

Acceptability of the female condom by female health workers in Francistown, Botswana

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Assignment submitted in partial fulfilment of the requirement for the degree of Master of Philosophy (HIV/AIDS Management) at Stellenbosch University.



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March 2011

Declaration

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Acronyms

AIDS: Acquired Immunodeficiency Syndrome

BDS: Botswana Demographic Survey

BFTU: Botswana Federation of Trade Unions

CDC: Centers for Disease Control and Prevention

CMS: Central Medical Stores

CHANGE: Center for Health and Gender Equity

CSO: Central Statistical Office

FCC: Francistown City Council

FDA: Food and Drug Administration

FDHMT: Francistown District Health Management Team

FHC: Family Health Company

GoB: Government of Botswana

HCP: Health Care Provider

HCW: Health Care Worker

HIV: Human Immunodeficiency Virus

HRDC/HRU: Health Research Development Committee/Health Research Unit

MoH: Ministry of Health

MSM: Men who have Sex with Men

NACA: National AIDS Coordinating Agency

PATH: Program for Appropriate Technology in Health

PLWHA: People Living With HIV/AIDS

PSI: Population Services International

STI: Sexually Transmitted Infection

UN: United Nations

UNAIDS: The Joint United Nations Programme on HIV/AIDS

UNFPA: United Nations Population Fund

US(A): United States (of America)

WHO: World Health Organization

Acknowledgements

First of all, I would like to thank my ever-loving, ever merciful Heavenly Father Jehovah God for giving me this opportunity to be on this earth and pursue my career goals. It is because of His grace that I put pen to paper and produce this document.

I thank the health workers and staff of the Francistown City Council clinics who selflessly gave their unwavering support and took their precious time to participate in this important study. Kea leboga.

My heartfelt gratitude goes to my study leader Mr. Burt Davis for being such an encouragement throughout the study. Thank you for your patience and scientific guidance. You were always there when I needed direction. You have my personal and professional respect.

I also wish to thank Dr. Paul Nashara, the FDHMT Medical Officer, who gave permission for the study to be conducted at Council clinics. I also thank Mr. Balekang Bailer of the Health Research Unit of the Ministry of Health in Botswana for his valuable support.

Last and by no means, I am also grateful to my family who supported and encouraged me during my studies. My son Simon and daughter Gugu have been a source of pride and inspiration throughout my work. They tolerated my time on the computer and getting home late because I had to complete my project. My unique appreciation goes to my wife Catherine “Tsitsi” for exceptional strength, prayer and support. Congratulations on adding another qualification - PDM - to your numerous accolades!

Dedication

This research study is written in memory of my late grandparents, Mr. Mordecai and Mrs. Tamarawaka Chirwa, who brought me up, nurtured me and made sure I had a wonderful childhood.

The study is also dedicated to my mother Mary for teaching me the love for learning.

Abstract

Background: Women account for nearly half the global population of persons living with HIV. In sub-Saharan Africa women constitute 60% of adults living with the virus. The situation makes it necessary to develop and improve prevention actions that target women. The female condom is a practical option. It is the only available dual protection method that protects against sexually transmitted infections and unwanted pregnancies, and is designed for women to initiate.

Objective: This study evaluated female condom acceptability in Francistown, Botswana. The main aim of the study was to examine female condom uptake among female health workers. The study also assessed beliefs held by health workers regarding the condom.

Research Design: The research design employed was the survey method. Seventy-one participants were enrolled. Participants were asked to complete a self-administered questionnaire which consisted of demographic characteristics, and attitudes and perceptions of female condom use.

Results: The study found that 15.5% of women had used the female condom in the previous month, 12.9% had used the condom in the previous 3 months, and 17.2% had used the female condom in the previous 12 months. The study also showed that the majority of participants believed the female condom was readily available (71.4%) and that it empowered women (63.3%), and the majority of women (78.9%) would recommend its use. However, only 22.8% believed that the female condom was better than the male condom, 28.6% % believed it was easy to use, and only 9.8% thought it was popular with clients.

The majority (53.5%) believed the female condom was not well promoted and (56.3%) of participants did not know if sex with the female condom was as good.

Conclusion & Recommendation: Female condom use by female health workers was low. There is need for more research to examine why the condom is not acceptable among female health workers.

Opsomming

Agtergrond: Bykans die helfte van die wêreldbevolking wat MIV-positief is, is vroue. In sub-Sahara Afrika beslaan vroue 60% van die volwasse bevolking wat met dié virus saamleef. Hierdie toedrag van sake noodsaak die ontwikkeling en verbetering van voorkomingsaksies wat op vroue gerig is. In dié verband is die vroue-konoom ongetwyfeld 'n praktiese oorweging. Dit is die enigste, beskikbare tweeledige beskermingsmetode wat seksueel oordragbare infeksies en ongewenste swangerskappe verhoed en dit is ontwerp om deur die vrou geïnisieer te word.

Doelwit: Hierdie studie het die aanvaarbaarheid van vroue-konoom in Francistown, Botswana, geëvalueer. Die belangrikste mikpunt van die studie was om die aanvaarbaarheidsgraad van die konoom onder vroue-gesondheidswerkers vas te stel. Die studie het ook die beskouing van die vermelde vrouewerkers met betrekking tot dié konoom geassesseer.

Navorsingsontwerp: Die navorsingsontwerp waarvan gebruik gemaak is, was die opname-metode en 71 deelnemers is betrek. Deelnemers is versoek om 'n selfopgestelde vraelys te voltooi wat uit demografiese eienskappe, asook houdings en persepsies oor die gebruik van die vroue-konoom bestaan het.

Resultate: Met die studie is bevind dat 15.5% vroue die vroue-konoom in die vorige maand gebruik het, 12.9% het dit in die vorige drie maande gebruik, en 17,2% het die konoom in die vorige 12 maande gebruik. Die studie het ook getoon dat die meerderheid deelnemers (71.4%) glo die vroue-konoom is geredelik beskikbaar, dat dit vroue bemagtig (63,3%), en dat die meerderheid vroue (78.9%) die gebruik daarvan sou aanbeveel. Maar, slegs 22.8% was van mening die vroue-konoom is meer geskik as die manlike konoom, 28.6% was die mening toegedaan dat dit maklik is om te gebruik, en net 9.8% het gemeen dit is gewild onder kliënte. Die meerderheid (53.5%) het die mening gehuldig dat die vroue-konoom nie aggressief genoeg bemark is nie

en 56.3% van die deelnemers was nie bewus of seks waartydens van die vroue-konoom gebruik gemaak word, ewe genotvol was nie.

Afsluiting & Aanbeveling: Die gebruik van die vroue-konoom deur vroulike gesondheidswerkers is gering. Dit is nodig dat nog navorsing gedoen word om te bepaal waarom die vroue-konoom basies nie onder vroue-gesondheidswerkers aanvaarbaar is nie.

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Chapter 1: Introduction

Chapter 1 presents background information to the current global HIV pandemic and the sub-Saharan epidemic. It will reflect on the current state of the epidemic in Botswana, where the study is based. Then, HIV among women is discussed. The rationale for conducting the study then follows.

The research question, aim of the study, objectives of the research, and significance of the study will complete the chapter.

1.1 Background Information

1.1.1 The Global HIV Pandemic

On December 1, 2010 the United Nations (UN) Secretary General Ban Ki-moon stated, "We have finally reached the first part of Millennium Development Goal 6 by halting and beginning to reverse the spread of the Human Immunodeficiency Virus (HIV)." His comments came in the wake of a report which showed that new HIV infections had fallen by nearly 20% in the previous 10 years, Acquired Immunodeficiency Syndrome (AIDS) - related deaths were down by nearly 20% in the previous five years, and the total number of people living with HIV was stabilizing (*The Joint United Nations Programme on HIV/AIDS - UNAIDS, 2010*).

Millions of people across the world however remain vulnerable to HIV. In Eastern Europe and Central Asia, high rates of HIV transmission continue to occur in networks of people who inject drugs. In its report, the UNAIDS (2010) reported that seven countries, mostly in Eastern Europe, saw an increase in incidence of HIV of more than 25% between 2001 and 2009.

1.1.2 The sub-Saharan HIV Epidemic

Sub-Saharan Africa is one of the regions that have witnessed a decline in the number of new HIV infections. Twenty-two of the 33 countries that saw a reduction in the incidence of HIV between 1999 and 2010 are in Southern Africa (*UNAIDS, 2010*). Five countries - Botswana, South Africa, United Republic of Tanzania, Zambia, and Zimbabwe - showed a significant decline in HIV prevalence among young women and men. According to the UNAIDS (2010), this trend reflects a combination of factors, including the impact of HIV prevention efforts and the natural course of HIV epidemics.

These figures may be encouraging but sub-Saharan Africa has already borne the brunt of this epidemic more than any other region in the world. By affecting the most productive age group 15-49, HIV/AIDS has led to financial, resource and income impoverishment in most Southern African communities (*Barnet & Whiteside, 2002*).

1.1.3 The Botswana HIV Epidemic

Botswana is ranked as one of nine Southern African countries where more than 10% of the population is infected with HIV. UNAIDS (2010) estimated that in 2009, 24.8% of adults aged 15 to 49 years were HIV positive.

Recent surveys show that the rate of new infections could be slowing. According to UNAIDS (2010) prevalence in both urban and rural areas decreased between 2001 and 2006, and the percentage of 20 to 24 year-old antenatal clinic attendees who were HIV-infected fell from 38.6% in 2003 to 24.3% in 2009.

In Botswana, women and girls continue to be disproportionately affected by HIV/AIDS. According to the UNAIDS (2010) in 2009, of the estimated 300 000 people aged 15 and above infected with HIV, 170 000 were women.

1.1.4 HIV and Women

In the early stages of the pandemic, HIV infection was predominantly among men who have sex with men (MSM) in many developed countries (*UNAIDS/World Health Organization - WHO, 2003*). As the pandemic continued to spread to other parts of the world, the picture began to change. The number of women living with HIV and AIDS has overtaken the number of infected men. By the end of 2002 in sub-Saharan Africa, 58% of adults infected with HIV were women (*UNAIDS, 2002*).

Generally, women are at a greater risk of acquiring HIV infection through unprotected heterosexual intercourse than men. In one study, Abercrombie (1996) found that female partners of HIV-infected men were 15 times more likely to become infected than male partners of infected women. Strebel (1993) attributes part of women's vulnerability to the anatomical design of women's sexual organs which puts them at risk of easily contracting HIV. Economic disparities between women and men have also been cited as an additional cause of HIV transmission among women (*Coates & Makadon, 1996; Wood, 1997; de Klerk, 2002*).

Certain prevalent cultural norms and practices related to sexuality contribute to the risk of HIV infection among women. In Zambia, Simpson (2007) found that some men did not want to use condoms regularly because of beliefs that unprotected sex was equated with masculinity and was necessary for male health. In addition, condoms have been associated with unfaithfulness and lack of trust and love in relationships (*Baker, 2005*). According to Reddy (2009), sexual practices such as "dry sex" where the vagina is expected to be small and dry carry a high risk of HIV because they cause abrasions to the lining of the vagina and on the penis.

Physically abusive relationships limit women's ability to negotiate safer sex. Dunkle (2004) argued that women who are victims of sexual violence or rape were at a higher risk of being exposed to HIV. Rauf (2010) further revealed that people who do not

possess accurate, relevant information on HIV/AIDS and sexuality often do not protect themselves because they lack the skills, support or incentives to adopt safe sexual behaviors.

1.1.5 Preventing HIV Infection in Women

Preventing new HIV infections is an urgent global priority. An analysis found that in sub-Saharan Africa alone, expanded prevention could prevent 55% of the 53 million new infections projected to occur in the region between 2003 and 2020 (*Salomon, 2005*). With the number of HIV-infected women outnumbering HIV-infected men, there is an urgent need to develop and promote prevention efforts that will reduce the vulnerability of women.

