

CHAPTER ONE

1.0 Background

More than thirty years since the infection was first detected and described in human populations, the Human Immunodeficiency Virus (HIV) epidemic continues to represent a public health threat world-wide. Globally about 34 million people are living with HIV/AIDS, and annually 2.5 million new infections and 1.7 million deaths related to AIDS occur (UNAIDS, 2012). During the past two decades, the number of people living with HIV has decreased in every region of the world (WHO, 2009). However, the burden of HIV/AIDS remains highest in sub-Saharan Africa, a region that accounts for only 10% of the world's population but over 60% of HIV/AIDS infections, and seventy-two percent of deaths due to AIDS occur in sub-Saharan Africa (UNAIDS, 2012).

Zambia in particular is experiencing a generalized HIV/AIDS epidemic, with a national HIV prevalence rate of 14.3 percent among adults aged 15 to 49 (ZDHS, 2007). The primary modes of HIV transmission are through heterosexual sex and mother-to-child transmission (WHO, 2005). HIV prevalence rates vary considerably within the country. Infection rates are highest in cities and towns, along major transportation routes and lower in rural areas with low population density. HIV prevalence among pregnant women can range from less than 10 percent in some areas to 30 percent in others (UNAIDS, 2010).

Women in particular suffer a disproportionate impact of HIV, especially women in highly afflicted sub-Saharan Africa. In this region, three women are infected with HIV for every two men (UNAIDS, 2012). Among young people aged 15 to 24, the magnitude of this disparity is even greater, with three young women infected for every young man (Kassie, 2008). A number of factors place women at heightened risk of contracting Sexually Transmitted Infections (STI), including HIV. One of these factors is the threat of violence (both in relationships and in conflict situations), lack of economic independence, biological differences, and work in the sex trade, and cultural norms and expectations (Benefo, 2012). Some examples of the latter are that, women are often raised to be submissive and unaware of sexual matters until marriage. They often fear reprisals from their partners and others, or being identified as promiscuous, immodest

or unfaithful if they raise issues related to sexuality and sexual health including STI/HIV prevention.

In the face of the HIV crisis, a number of prevention interventions are available to developing world health leaders, multilateral institutions, donors, and implementers. The Abstinence, Be faithful, Use a condom strategy (ABCs) has served as the cornerstone of prevention efforts for the last quarter of a century (WHO, 2010). A number of organizations, including the International Partnership for Microbicides, the Contraceptive Research and Development Program (CONRAD), and the Population Council, have partnered with pharmaceutical firms and invested in the development of Microbicides that can be inserted by women in gel or perhaps ring form as a means of preventing STIs and HIV and family planning (UNAIDS, 2012). However, the most successful microbicide trial so far only showed a 39% efficacy (Karim et al., 2010).

Thus, to date, the female condom is one of the technologies available that women can use as an alternative to the male condom. A female condom is a sheath of rubber that is inserted in the vagina before sexual contact. An inner ring fits inside the vagina around the cervix (like a diaphragm) and an outer ring covers the outside labia (Shapiro & Ray, 2007). After the man ejaculates, a female user must twist the end closed and gently pull the condom from the vagina. This method provides equally effective protection against STIs, including HIV and Hepatitis B, as a male condom (Shapiro & Ray, 2007).

According to UNAIDS (2013) female condom use is a critical element in a comprehensive, effective and sustainable approach to STIs including HIV prevention and treatment. Female condoms have helped to reduce STIs including HIV infection rates where AIDS has already taken hold, curtailing the broader spread of HIV in settings where the epidemic is still concentrated in specific populations however; the female condom is more expensive than the male condom. The joint United Nations Programmes on HIV/AIDS (UNAIDS) has negotiated a public sector price of US\$ 0.57 per condom with a manufacturer of the first generation female condom (made of polyurethane) also known as FC1. This is over 11 times the unit price of a male condom, which sells at US\$ 0.05, posing a challenge to the supply and distribution of female condoms. However, health economists have modeled the estimated

benefit of female condom investment compared with the costs of other STI/HIV prevention methods, finding that the technology is cost effective. An investment in female condoms of US\$ 4,000 distributed to 1,000 sex workers in South Africa, for example, would prevent many cases of HIV, gonorrhoea and syphilis, saving the health sector approximately US\$ 9,000 (Seedat, 2011).

A second-generation female condom, known as FC2, is expected to cost even more as it is made out of different materials (synthetic nitrile). The uptake of this female condom at a unit cost of US\$ 0.77 for production, distribution, training and education would prevent 1,740 HIV infections (total cost US\$ 210,000) with net savings to health systems of US\$ 980,000. It is important to note that these estimates did not take into account the reduction of pregnancy rates and consequent prevention of mother-to-child transmission of HIV, which could increase the cost effectiveness of female condoms further (Seedat, 2011).

Prevention is the mainstay of the response to HIV/AIDS. Several organizations are involved in supporting, researching, and implementing promotion of the female condom, both in the private and public sector, including donors, researchers, product developers, and social marketers. Key donors and multilateral organizations that have been instrumental in 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). Organizations 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. Key implementers include Population Services International (PSI), Marie Stopes International (MSI), and DKT International. These three organizations apply social marketing or community distribution techniques in the private sector and support female condom distribution programs (UNAIDS, 2011).

Misconceptions about the female condom reduce its use. The perception that female condom use does not give total protection against HIV may appear to have influenced some men's choice for male condoms or abstinence since they could not have a guarantee to trust their sexual partner (Kassie, 2008). A study in Zimbabwe found that women and men were reluctant to use a female

condom due to its perceived low effectiveness for STI and also because of low perceived risk of contracting HIV/AIDS (Dominique & Richte, 2012). Further, the ability to practice safer sex depends on confidence, communication and trust in the partner and the relationship. Women also feel reluctant to speak to their partners about protection, which is not surprising as partner objection was the main reason for abandoning female condom use by Busza & Baker 2013 in Cambodia. These characteristics may or may not be present; indeed, sex may take place with little or no communication whatsoever and/or may be coerced. Besides, in many cultures discussing sex is taboo, making the delivery of education to health workers and the discussion of safer sex by them with people living with and at risk of HIV very challenging. It is argued that safer sex promotion can only be effective if it considers people's sexual desires and activities (Shapiro & Ray, 2007).

Lack of easy availability and a reliable supply of quality female condom most likely contribute to low use of female condoms. Egger et al., (2010) conducted a study in Latin America, where motels rented out rooms for commercial and non-commercial sex. The impact of providing health-education material and male condoms on condom use in Managua, Nicaragua was investigated. Out of 19 included motels, 11 motels were mainly used by sex workers and their clients and eight were mainly used for noncommercial sex. A total of 6463 couples attended the motels in 24 days. On 3106 (48.0%) occasions, at least one used male condom was retrieved. Male condom use was more frequent for commercial sex than for non-commercial sex. Condom use increased for commercial and non-commercial sex workers if male condoms were available in the room. Direct handing out of condoms to couples was similarly effective for commercial sex but less effective for non-commercial sex. The interpretation was that in Latin America, motels were key locations for promoting the use of condoms and these findings had important implications for HIV-prevention policies. Lack of easy availability and a reliable supply of quality condoms were some of the factors associated with lower utilization among couples in Zimbabwe (Dominique & Richte, 2012). Yomi et al., (2012) reports about a qualitative study conducted in Yaounde and Douala, Cameroon, and found that the following were factors associated with female condom use: female condom availability, attitudes about female condoms, and self-perceived risk of STI.

In addition there is still stigma associated with female condom due to the fact that women face challenges in most African societies with regard to making decisions regarding safer sex (Elliot & James, 2013). Kanya et al., (2013) conducted a study on factors associated with female condom use in an urban village of Kampala, Uganda, where it was found that the prevalence of consistent female condom use in Kampala was one of the lowest in urban of Kampala (about 1%). The most frequently mentioned problem in this study was lack of education about proper use and effectiveness of female condoms. Participants denied believing in common female condom-related myths in Uganda such as: "Female condoms can disappear inside a woman and she has to be operated on to remove it," or "Female condoms have small holes that could allow a germ to go through." These findings may be encouraging as they convey something positive in accepting female condom use. Further, social norms and community members' preferences can also limit the acceptability of the female condom. Providers have reported that some women initially have a negative reaction to the device. Coinciding with this, community members were concerned that female condoms would give women too much freedom. In contrast to the findings in urban village of Kampala, Uganda, misconceptions and myths impeded a true understanding of female condoms. People feared that it could get stuck in the womb or stomach that the semen could be captured and taken to a witch doctor, and there were rumours that it is laced with HIV (Busza & Baker, 2013). Misconceptions on the part of the users and local communities have been shown to influence both distribution of and access to female condoms in rural area of Luapula, Zambia (ZHECT, 2010).

Another challenge that is slowing the uptake of female condoms is negative perceptions from the providers. Interviews with providers working for Society for Family Health (SHF), and World Population fund (WPF) revealed that they felt that the female condom was suitable for sex workers and single women but not for those in stable unions. Thus they only recommended the device once in 42 observed visits which was conducted in New York City hospital (SHF, 2014 & WPF, 2014). Others have found that providers such as Family Health International (FHI), Netherlands Development Cooperation (NDC) and Planned Parenthood Association of Zambia (PPAZ) claimed that the device is too complicated or awkward to use and thus they did not offer it to clients, as they did not have the time to counsel the clients (UNAIDS, 2010). Yet others providers report that women are not willing to learn the techniques which are necessary for

insertion, such as touching their genitals. Seedat (2012) argues that such provider behavior' and attitudes can make a clear contribution to the inadequate interest from the clients and donors.

Seedat (2012) further argues that similar obstacles emerged with other vaginal products such as tampons, which took almost 20 years to be widely accepted in Zimbabwe. Therefore, such supply side barriers to convince the providers need not be seen as impossible to get through with a consideration of local culture, effective coordinator support to counsel, educate, and reassure women, and monitoring of negative gender influences.

Collumbien et al., (2012) conducted a cross-sectional population-based survey in 2012 in four coastal districts of Orissa, which is one of the most impoverished states 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. The conclusions was that female condoms should be promoted differently among different target groups: as an effective way to prevent HIV and other sexually transmitted infectious among the minority of men who engage in high-risk sexual behavior, and as a means of preventing both pregnancy and disease among young unmarried men and women (Collumbien et al., 2012).

Ekstrand et al., (2010) conducted among 1535 HIV negative male STI patients completed an interviewer-administered survey on AIDS-related knowledge, beliefs and behaviors as part of their participation in a behavioral HIV risk reduction trial in two municipal STI clinics in the city of Mumbai Maharashtra in India. As many as 92% of the men reported sex with a Female Sex Worker (FSW) in their lifetime and 75% of the men reported sex with a FSW in the past 3 months. Female condom use was low: 93% of the men stated that they never used female condoms and 1% of men reported to have used female condom with FSWs, and 6% reported inconsistent use of both male and female condom. Men who perceived a greater number of barriers to female condom use (such as low female condom availability, embarrassment, and decreased pleasure) were more likely to have unprotected sex with FSWs. Other correlates of unsafe sex with FSWs included a greater perception that their peers were unsafe with the use of female condom, and decreased pleasure.

Cort and Modeste (2012) conducted a study among high school and university students in Zimbabwe to investigate the extent to which knowledge of AIDS is associated with two components of the Health Belief Model: attitude toward female condom use, and intentions to use female condom in future sexual encounters. The results indicated that knowledge of AIDS was not significantly related to any of the two dependent variables. However, belief in the efficacy of female condoms, and lack of knowledge on how to use female condom use were some of the factors associated with low use of female condoms (Cort and Modeste, 2012). It was concluded that lack of education about and familiarity with female condoms were prominent factors contributing to non-use of female condoms.

Roth et al., (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. Most notably, the lack of privacy in stores and the social stigma associated with female condom use were indicated as the most significant factors associated with female condom use (Roth et al., 2011).

It can be concluded from available literature that despite efforts to empower a woman through female condom use, women may still not be able to negotiate for female condom use with their sexual partners (UNAIDS, 2006).

2.1 Statement of the Problem

In Zambia, female condom use has remained low among both married and unmarried women despite knowledge about it being almost universal. In 2007, only 1.2 per cent of women (both married and unmarried) reported having ever used a female condom which is far less than the 10 percent, 6 percent, and 5 percent recorded in South Africa in 2005, Botswana in 2006 and Zimbabwe in 2007 and the 51.5 percent that was recorded for a male condom in Zambia (WHO, 2010; ZDHS, 2007). This is in spite of the critical need for women to protect themselves from HIV and other STIs in a country with high HIV prevalence, (ZDHS, 2007).

