wear a female condom	61	282	18	23	
Have you been able to ask your husband/partner to use a condom when having sex with you?	191	102	20	71	384
I believe my knowledge about the female condom affects how I view it.	180	121	21	62	384

According to Table 7, 78.1% (300) used female condoms to prevent STIs and pregnancies, and 63% (242) reported that knowledge about female condoms affected how they view the commodity. A further 34.6% (133) stated refusing to use the female condoms because their partner would think they are prostitutes, 44% (169) fearing their husbands would get a girlfriend if they used a female condom, 29.7% (114) said that female condoms had an unpleasant smell, and 43% (165) indicated that their partners object the use of female condoms.

4.3.3 Association Between different Variables

Chi-square test of association for categorical variables was used to test the associations between female condom utilisation, knowledge on female condoms, availability of female condoms and attitudes towards female condom use against demographic characteristics, as well as association between female condoms utilisation, knowledge on female condoms, availability of female condoms and attitudes towards female condom use.

Table 8: Association between utilisation of female condom and demographic characteristics (n = 384)

Variable	Category	n (%)	X^2	*p-Value*
Age	15 – 20 years	73 (19)		
	21 – 30 years	159 (41.4)	5.719	0.126
	30 - 40 years	92 (24)		
	40 years and above	60 (15.6)		
Marital status	Single	176 (45.8)	4.568	0.033
	Married	208 (54.2)		
Number of children	0	107 (27.9)	2.577	0.276
	1 – 4	219 (57)		
	Above 5	58 (15.1)		
Year of the last child	Below 1 year	39 (10.2)		
	1 - 4 years	126 (32.8)	1.020	0.796
	Above 5 years	114 (29.7)		
	None	105 (27.4)		
Highest level of education	No formal education	29 (7.6)		
	Primary School	109 (28.4)	1.942	0.585
	Secondary school	149 (38.8)		
	College	97 (25.3)		
Employment status	Informal	147 (38.3)		
	Formal	159 (41.4)	0.730	0.694
	Student	78 (20.4)		
Religion	Christian	368 (95.8)		
	Moslem	10 (2.6)	3.924	0.141
	Others	6 (1.6)		

Table 8 indicates that the association between female condom utilisation and marital status was statistically significant with p-value of 0.033. The rest of the associations were not significant.

Table 9: Association between knowledge on female condoms and socio-demographic characteristics

(n = 384)

Variable	**Category**	**n (%)**	***X^2***	***p-Value***
Age	15 – 20 years	73 (19)		
	21 – 30 years	159 (41.4)	14.238	0.027
	30 - 40 years	92 (24)		
	40 years and above	60 (15.6)		
Marital status	Single	176 (45.8)	3.139	0.208
	Married	208 (54.2)		
Number of children	0	107 (27.9)	13.568	0.009
	1 – 4	219 (57)		
	Above 5	58 (15.1)		
Year of the last child	Below 1 year	39 (10.2)		
	1 - 4 years	126 (32.8)	10.398	0.109
	Above 5 years	114 (29.7)		
	None	105 (27.4)		
Highest level of education	No formal education	29 (7.6)		
	Primary School	109 (28.4)	27.925	0.000
	Secondary school	149 (38.8)		
	College	97 (25.3)		
Employment status	Informal	147 (38.3)		
	Formal	159 (41.4)	6.843	0.144
	Student	78 (20.4)		
Religion	Christian	368 (95.8)		
	Moslem	10 (2.6)	4.309	0.366
	Others	6 (1.6)		

The association between knowledge on female condom and age (p-value = 0.027), number of children (p-value =0.009) and highest level of education (p-value = 0.000) was statistically significant.

Table 10: Association between availability of female condom and socio-demographic characteristics

(n = 384)

Variable	**Category**	**n (%)**	X^2	***p-Value***
Age	15 – 20 years	73 (19)		
	21 – 30 years	159 (41.4)	18.377	0.005
	30 - 40 years	92 (24)		
	40 years and above	60 (15.6)		
Marital status	Single	176 (45.8)	4.619	0.099
	Married	208 (54.2)		
Number of children	0	107 (27.9)	4.927	0.297
	1 – 4	219 (57)		
	Above 5	58 (15.1)		
Year of the last child	Below 1 year	39 (10.2)		
	1 - 4 years	126 (32.8)	9.045	0.171
	Above 5 years	114 (29.7)		
	None	105 (27.4)		
Highest level of education	No formal education	29 (7.6)		
	Primary School	109 (28.4)	3.948	0.684
	Secondary school	149 (38.8)		
	College	97 (25.3)		
Employment status	Informal	147 (38.3)		
	Formal	159 (41.4)	5.085	0.279
	Student	78 (20.4)		
Religion	Christian	368 (95.8)		
	Moslem	10 (2.6)	6.456	0.168
	Others	6 (1.6)		

The association between availability of female condom and age was statistically significant with a p-value = 0.005.