Prevention strategies - often summed up by the “ABC” approach: - *Abstain, Be* mutually faithful and use *Condoms* - do not enable women to adequately protect themselves from HIV. A UNAIDS-sponsored survey conducted among young women in Harare, Zimbabwe, and Durban and Soweto in South Africa found that 66% of the women reported having one lifetime partner, and 79% had abstained from sex at least until the age of 17, yet 40% of these young women were also HIV positive, and most had been infected despite staying faithful to one partner (*UNAIDS, 2005*).

According to the United Nations Populations Fund (UNFPA) (2010), HIV prevention strategies must be broadened so that they better respond to the challenging contexts of women’s lives by addressing the underlying vulnerabilities faced by women, including by expanding affordable access to prevention options that women can initiate and control. One such option includes the promotion of the female condom.

1.2 Rationale of the Study

The health sector plays a pivotal role in delivering prevention, diagnosis, treatment as well as care to the population it serves. The health sector as well plays an important

role in HIV prevention programs and in the treatment and care of people living with HIV/AIDS (PLWHA). At the heart of each and every health system, lays the health care worker.

According to the WHO (2006), a health care worker (HCW) or health care provider (HCP) can be defined as “any person engaged in actions whose primary intent is to enhance health.” This definition of HCW includes people such as doctors, nurses, pharmacists, laboratory technicians, and management and support workers such as financial officers, cooks, drivers and cleaners whose primary goal is to improve health.

In Africa, women continue to dominate the health profession. The WHO (2006) approximates that 75% of nurses in Africa are women. A survey conducted by Abt Associates (2000) in Botswana showed that women outnumbered male HCWs by a ratio of 1.9 to 1.

Large numbers of health care professionals are directly affected by the HIV/AIDS epidemic. Buve (1994) in his study in Zambia found that the mortality rate among female nurses in two hospitals rose from between 2 per 1000 in 1980-1985 to 26.7 per 1000 in 1989-1991.

Given that HIV/AIDS disproportionately affects women, the Global Coalition on Women and AIDS (<http://womenandiads.org>) emphasizes the need to develop prevention options that women can use with, or when necessary without, their partners' knowledge. The female condom offers an additional alternative that empowers women over matters of sexuality to protect against unwanted pregnancies and STIs.

The UNAIDS and the WHO (1997) recommended female condom use in preventing pregnancy and sexually transmitted infections (STIs). The female condom was

introduced in Botswana in 2002. The polyurethane “Bliss” brand of the female condom is distributed by the Ministry of Health (MoH) through the Population Services International (PSI) (*Central Medical Stores - CMS, 2008*). The condom can be obtained free of charge at government health institutions throughout the country. The condoms can also be purchased from stores and pharmacies.

Since its introduction in Botswana to the present, the female condom has attracted a lot of attention but very little scientific research has been conducted in regards to its uptake. In Botswana the female condom has a potential to be a popular pregnancy and STI prevention option among female HCWs: it is free and can be obtained from the workers’ facilities. The question however is, “Will the health workers use it?”

1.3 The Research Question

A study was conducted in order to examine the acceptability of the female condom among female health workers.

The research question that was analyzed is:

How acceptable is the female condom among female health workers in Francistown, Botswana?

1.4 The Aim and Objectives of the Study

The main aim of this study was to assess the acceptability of the female condom among female HCWs.

The objectives of the study were:

- To assess the short-term and long term acceptability of the female condom.
- To assess beliefs regarding the female condom.

- To make recommendations based on the findings of this study.

1.5 Significance of the Study

Findings of this study will identify specific areas in female condom usability and perceptions, and provide the Francistown District Health Management Team (FDHMT) and HIV/AIDS Prevention Division of the Botswana Ministry of Health with information that will help in planning female condom programs.

Chapter 2: Literature Review

Chapter 2 reviews the literature. It introduces the characteristics of the female condom and outlines some studies that assess its acceptability and perceptions of usability.

2.1 The Female Condom

The UNAIDS and WHO (1997) describe the female condom as a sheath inserted in the vagina before sexual intercourse, providing protection against both pregnancy and STIs.

There are several types of female condom models that have been developed.



Figure 1. The FC1 Female Condom (Picture courtesy of Avert)

The FC1 female condom (Figure 1), approved for use by the Food and Drug Administration (FDA) in 1993, is the original female condom produced by the Female Health Company (FHC). According to the UNAIDS-produced document “*The Female Condom - A Guide for Planning and Programming*,” the FC1 also called the “reality” condom, is made of polyurethane, a type of plastic which is more durable than latex. The condom is odorless, less likely to cause an allergic reaction than latex and may be used with both oil-based and water-based lubricants. The FC1 female condom requires no special storage requirements because polyurethane is not affected by

changes in temperature and dampness, and the expiry date on the female condom is 60 months (5 years) from the date of manufacture. In addition, the polyurethane material is thin and conducts heat well, so sensation during sexual intercourse is preserved.

The newer second-generation female condom, the FC2 is made of nitrile, a type of synthetic rubber that is latex-free (*WHO, 2007*). The FC2 looks like the original FC1 female condom except that the crinkling and squeaking commonly associated with the FC1 condom have nearly been silenced. The FC2 obtained FDA approval in 2009. It costs about 30% less than the FC1 condom.

Manufactured by MedTech products of India, the VA W.o.w. Female Condom is another female condom that is being tested (*Center for Health and Gender Equity - CHANGE, 2010*). The VA w.o.w. stands for the V-Frame design that is outside and the pouch that is inside; the w.o.w. refers to Worn-of-Women. This condom is lubricated and is a latex material. It looks somewhat like the normal FC1 female condom, with the exception of having a sponge at the end. The condom does not yet have FDA approval.

The Panty Condom is a pair of panties with a condom worn during the process of intercourse (*CHANGE, 2010*). The condom is a sheath made of polyofinic material; it is lubricated, using a non-spermicidal lubricant inside and outside of the sheath, and does not require an applicator. The condom (sheath) is fitted into the panties before the act of intercourse. Once the act of intercourse has concluded, the sheath is discarded and the panties washed to be used again. Replacement sheaths can be purchased separately. The panty condom has not yet been approved by the FDA.

The Program for Appropriate Technology in Health (PATH) Women's condom is one of the newest female condoms that have been upgraded to provide women more comfort (*PATH, 2009*). It is made with a polyurethane material like the regular FC1 female

condoms but in place of the inner ring, the PATH female condom includes pieces of foam to make the product and its insertion more comfortable for the wearer. The entire condom is in a capsule, which dissolves after use. At the time of writing this paper the PATH condom was in the final phases of testing.

For this study, the term “female condom” will refer to the FC1 polyurethane condom.

2.2 Effectiveness of the Female Condom

The female condom is effective in protecting against pregnancy and STIs.

As a contraceptive, the female condom compares favorably with other barrier methods. A Chinese study that examined the contraceptive efficacy of the female condom with the male condom showed better results with the female than the male condom i.e. 1.06 and 1.69 pregnancies per 100 women, respectively, over six months (Xu, 1999). Another study conducted by Trussel (2004) in the US found that within the first year of consistent and correct use, about 5% of women relying on the female condom had an unintended pregnancy, compared to 2% for male condoms and 6% for the diaphragm with spermicide.

The female condom is effective in reducing the risk of STIs and HIV. Drew (1990) indicated that laboratory and *in vitro* studies have shown that polyurethane is impermeable to small viruses such as cytomegalovirus, hepatitis B virus and HIV. Latka and colleagues (2000) conducted a randomized clinical trial in Philadelphia designed to evaluate the effectiveness the female condom in preventing STIs. They compared the use-effectiveness of the female condom with the male condom in preventing four STIs - chlamydia, gonorrhea, syphilis or trichomoniasis. The trial showed that there were no significant differences in STI rates between the female condom (5.27 per person months of observation) and male condom arm (6.12 per person months).

Trussell (1994) also showed that correct and consistent use of the condom for a year by a woman having sexual intercourse twice a week with an HIV-infected partner could reduce her risk of acquiring HIV by more than 90%.

2.3 Female condom Acceptability

Mantell (2005) describes acceptability as “voluntary consistent use of a method in the presence of alternatives.” Acceptability can either be short-term (also referred to as initial) or long - term (also called sustained). Short term acceptability refers to consistent use of a method not exceeding 3 months whereas long - term acceptability implies regular and proper use of a method for 3 months or more.

There have been several studies to assess both short-term and long-term female condom acceptability. Many of these studies have involved female commercial sex workers because, according to Deniaud (1997), they generally accept the device more quickly than other women.

Acceptability studies have generally shown initial positive uptake with a gradual decrease with sustained use. For example, Feldblum (2001) in one community intervention trial of the impact of introducing the female condom in rural Kenya found that most women who used the device reported they liked it, preferred it to male condoms, and stated they would be willing to purchase it in the future. Yet over time, only a small proportion of women at the study sites used female condoms consistently, and the female condom had no measurable impact on STI prevalence.

2.3.1 Short-term Female Condom Acceptability

Studies conducted to assess the short term acceptability of the female condom in more than 40 countries in Africa, Asia, Latin America, Europe and North America have found good initial acceptability of the device by people with varying sexual histories, ages, social situations and economic status. Acceptance rates in these studies varied

widely, from 37 to 96% of study participants (*United Nations Population Fund - UNFPA/UNAIDS/World Bank, 1998*).

Gollub and colleagues (1995) in a short-term acceptability study of the female condom undertaken at New York's Harlem Hospital between August 1993 and February 1994 that enrolled 52 women aged 18-57, revealed that two-thirds of users liked the female condom either very much or somewhat. Another study in Thailand also showed positive results. In a randomized study that enrolled 276 sex workers in Thailand to assess the acceptability of the female condom, Jivasak-Apimas (2000) found that the overall satisfaction rate with the female condom was 68%.

Some short-term female condom acceptability studies conducted in southern Africa have also revealed positive results. For example, Francis-Chizororo & Natshalaga (2003) conducted a study to generate data for developing an action plan for accessing the female condom through primary health care centers in Zimbabwe. The study used both quantitative and qualitative methods to gather information from sexually active women and men on the perception and acceptability of the female condom among users in rural areas of Zimbabwe. The findings showed that very few women had used the female condom prior to the survey, but when they were introduced to the condom several women (93%) liked the condom especially young women aged 20-39 years (83%).

2.3.2 Long-term Female Condom Acceptability

Studies examining long-term female condom acceptability have revealed varying results. For example, 99 married couples that reported being in a monogamous relationship with one partner with a symptomatic STI attending an STI clinic in Lusaka, Zambia were provided with female condoms, male condoms, and spermicides at 3-month intervals over a 1-year period (*Musaba, 1998*). Participants were counseled to use a male condom plus spermicide or a female condom plus spermicide

at each coital act. The study showed that the condoms/spemicide were used in one-quarter of coital acts at three, six and 12 months. The same study showed that the majority of couples at high-risk of HIV preferred the female condom over a 1-year period when given a choice between other barrier contraceptive methods.

Furthermore, Fontanet (1998) assessed long-term female condom acceptance among sex workers in Thailand. Of the 250 women that were offered both male and female condoms 12 percent used female condoms in of all sexual acts, a level that continued for the entire six-month study period.

Not all studies examining long-term female condom acceptability have been encouraging. Galvao, (2001) showed that there was no evidence that educational and marketing interventions designed to respond to barriers related to the use of the female condom increased the use of the female condom consistently or led to an overall increase in women using protection.

Jacklass and colleagues (2010) conducted a research in Botswana's northern district of Chobe among male and female population groups. The results showed that over a 6-months period only 17% of women aged 18 - 49 had ever used the female condom.

2.4 Beliefs regarding the Female Condom

Willingness to use the female condom depends a lot on user and partner attitude and perception. Hirky (2003) conducted qualitative interviews to examine the attitudes toward and experiences with the female condom of 89 HIV-positive individuals. She found that those who had used the female condom had a more positive attitude about the device than non-users.