2.2 Justification of Study

In view of the foregoing, this study will attempt to establish factors associated with utilization of female condoms among women of reproductive age in Zambia using data from the Zambia Demographic and Health Survey 2007. The study will be helpful in designing better social marketing strategies aimed at increasing the use of the female condom. A better understanding of factors that are associated with female condom use will help policy makers, family planning managers and providers when designing strategies to improve accessibility of family planning services.

2.3 Research Question

What are the factors that are associated with female condom use among women of reproductive age in Zambia?

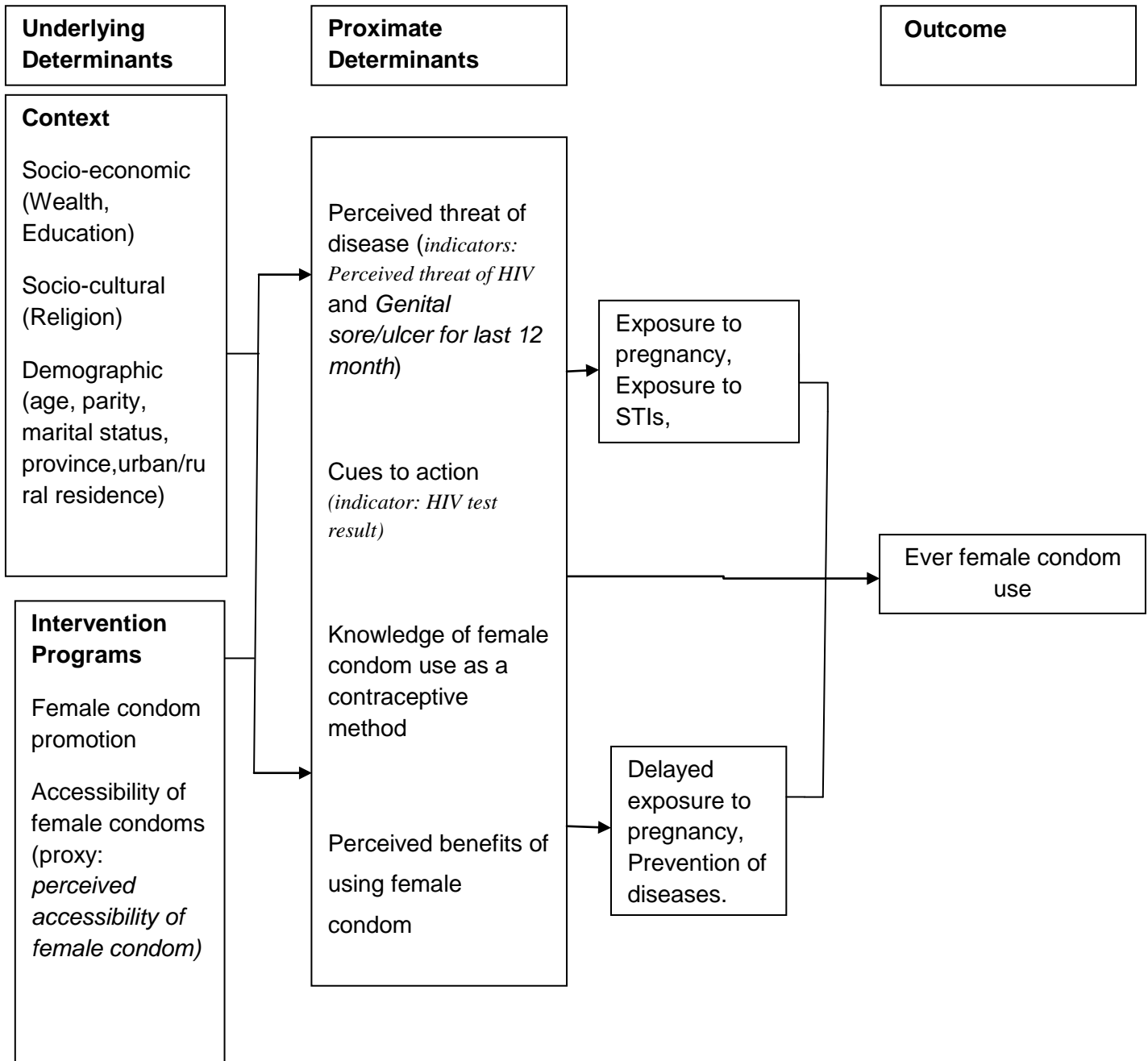
2.3.1 General Objectives

To determine factors associated with ever female condom use among women of reproductive age in Zambia.

2.3.2 Specific objectives

1. To determine the knowledge of female condom use among women of reproductive age by key socio-demographic variables
2. To determine the perceived accessibility of female condoms among women of reproductive age
3. To identify socio-demographic and proximate factors that are associated with ever female condom use
4. To identify the social /cultural and personal beliefs associated with female condom use among women in reproductive age.

Figure 1: Proximate-determinants conceptual framework for ever female condom use in Zambia.



CHAPTER TWO-METHODOLOGY

2.0 Study Setting

For quantitative study, secondary data was obtained from the Zambia Demographic and Health Survey (ZDHS) 2007, and thus the study setting was all urban and rural areas of all the nine provinces at that time (Central, Copperbelt, Eastern, Lusaka, Luapula, Northern, North-Western, Southern, and Western) in Zambia.

For qualitative study, it was conducted at Ng'ombe Clinic of Lusaka Province. Ng'ombe township is one of the areas where the Society for Family Health (SFH) and Zambia Health Education Trust (ZHECT) conduct sensitization and supply female condom for HIV/AIDS, STI prevention and including family planning (SFH Annual Report, 2006; ZHECT Annual Report, 2010).

2.1 Study population

The survey population consisted of men aged 15-59 years and women in the reproductive age of 15-49 years in Zambia, but we only analysed data from the women. For Qualitative study, the target population were women who were attending family planning at Ng'ombe clinic for the focus group discussion.

2.2 Study design

This was a mixed methods, sequential design. First, using a cross sectional study design for ZDHS 2006/7 dataset for quantitative study and followed by qualitative study for the focus group discussion.

2.2.1 Cross Section Study Design

The sampling frame used for the 2007 ZDHS was from the Census of Population and Housing of the Republic of Zambia (CPH) conducted in 2000, provided by the CSO. The 2007 ZDHS is the second DHS survey that includes information on testing individuals for syphilis and HIV and the frame consisted of 16,757 standard enumeration areas (SEA). (A SEA is a geographical area with an average size of 130 households or 600 people (ZDHS, 2007).

The sample was stratified and selected in two stages from the CPH 2000 frame. Stratification was achieved by separating every province into urban and rural areas. Since there were nine provinces, this resulted in 18 sampling strata and samples were selected independently in every stratum by a two-stage selection. In the first stage, 320 SEAs were selected with probability proportional to the SEA size. Selected SEAs with more than 300 households were segmented, with only one segment selected for the survey with probability proportional to the segment size. Therefore, a ZDHS 2007 cluster was either an SEA or a segment of an SEA. A complete listing of households and a mapping exercise was carried out for each cluster in August 2006, with the resulting lists of households serving as the sampling frame for the selection of households in the second stage. An average number of 25 households were selected in every cluster, by equal probability systematic sampling, resulting in a representative sample of 8 000 households (ZDHS, 2007).

The 2007 ZDHS was implemented by the Central Statistical Office (CSO) in partnership with the Ministry of Health and other cooperative partners from April to October 2007. All men and women aged 15 years old and above who were permanent residents of the sampled household or visitors present in the households on the night before the surveys were eligible to be interviewed about female condom use regarding family planning, HIV/Aids, and STIs.

2.2.2 Qualitative study

Three focus group discussions were conducted at Ng'ombe clinic consisting of 8 to 10 participant. Ng'ombe clinic was purposively selected to understand the ZDHS (2006/7) data on the assumption that current female condom use in Zambia is highest in Lusaka Province (0.2 percent) (ZDHS, 2007). Further, Ng'ombe area is one of township where most of the sensitization and supply of female condom is done by the Society for family Health and Zambia Health Education and Communication Trust (ZHECT) (SFH Annual Report, 2012; ZHECT Annual Report, 2010). Group Participants were interviewed on factors associated with female condom use among women in the reproductive age group and the discussion was recorded on audio tape.

2.2.3 THE PROXIMATE-DETERMINANT CONCEPTUAL FRAMEWORK

The model used in this study to understand female condom use included underlying and proximate determinants and is based on the Health belief model (see figure 1). The underlying determinants comprise the contextual variables (socio-economic, cultural, and demographic factors) as well as intervention programs. We hypothesize that these influence ever female condom use through proximate determinants such as knowledge of female condom use as a contraceptive method, perceived threat of disease, cues to action, perceived benefits of using female condom and barriers to behaviour change. This distinction between underlying and proximate determinants is important when modelling because there are likely to be hierarchical associations between the determinants. The Zambia Demographic and Health Survey 2007 does not include all the factors in the Health belief model, but we have identified several variables that can be used as proxies of the factors in the Health belief model, such as “*Perceived threat of HIV*” and “*Genital sore/ulcer for last 12 month*” being plausible proxies of “Perceived threat of disease”, and “HIV test result” being a proxy for “Cues to action”.

2.4 VARIABLES

Variables that were included in this study are shown in the table below.

Table 1: List of variables

Type of Variable	Variable	Categories	Measurement Scale
Dependant	Ever Female Condom use	No Yes	Nominal
Independent (underlying)	Age	15-19 20-24 25-29 30-34 35-39 40-44 45-49	Ordinal
	Marital Status	Never Married Married Widowed Divorced Not living together	Nominal
	Residence	Rural Urban	Nominal
	Educational attainment	Primary Secondary Higher	Ordinal
	Wealth quintile	Poorest Poorer Middle Richer Richest	Ordinal
	Religion	Catholic Others	Nominal
	Parity	No Child 1-Child 2-Child ≥4-Children	Ordinal
	Province	Central Copperbelt Eastern Luapula Lusaka Northern North-Western Southern	Nominal

		Western	
	Accessibility of female condom	No Yes	Nominal
Independent (proximate)	Knows a place to get female condom	No Yes	Nominal
	Knowledge on how to use female condoms	No Yes	Nominal
	Perceived Benefit of female condom	No Benefit Reduces the chance of Aids Don't Know	Nominal
	Symptoms of genital ulcer in last 12 Month	No genital sore/Ulcer Had genital sore/Ulcer	Ordinal
	Perceived threat of HIV	No Risk Low Medium High Other	Ordinal
	HIV test result	HIV negative HIV positive	Nominal

2.4.1 Inclusion Criteria

- Sexually active women of reproductive age who were part of ZDHS (2007).
- For the focus group discussion, women in the reproductive age who were attending family planning at Ng'ombe clinic and who had consented.

2.4.2 Exclusion Criteria

- Women of reproductive age who did not consent in qualitative study.
- Women of reproductive below the age of 18 years for the qualitative study.

2.5 DATA COLLECTION TOOL AND TECHNIQUES

ZDHS 2007 dataset was used for quantitative study and a focus group discussion guide was used to collect data from the participants for qualitative study. The questionnaire had open ended questions. The questionnaire was written in English but it was translated in vernacular during interview. A tape recorder was also used to capture the exact words helped the researcher not to forget the actual responses participants gave and with the help of linguistic expert it was translated into English during analysis. Participants were given explanation with regards to the study. They were asked to volunteer to participant in the study.

2.6 PILOT STUDY AND TRAINING OF THE RESEARCHER ASSISTANT

One focus group was conducted on women in the reproductive age at Ng'ombe Clinic consisted of 10 participants to check for clarity, ambiguity, clear understanding of questions. And to ensure that good quality data was collected, three female Nurses were trained as researcher assistant for a week.

2.7.0 DATA ANALYSIS

2.7.1 Quantitative Data

Data was analysed using Stata® Version 12 (**Stata Corporation**, College Station, Texas) (StataCorp, 2013). Firstly, the data was imported into the software programme and some variables which were not necessary for the study were excluded from the dataset before analysis. The HIV dataset was merged with the Female dataset (incl. socio-demographic data and data on ever female condom use).