Table 11: Association between attitudes towards female condoms and socio-demographic characteristics

(n = 384)

Variable	**Category**	**n (%)**	X^2	***p-Value***
Age	15 – 20 years	73 (19)		
	21 – 30 years	159 (41.4)	2.136	0.545
	30 - 40 years	92 (24)		
	40 years and above	60 (15.6)		
Marital status	Single	176 (45.8)	0.438	0.508
	Married	208 (54.2)		
Number of children	0	107 (27.9)	4.623	0.099
	1 – 4	219 (57)		
	Above 5	58 (15.1)		
Year of the last child	Below 1 year	39 (10.2)		
	1 - 4 years	126 (32.8)	6.531	0.088
	Above 5 years	114 (29.7)		
	None	105 (27.4)		
Highest level of education	No formal education	29 (7.6)		
	Primary School	109 (28.4)	3.438	0.329
	Secondary school	149 (38.8)		
	College	97 (25.3)		
Employment status	Informal	147 (38.3)		
	Formal	159 (41.4)	6.094	0.047
	Student	78 (20.4)		
Religion	Christian	368 (95.8)		
	Moslem	10 (2.6)	1.364	0.506
	Others	6 (1.6)		

The association between attitudes towards female condoms and employment status was statistically significant with p-value =0.047.

4.3.4 Association between Knowledge, Availability and Attitude with Utilisation of Female Condom

Table 12: Association between utilisation of the female condom, Knowledge, availability and attitudes towards the female condom

Variable	**Category**	**Utilisation Score**		***X***	***p-Value***
		High	Low		
Knowledge	High	70	6	19.653	0.000
	Moderate	176	1		
	Low	171	0		
Availability	Never	33	4	18.490	0.000
	Sometimes	217	2		
	Always	177	1		
Attitudes	Positive	29	0	0.582	0.445
	Negative	348	7		

Table 12 shows that the association between utilisation of female condoms and knowledge as well as availability was statistically significant with a p-value of less than 0.0001

4.4. Presentation of Qualitative Findings

4.4.1 Demographic Characteristic of the FGD Participants.

Three FGDs, which comprised only of women within the reproductive age, were held at Chainda health Centre. The first FGD comprised of 10 participants aged 18 years to 24 years, the second comprised of 10 participants aged 25 years to 30 years and the third comprised of 10 participants above 30 years. These age groups were selected because they are within the child bearing ages; hence, expected to be using family planning methods. Those less than 18 years old were less likely to attend family planning services at Chainda clinic.

Three themes namely, (i) knowledge of female condom use, (ii) use of female condom (iii) experiences of using the female condom, (iv)Availability of female condom emerged from the FGD data and (v) Where can one get a female condom

Theme I: Knowledge of female condoms

The participants' knowledge and awareness of the female condoms were assessed and some said that they had heard about female condoms, while others said that female condoms prevented HIV and cancer.

"*Yes, what I know about the female condom is that it prevents from diseases"* Respondent 4.

"I just know that a female condom is a condom which is used by women" Respondent 1.

When asked on what messages they would give other women about female condoms? These were the responses;

"What I can tell them is that this female condom is good enough for using, because you will not be found with any problem, no matter how much sex you have, as long as you use it, you are protected" Respondent 2.

"They can tell the women to start using female condoms as prevention from diseases and unwanted pregnancies and she encouraged other women to try the female condom use to see its goodness" Respondent 18.

"I can tell them the goodness of a female condom, the way it is and what I have learnt about it" Respondent 9.

Theme (II): Use of female condoms

The use of female condoms as indicated in the FGDs was low. Most women said that they had never used a female condom before. A cross analysis of the three groups of women according to age, revealed that there was no major difference in the use of condoms. Only two participants reported using female condoms. Many women reported using other contraceptives methods instead of female condoms.

"I have only used pill" Respondent 5.

"It is just ok, because it will prevent you from having unplanned children" Respondent 12.

"I have never used it and I did not know how to use it" Respondent 1.

Theme (III): Experiences of using female condoms

Those who said had used female condoms before reported them to be fine. Some said that they could not feel the presence of the condom since it felt just like skin to skin.

"*It just feels normal, just the way we feel when doing normal sex. For this one, you actually feel morale when doing the act because there are no worries as compared to the normal sex. Normal sex there is so many dangers, with unprotected sex, us women can have cancer without knowing, you can't even know that you contracted HIV, STIs. So this condom prevents us from all these. Even cervical cancers, come from men, men give us, if we not use the female condoms, we are risking all these. We are to blame ourselves for not taking care of ourselves. We do not want to get what people teach us, so I saw the benefit in the condom"* Respondent 2.

"I never used to feel good, I used to feel pain and after I saw this one and the rings, I thought it would be worse and thought of using something else for family planning, so those of you who have an experience can tell us" Respondent 4.

"*I requested for one female condom after I learnt at one clinic to go and try at home, I told my husband that today it is me wearing a condom, I wore and used it. It just feels the same like skin"* Respondent 11.

"*I never used to feel good, I used to feel pain and after I saw this one and the rings, I thought it would be worse and thought of using something else for family planning, so those of you who have an experience can tell us"* Respondent 4

"The experience has just been ok, because we learnt from the clinic that using female condom does not only prevent pregnancy, but STIs and unplanned pregnancy, that is why I like it, otherwise if they were distributing here at the clinic, I would have been coming. But then it's once in a while, I just chance it; I come to the lab for some tests. I saw the goodness in the female condom because it prevents us from a lot of things. It's like anytime you want to have it (laughing)" Respondent 2.

Theme IV: Availability of female condom

The respondents were asked about whether female condoms were available in health facilities?

"Female condoms are available in hospitals and clinics if you ask from nurses and doctors and the last time I came to the clinic a nurse was teaching about female condoms being in clinics" Respondent 9

"I have never heard or seen a female condom. I only know of male condoms in all the clinics I have been to" Respondent 3

Theme V: Where can one get a female condom?

The respondents were asked about where they accessed female condoms. Most said that they were found at the health facility. However, there was contradicting views about that. Some said female condoms were rarely found at the health facilities.

"I have never used it before but I hear some people say it can be bought from drug stores or chemist" Respondent 6.