Pool (2000) cited male dominance on matters of sexuality to be associated with women's inability to negotiate for safer sex. In a series of studies in Southwest

Uganda, Pool showed that women did not feel empowered or have control over their sexual and reproductive health even when they preferred vaginal products.

Similarly in Lusaka, Zambia, Chipungu (1999) revealed that male dominance in women's sexual activities was the main reason for low use of the female condom. Women stated that they found it difficult to convince their partners to use the condom. In addition some women mentioned that the device was too long and they had initial trouble in placing it in the correct position. Others reported that the rings were uncomfortable and that the condom looked unattractive. Some women complained about noise during use, while others felt that like the male condoms, the female condoms carried the stigma of being used only in short-term, casual relationships for disease prevention, and hence were associated with promiscuity.

In the Chobe study (*Jacklass, 2010*), low condom uptake was attributed to the size of the condom, difficulties of use and noise during sexual activity. The study also showed that the presence of the male condom on the market was a barrier to female condom promotion.

Chapter 3: Study Methodology

3.1 Study Setting

Botswana is divided into administrative districts which are managed by local councils (*Government of Botswana, 1981*). Francistown, Botswana's second largest city with a population of about 83,000 people (<http://www.cso.gov.bw/index>) is administered by the Francistown City Council (FCC). The council, through the Francistown District Health Management Team (FDHMT), is responsible for provision of primary health care in Francistown.

The study took place in November 2010. It was conducted at 10 of the 13 FCC clinics.



Figure 2: Map of Botswana

The facilities that were chosen as study sites are Jubilee, Area W, Masego, Gerald, Lapologang, Botselo, Tshwaragano, Botswelelo, Boikhutso, and Tati Town Clinics.

3.2 Study Sample

The study sample was derived from a population of clinic HCWs. The workers included both clinical staff such as nurses, counselors, and laboratory technicians; and non-clinical workers such as orderlies and drivers.

The non- probability purposive sampling method was used. In purposive sampling, a population is sampled with a *purpose* in mind. Purposive sampling targets a particular group of people. The purposive sampling technique was used to select women working at the health facilities.

Before sampling, the study was introduced to all HCWs during the clinic morning briefs. Female HCWs aged 21-49 who could understand English were approached and asked to participate. A total of seventy-one participants were enrolled into the study. The sample size of 71 participants represented more than 25% of the total number of health workers at all the study sites.

3.3 Study Design

A survey method was used. This is because the researcher wanted to explore the frequency of female condom use and beliefs regarding the female condom by the health workers.

3.4 Data Collection Method

Participants were given an anonymous 15-question structured questionnaire to complete. The questionnaire asked demographic characteristics, behavioral and beliefs regarding female condom use. Completed questionnaires were placed in opaque envelopes and collected for analysis by the researcher.

3.5 Ethical Considerations

In accordance with the requirements of human subject research, prior to beginning this study, the research proposal was submitted for approval to the Research Ethics Committees of the University of Stellenbosch and the Health Research Unit at the Botswana Ministry of Health. Written permission was also obtained from the Medical Officer at the FDHMT (Appendix 7.3).

3.6 Challenges Encountered

There were no major challenges faced during the study although some potential participants were concerned with the way their information would be treated. They believed documents would be traced back to them.

Participants were assured that all data collected would be treated with absolute confidentiality and that all the records would be kept safe. The data collection instrument did not have names or particulars linking the participants with the study. Participants were also informed that they were allowed to withdraw at any stage of the study without fear of being victimized or intimidated. Participant's written consent was sought and only participants who fully understood the procedure and consented were recruited for the study.

Chapter 4: Findings

Excel Microsoft Office was used to analyze data.

4.1 Demographic Characteristics

Participant characteristics that were analyzed are age, marital status, level of education and main type of family planning method used.

4.1.1 Age of Participants

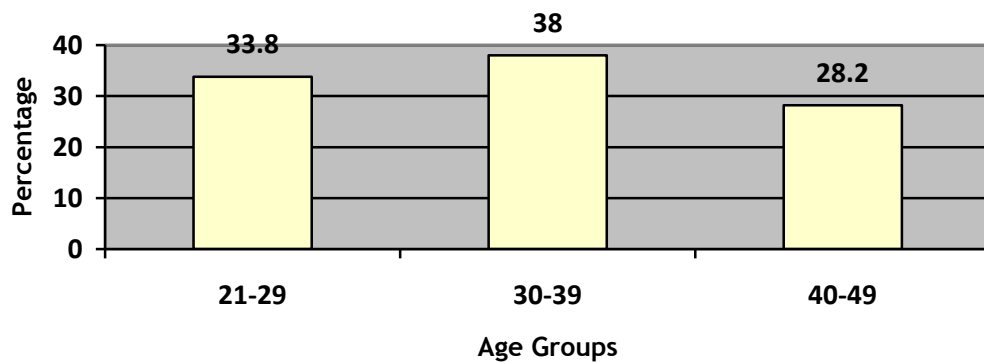
From the total number (n= 71) of participants, 24 participants were aged 21-29 (33.8%), 27 were of the age group 30-39 (38%), and 20 were aged 40-49 (28.2%) (Table 1).

Age	Number of Participants	Percentage
21-29	24	33.8
30-39	27	38.0
40-49	20	28.2

Table1: Frequency distribution by age groups (n= 71)

Figure 3 (below) shows the graphical distribution by age.

Figure 3: The bar chart showing the frequency distribution by age (years)



4.1.2 Marital Status

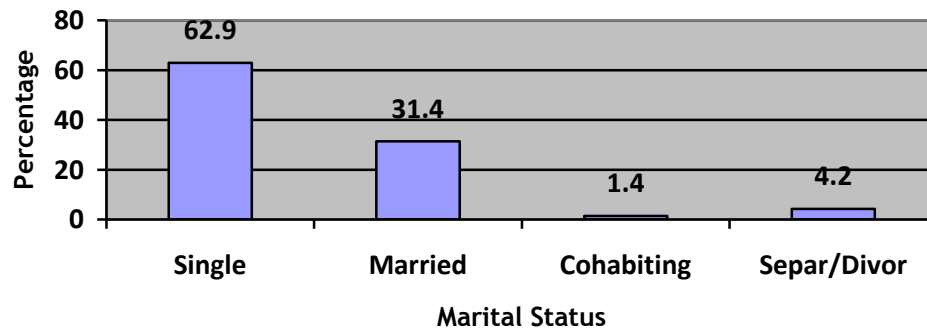
Out of the total number (n=70) of participants, 44 women (62.9%) were single, 22 (31.4%) were married, 1 was cohabiting, and 3 (4.2%) were either separated or divorced (Table 2).

Marital Status	Number of Participants	Percentage
Single	44	62.9
Married	22	31.4
Cohabiting	1	1.4
Separated/Divorced	3	4.2

Table 2: Frequency distribution by marital status (n=70)

Figure 4 (below) shows the graphical representation by marital status.

Figure 4: Bar chart showing frequency distribution by marital status



4.1.3 Educational level

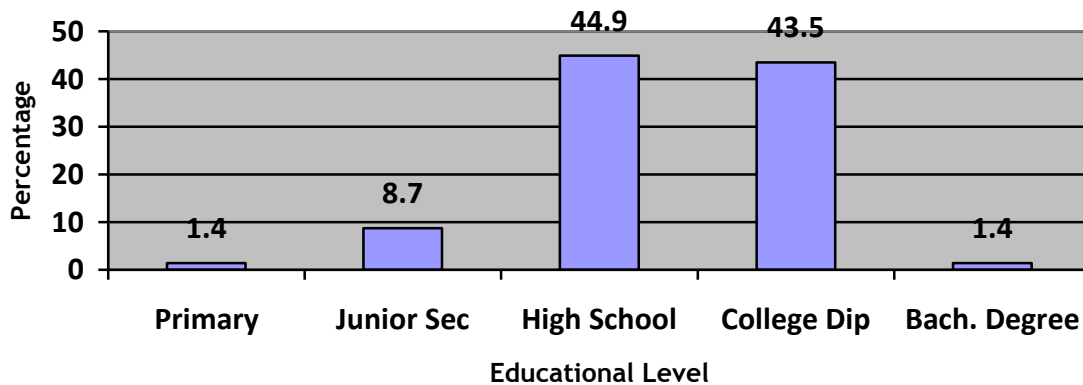
Of the participants (n=69) who responded to this question, one participant had primary school education, six had junior secondary education, thirty-one had completed high school, 30 had college diploma and one had bachelor's degree (Table 3).

Education	Number of Participants	Percentage
Primary School	1	1.4
Junior Secondary	6	8.7
High School	31	44.9
College Diploma	30	43.5
Bachelor's Degree	1	1.4

Table 3: Frequency distribution by education (n= 69)

Figure 5 (below) shows the graphical distribution by education.

Figure 5: Bar chart showing distribution by education



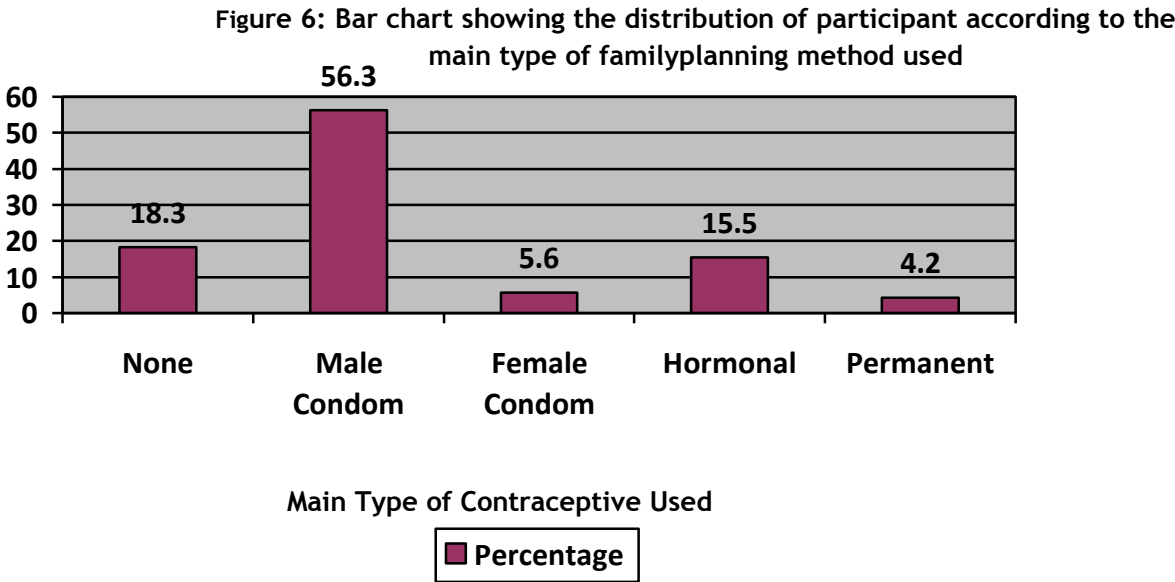
4.1.4 Main Type of Family Planning Method Used

From the total number (n=71) of participants, thirteen (18.3%) participants reported not using any type of contraceptive, forty (56.3%) women indicated using the male condom, four (5.6%) used the female condom, eleven (15.5%) used hormonal contraceptives, and three (4.2%) had a permanent method of contraception (Table 4).

Main Type of Family Planning Method Used	Number of Participants	Percentage
None	13	18.3
Male Condom	40	56.3
Female Condom	4	5.6
Hormonal	11	15.5
Permanent	3	4.2

Table 4: Frequency distribution by main type of family planning method used (n= 71)

Figure 6 (below) shows the graphical representation by main type of contraceptive used.



4.2 Female Condom Use

The following data shows female condom use in the previous one month, 3 months and 12 months.

