



Knowledge, attitudes and practices regarding the use of female condoms among undergraduate students of Africa university

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Abstract

Women are vulnerable to HIV infections because of their biological make up and they use female condoms as a means of HIV and STIs as well as pregnancy prevention. At first it was the male condom of which women had no control as a strategy of HIV and AIDS prevention as well as prevention of unwanted pregnancy. This led to development and use of female condom of which women have full control. The purpose of the study was to determine the knowledge, attitude and practices towards female condom use among female undergraduate students at Africa University. A quantitative descriptive cross sectional study design was used. Non probability Convenience sampling method was used to select 200 female undergraduate students aged 19 to 40 years. Data was collected using self-administered questionnaire with four sections namely demographic, knowledge, attitude and practices regarding female condom use. Data was analyzed using Epi info. The results showed that less than half 80 (40%) participants had heard about the female condom from the mass media while a few 20 (10%) had heard from health workers. The other half 100 (50%) had heard about female condom from university female students and male friends. Although the majority (75%) correctly defined a female condom and all knew that it is made out of polyurethane material, a small number 60 (30%) acknowledged its effectiveness when used as a single condom, correctly and consistently. The findings indicate that undergraduate students have partial information regarding female condom. A significant number 55 (27.5%) thought that female condoms were used by educated women only while a notable number 30 (15%) cited that it is for commercial sex workers only. Non usage of female condom was attributed to men preferring dry sex (25%) and that it was expensive. Most 138 (69%) believed that culture and religion negatively influenced condom use. The findings reflect that cultural norms and misconceptions have a bearing on non use of female condoms by undergraduate students. Almost all 178 (89%) participants had no sexual satisfaction when using female condom hence majority 175 (87.5%) did not use the female condom when having sex; most 180 (90%) had never used a female condom before. Only 12 (6%) participants had collected female condoms from the University clinic. Reasons for non-uptake of female condom were attributed to lack knowledge and interest (50.5%), discomfort while putting it on (19%), male condom preference (16.5%) and it was noisy (14%). The findings reveal low uptake of female condom by undergraduate female students mainly due to lack of empowerment. There is need therefore for the University Health Services Unit to continuously health educate undergraduate female students on female condom use to enhance the partial knowledge they already have in order to dispel the misconceptions and break the cultural barriers surrounding female condom use.

Keywords: Condom, female condom, contraceptive, undergraduate students

1. Introduction

Condoms are a critical component in a comprehensive and sustainable approach to the prevention of HIV and other sexually transmitted infections, hence female condoms are effective for preventing unintended pregnancies (WHO, 2012).

A female condom is a device that is used during sexual intercourse as a barrier contraceptive to reduce the risk of sexually transmitted infections (STIs, such as gonorrhoea, syphilis, and HIV, though its protection against infections is inferior to that by male condoms and unintended pregnancy, invented by Danish and Hessel. It is worn internally by the female partner and provides a physical barrier to prevent exposure to ejaculated semen or other body fluids. Female condoms can be used by the receptive partner during anal sex (Trussell & James, 2013) [26].

The female condom is a thin, soft, loose-fitting sheath with a flexible ring at each end. They typically come in various sizes. For most vaginas, a moderately sized condom is adequate; women who have recently given birth should try a large size first. The inner ring at the closed end of the sheath is used to insert the condom inside the vagina and to hold it in place during intercourse. The rolled outer ring at the open end of the sheath remains outside the vagina and covers part of the external genitalia. The female condom was developed in the later twentieth century (Terrance Huggins Trust, 2014) [53].

In 2013, an estimated 2.1 million people became newly infected with human immune deficiency virus and an estimated 500 million people acquired gonorrhoea and syphilis (UNAIDS, 2011) [25]. According to World Health Organization, (2012) every year more than 200 million women have unmet needs for contraception leading to approximately 80 million unwanted pregnancies. These public health issues require a decisive and holistic approach for using available and effective tools for with condoms play a pivotal role.