In analyzing factors associated with ever female condom use, all the analyses were adjusted for clustering and sample weights were used. Further, we stratified by rural/urban because we had found interaction and we were very much aware of the loss of power, but we did it because pooling would mask important differences between urban and rural areas. Frequency tables were created for the underlying and proximate factors in order to show the distribution of the data. Bivariate logistic regression analyses were performed in order to understand the relationships between the dependent variable (ever female condom use in the year preceding the survey) and

the underlying and proximate determinants. Cross tabulation were made to show the knowledge and perceived accessibility of female condom use among women of reproductive age.

Multivariable logistic regression analysis was also done, in order to identify which factors were most strongly associated with ever female condom use. Multivariable analysis comprised 4 models as follows: model 1, with underlying factors; model 2, with proximate factors; model 3 with both underlying and proximate factors and model 4 with those factors that were most strongly associated with ever female condom use (identified through stepwise backward regression). The selection of variables was automatic when the stepwise backward regression command was entered and variables significant at $p < 0.05$ were retained in the multivariable analysis.

2.7.2 Qualitative Data

At the end of each focus group discussion, the recorder read the point to the focus group members who were asked to clarify them. This was done to check the information for accuracy and consistence. Data obtained was transcribed from local language to English with help of linguistic experts. Using the participants own words, the key statements, ideas and attitude expressed for each topic, the data was transcribed and translated and then Nvivo software was used for analysis. The researcher reader through all the information to obtain a general sense of information and reflect on its overall meaning.

2.8.0 ETHICAL CONSIDERATIONS

The protocol for the blood specimen collection and testing for syphilis and HIV was reviewed and approved by the TDRC Ethical Review Committee, the Institutional Review Board of Macro International, and CDC Atlanta. The 2007 ZDHS was based on the anonymous linked protocol developed for MEASURE DHS and allowed for the merging of the HIV results to the socio-demographic data collected in the individual questionnaires, provided that information that could potentially identify an individual was destroyed before the linking took place. Further, the interviews were based on informed consent and individuals aged 15-17 years had to assent and guardians had to consent before interview. The participants were not informed about their HIV status, but they were referred to a Voluntary Counseling and Testing (VCT) site if they wanted to

know their status. Ethical clearance for this study was sought from and granted by the Excellence in Research Ethics and Science (ERES) in order to conduct secondary data analysis. The ZDHS dataset was obtained from Central Statistics office (CSO) and Measure DHS as the datasets are provided free of charge. For the focus group discussion participant were reassured on the maintenance of anonymity and confidentiality. No name was entered on the questionnaire; though unique numbering was applied to identify the individuals. The data collected was kept under lock and key. Participants were also informed on their freedom to withdraw from participating in the study at any time, though the emphasis was made on their importance to participate in the research.

CHAPTER THREE-PRESENTATION OF RESULTS

3.0 QUANTITATIVE DATA

3.1 Sample Description

The total sample of sexually active women interviewed in the survey was 6,214. Of these, the majority resided in rural areas. The number of participants in each age group was bigger in the early age group (20-24 years and 25-29 years) and smaller as the age increased. Further, the majority of the respondents perceived themselves as accessing female condoms in Zambia. The description of the sample is summarized in Table 2 below.

TABLE 2: SOCIO DEMOGRAPHIC CHARACTERISTICS (UNDERLYING DETERMINANTS) OF SEXUALLY ACTIVE WOMEN AGED 15-49 INTERVIEWED IN ZAMBIA DEMOGRAPHIC HEALTH SURVEY (2007).

Variable	Category	n (%)	N
Residence	Urban	2617(40)	6214
	Rural	3597 (60)	
Marital Status	Never Married	1009 (15)	6214
	Married	4264 (71)	
	Widowed	312 (5)	
	Divorced	422 (7)	
	Not living together	155 (2)	
Educational level	Primary	4155 (68)	6214
	Secondary	1732 (26)	
	Higher	327 (6)	
Province	Central	569 (9)	6214
	Copperbelt	681 (17)	
	Eastern	835 (14)	
	Luapula	610 (8)	
	Lusaka	783 (16)	
	Northern	670 (14)	
	North-Western	619 (5)	
	Southern	729 (10)	
	Western	718 (7)	
Age Group	15-19	796 (12)	
	20-24	1309 (20)	
	25-29	1352 (22)	
	30-34	1038 (17)	

	35-39	729 (12)	
	40-44	529 (9)	
	45-49	461 (8)	6214
Religion	Catholic	1173(20)	
	Others	5032(80)	6205 ^o
Parity	No Child	1525(25)	
	1-Child	2105(33)	
	2-Children	2440(40)	
	≥ 4-Children	147 (2)	6214
Wealth quintile	Poorest	1046(18)	
	Poorer	1143(19)	
	Middle	1278(19)	
	Richer	1494(22)	
	Richest	1253(22)	6214
Perceived accessibility of female condom	No	1099(40)	
	Yes	1694(60)	2793

^oN smaller because of missing responses to this question

Figure 2. Proportion of sexually active women accessing female condom by age in Zambia 2007.

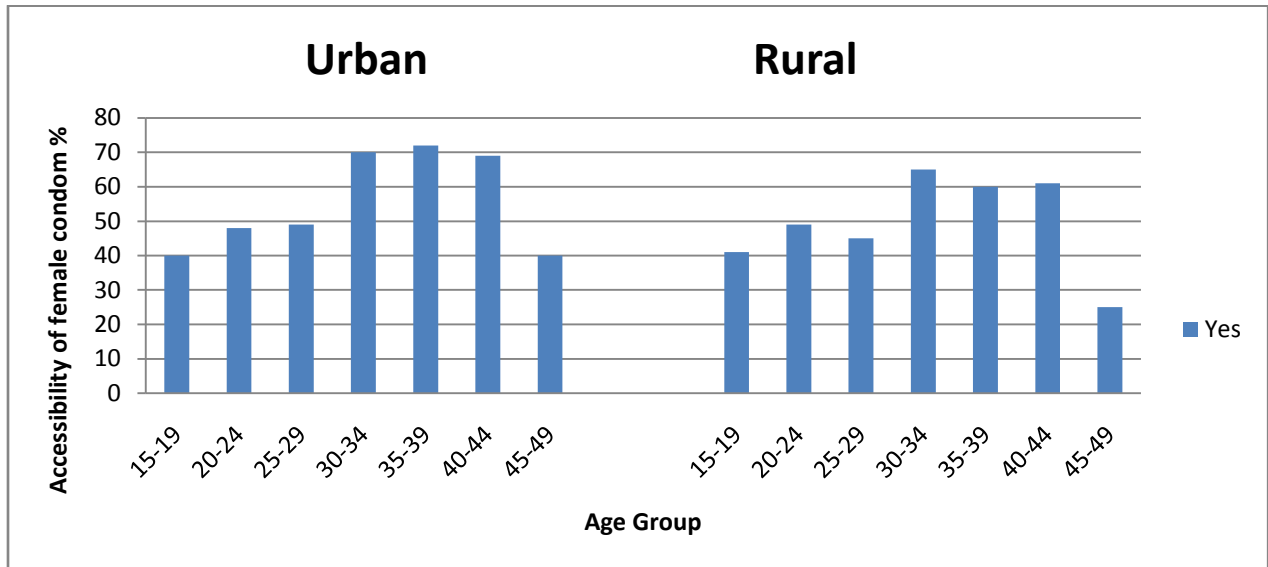


Figure 3. Proportion of sexually active women accessing female condom by education in Zambia 2007.

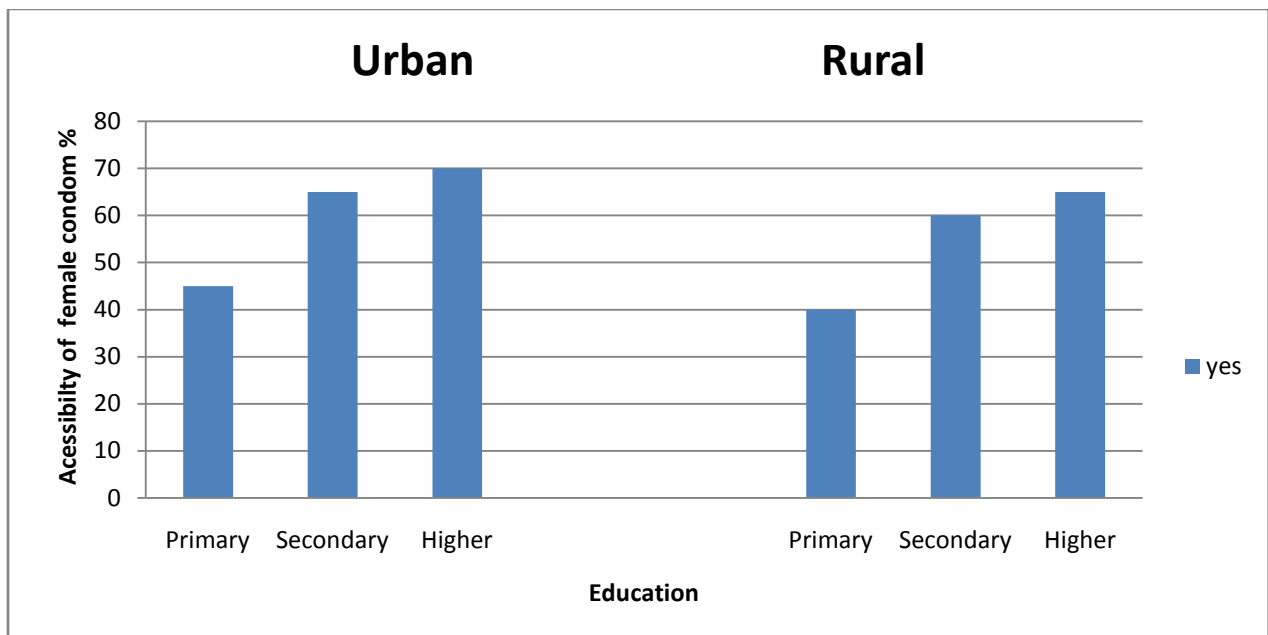


Figure 2 and 3 shows that the proportions having access to female condoms are highest in the age groups between 30 to 44 years and among those with secondary and higher education.

Figure 4. Proportion of sexually active women having knowledge on how to use female condom as a contraceptive method by age group in Zambia 2007

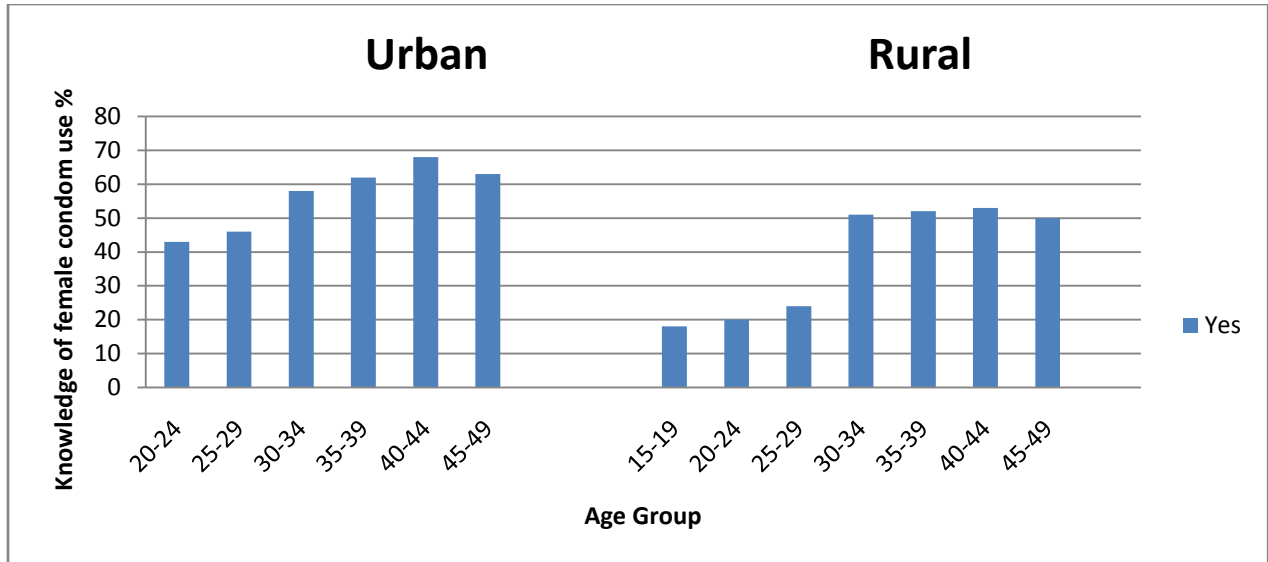


Figure 5. Proportion of sexually active women having knowledge on how to use female condoms as contraceptive method by education in Zambia 2007