"I only use female condoms for family planning and I get them from the clinic, sometimes I buy if there are not there at the clinic since I have high blood pressure and I was advised at the clinic to use condoms or have a loop inserted, but because a hear people say a loop can disappear inside I decided to use female condoms and my husband also accepted since we were together when the nurse was teaching us" Respondent 7

CHAPTER FIVE: DISCUSSION OF FINDINGS

5.0 Introduction

This chapter discusses the findings of the study in relation to the research objectives and research questions. The findings are compared with existing published literature to offer context. The main objective of this study was to identify factors associated with utilisation of the female condom among women in the Chainda catchment area. To achieve this goal, the study laid out specific objectives: Firstly, it aimed to assess the knowledge levels of women in Chainda catchment area, concerning use of the female condom. Secondly, it sought to appraise the attitudes of women towards the female condom as a choice for family planning. Finally, the study aimed to evaluate the actual practices of women in Chainda catchment area in relation to using the female condom as their preferred method of family planning. Additionally, the research sought to investigate the factors influencing utilisation of the female condom, focusing on identifying both barriers and facilitators.

5.1 Sociodemographic characteristics of the respondents

The findings revealed that 41.4% (159) of the respondents were aged between 21 and 30 year and 54.2% (208) of the participants were married. Majority of the participants, 57% had at least one to four children and 32.8% (126) had their last child in the last one to four years. About 38.8 % (149) of the respondents had at least secondary education, 41% were in formal employment, and 95.8% were Christians (Table 3). In terms of demographic characteristics, it is noteworthy that the findings of this study regarding the age group of the respondents align with results from similar studies conducted in Zimbabwe, Ghana, and the United States, specifically among women aged 18 to 49 years (Ananga *et al.*, 2017; Chipfuwa *et al.*, 2014). This suggests a degree of consistency across these diverse geographical locations. The similarity mentioned relates to the age group of respondents in the study conducted in the Chainda catchment area. This suggests that in all these regions and populations, women within the specified age range have certain similarities in their characteristics and behaviors related to female condom utilisation.

However, it is worth mentioning that the study differs from other researches on female condom use, particularly those conducted on different populations.

For example, there are studies on condom use among secondary female students in Cameroon, as well as among youths in selected tertiary institutions in Kenya. These diverse studies suggest that, while age groups and regions may exhibit similarities in terms of female condom utilisation, variations can be observed when considering different target populations. Similarities in term of age groups and regions, but differences in the populations studied, highlight the need for tailored strategies in promoting female condom usage based on specific demographics and contexts.

5.2 Utilisation of Female Condom

This study identified high female condom utilization as the majority 69.3% (266) of the women in this study used the female condom during sexual intercourse (see figure 1, page 56). Moreover, female condom utilisation in this study was much higher than in the studies previously reported in the country. However, most women in the focus group discussion stated that they did not use the female condom during sexual intercourse.

Condom utilisation in this study was affected by factors such as having sex with any sexual partner, having sex with someone who told the women that he had HIV/STIs, having sex with someone who had multiple sexual partners, and because female condoms were very easy to use. The increase in female condom use as evidenced in this study can be attributed to policy reforms such as increasing the knowledge among the women on use of female condom as well as making the female condoms available. Over 90% of the participants indicated that the condoms were available and availability of condoms was directly linked to utilisation (Dominique & Richte, 2012), such that in situations where availability and reliable supply of condoms was lacking, utilisation was lower.

The association between utilisation of the female condom and marital status, knowledge on female condom use and availability of the female condom was statistically significant. Similar results on the association between condom utilisation and marital status were obtained by Boraya *et al.*, (2018) and Nzioki *et al.*, (2015) in studies conducted in Kenya. Statistical significance of the association between marital status and utilisation of the female condom can be attributed to trust and mistrust between couples.

5.3 Knowledge on the Female Condom

Regarding knowledge of female condom use, the findings in Table 5 showed that 87.8 % (334) of the women knew that benefits of using a female condom outweighed the cost of treating STIs and caring for unplanned children. Further, 94.3% (362) of the women knew that using female condoms was part of taking care of their health, and 72.7% (279) were confident that they would refuse to have sexual intercourse with their partner if they refused to use the female condom. In addition the FGD participants also stated that they heard about the female condom and some stated that it prevents HIV and Cancer

The association between knowledge and utilisation of female condoms was statistically significant. This was consistent with findings of a study conducted in Kumba, Cameroon among high school students, which showed that of the 67.3% participants who had high knowledge, 75.6% were using the condoms as a preventive measure of HIV transmission (Tarkang & Bain, 2014). The statistical significance of the associations among participants in Tarkang & Bain (2014) study was attributed to the fact that all the participants were from a tertiary learning institution.

Utilisation of female condoms may depend on many other personal factor including health beliefs choice, availability, side-effects, disposal options and preferences among others. In contrast, Mark *et al*. (2017) reported that only 4.31% of the 96.6% participants who had high knowledge reported using female condoms at once, while 12% did not like the female condom. A study conducted in Zimbabwe revealed that there was generally a low level of knowledge about the female condoms among Zimbabwean women of reproductive age (Chipfuwa *et al.*, 2014).