This chapter gives a background and introduction of the study. It includes problem statement, purpose of study research objectives research questions significance of the study and conceptual definition of terms.

Background Information

The approval of the female condom in 1993 was heralding a new era in the empowerment of woman in negotiating for safer sex. A female condom is a contraceptive device used by women for protection against pregnancy and sexually transmitted infections. In Zimbabwe, usage rates of female condoms are low due to possible factors like lack of knowledge attitudes and preferred practices. The female condoms use was introduced in Zimbabwe in 1997 but was slowly accepted. The major reasons cited for low acceptance include partner refusal, religious beliefs and inadequate knowledge. The consequences of unprotected sex rose sharply and in 2013 alone there were 2.1 million new HIV infections, 500 million sexual transmitted acquired infections and 80 million unplanned pregnancies (Susser & Stein, 2015). Under these circumstances accessibility of both female and male condoms will synergistically enhance a dual protection and minimize public health reproductive problems.

Zimbabwean women as in many African countries encounter problems in negotiating for safer sex leading to numerous reproductive problems. A report on 789 students from 10 universities in Africa revealed that 66% were unable to use female condoms. While the promotion of female condom seems obvious in Zimbabwe Health agencies often express their concern about the low acceptability and low usage rates of female condoms.

It is now close to two decades since the United States food and drug administration approved the use of female condoms. Following this approval most Western countries introduced the female condom including Zimbabwe made it widely available.

Problem Statement

Up take of the female condom by consumers in developing countries is low and so it is at Africa university. The researcher has observed that male condoms are more utilized than female condoms. Although male and female condoms

are distributed in various sites, statistical data shows that the uptake of female condoms is very low.

Substantial data obtained at Africa University indicate a reduction in the number of female condoms issued and an increase in unplanned pregnancies. Limited studies were done to investigate knowledge, attitudes and practice of female condom by the consumers.

Table 1.1: Male and female condoms consumption rate shown by the table below: Male and female condom uptake June 2015 – May 2016 at Africa University clinic.

Month	Year	Female Condom	Male Condom
June	2015	40	240
July	2015	39	240
August	2015	80	600
September	2015	45	360
October	2015	38	290
November	2015	41	240
December	2015	50	1320
January	2016	20	480
February	2016	88	2520
March	2016	84	600
April	2016	100	810
May	2016	44	420
TOTALS		669	8120

(Africa University clinic June register 2015 to May 2016)

At Africa University in June 2015 to May 2016 2% Africa University female students collected the female condoms and the remaining were male students who collected male condoms. This statistics reveal that there is low uptake of 76%. A significant number of female students who use condoms, failure to use female condoms may result in occurrence of STIs, HIV & unwanted pregnancy. It is against this background that the investigator sought to examine knowledge attitude and practices regarding the use of female condoms.

Purpose of study

The purpose of study is the general objective of what the investigator or researcher hope to achieve (NHS Choices 2015). The purpose of study of this study is:

To determine the Knowledge, Attitudes and Practices of the use of female condom among Africa undergraduate University female students.

Objective of the study

1. To determine knowledge levels regarding the use of female condoms among female undergraduate students at Africa University.
2. To find out the attitudes towards the use of female condom among female undergraduate students at Africa University
3. To establish the practices regarding the use of female condom among female undergraduate students at Africa university

Research questions

1. What is the knowledge level regarding the use of female condoms among female undergraduate students at Africa university?
2. What are the attitudes towards the use of female condoms by female undergraduate students at Africa University?

3. What is the practices regarding the use of female condoms among Undergraduate female students at Africa university?

Significance of the study

The significance of the study provides the review with scientific rationale for undertaking the study (Open Doors, NHS 2015).

It is hoped that the finding of the study would help health care givers at Africa University to improve health promotion and counseling strategies. It is hoped that the findings will assist Africa University authorities to either strengthen or intensify the activities on the use of female condoms on campus. In addition, the findings of this study were added into the training of nurses at all levels and will also be a spring board for further researchers.