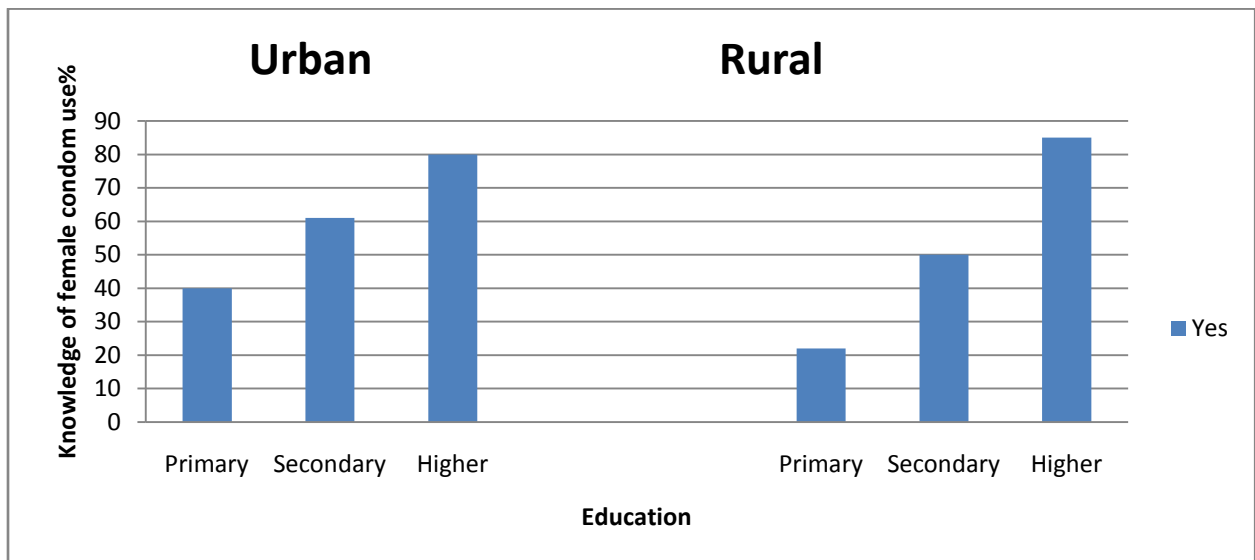


Figure 4 and 5 shows that the proportions having knowledge of female condoms are highest in the age groups between 30 to 44 years and among those with secondary and higher education.

Table 3 shows that in the bivariate regression analyses, urban women who were married, widowed or not living together (separated), and rural women who were divorced or not living together had a higher odds of having ever used a female condom use than those who had never been married. The richest (14%) and second richest (13%) quintiles reported higher percentages of ever female condom use than the middle quintile (8%) and poorest (recording 11%) for the urban women. A similar pattern was observed in the rural women. In both urban and rural areas, women in Southern province had a higher percentage of ever female condom use than women in other provinces. However, only rural women from Southern province had a higher likelihood of ever of female condom use compared to rural women from Central province and this was statistically significant. Both urban and rural women from Northern Province and rural women from Eastern province had a lower odd of ever having used female condom compared to women from Central province. In terms of age group, in urban areas a higher percentage of women aged 40-44 years reported ever having used a female condom than any other age group. Further, all age groups from 20 years and up were significantly more likely to report condom use than those aged 15-19 years in both urban and rural areas. As for the difference between those aged 25-29 years and those aged 20-24 or 30-39 years, the confidence intervals are overlapping which means that the difference is not significant.

Further, the multivariable regression analysis shows that urban women in the age group 35-44 years and rural women in the age groups 25-29 years and 35-39 years had higher odds of having ever used female condom compared to those in the 15-19 year age group and this was statistically significant at 95% confidence level. With regards to province, rural women in Southern and Western provinces had a higher likelihood of having used female condoms use compared to rural women from Central province. On the other hand, urban women from Northern had lower odds of ever having used female condoms than those from Central province. Perceived accessibility of female condom was associated with ever female condom use among urban women. In addition, urban women with higher education had higher odds of reporting ever female condom use than those with primary education. Further, both urban and rural women with secondary education were more likely to ever have used female condom compared to women with primary education.

TABLE 3: EVER FEMALE CONDOM USE BY DIFFERENT BACKGROUND CHARACTERISTICS AND LOGISTICREGRESSION ANALYSES OF THE ASSOCIATION BETWEEN EVER FEMALE CONDOM USE AND UNDERLYING FACTORS AMONG SEXUALLY ACTIVE WOMEN AGED 15-49 IN ZAMBIA (2007).

Variables	Categories	Urban			Rural		
		n(% users)	Bivariate CRUDE OR(95% CI)	Multivariable Adjusted OR	n (% users)	Bivariate CRUDE OR(95% CI)	Multivariable Adjusted OR(95%CI)
Marital Status							
	Never Married	131(5)	1.00	1.00	144(4)	1.00	1.00
	Married	262(10)	2.31(1.31-4.08)	1.13(0.34-3.74)	288(8)	2.17(1.00-4.72)	2.27(0.55-9.30)
	Widowed	262(10)	1.91(1.03-3.54)	1.47(0.56-3.82)	252(7)	1.64(0.83-3.24)	2.24(0.60-8.35)
	Divorced	183(7)	1.98(0.84-4.67)	1.35(0.32-5.71)	432 (12)	2.94(1.31-6.62)	2.50(0.49-12.9)
	Not living together	366 (14)	2.80(1.91-4.10)	2.36(1.06-5.25)	288 (8)	2.04(1.25-3.33)	1.90(0.65-5.53)
Education level							
	Primary	209(8)	1.00	1.00	216(6)	1.00	1.00
	Secondary	314 (12)	1.40(1.07-1.84)	2.17(1.25-3.75)	468(13)	2.31(1.74-3.05)	1.71(1.06-2.75)
	Higher	523(20)	2.83(2.01-4.00)	2.63(1.32-5.24)	1151(32)	5.47(2.51-11.9)	2.74(0.61-12.3)
Province							
	Central	340(13)	1.00	1.00	252(7)	1.00	1.00
	Copperbelt	340(13)	1.07(0.66-1.74)	0.96(0.41-2.24)	252(7)	1.01(0.51-1.99)	2.11(0.67-6.72)
	Eastern	314(12)	0.95(0.54-1.68)	1.17(0.54-2.55)	144(4)	0.49(0.27-0.90)	1.25(0.44-3.55)
	Luapula	288(11)	0.89(0.49-1.62)	0.62(0.19-2.03)	180(5)	0.77(0.43-1.39)	1.28(0.42-3.89)
	Lusaka	236 (9)	0.70(0.42-1.16)	0.84(0.39-1.78)	252(7)	1.04(0.55-1.97)	2.87(0.99-8.28)
	Northern	183(7)	0.52(0.27-0.99)	0.30(0.12-0.78)	108(3)	0.35(0.17-0.72)	0.22(0.02-2.06)
	North-Western	209(8)	0.58(0.99-1.11)	0.84(0.33-2.17)	108 (3)	0.44(0.22-0.88)	1.29(0.49-4.23)
	Southern	419(16)	1.37(0.81-2.31)	1.39(0.64-3.03)	935 (26)	4.64(2.94-7.32)	9.62(3.64-25.4)
	Western	393 (15)	1.24(0.72-2.15)	1.13(0.54-2.35)	288(8)	1.14(0.68-1.93)	3.94(1.42-10.9)
Age group							
	15-19	79 (3)	1.00	1.00	108(3)	1.00	1.00
	20-24	236 (9)	2.99(1.54-5.80)	2.14(0.69-6.61)	252(7)	2.24(1.24-4.02)	2.35(0.95-5.80)
	25-29	340 (13)	4.14(2.16-7.93)	2.87(0.98-8.44)	360(10)	3.04(1.72-5.37)	3.20(1.25-8.16)
	30-34	262(10)	4.00(2.04-7.82)	2.69(0.92-7.91)	252 (7)	2.41(1.33-4.37)	2.14(0.77-5.92)
	35-39	471 (18)	7.50(3.83-14.7)	4.26(1.30-14.0)	324(9)	2.98(1.68-5.44)	3.53(1.37-9.10)
	40-44	550(21)	8.11(4.07-16.1)	7.04(2.02-24.5)	288(8)	2.52(1.31-4.84)	2.10(0.75-5.86)

	45-49	314(12)	4.66(2.24-9.69)	3.69(0.94-14.4)	288(8)	2.67(1.37-5.21)	2.15(0.73-6.34)
Religion							
	Catholic	287(11)	1.00	1.00	216(6)	1.00	1.00
	Others	313(12)	1.00(0.84-1.62)	1.02(0.62-1.68)	287(8)	1.16(0.84-1.62)	1.06(0.56-2.03)
Parity							
	No Child	314(12)	1.00	1.00	216(6)	1.00	1.00
	1-Child	262(10)	0.83(0.62-1.11)	0.71(0.42-1.21)	252(7)	1.09(0.75-1.58)	0.79(0.46-1.35)
	2-3 Children	340(13)	1.00(0.74-1.34)	1.12(0.67-1.89)	288 (8)	1.22(0.86-1.72)	0.91(0.52-1.61)
	≥ 4-Children	471(18)	1.27(0.52-3.09)	2.62(0.70-9.82)	432 (12)	1.73(0.88-3.38)	0.73(0.27-1.93)
Wealth							
	Poorest	288(11)	1.00	1.00	252(7)	1.00	1.00
	Poorer	288(11)	1.22(0.85-1.76)	0.78(0.45-1.36)	252 (7)	0.89(0.59-1.35)	1.05(0.60-1.84)
	Middle	209(8)	0.95(0.64-1.41)	0.53(0.24-1.15)	144(4)	0.57(0.36-0.90)	0.64(0.34-1.20)
	Richer	340 (13)	1.52(1.06-2.17)	0.67(0.34-1.33)	288(8)	1.16(0.78-1.71)	1.15(0.64-2.08)
	Richest	366(14)	1.62(1.13-2.31)	0.66(0.31-1.42)	432(12)	1.58(1.10-2.26)	0.99(0.52-1.94)
Perceived accessibility of female condoms							
	No	145(11)	1.00	1.00	133(9)	1.00	1.00
	Yes	224(17)	1.71(1.22-2.39)	1.65(1.12-2.44)	162(11)	1.55(1.08-2.22)	1.17(0.70-1.95)

The majority of women did not have the knowledge of female condom use as a contraceptive method, but many knew where to get female condom and the benefit of using female condoms to prevent HIV. And 3% of women reporting having had genital sore/ulcer in the last 12 month. Further, out of the 4,987 women who consented to HIV testing, 18% tested positive for HIV (Table 4).

Table 4 DISTRIBUTIONS OF PROXIMATE DETERMINANTS OF EVER USING FEMALE CONDOM AMONG SEXUALLY ACTIVE WOMEN AGED 15-49 IN THE ZAMBIA DEMOGRAPHIC AND HEALTH SURVEY (2007).

Variables	Category	n(%)	N
Knows a place to get female condom	No	2780(45)	6197
	Yes	3417(55)	
Knowledge of female condom use as contraceptive method	No	4021(64)	6213
	Yes	2192(36)	
Perceived benefit of using female condom	No Benefit	1137(19)	6159
	Reduces the chance of Aids	4742(76)	
	Don't Know	280(5)	
Genital sores/Ulcer in the last 12 Months	Didn't have genital sore/Ulcer	5987(97)	6199
	Had genital sore/Ulcer	207(3)	
Perceived threat of HIV	No Risk	1224(19)	6161
	Low	1097(18)	
	Medium	1118(17)	
	High	1700(29)	
	Other	1022(17)	
HIV test result	Negative	4069(82)	4987
	Positive	918(18)	

Further analysis, as shown in Table 5, revealed that knowing a place to get female condoms was negatively associated with ever female condom use. With regard to perceived risk of HIV infection, urban women who perceived themselves at high risk of HIV infection had a lower odds of ever female condom use compared to women who perceived themselves at no risk of HIV infection. On the other hand rural women who perceived themselves at medium risk of HIV infection had a higher odds of ever female condom use compared to rural women who perceived themselves at no risk. In the multivariable analysis, both urban and rural women who knew a place to get female condoms had a lower likelihood of ever female condom use than those women who did not know where to get them. Urban women who had genital sores in last 12 months had a higher likelihood of ever having used a female condom than women who didn't have a genital sore/ulcer in the last 12 months, and this was statistically significant at 95% confidence level. Further, rural women who perceived themselves at medium risk of HIV infection were more likely to have used female condoms than those who perceived themselves to be at no risk of HIV infection.