5.4 Availability of Female Condom

Availability of the female condom in this study was measured by asking the women whether the female condom was available at the health facility. The findings showed that 68% of the respondents stated that female condoms were available at the health facilities (see figure 4, page 43). This notion was reaffirmed by the women who participated in the focus group discussions**.**

5.5 Affordability of female condoms

In terms of affordability, 50.8% of the women said that the female condoms were expensive (table 6, page 59). In addition, some participants stated that the buy from pharmacies and drug stores if there are out of stock from the clinics. The association between availability of female condoms and utilisation of female condoms and age of the women who took part in the study was statistically significant. This seems to show that availability may translate into usage just like in the Dominique and Richte (2012) study, which showed that utilisation, was associated with availability and accessibility. Other studies, however, indicate poor utilisation being associated with availability of female condoms.

5.6 Attitude towards Female Condom Use

According to Table 7, 78.1% (300) used female condoms to prevent STIs and pregnancies, and 63% (242) reported that knowledge about female condoms affected how they view the commodity. A further 34.6% (133) stated refusing to use the female condoms because their partner would think they are prostitutes, 44% (169) fearing their husbands would get a girlfriend if they used a female condom, 29.7% (114) said that female condoms had an unpleasant smell, and 43% (165) indicated that their partners object the use of female condoms.

The results of this study revealed that 20.8% of respondents agreed with the statement that it was possible for person utilizing female condoms to contract STIs and pregnancy, while 49% believed that it was not if use of the female condom was correct. The association between women's attitudes towards female condom utilisation and attitudes even though the majority (86%) of the participants had a negative attitude towards female condom utilisation. In a similar study conducted by Tarkang and Bain (2014) in Cameroon, majority (64.1%) of the participants thought female condoms would reduce sexual satisfaction while (52%) advanced religious beliefs. High numbers of negative attitudes could be attributed to religious beliefs, owing to high number (95.8%) of Christian participants in the study.

Using the HBM to explain the findings from group interview, perceived benefits and barriers had direct effects on condom use, consistent with findings from a previous study which concluded that both perceived benefits and barriers determined condom usage (Carpenter, 2010).

Barriers to female condom usage noted in this study included inconsistent condom availability at the facility, and the fear of spouse rejection. In addition, the current study findings suggest that perceived barriers on condom use was greater than the perceived benefits. Thus, reducing barriers to condom use may be more effective than increasing the awareness of benefits to improve the condom use behavior.

The association between high knowledge levels and utilisation of the female condom was statically significant with a p-value of less than 0.001, and information from the FGDs indicated barriers that contribute to low utilisation. Expanding the IEC base from family planning clinics to using other media could widen the coverage of women who would have the required knowledge to improve female condom utilisation. Perceived barriers to condom use included inconsistent availability and fear of spouse rejection. Thus, future intervention studies should not only try to reduce barriers to condom use, but also focus on the improvement in accessing condoms among women and reaching out to partners.

5.7 Implications of the Study

5.7.1 Implications to Nursing Practice

The low female condom use has an impact on STIs such as cervical cancer, which has a heavy toll on women. Therefore one of the packages for cervical cancer treatment and management must be the use of female condoms.

5.7.2 Implications to Research

There is need to conduct more research as to why despite the knowledge on condom use being very high and the condoms being available, there are negative attitudes towards female condom use.

5.7.3 Implication to Nursing Education

There is need to raise more sensitisation on female condom use through different teaching methods, such as community sensitisation meetings and use of media.

5.7.4 Implications to Nursing Administration

Since some women indicated that female condoms were not available at facilities, there is need to strengthen distribution and communication at local levels especially the use of community health workers (CHW) and where possible, the workers must be provided with female condoms.

5.8 Conclusion

Utilisation of the female condom by women in Chainda catchment area was low, knowledge of the female condom among the residents was high. However, there were negative attitudes towards female condom use in the community. From these findings, there is need to conduct further research on the reasons for the negative attitudes towards female condoms use.

5.9 Recommendations

Based on the findings, the MoH together with other partners involved in promotion of female condom use should;

1. Empower women through IEC programmes to increase their knowledge on personal risk in order to build self-assertiveness when negotiating female condom use.
2. Ensure that the female condoms are accessible and available at all time.
3. Health staff should demonstrate how to use female condoms during IEC services to ensure that women are able to use the method correctly. They should also come up with programmes that can encourage both married and unmarried women to use female condom as a tool for family planning
4. There is need to conduct more research on why despite the knowledge on condom use being very high, there are negative attitudes towards its use.
5. MoH should raise more sensitisation on female condom use through different methods, such as community sensitisation meetings and use of media.

5.10 Strength and Limitations of the study

5.10.1 Limitations

The study was conducted in one catchment area; therefore, generalisation of the findings should be done with caution because of contextual differences that may exist.

5.10.2 Strength

The study used a mixed method approach to investigate condom use among women and the sample size was adequate to enable generalisation of the findings. Statistical procedures were used to analyse data. The study also used validated data collection tools

5.11 Utilisation and dissemination of findings

The findings will be presented to the public at the postgraduate forum organized by the school of Nursing sciences. Bound copies of the dissertation will be submitted to the School of Nursing Sciences, Medical and University of Zambia Libraries. In addition the results will be disseminated to relevant stakeholders at various fora such as conferences and workshops. The findings will also be published in a peer reviewed Journal.