4.2.1 Female Condom Use in the Previous One Month

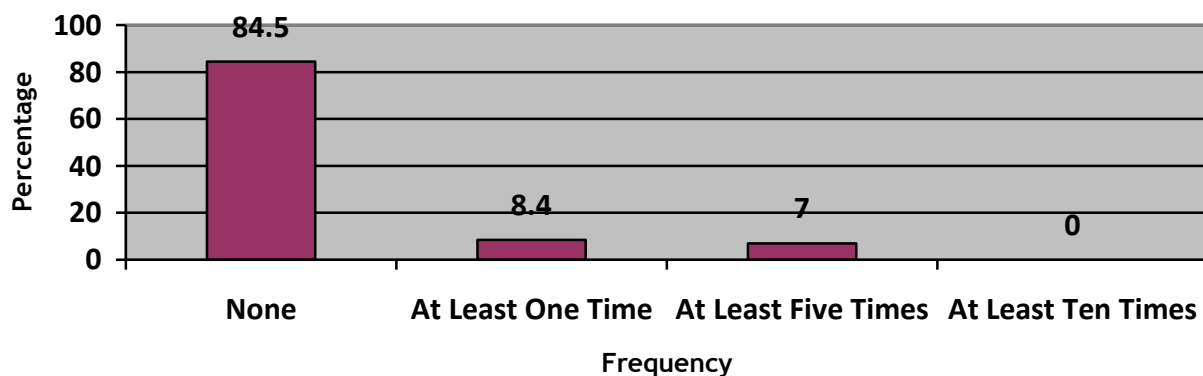
Sixty of the 71 (84.5%) participants had not used the female condom in the previous month; six participants (8.4%) had used the condom on at least one occasion, and 5 (7%) had used the condom at least five times. No participant had used the female condom on 10 or more occasions (Table 5).

Female Condom Use in the Last One Month	Number of Participants	Percentage
None	60	84.5
At Least One Time	6	8.4
At Least 5 Times	5	7.0
At Least 10 Times	0	0

Table 5: Frequency distribution of female condom use in the previous one month (n= 71)

Figure 7 (below) is the graphical representation of female condom use in the previous one month.

Figure 7:The bar chart showing the distribution of female condom use in the previous one month



4.2.2 Female Condom use in the Previous Three Months

Sixty-one (87.1%) of the total number (n= 70) of women had not used the female condom in the previous 3 months; five (7.1%) had used the condom at least once, and

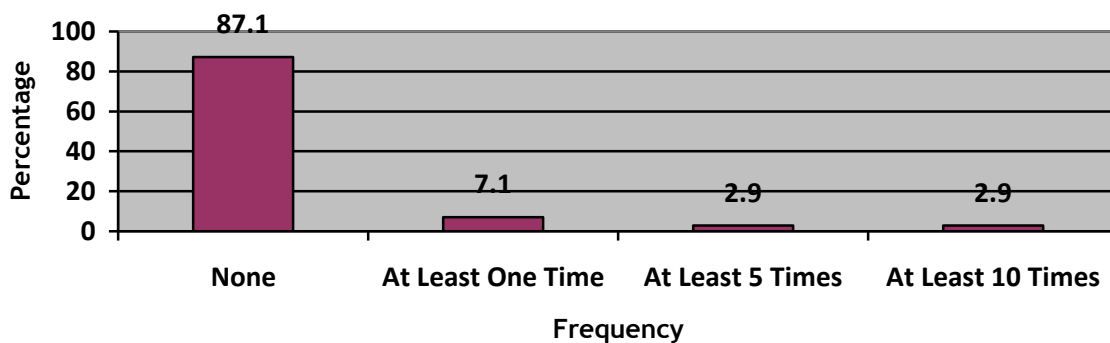
2 women each (2.9%) had used the female condom on at least 5 and 10 occasions (Table 6).

Female Condom Use in the Last Three Months	Number of Participants	Percentage
None	61	87.1
At Least One Time	5	7.1
At Least 5 Times	2	2.9
At Least 10 Times	2	2.9

Table 6: Table showing frequency distribution of female condom use in the previous three months (n=70)

Figure 8 (below) is the bar chart showing the distribution of female condom use in the previous 3 months.

Figure 8: Bar chart showing distribution of female condom use in the previous three months



4.2.3 Female Condom Use in the Last Twelve Months

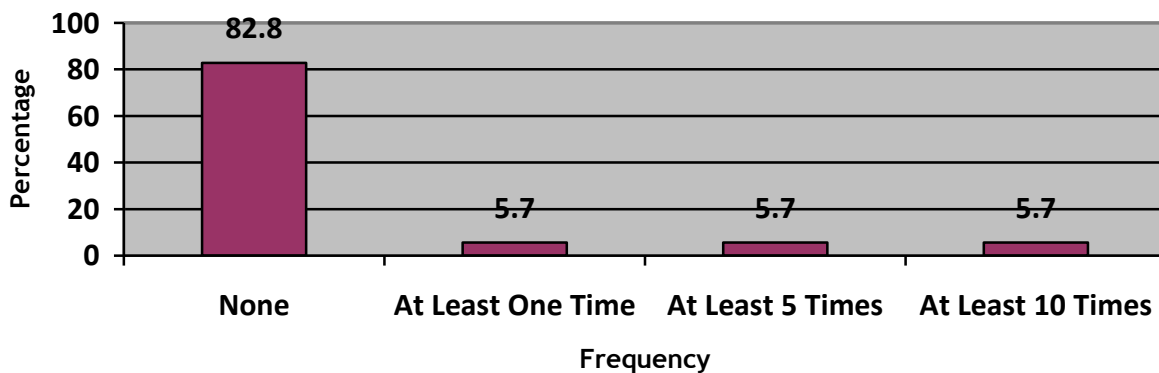
Fifty- eight out of 70 (82.8%) participants had not used the female condom in the last twelve months. Four women each (5.7%) had used the condom on at least one occasion, at least five times, and at least 10 times in the previous 12 months (Table 7).

Female Condom Use in the Previous 12 Months	Number of Participants	Percentage
None	58	82.8
At Least One Time	4	5.7
At Least 5 Times	4	5.7
At Least 10 Times	4	5.7

Table 7: Frequency distribution by female condom use in the last twelve months (n= 70)

Figure 9 (below) is the graphical distribution of female condom use in the previous 12 months.

Figure 9: Bar chart showing distribution of female condom use in the previous twelve months



4.3 Beliefs regarding the Female Condom

Beliefs regarding the female condom were assessed using the Likert Scale.

4.3.1 Participants felt Female Condoms were better than Male Condoms

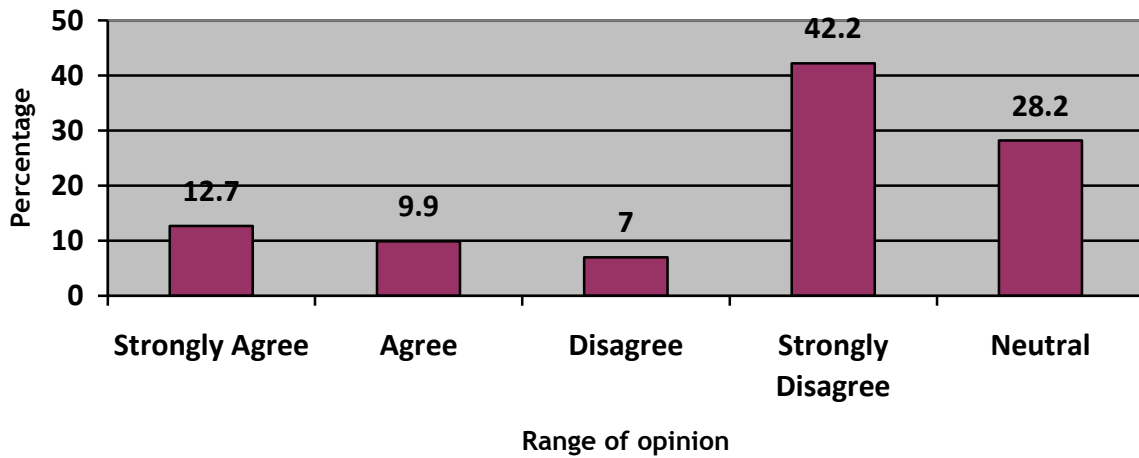
Out of the total number (n= 71) of participants, 9 (12.7%) participants strongly agreed that female condoms were better than male condoms, 7 (9.9%) agreed, 5 (7%) disagreed, and 30 (42.2%) strongly disagreed. Twenty (28.2%) participants were neutral (Table 8).

Female Condoms Better than Male Condoms	Number of Participants	Percentage
Strongly Agree	9	12.7
Agree	7	9.9
Disagree	5	7.0
Strongly Disagree	30	42.2
Neutral	20	28.2

Table 8: Frequency distribution according to whether the participants believed female condoms were better than male condoms (n= 71)

Figure 10 (below) is the graphical representation of the responses to whether the participants felt female condoms were better than male condoms.

Figure 10: Bar chart showing frequency of responses in regards to whether participants felt female condoms were better than male condoms



4.3.2 Participants felt Female Condoms were Easy to Insert

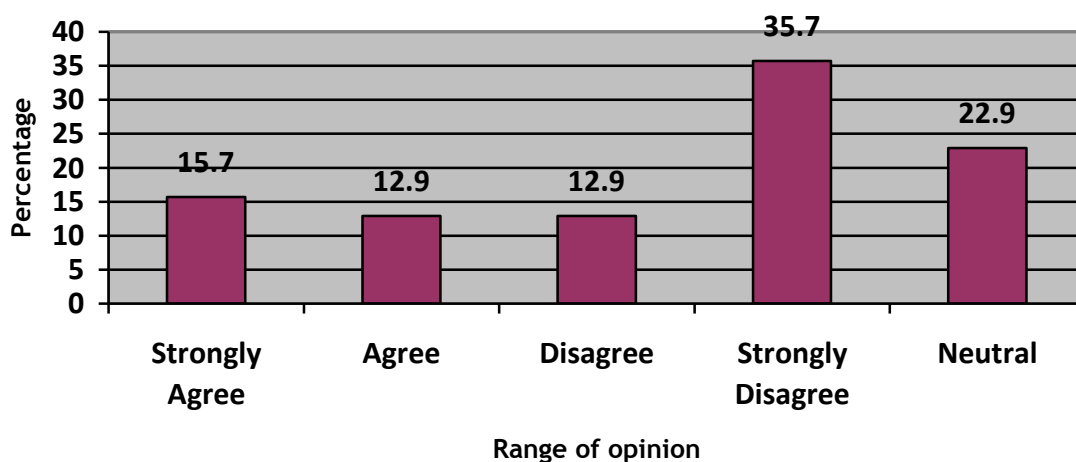
Out of 70 participants, 11 (15.7%) participants strongly agreed, 9 (12.9%) agreed, another 9 disagreed, 25 (35.7%) strongly disagreed that female condoms were easy to insert. Sixteen (22.9%) participants were neutral (Table 9).

Female Condoms are Easy to Insert	Number of Participants	Percentage
Strongly Agree	11	15.7
Agree	9	12.9
Disagree	9	12.9
Strongly Disagree	25	35.7
Neutral	16	22.9

Table 9: Frequency distribution according to whether the respondents believed the female condoms were easy to insert (n= 70)

Figure 11 (below) shows the bar chart indicating the frequencies of the responses to the whether participants felt female condoms are easy to insert.