TABLE 5: PERCENTAGES OF WOMEN REPORTING FEMALE CONDOM USE AND MULTIVARIABLE REGRESSION ANALYSIS OF THE ASSOCIATION BETWEEN EVER FEMALE CONDOM USE AND PROXIMATE DETERMINANTS AMONG SEXUALLY ACTIVEWOMEN AGED 15-49 IN ZAMBIA (2007).

Variables	Categories	Urban			Rural		
		n(% users)	Bivariate CRUDE OR(95% CI)	Multivariable AdjustedOR(95%CI)	n (% users)	Bivariate CRUDE OR(95% CI)	Multivariable Adjusted OR(95%CI)
Knowledge of female condom as a contraceptive method^a	No	0(0)		1.00	0(0)		1.00
	Yes	576(22)			1043 (29)		
Knows a place to get female condoms	No	365(14)	1.00	1.00	359(10)	1.00	1.00
	Yes	235 (9)	0.57(0.45-0.74)	0.63(0.46-0.88)	215(6)	0.52(0.41-1.67)	0.59(0.43-0.82)
Perceived benefit of using female condom	No Risk	234(9)	1.00	1.00	249(7)	1.00	1.00
	Reduces the chance of Aids	313(12)	1.36(0.97-1.89)	1.43(0.95-2.14)	284(8)	1.06(0.77-1.46)	0.93(0.65-1.32)
	Don't Know	260(10)	1.36(0.63-2.90)	1.81(0.67-4.87)	178 (5)	0.62(0.31-1.24)	0.54(0.21-1.36)
Genital sores/Ulcer in last 12 Months	No genital sore/Ulcer	287(11)	1.00	1.00	251(7)	1.00	1.00
	Had genital sore/Ulcer	443(17)	1.36(0.78-2.39)	1.57(0.84-2.92)	323(9)	1.24(0.64-2.41)	1.26(0.64-2.48)
Perceived threat of HIV infection	No Risk	391(15)	1.00	1.00	249(7)	1.00	1.00
	Low	313(12)	0.90(0.62-1.28)	0.80(0.53-1.21)	320(9)	1.43(0.95-2.15)	1.36(0.84-2.20)
	Medium	361(10)	0.73(0.50-1.05)	0.74(0.46-1.18)	355(10)	1.75(1.18-2.61)	1.68(1.08-2.61)
	High	287(11)	0.67(0.47-0.95)	0.85(0.55-1.30)	213 (6)	0.93(0.63-1.37)	0.89(0.58-1.36)
	Otherresponses	235(9)	0.73(0.50-1.08)	0.70(0.38-1.29)	284 (8)	1.19(0.78-1.83)	1.05(0.64-1.74)
HIV test result	Negative	273(13)	1.00	1.00	202(7)	1.00	1.00
	Positive	210(10)	0.88(0.65-1.18)	0.75(0.48-1.17)	260(9)	1.17(0.83-1.64)	1.12(0.81-1.55)

^a - Omitted from the regression model due to empty cells.

When all the determinants were taken into consideration in the full multivariable model,, significantly higher likelihoods of female condom use were observed in rural areas for those who had separated compared to those who had never married, women who knew the source of female condom compared to those did not know the source of female condom, and women who perceived the threat of disease to be medium compared to those women who perceived themselves at no risk of HIV. On the other hand urban women, who perceived the threat of HIV infection to be low, had a lower likelihood of ever having used female condom compared to those who had never been married. Further, urban women aged 35-39 and 40-44 years were more likely to ever have used female condom than any other age group. Urban women who had a genital sore/ulcer in the last 12 months had a higher likelihood of ever having used female condoms compared to those who did not have genital sores/ulcer in last 12 months. Urban women with secondary and higher education were more likely to have ever used female condoms than those with primary education. With regard to province, rural women in Southern province had a higher odd of ever female condom use than women in any other provinces(Table 6).

TABLE 6: FULL MULTIVARIABLE REGRESSION MODELS WITH FACTORS ASSOCIATED WITH EVER FEMALE CONDOM USE AMONG SEXUALLY ACTIVE WOMEN AGED 15-49 IN ZAMBIA (2007).

Variable	Category	<i>Fitting all Determinants</i>	
		Urban aOR (95% CI)	Rural aOR(95% CI)
Marital Status			
	Never Married	1.00	1.00
	Married	1.23(0.29-5.12)	2.80(0.66-11.8)
	Widowed	1.51(0.54-4.20)	3.66(1.00-13.5)
	Divorced	1.65(0.27-10.0)	3.83(0.68-21.7)
	Not living together	2.41(0.98-5.90)	3.04(1.01-9.11)
Highest Education Level			
	Primary	1.00	1.00
	Secondary	2.74(1.43-5.25)	1.71(1.00-2.91)
	Higher	2.81(1.26-6.29)	3.01(0.60-15.1)
Province			
	Central	1.00	1.00
	Copperbelt	1.26(0.52-3.05)	2.22(0.45-10.9)
	Eastern	1.50(0.59-3.81)	1.20(0.35-4.12)
	Luapula	0.70(0.17-2.88)	0.88(0.25-3.07)
	Lusaka	1.13(0.51-2.52)	2.51(0.74-8.57)
	Northern	0.33(0.11-0.98)	0.26(0.03-2.71)
	North-Western	0.87(0.31-2.40)	0.88(0.23-3.37)
	Southern	1.80(0.76-4.26)	9.73(3.00-31.6)
	Western	1.03(0.46-2.30)	2.85(1.03-9.12)
Age Group			
	15-19	1.00	1.00
	20-24	2.32(0.71-7.61)	2.04(0.68-6.18)
	25-29	2.33(0.71-7.64)	2.32(0.74-7.28)
	30-34	2.50(0.79-7.89)	1.34(0.40-4.50)
	35-39	4.70(1.26-17.5)	2.56(0.83-7.92)
	40-44	7.59(1.84-31.3)	1.52(0.46-5.06)
	45-49	2.95(0.62-14.1)	1.62(0.46-5.76)
Religion			
	Catholic	1.00	1.00
	Others	0.88(0.51-1.54)	1.30(0.59-2.88)
Parity			
	No Child	1.00	1.00
	1-Child	0.63(0.35-1.16)	0.92(0.48-1.77)
	2-Child	1.25(0.71-2.20)	1.20(0.61-2.34)
	≥4-Children	1.71(0.41-7.03)	0.73(0.21-2.54)
Wealth quantile			
	Poorest	1.00	1.00

	Poorer	0.76(0.35-	1.15(0.58-2.28)
	Middle	1.57)0.63(0.23-1.67)	0.55(0.26-1.18)
	Richer	0.72(0.32-1.61)	1.30(0.64-2.64)
	Richest	0.67(0.29-1.52)	1.39(0.68-2.83)
Knows a place to get female Condom			
	No	1.00	1.00
	Yes	1.15(0.68-1.94)	2.26(1.42-3.58)
Perceived accessibility of female Condom			
	No	1.00	1.00
	Yes	1.36(0.84-2.18)	1.02(0.55-1.88)
Knowledge of female condom as contraceptive method⁶			
Perceived benefit of using female condom			
	No Risk	1.00	1.00
	Reduces the chances of Aids	1.54(0.80-2.95)	0.71(0.41-1.23)
	Don't Know	1.73(0.27-11.0)	0.23(0.04-1.17)
Genital sore/Ulcer in last 12 Month			
	No genital sore/Ulcer	1.00	1.00
	Had genital sore/Ulcer	3.62(1.71-7.67)	0.38(0.14-1.05)
Perceived threat of HIV infection			
	No Risk	1.00	1.00
	Low	0.47(0.26-0.85)	1.57(0.79-3.13)
	Medium	0.46(0.20-1.08)	2.13(1.12-4.05)
	High	0.97(0.50-1.89)	1.21(0.60-2.44)
	Other responses	0.80(0.35-1.81)	0.96(0.42-2.20)
HIV test Result			
	Negative	1.00	1.00
	Positive	0.79(0.43-1.48)	0.87(0.45-1.69)

⁶- Omitted from the regression model due to empty cells

Table 7: Predictors of ever female condom use using Backward Step Multiple Regression with ever female condom use as dependent variable

	Urban		Rural
Variables	OR(95%CI)	Variables	OR(95%CI)
Marital status			
Not living together	2.00(1.30-3.06)		
Age			
40-44	2.56(1.46-4.50)		
Province			
Northern	0.34(0.17-0.71)	Copperbelt	2.93(1.32-6.48)
		Lusaka	3.85(2.18-6.78)
		Southern	10.6(6.88-16.4)
		Western	2.72(1.51-4.90)
Knows a place to get female condom			
	0.77(0.20-0.62)		

The table above shows the strongest predictors of ever female condom use in these data from the Zambia Demographic and Health Survey according to the backward stepwise regression model run in Stata. Urban women who were not living together, aged 40-44 years and who knew a place where to get female condom and rural women in Copperbelt, Lusaka, Southern, and Western provinces were more likely to report female condom use. Further only urban women in Northern Province were less likely to report female use.

3.2 QUALITATIVE FINDINGS

3.2.1 Demographic Characteristic of the Participants of the Focus Group Discussion.

Three focus group were held at Ng'ombe clinic which comprised only women of reproductive age. The first focus group comprised of women who were aged 18 years to 24 years consisting of ten participants, the second focus group comprised of women who were aged 25 years to 30 years consisting of nine participants and the third focus group comprised of women who were above 30 years of age consisting of ten participants. These participants came from different parts of Lusaka District. This age group was selected because these women were antenatal mother within the child bearing ages who are supposed to use family planning method and for those women who were less than 18 years old were excluded because they needed somebody to sign for them in order to participate in the study and they were less likely to attend to family planning services at Ng'ombe clinic.

The study findings are presented under seven themes namely (i) knowledge of female condom use, (ii) use of female condom (iii) Experience of using female condom (iv) Accessibility of female condom (v) Benefit of sing female condom (vi) partner involvement in using female condom (vii) Barriers to female condom use and (viii) Cultural Beliefs.

- **Theme (I) Knowledge about female condoms**

The respondent's knowledge and awareness on female condoms was assessed. The majority of the respondents said they heard about female condoms. Others said that female condoms prevented HIV or cancer(model 1).

Yes, what I know about female condom is that it prevents from diseases, Respondent number 4, 25 to 30 years old woman

I just know that a female condom is a condom which is used by women, Respondent number 1 ,above 31 years old woman

The implication here was that they knew about female condoms. However, some participants indicated a level of ignorance in how to insert or use it.

*Can you both wear condoms at the same time, man and woman? Respondent number 7
18 to 24 years old woman*

*I don't know how to use it and I wanted to know, how do they use it? Respondent number
12 ,25 to 30 years old woman*

When asked on what messages they would tell women on female condoms, nearly all women suggested a positive message. Despite showing high level of ignorance, their proposed messages showed that they knew the importance of female condoms. That female condom would protect against HIV and pregnancy (see model 1).