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APPENDICES

Appendix I: Study Budget

BUDGET CATEGORY	UNIT	UNITY COST (K)	QTY	TOTAL COST (K)
Stationary				
Plain papers	Ream	50.00	4	200.00
Pens	Each	1.00	5	5.00
Pencils	Each	1.00	5	5.00
Correction fluid	Each	10.00	2	20.00
Box of Staples	Box	10.00	2	20.00
Scientific calculator	Each	120.00	1	120.00
Flip Chart	Each	35.00	1	35’00
Markers	Each	5.00	6	30.00
Note books	Each	10.00	5	50.00
Staplers	Each	50.00	2	100.00
Subtotal				**585.00**
Personnel				
Transport	Days	135.00	30	4,050.00
Lunch allowance (1) researcher	Days	85.00	30	2550.00
Subtotal				**6,600.00**
Secretarial Services				
Questionnaire typing	Pages	2.00	10	20.00
Questionnaire photocopying	Pages	1.00	100	100.00
Research report writing	Pages	3.00	100	300.00
Research report photocopying	Pages	1.00	500	500.00
Typing and binding Proposal	Each	350.00	2	700.00
Binding report	Each	75.00	5	375.00
Subtotal				**1,995.00**
Hall hire for dissemination	Each	500.00	1	500.00
LCD hire dissemination	Each	150.00	1	150.00
Refreshments	Each	20.00	60	120.00
Subtotal				**770.00**
Total				**9,950**
Contingency 10%				**995**
GRAND TOTAL				**10,495.00**

Budget Justification

1. **Stationary**

   Stationary was required for typing the research proposal, writing the final research report as well as typing and printing the report. Note books were needed for record keeping during data collection and analysis. The scientific calculator was needed for data analysis. Staples and stapler were needed to put papers together and maintain proper arrangement

2. **Secretarial services**

   There was need for money to cater for typing and photocopying services as well as binding the research proposal and report.

3. **Personnel**

   The researcher required money for transport to move from home to the clinic where data collected and lunch allowance during data collection period**.**

4. **Contingent**

   The 10% Contingent fund was required for other unforeseen expenses during the research.

5. **Dissemination workshop**

   Some money was kept aside for dissemination workshop to communicate research results.

Appendix II: Research Work Schedule

NO	TASK TO BE PERFORMED	DATES	WEEKS	PERSONNEL	DAYS REQUIRED
1	Literature review	continuous		Researcher	
2	Submit topic to supervisor	20th -27th April, 2019	1	Researcher	7 days
3	Submit first draft to Supervisor.	20th October 2019	1	Researcher	7 days
4	Finalize research proposal	1st -7th November, 2019	1	Researcher	7 days
5	Data collection tool	8th November, 2019	1	Researcher	7 days
6	Submit final draft to Supervisor	10th November, 2019	1	Researcher	7 days
7	Presentation of research proposal to graduate forum	15th November, 2019	1	Researcher	1
8	Amending corrections	16th -17th November, 2019	1	Researcher	2
9	Clearance from ethical committee	18th -31st November, 2019.	1	Ethical committee	14 days
10	Pilot study	1st -7th December, 2019.	27	Researcher	7 days

11	Amending corrections	8th Dec – 10th Dec,2019	27-29	Researcher	2 days
12	Submission of amendment to ethics	11th -15th Dece, 2019.	30-31	Researcher	5
13	Date collection	15th- 31st Dec, 2019.	35-42	Researcher	14 days
14	Data analysis	1st Jan – 5th Jan, 2020	50-51	Researcher	5
15	Report writing	6th Jan -19th Jan, 2020	51-54	Researcher	14
16	Submission of draft copy of research to supervisor	15th Jan,2020	54-61	Researcher	7days
17	Oral and poster presentation	1st Feb -2020	61 - 62	Researcher	1 days
18	Finalizing research report and binding	3rd – 5th Feb, 2020.	63-72	Researcher	3 days
19	Disposition of final research report	6th – 10th April, 2020	73-85	Researcher	4 days
20	Monitoring and evaluation	Continuous		Researcher	

Appendix III: Information Sheet

Topic of Study: Utilisation of the female condom by women in Chainda catchment area of Lusaka district, Zambia

Dear participant**,**

My name is Modrine Shankwaya, a Master of Science in midwifery and women's health student at the University of Zambia, School of Nursing Sciences. I wish to interview you as part of my research study on utilisation of the female condom by women in Chainda catchment area. You will be requested to share your views on utilisation of female condoms as well as any other related information with me

Purpose of the study

The information you are giving me will be used by policy makers to come up with strategies to improve on utilisation of female condoms.

Procedure

You have been selected to participate in this study because you accesses health services from this facility. The interview will take about 30-45minutes. I will ask you questions concerning utilisation of female condoms. After the interview, you shall not be followed up and this will be the end of the contact. If you agree to take part in the study, you may withdraw at any time without any disadvantage to you.

Risk of participation

There is no anticipated risk and discomfort involved in taking part in this study. Some questions may make you uneasy. You do not have to answer any question(s) if you do not want to.

Benefits

There is no direct benefit to you by participating in this study and no monetary favors will be given in exchange for information.

Confidentiality

Your name will not appear in the research report and you will be identified by a number and therefore you will remain anonymous. I will also need your permission to write your views and comments. Information collected will be confidential to the extent permitted by the law. Please be assured that the study has the approval of the Research Ethics Committee. Feel free to participate and ask questions related to the study.

Appendix IV: Informed Consent Form

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and discomforts and confidentiality of the study. I further understand that:

If I agree to take part in this study and that I can withdraw voluntarily at any time without having to give an explanation or losing my privileges.

I_____ (Names) do hereby agree to take part in the study.