Figure 11: Bar chart showing frequency of responses by participants regarding the statement "female condoms are easy to insert"



4.3.3 Participants felt Female Condoms put Women in Charge

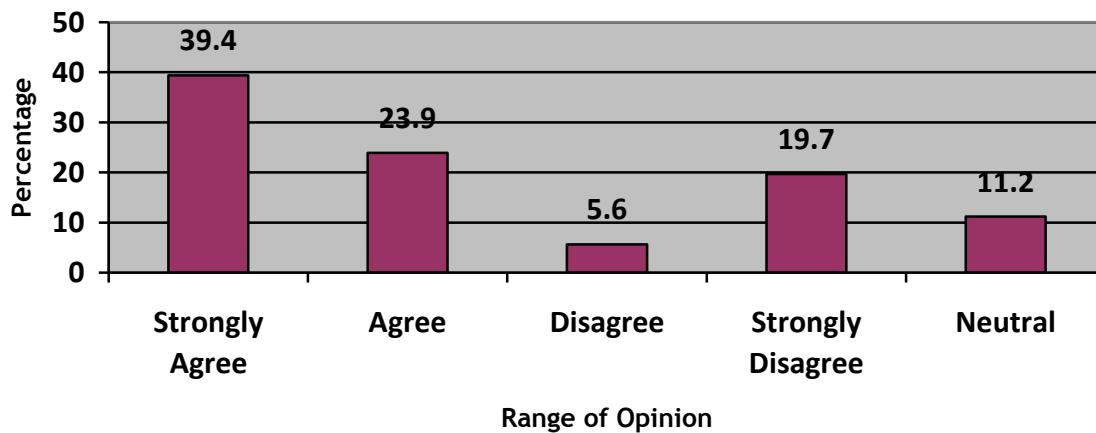
Out of the total number (n= 71) of participants, 28 (39.4%) participants strongly agreed, 17 (23.9%) agreed, 4 (5.6%) disagreed, 14 (19.7%) strongly disagreed that female condoms put women in charge. Eight (11.2%) of participants were neutral (Table 10).

Female Condoms put Women in Charge	Number of Participants	Percentage
Strongly Agree	28	39.4
Agree	17	23.9
Disagree	4	5.6
Strongly Disagree	14	19.7
Neutral	8	11.2

Table 10: Frequency distribution according to whether the respondents believed female condoms put women in charge (n= 71)

Figure 12 (below) shows the graphical representation of the responses to whether the participants felt the female condoms put women in charge.

Figure 12: Bar chart showing frequency of responses regarding the statement "female condom put women in charge"



4.3.4 Participants felt Sex was as good with Female Condoms

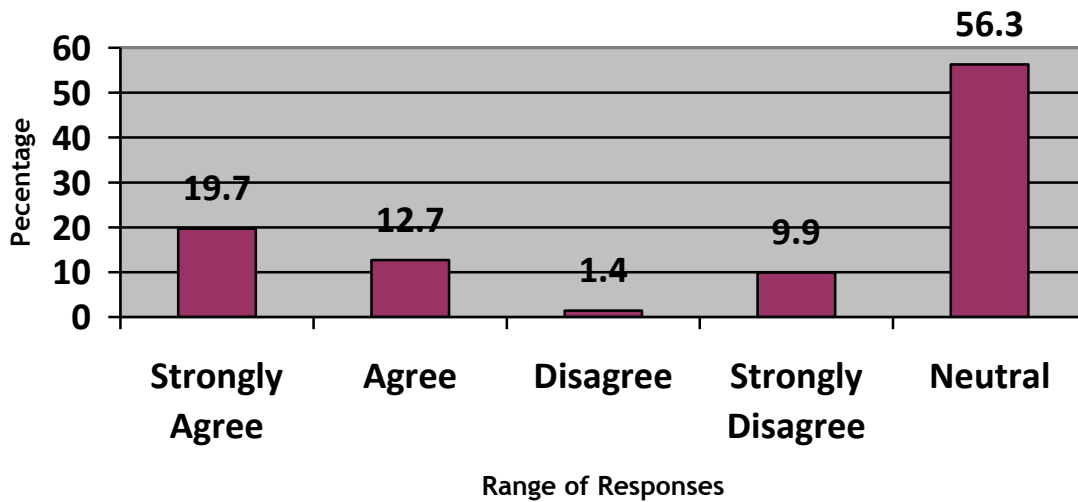
From 71 participants, 12 women (19.7%) strongly agreed, 9 (12.7%) agreed, 3 (1.4%) disagreed, and 7 (9.9%) strongly disagreed that sex with the female condom felt as good. Forty (56.3%) participants were neutral (Table 11).

Sex feels as good with Female Condom	Number of Participants	Percentage
Strongly Agree	12	19.7
Agree	9	12.7
Disagree	3	1.4
Strongly Disagree	7	9.9
Neutral	40	56.3

Table 11: Frequency distribution according to whether the respondents believed sex felt as good with a female condom (n= 71)

Figure 13 (below) is the bar chart showing distribution of the responses to whether participants felt sex was as good with the female condom.

Figure 13: Bar chart showing frequency of responses towards the statement "sex feels as good with a female condom"



4.3.5 Participants felt Clients preferred Female Condoms to Male Condoms

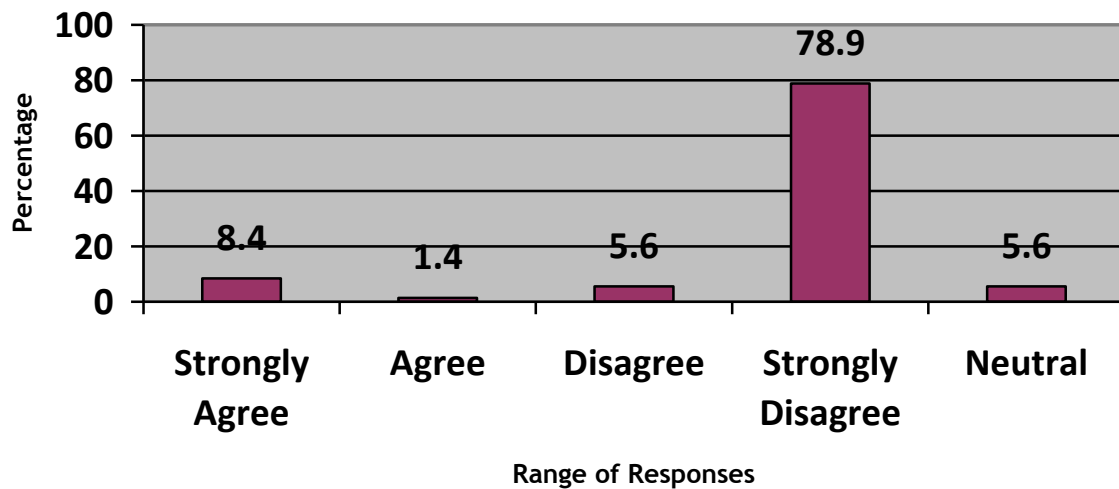
Six (8.4%) participants strongly agreed, 1 participant (1.4%) agreed, 4 (5.6%) disagreed, and 56 (78.9%) strongly disagreed that clients preferred the female condom to the male condom. Four participants were neutral (Table 12).

Clients prefer Female Condoms to Male Condoms	Number of Participants	Percentage
Strongly Agree	6	8.4
Agree	1	1.4
Disagree	4	5.6
Strongly Disagree	56	78.9
Neutral	4	5.6

Table 12: Frequency distribution according to whether the respondents believed clients preferred female condoms to the male condoms (n= 71)

Figure 14 (below) is the bar chart showing distribution of the responses to whether the participants believed clients preferred the female condom to the male condom.

Figure 14: Bar chart showing frequency of responses regarding the statement "clients prefer the female condom to the male condom"



4.3.6 Participants would recommend Female Condoms use

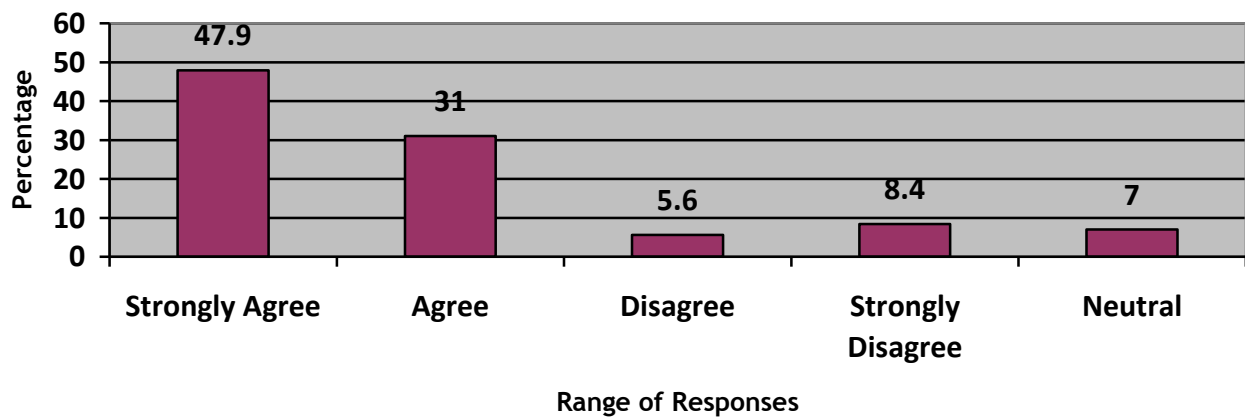
Out of the total number (n= 71) participants, 34 participants (47.9%) strongly agreed, 22 (31%) agreed, 4 (5.6%) disagreed, and 6 (8.4%) strongly disagreed they would recommend the female condom. Five participants (7%) were neutral (Table 13).

Would recommend Female Condoms to Clients	Number of Participants	Percentage
Strongly Agree	34	47.9
Agree	22	31.0
Disagree	4	5.6
Strongly Disagree	6	8.4
Neutral	5	7.0

Table 13: Frequency distribution according to whether the participants would recommend the female condom (n= 71)

Figure 15 (below) is the bar chart showing frequency of the responses according to whether the participants would recommend the female condom to clients.

Figure 15: Bar chart showing the frequency of responses to whether participants would recommend female condom use to clients



4.3.7 Participants felt Female Condoms were readily available

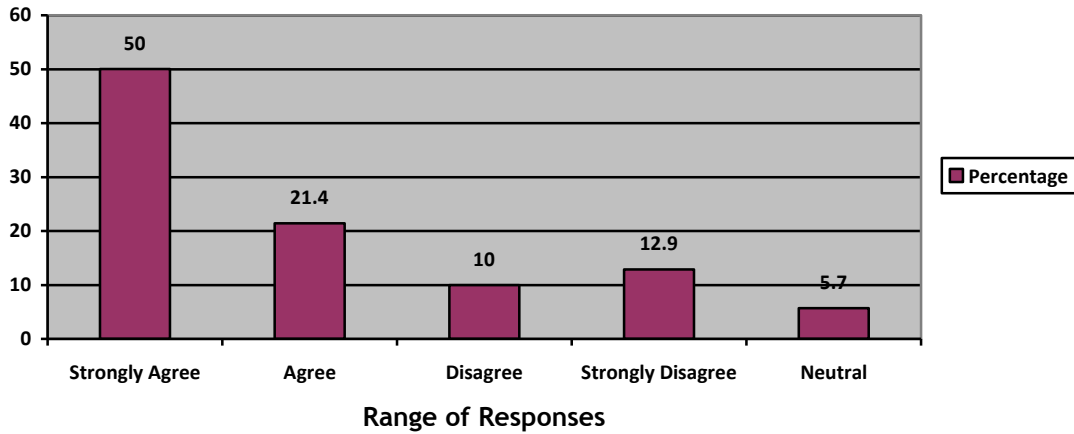
From 70 participants, thirty-five participants (50%) strongly agreed, 15 (21.4%) agreed, 7 (10%) disagreed) and 9 (12.9%) strongly disagreed that female condoms were readily available. Four participants (5.7%) were neutral (Table 14).

Female Condoms are readily Available	Number of Participants	Percentage
Strongly Agree	35	50.0
Agree	15	21.4
Disagree	7	10.0
Strongly Disagree	9	12.9
Neutral	4	5.7

Table 14: Frequency distribution according to whether the participants believed female condoms were readily available (n= 70)

Figure 16 (below) is the bar chart showing frequency of responses according to whether the participants believed female condom were readily available.