*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 are using it, you are protected. So am appealing to those of you who have not used it, to try it, nothing will happen and everything will be ok and you will like it. Respondent number 2
18 to 24 years old woman*

*I can tell the women the good part of the female condom. To start with, a female condom prevents us from diseases; it prevents us from unwanted pregnancy. So, if you are using a female condom, you are protected from many things. If you have never used a female condom, try to get so you can go and use to see its goodness. Respondent number 11
18 to 24 years old woman.*

*I can tell them the goodness of a condom, the way it is and what I have heard that for instance when a man goes out, he wouldn't come with a condom to use to his wife, he would sleep with you with direct to show that he loves you and yet he is from sleeping with a girlfriend of which you can even get the diseases. Respondent number 9
,25 to 30 years old woman*

I can tell them what I know that female condom is good and it prevents us from diseases. Respondent number 2 ,above 31 years old woman

- **Theme (ii) Use of female condoms**

The use of female condoms as indicated in the focus group discussion was low. Most women talked to, had never used female condoms before. A cross analysis of the three groups of

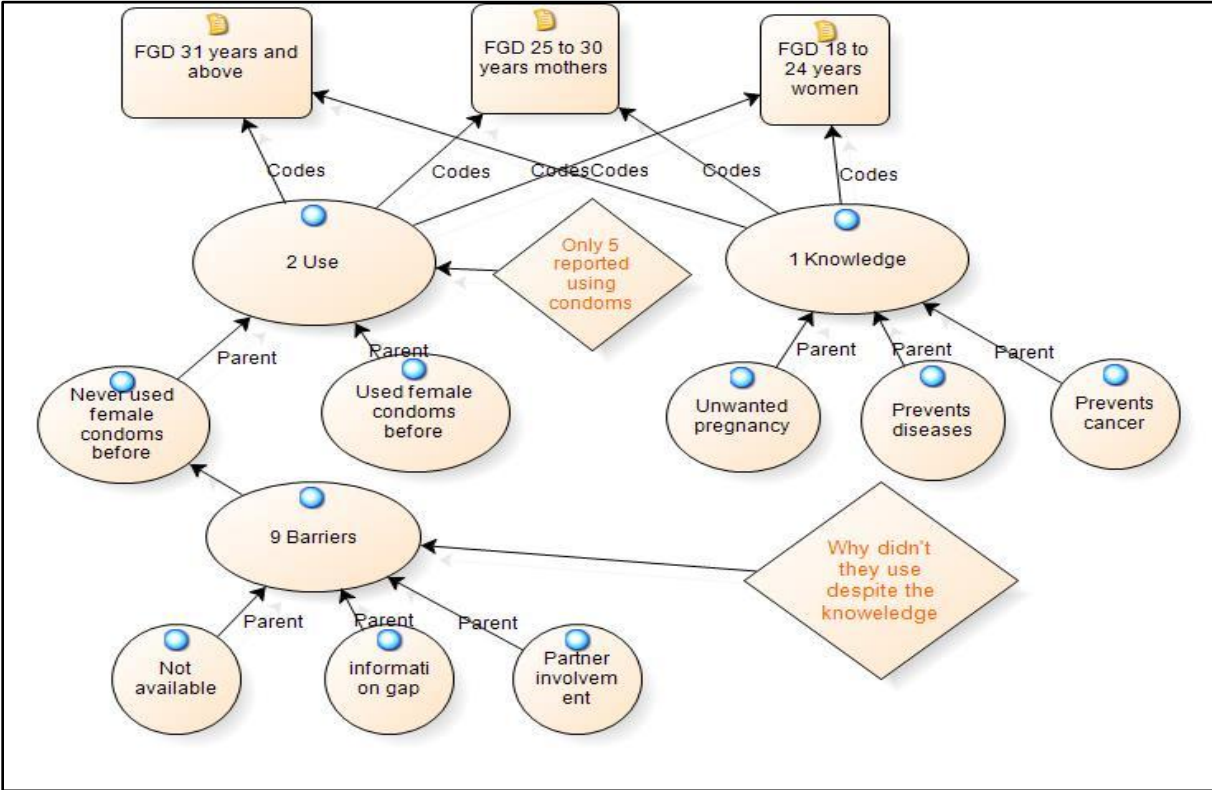
women, no major difference occurred in the use of condoms. Only 2 women from the 18 to 24 years and the 25 to 30 years women reported using female condoms. Only one from the older group of women reported using female condoms (see model 1). Other women only said that they used other contraceptives in steady of condoms. This gives an impression that women were more concerned with the prevention of pregnancy than HIV and STIs.

I have only used pill. Respondent number 5 18 to 24 years old woman

It is just ok, because it will prevent you from having unplanned children. Respondent number 12 ,25 to 30 years old woman

I have never used it and I did not know how to use it. respondent number 1, ,above 31 years old woman

Model 1: Does Knowledge reflect use



A trace of participants knew how to use female condoms. This was despite their knowledge that condoms could prevent STIs and other diseases. Other women in the FGD were able to respond to some misconceptions and lack of knowledge on how to use it from fellow respondents.

There is no problem; you can insert it there and then. The reason why we say you insert it hours before, you can be tired and sleep and when the time comes for you to meet for act, then you think of starting to remove the condom, to fold it your friend will get bold, So it becomes easy when insert it before you sleep, so that when your husband requests for sex and start foreplay, you won't have to say, 'no wait' you don't have to start bothering about inserting the condom. It is different with the male condom with is worn when the man's manhood is erect, but for our female condom you can insert it anytime. For the men, you do foreplay, when he is strong, that's when you wear him. So that is the difference which is there, so its better you insert 10minutes before. Respondent number 12 18 years to 24 years old woman.

- **Theme (iii) Experiences of using female condoms**

Those who said had used female condoms before found them to be fine. Some said that they could not feel the presence of condoms since it felt 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 are so many dangers, with unprotected sex, us women can have cancer without knowing, you can't even know that you contracted HIV, STI's. So this condom prevents us from all these. Even these cancers, they come from men, they are the ones who give us and so if we are not using the female condoms, we are risking all these. We discover at the end that we were given a disease, and yet 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 number 2, above 31 years old woman

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 number 4, 25 to 30 years old woman

Seems the use of female condoms is not a priority for women, some women only used it to try. Others could not even try it because they had a bad experience with male condoms. Varying views came out from the women. Implying there are different experiences with the use of

female condoms. others liked female condoms while some did not. Here is how respondents put it;

Maybe I contribute, this female condom when I learnt, I requested for one to go and try at home... I went to try and I told my husband that today it is me wearing a condom, I wore it and I used it. It just feels the same like skin, respondent number 11 18 to 24 years old woman

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 number 4 18 years to 24 years old woman

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, maybe I am sick I come to the lab and I chance it. 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 number 2 ,25 to 30 years old woman

- **Theme (iv) Accessibility of female condoms**

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.

For me, I have never bought this condom; I usually access them from here at the clinic, Respondent number 11, 18 to 24 years old woman

We usually come to the clinic, but they have never taught us, Respondent number 6 18 to 24 years old woman

It is found at the clinic but they rarely give, Respondent number 2, above 31 years old woman

M: they don't give anyhow, ok. Why don't they give at the clinic?

They give, but R2 is the only one who said she uses female condom, most women don't even ask for it at the clinic and when it's available, you would find that they actually get expired. Mostly, male condoms are accessed because people request for them, and when women are told that female condoms are in stock we give you some, they refuse to say no just give me female Respondent number 11 ,above 31 years old woman

- **Theme (v) Benefits of using female condoms**

The major benefit that women talked about was that female condoms could prevent them from STIs, HIV, and pregnancy and cancer infections. This was despite their lack of knowledge in the use of female condoms (model 2).

The important part is that you are preventing yourself from diseases, even when your husband is not there, you can insert the condom till he comes. Respondent number 9 ,25 to 30 years old woman

Just to contribute on what has been said by R11, if you wear a condom, both of you are protected. But then if both of you are wearing, the friction of rubber to rubber wont be good and there is going to be damage on the condoms. For this reason, it is not necessary. If one decides to wear, the other one should not wear. You can't both be on rubber, rubber it is not ok. respondent number 12, 18 to 24 years old woman

The important part is that you are preventing yourself from diseases, even when your husband is not there, you can insert the condom till he comes. respondent number 9 ,25 to 30 years old woman

It prevents from diseases and pregnancy, respondent number 1, 25 to 30 years old woman

M: diseases and pregnancy, fine. R3

To prevent ourselves from diseases and pregnancy, respondent number 3, 25 to 30 years old woman (model 2).

The other benefits as alluded to by respondents were that female condoms were not coital dependent. A woman would insert it hours before having sex. Compared to other contraceptive pills, women found female condoms to be better since they did not have side effects which are common with contraceptive pills. They said female condoms were better since they would not forget to insert as would happen with the pills.

There is no problem; you can insert it there and then. The reason why we say you insert it hours before, you can be tired and sleep and when the time comes for you to meet for act, then you think of starting to remove the condom, to fold it your friend will get bold, So it becomes easy when insert it before you sleep, so that when your husband requests for sex and start foreplay, you won't have to say, 'no wait' you don't have to start bothering about inserting the condom. It is different with the male condom with is worn when the man's manhood is erect, but for our female condom you can insert it anytime. For the men, you do foreplay, when he is strong, that's when you wear him. So that is the difference which is there, so its better you insert 10minutes before. Respondent number 12, 18 to 24 years old woman

Actually, female condom is easy, unlike the pill which is forgotten most of the times, the more reason why we fall pregnant because we tend to forget. But for the female condom, you actually know that I have not inserted Respondent number 2, above 31 years old woman

The other benefit was that it brought dialogue in a home before condoms were used. Some women realized that it was their role to encourage condom use in marriage. They said men would not want to introduce condom use at home even after having sex outside marriage.

The other good part is that if you want to use it, you just tell your husband that 'I want to insert,' if he is interested, he will tell you to go ahead, if he doesn't want he will just say 'no, let wear,' isn't it? respondent number 11 18 to 24 years old woman

I did not find any problems in using female condoms, when you want to do something at home, there are some things you fail to agree together, and when it comes to prevention of diseases, you are supposed to agree and it depends on how you understand each other.

Not that no, my husband forbids me, and you also stop... Respondent number 3 ,above 31 years old woman

Other men can't even use the condom with you much as they know that they are sleeping with other women, just to destroy you, and as a woman you need to be strong to use a female condom. Respondent number 5, above 31 years old woman

- **Theme (vi) Partner involvement in using female condoms**

There was also indication that the partner has to be informed before using it. Autonomy in product use in reproductive health remains a challenge for women. Women still have a challenge in making decisions on matters of sexuality (model 2).

The other good part is that if you want to use it, you just tell your husband that 'I want to insert,' if he is interested, he will tell you to go ahead, if he doesn't want he will just say 'no, let wear,' isn't it?...you make a decision both of you. Other men would say 'today it is you wearing a condom, me I will not wear, and since you are the one who brought them, you wear. So you decide together... No. because for instance, I get a condom and I have learnt, I am supposed to tell my partner that 'my husband, today I got a condom at the clinic and this is what I learnt. It should not be that if I have been given a female condom then I should be an outside partner, no. it is a way of preventing ourselves. Respondent number 11, 18 to 24 years old woman.

Prevents us from diseases such as cervical cancer I am sure you have heard about isn't it. So this same condom will prevent us. The benefits to us are quite many. And just like R11 has said, if you are to use a female, you need to discuss with your husband first of all. Actually I have also used it before, so I had discussed with my husband to say, today I also want to try this since most of the time you are the one who uses and my husband was happy. I inserted my condom and during sex just like R2 had said, you don't feel as if there is something and he was actually happy to say it was better than the male of which he had complained about the staff inside. So it shows that you are also concerned and you love your friend isn't it. I think this is what I can say about the female condom because I have used it before. Respondent number 12, 18 to 24 years old woman

A woman is the one who is supposed to encourage your husband. It is the same with the condom, you need to tell your husband the good part of the female condom, if you love me, let us use it to prevent us from diseases. Respondent number 3, above 31 years old woman