Signed_____ Date_____
(Participant)

Participant's Right thumb print

Signed_____ Date_____
(Witness)

Signed_____ Date_____
(Researcher)

PERSONS TO CONTACT FOR PROBLEMS OR QUESTIONS

1. Shankwaya Modrine of Lusaka Railway Urban Health Centre, P.O. Box 50827, Lusaka. Cell; 0977 886 632
2. Dr. C Kwaleyela. Lecturer and researcher, UNZA, School of Nursing Sciences, P.O. Box 50110, Lusaka. Cell number; 0977504783 / 0967716691.
3. Brenda. N. Sianchapa. Lecturer and researcher, UNZA, School of Nursing Sciences, P.O. Box 50110, Lusaka. Cell +260 979 187 399 / +260 955 812 823
4. Chairperson; Dr Jason Mwanza (Dip. Clin.Med. Sc., BA. M.Soc., PhD. Plot No. Cnr Joseph Mwilwa, Rhodes Park, Lusaka, Zambia. Tel: +260955633 /34.Email. eresconverge@yahoo.co.uk

Appendix V: Questionnaire

TOPIC: Utilisation of the female condom by women in Chainda catchment area of Lusaka district, Zambia

Questionnaire number_____

Date of data collection: _____

Serial number of respondent:_____

Location of interview_____

INSTRUCTIONS TO THE INTERVIEWER

1. Introduce yourself to the respondent
2. Explain the purpose of the study.
3. Please ensure that all the questions are answered.
4. Obtain verbal and written consent.
5. Do not write the name of respondent on interview schedule to ensure anonymity.
6. Tick in the box corresponding to the correct answer.
7. Assure the respondent of confidentiality and anonymity.
8. Thank the respondent, collect the questionnaire and store them safely.

SECTION A: DEMOGRAPHIC DATA

1. Age of the respondent

a) 15 – 20 years
b) 21 – 30 years
c) 30 - 40 years
d) 40 years and above

2. Marital status

a) Single

b) Married

3. Number of children

a) 0

b) 1 - 4

c) Above 5

5. Year of the last child

a) Below 1 year

b) 1 - 4 years

c) Above 5 years

d) None

6. Highest level of education

a) No formal education

b) Primary School

c) Secondary school

d) College

7. Employment status

a) Informal

b) Formal

c) Student

8. Religion

a) Christian

b) Moslem

c) Others

SECTION B: UTILISATION OF FEMALE CONDOM

9. I would use a female condom if I had sex with any sexual partner
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
10. I would use female condoms if I had sex with someone who told me that he has HIV /STIs.
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree

11. I would use a female condom if I had sex with someone who has multiple sexual partners.
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
12. Female condoms are easy to use
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree

SECTION C: KNOWLEDGE OF FEMALE CONDOM

13. The benefits of using a female condom outweigh the costs of treating STIs or caring for unplanned child
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree

14. Using female condoms is part of taking care of my health

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

15. If I have heard good things or information about female condoms, I would do everything I could to avoid STIs or unplanned pregnancies

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

16. I feel confident to refuse to refuse sex with my partner (s) if they refuse to use condoms.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

17. I believe I can recommend use of the female condoms to someone?

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

SECTION D: AVAILABILITY OF FEMALE CONDOM

18. I believe a female condom is very expensive and this affects how often I use it.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

19. I believe female condoms are available and accessible in the health facilities

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

SECTION E: ATTITUDE TOWARDS FEMALE CONDOM

20. Everybody can get STIs or pregnant including women who use female condoms regularly.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

21. I believe that I will not get STIs or pregnant if I use female condoms correctly and consistently

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

22. When a woman has STIs or unplanned pregnancy, their relationship with spouse and family suffers.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

23. I believe that if I use female condoms my spouse will end the relationship thinking I'm a prostitute

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

24. I believe my husband / partner would threaten to get a girlfriend or another wife if I use a condom during sexual intercourse with him.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

25. Female condoms has an unpleasant smell

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

26. Female condoms make noise when used during sexual intercourse

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

27. I believe my husband / partner would threaten to get a divorce if I use a condom during sexual intercourse with him.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

28. I believe the female condoms don't work well

e) Strongly agree
f) Agree
g) Disagree
h) Somewhat agree

29. Condom use decrease sexual pleasure
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
30. It would be difficult to insert a female condom because they are too big
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
31. It would be uncomfortable to wear a female condom
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
32. My partner objects female condom use during sexual intercourse?
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree
33. I believe there will be mistrust in our marriage/ relationship if I use female condoms
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree

34. I'm too young to wear a female condom
    a) Strongly agree
    b) Agree
    c) Disagree
    d) Somewhat agree

35. Have you been be able to ask your husband/partner to use a condom when having sex with you?

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

36. I believe my knowledge about the female condom affects how I view it.

a) Strongly agree
b) Agree
c) Disagree
d) Somewhat agree

This is the end of the questionnaire. Thank you for your participation

Appendix VI: Permission Letters

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NURSING SCIENCES

Telephone: 252641
Telegrams: UNZA, Lusaka
UNALUZA 44370

PO Box 50110
Lusaka

15th October, 2019

The Chairperson,
ERES CONVERGE IRB,
33 Joseph Mwilwa Road,
Rhodes Park,
LUSAKA

RE: REQUEST FOR ETHICS CLEARANCE: MODRINE SHANKWAYA (2016144953)

Reference is made to the above subject matter.

This letter serves to confirm that the research proposal for Modrine Shankwaya Master of Science (MSc) in Midwifery and Women's Health student entitled "Utilisation of the female condom by women in Chainda catchment area of Lusaka district, Zambia" is ready for ethics review.

ch is appreciated.