Figure 16: Bar chart showing the frequency of responses in relation to whether they believed female condoms were readily available



4.3.8 Participants felt Female Condoms were well Promoted

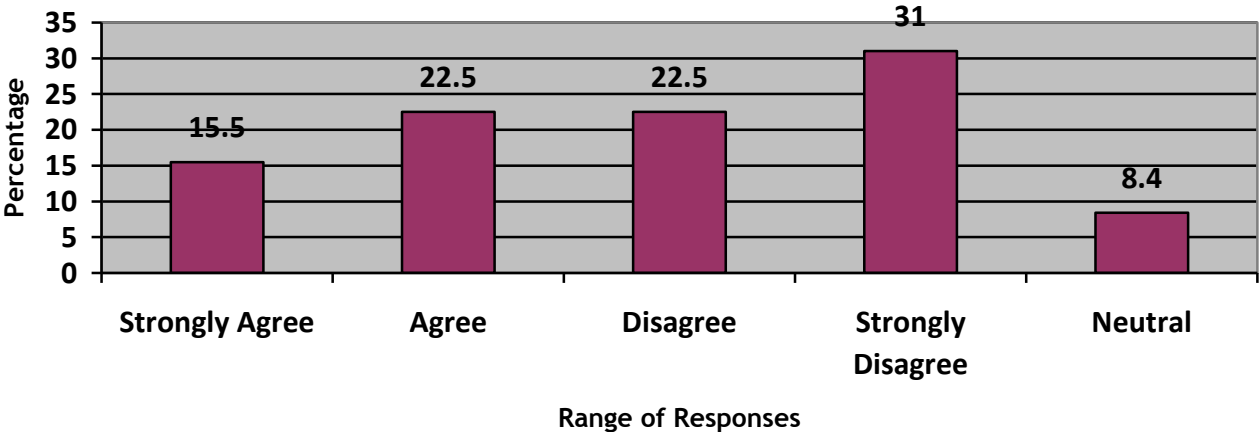
Out of the total of 71 participants, 11 women (15.5%) strongly agreed, 16 (22.5%) agreed, 16 participants disagreed, and 22 (31%) strongly disagreed that female condoms well promoted. Six women (8.4%) were neutral (Table 15).

Female Condoms are well Promoted	Number of Participants	Percentage
Strongly Agree	11	15.5
Agree	16	22.5
Disagree	16	22.5
Strongly Disagree	22	31.0
Neutral	6	8.4

Table 15: Frequency distribution according to whether the participants believed female condoms were well promoted (n= 71)

Figure 17 (below) is the bar chart showing distribution of the responses to whether the participants felt the female condoms were well promoted.

Figure 17: Bar chart showing the frequency of responses to the statement "female condoms are well promoted"



Chapter 5: Discussion

Chapter 5 discusses the findings.

5.1 Demographic Characteristics

5.1.1 Age

The majority of participants were aged 30-39.

5.1.2 Marital Status

The majority (62.9%) of the women were unmarried. These results correspond with findings of the Botswana Demographic Survey (BDS) of 2006 which showed that 64.2% of women aged 18 and above had “never married” (*Central Statistical Office - CSO, 2009*).

5.1.3 Educational level

The majority of women (89.9%) had high school education or above.

Botswana’s basic education system comprises 7 years of primary education, three years of junior secondary education, and two years of senior (high) secondary education (*Botswana Federation of Trade Unions - BFTU, 2007*). After leaving secondary school, students can enroll into a technical college or take vocational courses in teaching or nursing. English is taught from primary school.

5.1.4 Main Type of Family Planning Method Used

The study revealed that 81.7% of women used contraception. The male condom was the commonest type of contraceptive used by the participants. The female condom was much less popular.

These findings are in contrast to the 2001 CSO report in which use of contraception in Botswana was reported by 44% of women aged 15 to 49 years. The most popular method used by women was the pill, followed by condom, injection, intrauterine device, and female sterilization. Condom use was low among women aged 35 years and above, despite its widespread distribution.

5.2 Female Condom Acceptability

5.2.1 Female Condom use in the Previous One Month

The study showed that 11 women (15.5%) had used the female on one occasion or more in the previous one month and sixty women (84.5%) did not use the condom in the previous one month.

The number of users was so small that further analysis according to age, marital status, or education was not indicated.

5.2.2 Female Condom use in the Previous Three Months

The study revealed that only 9 participants (12.9%) had used the female on one occasion or more in the previous 3 months. Sixty participants (87.1%) did not use the condom in the previous three months.

The number of women who had used the female condom in the previous 3 months was so small that further analysis according to age, marital status, or education was not indicated.

5.2.3 Female Condom use in the Previous Twelve Months

The study showed that 11 participants (17.2%) had used the female on one occasion or more in the previous 12 months. Sixty participants (82.8%) did not use the condom in the previous twelve months.

The number of users was so small that further analysis according to age, marital status, or education was not indicated.

5.3.4 Female Acceptability

With more than 80% of the study participants reporting that they had not used the female condom in the previous 1 month, 3 months or even 12 months, these findings indicate low short-term and long-term acceptability of the condom among female HCWs in Francistown.

These results correspond with the findings of the Jackclass (2010) study which showed similarly low female condom use among women in Botswana.

5.3 Beliefs regarding the Female Condom

5.3.1 Female Condom better than Male Condom

Sixteen women (22.8%) agreed that female condoms were better than male condoms, whereas 35 women (49.2%) disagreed. The number of participants who strongly disagreed - 30 (comprising 42.2% of the total of women) was almost two times the total number of women who agreed. The results indicate that women believe the male condom to be better than the female condom.

There were 20 (28.2%) participants that were neutral to this question. This figure could be explained by some women, due to low female condom usage, not being able to compare the two devices.

The popularity of male to female condoms was shown by Kulczycki and colleagues (2004) in a study conducted in Alabama. A sample of 108 women in stable relationships recruited from an urban, reproductive health clinic were randomly assigned to use 10 male or female condoms, followed by use of 10 of the other type.

Across a range of criteria, the female condom was less acceptable than the male condom to most women and their partners.

5.3.2 Female Condom easy to Insert

The results showed that 28.6% of participants believed the female condom was easy to insert while 48.8% of women disagreed. The number of participants that strongly agreed (15.7%) was less than half of the number of women that strongly disagreed (35.7%).

The results reveal that the majority of women felt the female condom was not easy to use. The general negative perception regarding female condom insertion is interesting considering the low condom usage. According to Artz (2002), women who have a negative perception regarding female condom insertion fall into two groups: one group which refuses to try inserting the condom, while the other group tries but experiences difficulties. The latter seems to fit well with the study participants.

Just over a fifth of the participants were neutral in their opinion. This figure could also be explained by the low female condom usage.

5.3.3 Female Condoms put Women in Charge

The majority of participants felt the female condom empowered women. Sixty-three percent of women believed the female condom empowered women compared to 25.3% who thought it did not. The number of participants who strongly agreed (28) was twice the number of women who strongly disagreed (14).

The study makes an interesting observation: *if women were offered a method over which they had greater control, they would not necessarily adopt it.*

5.3.4 Sex feels as good with the Female Condom

There were 17 participants (32.4%) who agreed that sex with the female condom was as good; ten participants (11.3%) disagreed. The majority - 40 participants (56.3%) were neutral.

Again, low female condom use could explain the high number of women who were neutral on this question.

5.3.5 Clients prefer the Female Condom

Seven participants (9.8%) believed clients preferred the female condom; the majority, sixty participants (84.5%) disagreed.

This finding raises an important question: *If health care workers believe clients do not prefer the female condom, should the condom be promoted?*

It would seem that making female condoms available at health facilities is not cost-effective as clients will not use them.

5.3.6 Participants would recommend the Female Condom

The study showed that 78% of women would recommend female condom use; 14% disagreed. Participants that strongly agreed to recommend female condom use were in the majority (47.9%).

The study observes that *women would recommend a method they were not using*. This may seem unusual but is not surprising. A study conducted by Sakondhavit and colleagues (2001) in Thailand revealed similar findings.

The study enrolled twenty sex workers from a massage parlor and 21 from a brothel who were trained in the use of the female condom. The participants were instructed about the risk of HIV and advised that they could use the female condom as an alternative method to the male condom for protection. The female condom was used in 28.4 per cent and 17.8 per cent episodes of sex in each site during the two weeks. Female condom use increased from 0 per cent in the first group to 43 per cent in the second group. Participants discontinued condom use citing partners' objection and the "inconvenience" of the device. However, the participants mentioned that they would recommend it to others as most felt that other women would want to try it.

5.3.7 Female Condoms readily Available

Women who agreed female condoms were readily available (71.4%) constituted more than three times those that disagreed (22.9%). The majority (50%) of women agreed.

It would generally be assumed that female condom availability would have a positive impact on its uptake. The study reveals the contrary and makes an important finding: *female condom availability does not necessarily translate into increased condom use*.

Study finds correspond with results of an intervention study conducted in Mombasa, Kenya. Thomsen (2006) established that the availability of the female condom led to reduction in the levels of unprotected sex but only a small increase in the percentage of participants who reported protected sex with all partners.

The study contradicts findings by Hoke (2007) which showed that the availability of female condoms was associated with more condom use, and thus better protection

against STIs. When female condoms were added to a male-condom distribution system for sex workers, the use of protection with paying partners increased.

5.3.8 Female Condoms well Promoted

Twenty-seven (38%) agreed that the female condom was well promoted compared to 38 participants (53.5%) who disagreed. Participants who strongly agreed (11) were half of those that strongly disagreed (22). Generally participants believed female condoms were not well promoted.

This finding is important to policy and decision makers. The importance of female condom promotion is illustrated by the Jivasak-Apimas (2000) study which led to the development of the “100 percent condom” promotion in brothels in Thailand.

The study involved a female condom promotion campaign among female commercial sex workers. As a result of the campaign as well as improved STI treatment services, condom use among commercial sex workers increased to more than 90 percent; reported visits to commercial sex workers by men declined by about half; HIV infection rates among military recruits decreased by about half; and the cases of five other STIs decreased by nearly 80 percent among brothel workers (*UNAIDS, 2000*).

Chapter 6: Conclusion and Recommendations

6.1 Conclusion

The study showed that both short-term and long term female condom acceptability by female HCWs in Francistown was low.

The study showed that participants believed that although the female condom was readily available and that it empowered women, it was difficult to use. The women did not think the female condom was better than the male condom. The majority of participants believed the condoms were not popular with clients and that not enough was being done to promote them. The study also observed that the participants would recommend female condom use to clients.

6.2 Recommendations

Based on the findings of this study the following recommendations can be made:

6.2.1 Conduct more research

The study determined that female condom use did not depend on condom accessibility, or the knowledge that female condoms empower women. In order to ensure effective and consistent use, an in-depth understanding of user preferences and needs is required.

There is need to conduct more research in order to understand barriers to female condom use by HCWs. It is important to understand why the HCWs will not use a device that is readily available, that empowers them, and which they are willing to recommend.

6.2.2 Educating health care providers

The researcher recommends that health workers be trained on the female condom to ensure they fully understand it because health care providers play a key role in increasing women's access to the female condom. Agha (2002) found that in Tanzania more than half of women using the female condom had heard about it from a clinic or hospital and that communication with a peer educator or health care provider had a direct positive impact on female condom uptake.

It is crucial that providers receive training as well as information and support about the female condom, so that they in turn feel confident and comfortable in promoting it to their clients. Service providers may have a bias against barrier methods such as the female condom, so it may be necessary to de-sensitize the workers in order to prevent their beliefs from negatively influencing potential users.

Training can be conducted through the following activities:

- Insertion practice

Using an anatomical model and then under the guidance of an experienced trainer offers a great opportunity to learn the insertion technique.

- Testimonials by satisfied users

Sharing experiences and exchanging tips among staff can help develop confidence and can help women develop condom negotiation skills with their male partners.

- Face-to-face communication and counseling

Interviews with the health workers can elicit in-built fears or misconceptions about the female condom.