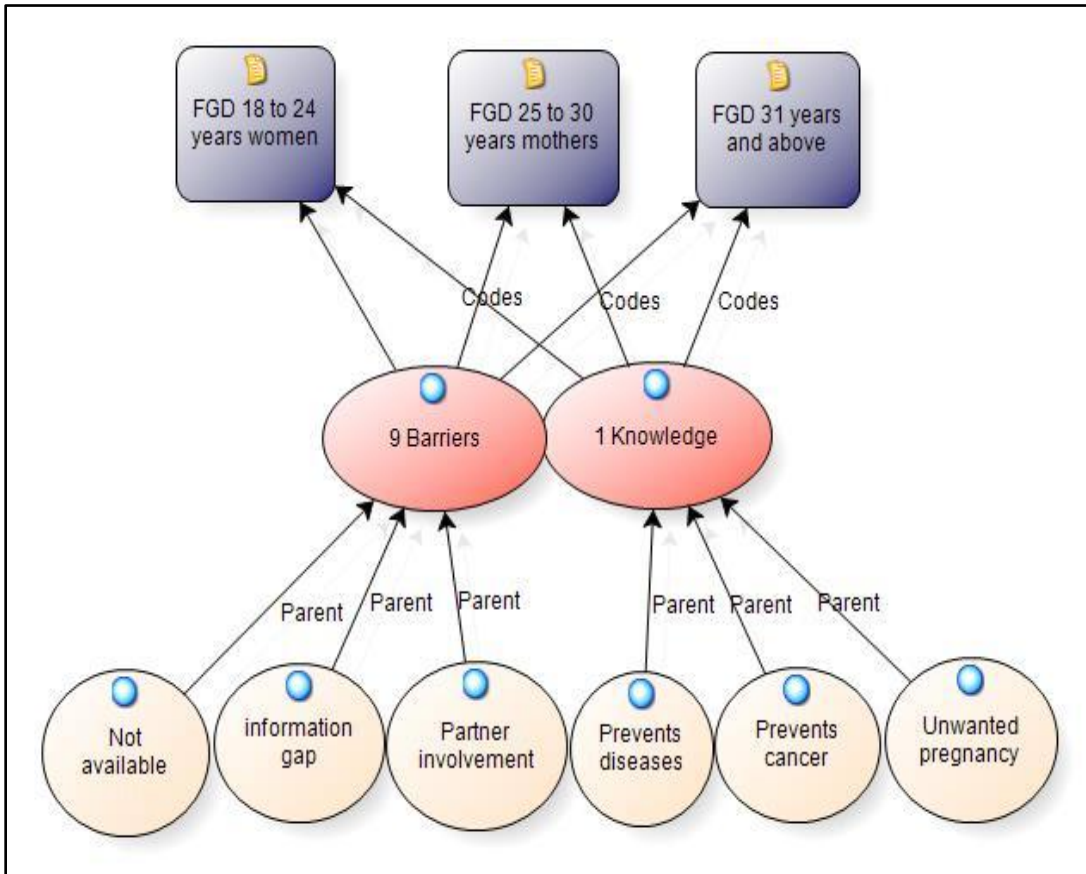
- **Theme (vii) Barriers to female condom use**

Despite many benefits recognized in using condoms, very few women reported using them. What are the major barriers in women using female condoms? This question was posed to the respondents and various reasons were raised. They said that the lack of access to *information* contributed to low use of female condoms. They said that they did not know how to use the female condoms (model 2). This issue were about the lack of *sensitization* about female condoms. Women complained of lack of *access* to female condoms that is why many didn't know how to use them. They said that there is a lot of sensitization for male condoms than female condoms. The model below shows that despite women knowing much about the importance of female condoms, they were met with various challenges.

I think when it comes to female condom, the information is less. At least nowadays we are able to hear of it. If you compare with the male condom, male condom is everywhere in drug store and just everywhere but for the female condom just to say the truth, from the time I was born, I am seeing it for the first time, I have just been hearing that it is there, so it is rare to be used because it is rarely found, even at the clinics I don't think you can find enough in stock, maybe nowadays because you would go there and find there is nothing in stock. So we have got no information about that one. Respondent number 10, 25 to 30 years old woman

I think for me, I just want to make a contribution. My contribution is that for you as researchers, it is important because for us women we become ignorant to use it, again it is because we lack information, so it is important that much as you teach about the male condom, teach about the female condom also, because others just make bracelets from the female condom, and we have heard about the bracelets, so if you teach them more, I think most of us will have a good idea and we will enjoy using it more compared to the male condom. Respondent number 10, 18 to 24 years old woman.

Model 2: Effects of the barriers on the knowledge of product use



The issue of *stock outs* of female condoms at the health facilities was one of the challenges women faced. Mostly they would find more male condoms than for females. They also said it was difficult for women to go and buy female condoms. The issue of stigma also played a part, women would not be free to collect condoms at a clinic because they feared others would see them.

some of us, we knew about the female condom way back, some of us it was around 2004, we came to see and know about it through society for family health. For them, they used to bring it as well as to sell it. But then you know how it is for us people, buying and being given for free are two different things. So, most people would prefer for free things. At the moment, those who know the female condom and use them, they just come to request for them. They know where to find them... And for those who collect the female

condoms don't collect for others to see, they hide that people will see me collecting these things. It is different with the males because for them they go like 'give me some.' If you talk to a nurse, then you want female condom. Thinking, people will presume I like sex because if I tell the big man that lets do it, then I like it very much. Respondent number 11, 18 to 24 years old woman

True, it is rarely found as compared to female condom. Respondent number 6 18 to 24 years old woman

Let me just say something, this condom is less talked about, and there is no sensitization. It is not talked about as in to create any interest in women. It's more like forgotten or abandoned. Most of the times we come to the clinic, we find pills, Respondent number 10, 25 to 30 years old woman

There was experience that even if it is there in stock, we would have a few condoms in stock and male condoms. Male condoms would be more than the female condoms 50 or so. And if you ask fellow mothers to get some, most of them choose to get male condoms, for the female condoms no, we don't know how to use them, in fact for these, maybe prostitutes. And you would find that they don't want to get some. Respondent number 12 18 to 24 years old woman

Theme (viii) Cultural Beliefs

Culture beliefs was also among the factors that was not associated with female condom use. Some of the women in the study indicted that their cultural does not allow them to ask thier partner to use a female condom.

I do not use female condom. My culture does not allow me to ask my husband for us to use a female condom that is disrespectful and if brought before the elders my aunties or my grandma that would be a shame and a disgrace to our family. Besides, our custom does not allow me to control the marriage in the house. We do not discuss any issues to do with a female condom, that's taboo in our tribe. Respondent number 8, above 30 years old woman.

CHAPTER FOUR

4.0 DISCUSSION OF FINDINGS

Our data suggest that the proportions of women in reproductive age having access to female condoms are highest in the age group between 35 years to 44 years and those with secondary and higher education in both urban and rural areas. It also indicates that most women with secondary and higher education in both urban and rural areas had knowledge on female condom as a contraceptive method. Further, the most important factors that were associated with female condom use were urban women not living together with spouse, aged 40-44 years, from Northern province, rural women being in Lusaka, Copperbelt, Southern and Western province and knowing a place to get female condoms. In the full multivariable model, rural women who were widowed, not living together with their spouse, both urban and rural women with secondary and urban women with high education, rural women being in southern and western province, urban women aged 35-39 years, rural women aged 40-44 years, rural women knowing a place to get female condom, urban women who had genital sore/ulcer and rural women who perceived the threat of disease to be medium, were more likely to use female condoms. Further urban women who perceived the risk of HIV infection to be low were less likely to use female condom.

Majority of both urban and rural women in the age group 30-44 years had access to female condom use. This findings correlates with that of Mung'ala, L. et al., (2006) who conducted a on "Promoting female condoms in HIV voluntary counseling and testing centres in Kenya where they found 65% of women aged of 30-44 years were able to access female condom due to the fact that it is an effective and reliable tool for family planning as an alternative to male condom. Therefore, easier accessibility has probably contributed to high usage of female condom among women of to be higher in these subgroups. In both multivariable underlying determinant model and the full multivariable model urban women who were of age 35-39 years and 40-44 years were more likely to ever have used female condom compared to women in the age group 15-19 years. This compares well with a study done by Dominique & Richte (2005) on factors associated with use of the female condom in Zimbabwe which showed that majority (68%) of women in elder age group (35 years to 44 years) were more likely to use female condom especially those in urban areas due to availability of information. Further, Seedat, 2011 a study based on hindering female condom from preventing HIV/AIDS in urban cape Town, South

Africa indicated that young women were less likely to use female condom because they were shy to buy or to go to the clinic to ask for female condoms. We also found that urban women who perceived themselves as accessing female condom were more likely to use female condom compared to those women who were not able to access female condom. According to Dominique and Richte (2012) a study on acceptability of the female condom in Zimbabwe where they found that urban women were more likely to access female condom due to the fact that they are able to access information concerning to female condom use easily compared to rural women. Further a summary report on AIDS from the International Center for research on Women in Guatemala, India, Jamaica, and Papua New Guinea, women reported female condom use if they were able to access it (Steinberg M et al., 2000).

In the full multivariable analysis significant associations were observed between ever female condom use and rural women who were not living together (on separation), and those who were widowed compared to those rural women who never married. These findings were similar to those found in Kiambaa Division, Kiambaa District; Kenya (Mativo et al., 2010) where it was found that majority (59%) of women who were using female condom were those who were on separation (not living with their spouse) and widowed compared to those who never married. These could be due to the fact that women who are not living with their spouse don't trust their sexual partner and possibly do not fail to negotiate for female condom use for fear of contracting HIV or STIs infections. It also compares well with those of Joseph (2011) in a study conducted on the threats of AIDS and condom use in a Nigerian rural community: the majority (78.6%) of the women who were not living together with spouse reported using female condom because they did not trust their sexual partners and they acknowledged (60.2%) that proper use of female condom has the capacity to prevent STIs and HIV infection.

Both urban and rural women with secondary and higher education had the knowledge of female condom use as a contraceptive method. This findings correlates with that of Kassie et al., (2008) who conducted a study on the pattern of knowledge and condom use among population groups in Ethiopia where they found 68% of women had knowledge of female condom as a contraceptive method because most of these women would prefer use a reliable family planning tool due to the time they spend at school and may previously attended antenatal clinics where they are taught on

how to use it, and they may not be shy to ask for or buy female condoms. Therefore, better knowledge of female condoms as a contraceptive method prior to intercourse, probably this has contributed to high female condom use in these subgroups. Furthermore, the findings in this study indicate that both urban and rural women with higher education were more likely to ever use female condoms compared to those women who had lower education. According to Kassie et al., (2008) a study conducted in Ethiopia on the pattern of knowledge and condom use indicated that education increases the ability of women to be able to access information from diverse sources. Further, this decreases their vulnerability to myths and misconceptions about female condoms. As such the finding of this study was expected. Similar findings have been shown by Exavery et al., 2012: women with at least secondary education were twice as likely to use female condoms compared to those who had never been to school or had a primary education only. Further education plays an imperative role in societal transformation and education enhances women's self-esteem, self-confidence, ability to make decision and freedom of expression concerning their sexual and reproduction inclination. It also places women in positions where they are able to talk about HIV transmissibility, prevention and treatment which lessen their vulnerability to misconceptions about the use of condoms (Lagarde, et al., 2001). It may be concluded that these findings call for special efforts to increase their level of education to women with low education of reproductive age.

In both the multivariable proximate determinant model and the full model, rural women who perceived the threat of HIV infection to be medium were more likely to use female condoms compared to those who perceived the threat of HIV infection to be non-existent. On the other hand, in the full model (underlying and proximate determinant model) urban women who perceived the threat of HIV infection to be low were less (OR: 0.47, 95%CI: 0.26-0.85) likely to use female condoms than those who perceived the threat of HIV infection to be at none. This finding has possible explanations: rural women who perceived the threat of HIV infection to be medium felt that they have control over their risk and HIV infection may increase their vulnerability. On the other hand urban women who perceived the threat of HIV infection to low felt that they have no control over their risk and that possibly made them to have little motivation to use female condoms. Or they may have felt that with the increasing availability of antiretroviral therapy, they need not be as careful about their risk-related behavior (Mantell et

al., 2003). Further, urban women who had a genital sore/ulcer in the last 12 month were more likely to have used female condoms compared to those who did not have genital/ulcer in the last 12 month. These findings are consistent with those found in Nigeria where urban and rural women of reproductive age who perceived the threat of HIV infection to be low had a lower odd ratio to use female condom and rural women who perceived the threat of HIV infection to medium were more likely to use female condom as compared to those women who perceived the threat of HIV infection to be none. Further, in that study women who had genital sore/ulcer more likely to use female condom. This was because they regarded it as an important tool for protection against HIV, STIs and unplanned pregnancies on the basis that they engage with different sexual partners.

Further, in the full multivariable model rural women who knew a place where to get female condoms were more likely to use female condom than those who did not know a place to get it. On the other hand both urban and rural women who knew a place where to get female condom use were less likely to report condom use in the proximate determinant model. These findings are in contrast with those found in Nigeria where urban and rural women who knew a source of female condom were more likely to report female condom use. In that study majority (52%) of the women of reproductive age reported using female condom if they knew the source of female condom and when faced with the threat of contracting HIV/AIDS infection. This implies that a significant relationship exists between knowing the source of female condom, the perception of the female condom as a protective device against HIV/AIDS and willingness to use it (Bedimoal et., 2013).