UNIVERSITY OF ZAMBIA
SCHOOL OF NURSING SCIENCES
15 OCT 2019
HEAD DEPARTMENT OF RESEARCH, MONITORING & EVALUATION
P.O. BOX 50110, LUSAKA

Your continued support in the promotion of research
Dr Concepta Kwaleyela (PhD)
SUPERVISORPRINCIPAL INVESTIGATOR/CO-PI
(NAME): Shankwaya Modrine

DATE Oc%Z1 SIGNED

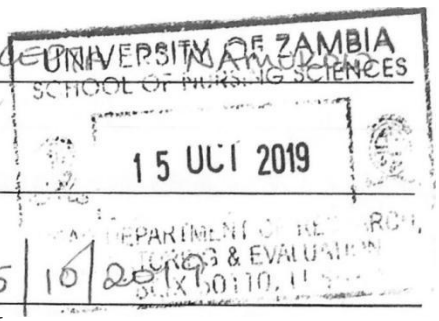
OTHER (NAME)

DATE SIGNED
Contact Address: Lusaka Railway Health Centre, Box 50827, Lusaka

Tel. No.0977886632. Fax No.

Email: modrines@gmail.com

Full name of Head of Department/Institution: CONGE KWALEYELA



Signed: Kwaleyela Date: 15/10/2019

HEAD OF DEPARTMENT/INSTITUTION

Full name of Supervisor: (FOR STUDENTS ONLY)

Please note that by signing this document you are endorsing that as the supervisor, you have read/cleared his proposal.

Signed: Kwaleyela Date: 15/10/2019

SUPERVISOR

SUPERVISOR

5

Appendix VII: Ethical Clearance

ERES CONVERGE

Plot No. 1, Cnr Joseph Mwilwa & Great East Road
Rhodes Park, Lusaka - Zambia
Tel: +260 955 155 633
+260 955 155 634
Cell: +260 977 493220
Email: eresconvergeltd@gmail.com

I.R.B. No. 00005948
F.W.A. No. 00011697

I I th December, 2019

Ref. No. 2019-Oct-013

The Principal Investigator
Ms. Modrine Shankwaya
University of Zambia School of Nursing Sciences P.O. Box 50110, LUSAKA.

Dear Ms. Shankwaya,

RE: UTILIZATION OF THE FEMALE CONDOM BY WOMEN IN CHAINDA CATCHMENT AREA OF LUSAKA DISTRICT, ZAMBIA.

Reference is made to your resubmission dated 11th December 2019. The IRB resolved to approve this study and your participation as Principal Investigator for a period of one year.

Review Type	Ordinary	Approval No. 2019-Oct-013
Approval and Expiry Date	Approval Date: 6th Decembe 2019	Expiry Date: 5 th December, 2020
Protocol Version and Date	Version - Nil.	5 th December2020
Information Sheet, Consent Forms and Dates	English.	5 th December, 2020
Consent form ID and Date	Version - Nil	5 th December,2020
Recruitment Materials	Nil	5 th December,2020
Other Study Documents	Questionnaires	5 th December,2020
Number of participants approved for study	384	5 th December, 2020

Where Research Ethics and Science Converge

specific conditions will apply to this As Principal Imestigator it is your responsibility to ensure that the contents of this letter are adhered to. If these are not adhered to, the approval may be suspended. Should the study be suspended, study sponsors and other regulatory authorities will be informed.

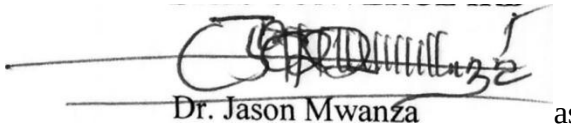
Conditions of Approval

- No participant may be involved in any study procedure prior to the study approval or after the expiration date.
- All unanticipated or Serious Adverse Events (SAEs) must be reported to the IRB within 5 days.
- All protocol modifications must be IRB approved prior to implementation unless they are intended to reduce risk (but must still be reported for approval). Modifications will include any change of investigator/s or site address.
- All protocol deviations must be reported to the IRB within 5 working days.
- All recruitment materials must be approved by the IRB prior to being used.
- Principal investigators are responsible for initiating Continuing Review proceedings. Documents must be received by the IRB at least 30 days before the expiry date. This is for the purpose of facilitating the review process. Any documents received less than 30 days before expiry will be labelled "late submissions" and will incur a penalty. ● Every 6 (six) months a progress report form supplied by ERES IRB must be filled in and submitted to us.
- A reprint of this letter shall be done at a fee.

Should you have any questions regarding anything indicated in this letter, please do not hesitate to get in touch with us at the above indicated address.

On behalf of ERES Converge IRB, we would like to wish you all the success as you carry out your study.

Yours
faithfully,
ERES
CONVERGE
IRB



Dr. Jason Mwanza ason wan
Dip. Clin. Med. sc., BA., M.Soc., PhD

CHAIRPERSON

Appendix VIII: Authority to Conduct Research

THE UNIVERSITY OF ZAMBIA

SCHOOL OF NURSING SCIENCES

DEPARTMENT OF POSTGRADUATE STUDIES

The Director

National Health Research Authority

UTH Paediatrics Centre of Excellence

Lusaka.

Dear sir (s)

RE: APPLICATION FOR AUTHORITY TO CONDUCT RESEARCH INVOLVING HUMAN PARTICIPANTS.

I Shankwaya Modrine do hereby apply to the National Health Research Authority requesting to conduct the above research involving human participants. The ethical review and approval was done by ERES CONVERGE IRB and it conforms to recognized ethical standards and that does not impinge on the rights of the individuals.

Attached is the photocopy of the approval letter from ERES CONVERGE IRB

Signed: Shankwaya Modrine Date: 23rd December, 2019.