6.2.3 Promoting the female Condom

The study showed that HCW did not believe the female condom was well promoted. The researcher therefore proposes an enhanced female condom promotion in Botswana, and that program should begin with promoting the condom among health workers.

Why promote the female condom when the male version is so popular?

Artz (2000) showed that many clients will try, and some will continue, to use female condoms when they are promoted positively and when women are trained to use them correctly and to promote them to their partners.

There are several strategies that can be used to promote the female condom among health workers:

- I. Integrating female condom use into HIV and STI prevention programs

The study showed that female HCWs did not believe the female condom was popular with clients. Despite this, the researcher recommends that the female condom be made available to all clients at various service points of health care.

The researcher recommends that female condoms be integrated into the core service package of existing HIV prevention and reproductive health programs, including the health ministry, and maternal and reproductive health services at health facilities. The importance of this is that the health worker receives feedback from both the policy makers on female condom procurement, and from clients on female condom usability.

In an intervention in Nigeria, when the female condom was introduced along with the male condom as part of the dual protection strategy in family planning clinics (Avni,

2001), results showed that in the first year of the program, there was a modest increase in male condom, but a significant interest in the female condom and an increased discussion of dual protection by providers.

II. Making female condoms accessible

It is important to make ensure steady supply of female condoms through the support of governments and donors. Although the study showed that female condom availability does not guarantee its use, and that participants felt that the condom was not popular, the researcher recommends that the Botswana government should continue to female condom available at all health facilities. The researcher believes change at time takes time. One article reported that it took 17 years before the tampon was accepted and used by women (Learning from the female condom experience. *Microbicides May 2002 Antwerp*. <http://archives.healthdev.net/gender-aids>).

The researcher commends the Botswana government for pledging to continue to procure the female condom (<http://www.mmegi.bw/index/2010/April/Monday26>) despite statistics that reveal low female condom uptake. We in Africa cannot afford to give up on the female condom - at least not yet.

Chapter 7: References and Appendixes

7.1 References

Abercrombie P D, "Women Living with HIV Infection," *Nursing Clinics of North America*. Vol. 31(1); March 1996:97-106

Abt Associates South Africa, "The impact of HIV/AIDS on the Health Sector in Botswana," *Abt Associates South Africa, Inc and UNDP*, 2000: 6-9

Agha S and Van Rossem R, "Impact of mass media campaigns on intentions to use the female condom in Tanzania", *International Family Planning Perspectives*, 2002, 28(3):151-158

Avni A, "Dual protection and female condoms in India." E-mail to Sexual and Reproductive Health Yahoo Group. Posted 14 December 2001 (<http://www.genderhealth.org>)

Artz L, Fleenor M. "Effectiveness of an intervention promoting the female condom to STD clinic patients," *American Journal of Public Health*, 2000, 90(2):237-244

Baker G, Ricardo C. "Young Males and Masculinity in Sub-Saharan Africa: HIV/AIDS, Conflict, and Violence." *The World Bank Social Papers*, 2005(26):9-14

Barnet T, Whiteside A, "AIDS in the 21st Century," 2002:159-82

BFTU, "Policy on Education in Botswana," BFTU; March 2007:3-7

Buve A, Foaster S D, Mbwili C, Mungo E, Tollenare N, Zeko M, "Mortality among female nurses in the face of the AIDS epidemic: a pilot study in Zambia," *PubMed AIDS* 1994, 8(3):396

Central Medical Stores M&E Quarterly Report (July to September 2008)

CHANGE, "Female Condoms of Today and Tomorrow: Strategic Call on Research on Research and Development (R & D) and Advocacy, Sep 2010

Chipungu J, "Zambian women shun female condoms," *Global Health Council's Global AIDS Program Newsletter*, 1999 ;(58):14-15

Coates TJ, Makadon HJ, "What are sex workers' HIV prevention needs? In HIV prevention: Looking Back, Looking Ahead" University of California, San Francisco Center for AIDS Prevention Studies (CAPS), 1996

CSO, "Botswana multiple indicator survey-2000." 2001, Gaborone, Botswana

CSO, "Botswana Demographic Survey 2006," 2009:23

De Klerk G W, "Social factors that make South African women vulnerable to HIV infection." *Health Care for Women International*, 23; 2002:163-72

Deniaud F, "Dynamics of female condom acceptability among prostitutes and young women in Abidjan, Ivory Coast." *Contracept Fertil Sex* 1997; 25:921-932

Dunkle K L, Jewkes R K, Brown H C, et al, "Gender-based violence, relationship power, and risk of HIV infection in women attending antenatal clinics in South Africa," 2004; *The Lancet*, 363 (9419):1415-21

Feldblum P, et al., "Female Condom Introduction and Sexually Transmitted Infection Prevalence: Results of a Community Intervention Trial in Kenya," *AIDS*, 2001 15(8):1037-44

Fontanet AL, Saba J, Chandelying V, et al. "Protection against sexually transmitted diseases by granting sex workers in Thailand the choice of using the male or female condom: results from a randomized controlled trial". *AIDS* 1998; 12(14):1851-59

Francis-Chizororo M, Natshalaga N R, "The female condom: acceptability and perception among rural women in Zimbabwe." *Afr J Reprod Health*; 2003 Dec; 7(3):101-16

Galvao L, Diaz J, Mobley S, Marchi N, "Acceptability of the Female Condom after a Social Marketing Campaign in Campinas, Brazil," *Horizons, Population Council*, 2002:1-4

Gollub E L, Stein Z, El-Sadr W, "Short - term acceptability of the Female Condom among Staff and Patients at a New York Hospital," *Family Planning Perspectives Journal*; Vol 27(24), July/August 1995:155 - 158

Government of Botswana: Local Government Structure in Botswana, *Government Paper 1*, 1981:1-3

Hoke TH, Feldblum PJ, Van Damme K, et al, "Temporal trends in sexually transmitted infection prevalence and condom use following introduction of the female condom to Madagascar sex workers." *Int J STD AIDS* 2007; 18(7):461-466

Hirky E A, Kirshenbaum S B, Melendez R M, et al, "The Female Condom: Attitudes and Experiences among HIV-Positive Heterosexual Women and Men," *Women and Health*. Vol 37 Issue 1; Feb 2003:71 - 89

Jackalas C, Mangope M, et al; "Factors contributing to the low uptake of the Female Condom among male and female (18 - 49) population in Chobe District in Botswana," *National AIDS Coordinating Agency (NACA) Report on the National HIV/AIDS and STI and Other Related Infectious Disease Conference (NHASORC) II*; May 2010

Jivasak-Apimas S, Saba J, Chandeying V, Sakondhavat C et al, “Acceptability of the Female Condom among Sex Workers in Thailand,” *Int Conf AIDS*. 2000: 13

Kulczycki A et al., “A comparison of the acceptability of the female and male condom”: A randomized crossover trial, *Perspectives on Sexual and Reproductive Health*, 2004, 36(3):120-126

Mantell J E, Mayer L, Carballo-Diegez A, Stein Z, Ramjee D, “ Microbicide acceptability research: Current approaches and future directions.” *PubMed. Social Sciences and Medicine*, 2005 60(2):319-330

Musaba E, Morrison C.S, Sunkutu M. R, et al. “Long-term use of the female condom among couples at high risk of human immunodeficiency virus infection in Zambia”. *Sex Trans Dis* 1998; 25 (5):260-64

PATH, “Female condom. A powerful tool for protection,” 2006:3-12, 24

PATH: Technology solutions for global health: Woman's Condom. (Available on: http://www.path.org/files/TS_update_womans_condom.pdf.) Published May 2009. Accessed October 23, 2009

Pool R et al., “An Acceptability Study of Female-Controlled Methods of Protection against HIV and STDs in South-Western Uganda,” *International Journal of STD and AIDS* 11, no. 3 (2000):162-67

Rauf W, Hitchcock S, Rauf A, et al, “Knowledge of and misconceptions about the spread and prevention of HIV infection among older urban women attending the Tshwane District Hospital, South Africa,” 2010 *SA Fam Pract* 2010; 52(2):142-148

Reddy P, Saleh-Onoya D, Sifunda S, et al. "Preference for dry sex, condom use and risk of STI among HIV-negative black women in the Western Cape province, South Africa". *South Africa Journal of Science* [online] 2009, vol.105, n.1-2:73-76

Sakondhavat C et al, "Consumer preference study of the female condom in a sexually active population at risk of contracting AIDS." *J Med Assoc Thai* (2001) 84: 973-81

Salomon J, et al. "Integrating HIV prevention and treatment: from slogans to impact." *PloS Med* 2005; 2:16

Simpson A, "Learning Sex and Gender in Zambia: Masculinities and HIV/AIDS Risk" *Sexualities*; April 2007 10:173-188

Strebel A, "Good intentions, contradictory outcomes? AIDS prevention and care for South African women," *Journal of Comprehensive Health*, 1993, Vol 4(1):22-25

Thomsen S C, Ombibi W, et al, "A prospective study assessing the effects of introducing the female condom in a sex worker population in Mombasa, Kenya." *Sex Transm Infect* 2006; 82:397-402

Trussell J, Hatcher R. L, Steward F, "The essentials of contraception: efficacy, safety, and personal considerations." In Hatcher RA, *Contraceptive Technology*, Eighteenth Revised Edition. New York: Ardent Media, Inc., 2004:221-52

UNAIDS: AIDS Epidemic Update, Dec 2002:6

UNAIDS: AIDS Epidemic Update, 2005:9

UNAIDS: Evaluation of the 100% Condom Program in Thailand, 2000:26-33

UNAIDS Report on the Global AIDS Epidemic, 2010:16-22, 180-182

UNAIDS: The Female Condom. A Guide for Planning and Programming. 2006:9

UNAIDS/WHO, "A History of the HIV/AIDS Epidemic with Emphasis on Africa," Sep 2003:3

UNAIDS/WHO: The Female Condom: An information pack. April 1997

UNFPA/WHO/UNAIDS/World Bank Special Programme of Research on Human Reproduction, "The Female Condom: A Review," Geneva, WHO, 1997

UNFPA, "Female-Initiated HIV Prevention Methods: Joint Advocacy Statement," UNFPA & Partners, 2010

WHO: Female Condom Technical Review Committee Summary Report on FC2, 2007

WHO: The Female Condom: A Guide for Planning and Programming, Geneva: WHO, 2000

WHO, "Working Together for Health." *The World Health Report*, Geneva, 2006:1, 6 (Available: <http://www.who.int/whr/2006>, accessed 10 January, 2009)

Wood K, Jewkes R, Maforah F, "The violence connection in reproductive health: teenage accounts of sexual relationships in Khayelitsha," *Urbanisation and Health Newsletter*, 1997.3:21-24

Xu J, Wu Y, Cao Q, "Contraceptive Efficacy of Sino-Female Condom: Comparison with Condom," *Zhonghua Fu Chan Ke Za Zhi* 34, 1999(1):33-35

7.2 Appendixes

7.2.1 Informed Consent Form



UNIVERSITEIT·STELLENBOSCH·UNIVERSITY
jou kennisvermoë • your knowledge partner

STELLENBOSCH UNIVERSITY CONSENT TO PARTICIPATE IN RESEARCH

ASSESSMENT OF SHORT AND LONG TERM ACCEPTABILITY, AND ATTITUDES REGARDING THE FEMALE CONDOM BY HEALTH WORKERS

You are asked to participate in a research study conducted by **Dr Lovemore Chirwa B. Sc (HB) MB. ChB. PDM** from the **Africa Center for HIV/AIDS Management, Faculty of Economic & Management Sciences**. The results of this study will be contributed to an academic research thesis.

1. PURPOSE OF THE STUDY

The study is designed to assess the short and long term acceptability of the female condom among female health workers. It will also assess the attitudes towards the female condom.

2. PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

a. Selection of Participants

Forty health workers will be randomly selected from the 13 clinics in Francistown to take part in the study. You, as health worker, have been chosen because you work at one of these health facilities. Health workers are key players in HIV prevention efforts.

b. Completing a Questionnaire

Once you agree to take part in the study you will be asked to fill a completely anonymous 15 – question questionnaire. No names or any information identifiable to you will be required. The questions will ask some background information about yourself, your experience with the female condom and your attitudes regarding the female condom. You will be given 15 to 30 minutes to complete the questionnaire. After you complete the questionnaire place it in the

opaque envelop provided, seal the envelop, and return the questionnaire to the sister- in- charge's office of the clinic. All the questionnaires will then be collected and kept in a secure place in the office of the researcher.

3. POTENTIAL RISKS AND DISCOMFORTS

There are no reasonable foreseeable risks for taking part in the study.

4. POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

There are no direct benefits for taking part in the study. Information collected will be used primarily for academic purposes. However, results of this study will be provided to the Francistown Senior District Health Officer. At the end of the study you will also be availed with the finding of this research. Should you be interested in being provided with the results of this research please contact me on **+267 71480784** or via my e-mail address: ChirwaL@bw.cdc.gov after December 2010.

5. PAYMENT FOR PARTICIPATION

You will not receive any payment for taking part in the study.

6. CONFIDENTIALITY

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of you completing only a numbered questionnaire. No names or other identifiable information will be required. Completed questionnaire will be kept in a locked drawer at the office of *Dr. Lovemore Chirwa* at the BOTUSA offices in Francistown.

No other persons will have access to the documents. Upon request the completed questionnaires will be availed to the University of Stellenbosch or if demanded for legal reasons.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may also refuse to answer any questions you don't want to answer and still remain in the study. The investigator may withdraw you from this research if circumstances arise which warrant doing so.

8. IDENTIFICATION OF INVESTIGATORS

If you have any questions or concerns about the research, please feel free to contact **Dr. Lovemore Chirwa** at phone number **+267 2410646** or mobile phone number **+267 71480784** or **Mr. Burt Davis** at phone number **+27 21 808 3006**.

9. RIGHTS OF RESEARCH SUBJECTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research subject, contact **Ms Maléne Fouché** [**mfouche@sun.ac.za; +2721 808 4622**] at the Division for Research Development or **Mr. Balekang Bailer** [**gbalekang@gov.bw; 363 2916**] at the Health and Development Unit of the Ministry of Health in Gaborone.

SIGNATURE OF RESEARCH SUBJECT OR LEGAL REPRESENTATIVE

The information above was described to [*me/the subject/the participant*] .by [*name of relevant person*]..... in [*Afrikaans/English/Xhosa/other*] and [*I am/the subject is/the participant is*] in command of this language or it was satisfactorily translated to [*me/him/her*]. [*I/the participant/the subject*] was given the opportunity to ask questions and these questions were answered to [*my/his/her*] satisfaction.

[*I hereby consent voluntarily to participate in this study/I hereby consent that the subject/participant may participate in this study*] I have been given a copy of this form.

Name of Subject/Participant

Name of Legal Representative (if applicable)

Signature of Subject/Participant or Legal Representative

Date

SIGNATURE OF INVESTIGATOR

I declare that I explained the information given in this document to _____ [*name of the subject/participant*] and/or [his/her] representative _____ [*name of the representative*]. [*He/she*] was encouraged and given ample time to ask me any questions. This conversation was conducted in [*Afrikaans/*English/*Xhosa/*Other*] and [*no translator was used/this conversation was translated into _____ by _____*].

Signature of Investigator

Date

7.2.2 Questionnaire

University of Stellenbosch

MPhil 2010/11

Questionnaire on

ASSESSMENT OF THE ACCEPTABILITY OF THE FEMALE CONDOM BY FEMALE HEALTH WORKERS IN FRANCISTOWN, BOTSWANA

As a Masters in HIV Management (MPhil) student at the University of Stellenbosch in South Africa, I am undertaking a research to assess the patterns of use and acceptability of the female condom among health workers in Francistown. I would be grateful if you would complete the following questionnaire and return it to me.

Please complete as many of the questions as honestly as you are able to. This questionnaire is entirely anonymous and all the information collected will be treated with utmost confidentiality. As such you do not need to put your name or any identifiable information.

Put a cross (X) or a tick (✓) against the answer of choice.

If you have any questions or need clarification please do not hesitate to contact me on Dr. Lovemore Chirwa on +267 71480784 or +267 2410646 ext 203.

Part A: Demography

These questions will ask some background information about you.

1. How old are you?

21 - 29

30 - 39

40 - 49

2. What is your marital status?

Single

Married

Cohabiting

Separated/Divorced

3. What is the highest degree or level of school you have completed?

Primary School Leaver

Junior Secondary Education

High School graduate

College diploma

Bachelor's degree

Master's degree

4. What is the main type of family planning method are you currently using?

None

Male condom

Female condom

Hormonal contraceptive i.e. injection or pill

Permanent method e.g. tubal ligation

Part B: Female Condom Use

These questions in this section will ask personal information such as your sexual behavior, and may make you feel uncomfortable. Remember there are no right or wrong answers and your honesty is greatly appreciated.

5. How many acts of sexual intercourse have you used the female condom in the last one month?

None

At least one time

At least 5 times

At least 10 times

Reluctant to answer

6. In how many acts of sexual intercourse have you used the female condom in the last 3 months?

None

At least one time

At least 5 times

At least 10 times

Reluctant to answer

7. In how many acts of sexual intercourse have you used the female condom in the last 12 months?

None

At least one time

At least 5 times

At least 10 times

Reluctant to answer

Part C: Beliefs regarding the Female Condom

Depending on what you understand, what do you think of each of the following statements about the female condom?

8. Female condoms are better than regular male condoms

Strongly Agree

Agree

Disagree

Strongly Disagree

Neutral

9. Female condoms are easy to insert

Strongly Agree

Agree

Disagree

Strongly disagree

Neutral

10. The female condom put women in charge

Strongly Agree

Agree

Disagree

Strongly disagree

Neutral

11. Sex feels as good when you use a female condom

Strongly Agree

Agree
Disagree
Strongly disagree
Neutral

12. Clients prefer the female condom to the male condom

Strongly agree
Agree
Disagree
Strongly disagree
Neutral

13. You would recommend female condom

Strongly Agree
Agree
Disagree
Strongly disagree
Neutral

14. Female condoms are readily available

Strongly Agree
Agree
Disagree
Strongly disagree
Neutral

15. In Francistown, female condoms are well promoted

Strongly Agree
Agree

Disagree

Strongly disagree

Neutral

Thank you for taking time to complete this questionnaire.

7.3 Approval Documents

7.3.1 Approval Letter from the FDHMT Medical Officer

Francistown DHMT

6th September 2010

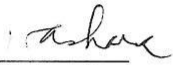
Dr Lovemore Chirwa
BOTUSA
Private Bag 410
Francistown

RE: PERMISSION TO CONDUCT RESEARCH IN FRANCISTOWN

Your application to conduct research in our Health Facilities has been granted.

Hope you will get all the necessary support and wish you luck.

Thank you.


Dr Nashara Paul
Francistown



7.3.2 Government of Botswana Ministry of Health - Health Research Unit (HRU)

Telephone: (267) 363200
FAX (267) 353100
TELEGRAMS: RABONGAKA
TELEX: 2818 CARE BD



MINISTRY OF HEALTH
PRIVATE BAG 0038
GABORONE

REPUBLIC OF BOTSWANA

REFERENCE NO: PPME 13/18/1 PS V (131)

24 August 2010

Health Research and Development Division

Notification of IRB Review: New application

Dr Lovemore Chirwa
Private Bag F410
Francistown

Protocol Title: **ASSESSMENT OF SHORT AND LONG TERM
ACCEPTABILITY, AND ATTITUDES
REGARDING THE FEMALE CONDOM BY
HEALTH WORKERS**

HRU Protocol Number: HRU 00651

Sponsor: African Center for HIV/AIDS Management, Faculty
of Economic and Management Sciences

HRU Review Date: 23 August 2010

HRU Expiration Date: 22 August 2011

HRU Review Type: HRU reviewed

HRU Review Determination: Approved

Risk Determination: Minimal risk

Dear Dr Chirwa

Thank you for submitting a new application for the above referenced protocol.

This approval includes the following:

1. Application form
2. Proposal
3. Data collection tool

This permit does not however give you authority to collect data from the selected sites without prior approval from the management. Consent from the identified individuals should be obtained at all times.

The research should be conducted as outlined in the approved proposal. Any changes to the approved proposal must be submitted to the Health Research and Development Division in the Ministry of Health for consideration and approval.

Furthermore, you are requested to submit at least one hardcopy and an electronic copy of the report to the Health Research, Ministry of Health within 3 months of completion of the study. Approval is for academic fulfillment only. Copies should also be submitted to all other relevant authorities.

If you have any questions please do not hesitate to contact Mr. P. Khulumani at pkhulumani@gov.bw, Tel +267-3914467 or Mary Kasule at mkasule@gov.bw or marykasule@gmail.com Tel: +267-3632466

Continuing Review

In order to continue work on this study (including data analysis) beyond the expiry date, submit a Continuing Review Form for Approval at least three (3) months prior to the protocol's expiration date. The Continuing Review Form can be obtained from the Health Research Division Office (HRDD), Office No. 9A 11 or Ministry of Health website: www.moh.gov.bw or can be requested via e-mail from Mr. Kgomoitso Motlhanka, e-mail address: kgmmotlhanka@gov.bw As a courtesy, the HRDD will send you a reminder email about eight (8) weeks before the lapse date, but failure to receive it does not affect your responsibility to submit a timely Continuing Report form

Amendments

During the approval period, if you propose any change to the protocol such as its funding source, recruiting materials, or consent documents, you must seek HRDC approval before implementing it. Please summarize the proposed change and the rationale for it in the amendment form available from the Health Research Division Office (HRDD), Office No. 9A 11 or Ministry of Health website: www.moh.gov.bw or can be requested via e-mail from Mr. Kgomoitso Motlhanka, e-mail address: kmotlhanka@gov.bw . In addition submit three copies of an updated version of your original protocol application showing all proposed changes in bold or "track changes".

Reporting

Other events which must be reported promptly in writing to the HRDC include:

- Suspension or termination of the protocol by you or the grantor
- Unexpected problems involving risk to subjects or others
- Adverse events, including unanticipated or anticipated but severe physical harm to subjects.

Do not hesitate to contact us if you have any questions. Thank you for your cooperation and your commitment to the protection of human subjects in research.

Yours sincerely


M. Kasule

For Permanent Secretary



7.3.3 University of Stellenbosch Ethics Committee Approval Letter



UNIVERSITEIT-STELLENBOSCH-UNIVERSITY
jou kennisvernoot • your knowledge partner

22 November 2010

Tel.: 021 - 808-9183
Enquiries: Sidney Engelbrecht
Email: sidney@sun.ac.za

Dr L Chirwa
Africa Centre for HIV/AIDS Management
University of Stellenbosch
STELLENBOSCH
7802

Reference: 425/2010

Dr L Chirwa

APPLICATION FOR ETHICAL CLEARANCE

With regards to your application, I would like to inform you that the project, *The female condom: Assessment of patterns of the use and acceptability by health workers in Franschhoek*, has been approved on condition that:

1. The researcher's remain within the procedures and protocols indicated in the proposal;
2. The researcher's stay within the boundaries of applicable national legislation, institutional guidelines, and applicable standards of scientific rigor that are followed within this field of study and that
3. Any substantive changes to this research project should be brought to the attention of the Ethics Committee with a view to obtain ethical clearance for it.
4. The researcher's implements the suggestions made by the mentioned by the Research Ethics Committee (Human Research) in order to reduce any ethical risks which may arise during the research.

We wish you success with your research activities.

Best regards




MIR SF ENGELBRECHT
Secretary: Research Ethics Committee: Human Research (Non-Health)

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