Our findings on the cultural belief are comparable of a study done by Osubor, Fatusi and Chiwuzi (2008) in Nigeria which reported that cultural beliefs were not associated with female condom use. It came out in the focus group discussion that some women their culture do not allow them to discuss female condom use with their sexual partner and they also stated that it is disrespectful and a taboo to tell your sexual partner (husband) to use female condom. Therefore, this places a woman at a relative disadvantage in the ability to introduce or female condom use within sexual partnership (Orubuloye, 1993; Opong, 1995; Gupta 2000) as found in this study.

In addition our qualitative finding indicated that, the dual protection of female condom against sexually transmitted infections, cancer and prevention of pregnancies was associated with female condom use. In addition to this duo protection, other reasons that were raised included; as a family planning tool (which they said is slightly different from pregnancy prevention). This confirms the study conducted by Nicolosi et, al., 1994; Campbell & Kelly 1995; UNAIDS, 2000). In this study one of the factors associated with female condom were its protection against sexually transmitted infectious and prevention of unwanted pregnancies.

Further our study reported that lack of information, lack of partner involvement in using female condom, and unavailability of female condom were some of the factors that were not associated with female condom use among women of reproductive age. The participate in the focus study indicated that the female condom were not available, lack of information on female condom and their sexual partner did not like discussing female condom use as they feel that men they not in charge of their of marriage. Therefore, the success of female condom programs, efforts must be made to provide information on female condom, making female condom available and engage both sexual partner and community figures/ leaders before rolling out to the community. Being gate keepers they have an important role to play in the acceptability and success of the program (Nicolosi et al., 1994).

Lastly we also found that knowledge on how to a female condom as contraceptive method was associated with female condom use. It came out in the focus group discussion that women who were able to insert the female condom were more likely to use a female condom. These findings were comparable with those of a study that was done in Turkey where 75.5% of women who had knowledge on how to use female condom were associated with ever female condom.

CHAPTER FIVE

5.0 LIMITATIONS

The study was not without limitations. Firstly, the Study design did not investigate causal relationships because it was based on cross sectional data. This implies a need for caution, since we do not know whether ever female condom use preceded or followed other events, such as getting married. In addition, selection bias was among the limitation of this study, in the sense that some women refused to participate in the survey altogether, and these may also differ from those included here. Further, the research only focused on women and did not include males. Although males were not included in the study, culturally, they play a major role in female condom use (Witte , et al., 2006). This is more so in rural areas where cultural norms and values may be stronger in comparison to urban areas. Certain women did not respond to the question on female condom in this survey which might have either overestimated or underestimated female condom use. Lastly, the results from the focus group discussion cannot be generalized to entire Zambia as only focused on Ng'ombe however; they gave us an insight on the factors associated with female condom.

5.1 CONCLUSIONS

The study shows that, the overall use of ever female condom is very low. Majority of women aged 30 years to 44 years and those with secondary and higher education were able to access female condom. The findings also indicate that the proportions of women having a highest knowledge on female condom as a contraceptive method are those aged women aged 30 years to 49 years and those with secondary and higher education. Further, it was identified that both urban and rural women with secondary and higher education and those aged 35-39 years and urban women aged 40-44 years, and urban women who were able to access female condoms were some of the groups that were positively associated with condom use. In addition, urban women who had genital sore/ulcer, rural women who perceived the threat of disease to be medium and for rural women who were widowed and not living together were significantly more likely to report female condom use. And for those who perceived the threat of disease to be low were less likely to report female condom use.

Therefore, with the knowledge of these factors that are associated with female condom use, this information can be used to shape policy and devise strategies that can be aimed at increasing female condom use in Zambia. Success in increasing female condom use can only be achieved through strategies that focus on the determinants such as education, accessibility and availability that have a significant association on female condom use and the study is a milestone in female condom programming if only results are implemented and by ensuring that the female condoms are in adequate supply alongside several awareness channels.

5.2 RECOMMENDATIONS

The Ministry of Community Mother and Child health (MCMCH) together with other partners who are involved in promotion of female condom use services should;

- Empower women through information, education and communication (IEC) programs to increase their knowledge on their personal risk in order to build their self-assertiveness to negotiate for female condom use.
- Ensure that the female condoms are accessible, available and must target women aged 20 to 34 years and those who are influential to reach out to fellow women. For instance a few women can be trained on female condoms, let them act as role models by taking the message to fellow females and highlighting the benefits of using them. This should also apply at distribution point of the female condoms. Further there should be a devise more broad approaches to increasing female condom coverage and provide practical education which demonstrates the use of female condoms to ensure correct use of female condoms among women.
- Come up with programmes to encourage both married and unmarried women on the use of female condom as a tool for family planning as it is the concept of women empowerment on deciding safe sex especially in an abusive environment where the male sex partner wants to engage in unprotected sexual intercourse.
- Ensure progressive scaling up of female condom awareness, education and distribution in Luapula, Eastern, and North-Western provinces which are deprived of the female condom. Since knowledge and awareness is power and key facilitator for an informed decision making process. It is important to recognize that people will only make decisions once they have adequate and relevant information about the decision they are to make and in this case, to start using female condoms. There is need therefore to balance up the varying levels of community awareness and education levels of the female condom in these provinces.

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APPENDIX 1

DATA EXTRACTED TOOL

Questionnaire

1. How old were you at your last birthday.....?
2. Have you ever attended school?
 - a) Yes []
 - b) No []
3. What is the highest level of school you attended?
 - a) Primary []
 - b) Secondary []
 - c) Higher (specify) []
4. What is the highest grade you completed at that level?
 - a) Grade []
 - b) Form []
 - c) Year []
5. What is your religion?
 - a) Catholic []
 - b) Protestant []
 - c) Muslim []
 - d) Other (specify).....
6. What tribe do you belong to.....?
7. How I would like to ask about all the births you have had during your life. Have you ever given birth?
8. Do you have any son or daughters to whom you have given birth who are now alive but do not live with you?
9. How many sons are alive but do not live with you? And how many daughters are alive but do not live with you? If none record '00'
10. Now I would like to talk about family planning – the various ways or methods that a couple can use to delay or avoid a pregnancy. Which way or methods have you heard about.....
.....?

11. Have you heard of other ways or methods that women or men can use to avoid pregnancy?
- a) Yes []
 - b) No []
12. Have you heard of any other ways or methods that women or men can use to avoid pregnancy?
- a) Yes []
 - b) No []
13. Have you ever used anything or tried any way to delay or avoid getting pregnant?
- a) Yes []
 - b) No []
14. What have you used or done
15. Female condom: women can place the sheath on their vagina before sexual intercourse
- a) Yes []
 - b) No []
16. Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant. How many living children did you have at that time, if any?.....
.....
17. Are you currently doing something or using any method to delay getting pregnant?
- a) Yes []
 - b) No []
18. Which method are you using?.....
19. Do you know of a place where a person can get female condoms?
- a) Yes []
 - b) No []
20. Where is that?
- a) Government hospital []
 - b) Government health centre []
 - c) Health post []
 - d) Any other place?.....

Probe to identify each type of source and circle the appropriate code(s)

Other public.....D

(Specify)

PRIVATE MEDICAL CENTRE

Private hospital/surgery.....E

Mission hospital/clinic.....F

Pharmacy.....G

Private Doctor.....H

Community based agent.....I

If unable to determine if hospital, health centre or clinic is public or private medical, write the name of the place.

OTHER PRIVATE

Medical.....J

(Specify)

OTHER SOURCE

Shop.....k

Friends/relatives.....L

Other.....X

(Specify)

21. If you wanted to, could you yourself get a female condom?

a) Yes []

b) No []

22. What brand name of the condom did you use?

a) Maximum classic []

b) Maximum scented []

c) Rough Ruder []

d) Public sector []

e) Care Fe male Condom []

f) Femidom []

- g) Reality []
- h) Public Sector
- i) Unbranded (white colour foil) []
- j) Other (specify).....
- k) Don't know []

23. How many condoms did you get the last time?

24. The last time you obtained (highest method on list in previous question) how much did you pay in total, including the cost of the method and any consultation you may have had?

- a) Cost []
- b) Free []

25. Since what month and year have you been using (current method) without stopping?

- a) Year
- b) Month.....

26. I would like to ask you some questions about the times you or your partner may have used a method to avoid getting pregnant during the last few years.

ILLUSTRATION QUESTION

When was the last time you used a method? Which method was that?

When did you start using that method? How long after the birth of (Name)?

How long did you use the method then?

APPENDIX II – INFORMED CONSENT

TOPIC: FACTORS THAT ARE ASSOCIATED WITH FEMALE CONDOM USE AMONG WOMEN IN THE REPRODUCTIVE AGE GROUP IN ZAMBIA

INTRODUCTION

I, Maseka Mwamba, a student of Masters of Science in Epidemiology from University of Zambia is kindly requesting for your participation in research study mentioned above.

PURPOSE OF STUDY

The purpose of the study is to enable health workers to understand the factor that are associated with female condom use among women in the reproductive. The data from the study will assist provide feedback to variety of audiences including sponsors, donors, service users, managers and staff which will influence decisions making or policy development in family planning services which in turn will improve female condom use. It is hoped that your participation in this study will help the implementation of female condom use among women in reproductive age.

Your participation in this study is voluntary. You are not being forced to participate. You are free to decline to participate and withdraw from the study at any time you wish to do so.

RISK AND DISCOMFORT

There is no risk and discomfort involved apart from the use of your time in answering questions which will take about 30 to 40 minutes. However, I acknowledge that discussing female condom use is a sensitive issue.

BENEFITS

Taking part in this study will provide with information that will help relevant authorities and policy developers to come up with strategies and policies that will help improve family planning services. No money favors will be given in exchange for information obtained.

CONFIDENTIALITY

All information you will give, will be confined and privacy will be maintained. The ministry of Health (MoH), the University of Zambia (UNZA) and school of Medicine may review your records and research findings will be disseminated to the relevant authority but such information released will not lead directly to you as anonymity will be maintained.

INFORMATION AND CLARIFICATION

Any time you want clarification or to ask any question you are welcome. Contact the following:

Maseka Mwamba

Kafue District Council

P.O BOX 360021,

Kafue, Zambia

E-Mail: masekamwamba@ymail.com

Cell Phone Number: +260 979 314773

+260 967 314773

The Chairperson

The RES CONVERAGE IRB,

33 Joseph Mwilwa Road

Rhodes Park

Lusaka, Zambia

Telephone Number: 0955-155633/4

IRB No. 00005948

FWA No. 00011697

APPENDIX 11 –CONSENT FORM TO PARTICIPATE IN THE STUDY

The purpose of this study has been explained to me and I understand the purpose, the benefits, risks and confidentiality of the study. I further understand that; if I agree to take part in this study,, I can withdraw at any time without having to give an explanation and taking part in this study is purely voluntary.

I.....(names)

Agree to take part in this study designed to find factors that are associated with female condoms use among women in reproductive age,

Signed/thumb print..... Date.....
(Participants)

Signed..... Date.....

Signed..... Date.....
(Witness)

Signed..... Date.....
(Researcher)

APPENDIX IV FOCUS GROUP DISCUSSION WITH FEMALE IN THE REPRODUCTIVE AGE GROUP

TOPIC: FACTORS ASSOCIATED WITH FEMALE CONDOM USE AMONG WOMEN IN THE PRODUCTIVE AGE GROUP IN ZAMBIA

Before we start, I would like to remind you that there is no right or wrong answer in this discussion. We are interested in knowing what each of you think of female condom use. Please feel free and frank to share your point of view, regardless of whether you agree or disagree with what you hear. It is important that we hear your opinions.

You probably prefer that your comment not be reported to people outside of this group. Please treat others in this group as you want to be treated by not calling anyone about what you hear in this discussion today,

First of all let's start by going the circle introducing oneself. (Members of the research team also introduce themselves and describe each of their roles).

1. What information do you know about female condom?
2. Please tell me; do you use a female condom?
3. From the time you started using female condoms, how often do you use female condom during sexual intercourse?
4. What has been your experience in using female condoms?
 - Has it been easy to use a female condom?
 - How does it feel to use condoms during sex intercourse?
5. From time you started using female condoms, what would you say are challenges you face in terms of accessibility, buying and availability?
6. What are the difficulties you face in using female condoms in your relationship?
 - Partner asking to be on separation
 - Partner/husband resorting to have sex with other women
 - Is it bad to use condom in this situation? or
 - Do you see any importance of using female condoms?

7. Going it your experience so far, if today you were asked to give a talk to females who are to use a female condom as a method for preventing HIV, STI and including family planning what you would say to them?
8. What any other information about using female condoms use which you feel I should have told you, but I did not?

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