Appendix IX: NHRA Permission

NATIONAL HEALTH RESEARCH AUTHORITY
Paediatric Centre of Excellence, University Teaching Hospital, P.O. Box 30075, LUSAKA
Tell: +260211 250309 | Email: znhrasec@gmail.com | www.nhra.org.zm

RefNo•_____ Date: 7th January, 2020

The Principal Investigator
Ms. Modrine Shankwaya
University of Zambia
School of Nursing Sciences PO Box 50110 LUSAKA.

Dear Ms. Shankwaya,

Re: Request for Authority to Conduct Research

The National Health Research Authority is in receipt of your request for authority to conduct research titled "Utilisation of the female condom by women in Chainda catchment area of Lusaka district, Zambia: Mixed method study." I wish to inform you that following submission of your request to the Authority, our review of the same and in view of the ethical clearance, this study has been approved on condition that:

1. The relevant Provincial and District Medical Officers where the study is being conducted are fully appraised;
2. Progress updates are provided to NHRA quarterly from the date of commencement of the study;
3. The final study report is cleared by the NHRA before any publication or dissemination within or outside the country;
4. After clearance for publication or dissemination by the NHRA, the final study report is shared with all relevant Provincial and District Directors ofHealth where the study was being conducted, University leadership, and all key respondents.

Yours sincerely,

Dr. Godfrey Biemba
Director/CEO
National Health Research Authority

Appendix X: Permission to Collect Data

THE UNIVERSITY OF ZAMBIA
SCHOOL OF NURSING SCIENCES

Tell +260 211 252453 School of Nursmg Sctences Butdltr.g
Fax: +260 21! 252453 University Teaching Hospitals
Website: www.unza.zm PO Box 50110 Email: dean-nursingscience@unza.zm Lusaka, Zambia

14t April, 2020

Lusaka District Health Chainda
Health Centre
LUSAKA

Dear Sir/Madam,

RE: REQUEST FOR PERMISSION TO COLLECT INFORMATION REQUIRED FOR RESEARCH PROPOSAL DEVELOPMENT - SHANKWAYA MODRINE (2016144953)

Shankwaya Modrine is currently a student pursuing a Master of Science in Midwifery, Women and Child Health programme at the University of Zambia, School of Nursing Sciences. She is required to carry out a research study in partial fulfilment of the programme. Her Research title is "Utilisation of the Female Condoms by women in Chainda Catchment Area of Lusaka, Zambia: Mixed Method Study" The student is currently at the level of proposal development.

The purpose of writing this letter is to request your office to allow the student to collect the information required for the development of her research proposal.

Your support is highly appreciated.

Yours faithfully,

Dr. Concepta N. Kwaleyela (PhD)
LECTURER/RESEARCH SUPERVISOR

c.c. Dean, School of Nursing Sciences
Assistant Dean (PG), School of Nursing Sciences
All correspondence should be In reply please quote addressed to the District Health

Appendix XI: Authority to Conduct Research in Lusaka District.

REPUBLIC OF ZAMBIA
MINISTRY OF HEALTH
14th April, 2020 LUSAKA DISTRICT HEALTH OFFICE

P.O. BOX 50827

LUSAKA

Modrine Shankwaya (Ms)
The University of Zambia School of Nursing Sciences
P. O. Box 50110
LUSAKA

Dear Ms. Shankwaya,

RE: AUTHORITY TO CONDUCT RESEARCH IN LUSAKA DISTRICT

We are in receipt of your letter over the above subject.

Please be informed that Lusaka District Health Office has no objection for you to conduct research entitled "Utilization of the female condom by women in Chainda catchment area of Lusaka District, Zambia.

Kindly ensure that your findings are shared with the health facility and District Health Office and that the normal operations of the facility are not disrupted.

By copy of this letter, the In-Charge for Chainda Health Centre is kindly requested to facilitate accordingly.

Yours sincerely,

Dr. Agatha M. Lloyd
Public Health Specialist

For/District Health Director
LUSAKA DISTRICT HEALTH OFFICE

C.C: The In-Charge — Chainda Health Centre, LUSAKA
C.C: The Medical Superintendent — Chelstone Health Centre, LUSAKA
C.C: The Public Health Specialist — Chelstone Health Centre, LUSAKA
C.C: The Supervisor — Dr. Concepta N. Kwaleyela: UNZA, LUSAKA

Appendix XII: Focus Group Discussion Guide

TOPIC: Utilisation of the female condom by women in Chainda catchment area of Lusaka district, Zambia

INSTRUCTIONS TO THE MODERATOR

1. Introduce yourself to the Participants
2. Explain the purpose of the study.
3. Please ensure that all the questions are answered.
4. Obtain verbal and written consent.

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1. Age of the respondent

e) 15 – 20 years

f) 21 – 30 years

g) 30 - 40 years

h) 40 years and above

2. Marital status

c) Single

d) Married

3. Number of children

a) 0

b) 1 - 4

c) Above 5

4. Year of the last child

a) Below 1 year

b) 1 - 4 years

c) Above 5 years

d) None

5. Highest level of education

e) No formal education

f) Primary School

g) Secondary school

h) College

6 . Employment status

a) Informal

b) Formal

c) Student

7. Religion

a) Christian

b) Moslem

c) Others

QUESTIONS

1. What is a condom?
2. Do you use a condom during sexual intercourse?
3. Where can one get condoms from?
4. Is female condom readily available?
5. Would you recommend the use of the female condom to other users?

Thank you for your participation