Findings of the study revealed knowledge gap, appropriate attitude and practices regarding the use of female Condoms among Undergraduate female students at Africa University. Again the hope is that the findings will contribute to strengthen nursing education regarding knowledge attitude and practices of the female condom among female students at Africa University.

The findings will be used to come up with programmes that will help reduce public health reproductive health problems including sexually transmitted infection, unplanned pregnancies and spread of HIV infection among University students. Knowledge gained from the study findings also generated research questions for further study to improve knowledge, attitude and practices regarding the use of female condoms among female students at Africa University.

Limitation of the study

Participants were not able to submit their completed questionnaire on time which affected the accurate outcome of the findings. The sample comprises of female undergraduate students from different nationalities, some who are not conversant with the English language used in the questionnaire. The investigator was not able to translate the research instrument into different vernacular languages as the site is pan African. However English as the communication media was used. The participants therefore did not understand some of the questions which resulted in an inappropriate response which gave inaccurate information.

Convenience sampling method was used to select participants. The sampling method had an element of bias. The instrument that was used in this study was developed by the investigator and was used for the first time. The investigator was a novice in research. The instrument did not yield detailed and accurate information despite it being pretested for validity and reliability.

Condom use is personal and sensitive and participants were not free to give detailed information despite being forewarned that the questions were sensitive.

Delimitation of the study

The research was confined only to Africa university female undergraduate students in Zimbabwe. Only female undergraduate students at Africa University were selected as participants. The selection was based on random selection though there was no age restriction.

Summary

The chapter discussed background information, problem

statement and purpose of the study. Research objectives, research questions definition of terms and abbreviations, significance of the study, limitation and delimitations was addressed.

Literature Review

Introduction

Reviewing literature is relevant to one's research is a critical step in the research; it is used in all the steps of the research process. Researchers cannot conduct their study in an intellectual vacuum, but it is undertaken within the context of an existing knowledge base.

This chapter gives a detailed account of the literature on knowledge, attitudes and practices regarding the use of female condom among female students. Literature review is a critical summary of research on a topic of interest often prepared to put a research problem in the context or as the basis for project implementation. The literature review is conducted to generate a picture of what is known about a particular situation.

Female condoms are currently the only available prevention method that provides effective protection against both STI/HIV transmission and unintended pregnancy and that are designed for women to initiate. They are also an important method of protection for people of all genders who engage in receptive vaginal or anal sex, giving them more agencies over their sexual health. They should be a standard option in an array of available methods for contraception and STI/HIV prevention to meet women's diverse needs and preferences.

A female condom is a device that is used during sexual intercourse as a barrier contraceptive to reduce the risk of sexually transmitted infections (STIs, such as gonorrhoea, syphilis, and HIV, though its protection against them is inferior to that by male condoms) (Wikipedia) and unintended pregnancy, invented by Danish, & Hessel. It is worn internally by the female partner and provides a physical barrier to prevent exposure to ejaculated semen or other body fluids. Female condoms can be used by the receptive partner during anal sex (Trussell & James, 2013)^[26].

The female condom is a thin, soft, loose-fitting sheath with a flexible ring at each end. They typically come in various sizes. For most vaginas, a moderately sized condom is adequate; women who have recently given birth should try a large size first. The inner ring at the closed end of the sheath is used to insert the condom inside the vagina and to hold it in place during intercourse. The rolled outer ring at the open end of the sheath remains outside the vagina and covers part of the external genitalia. The female condom was developed in the later twentieth century.

Knowledge level among females regarding the use of female condoms.

Condoms are an integral part of sexually transmitted infections (STI), HIV/AIDS and pregnancy prevention. Their use has significantly increased over the past decade. Correct and consistent condom use reduce the risk of STI HIV/AIDS transmission by more than 90%.

It is not enough that female condoms exist in a given country or community. People, especially those at risk of HIV or unintended pregnancy, must know where to access female condoms and have the skills and knowledge to use them consistently and correctly. There is a need for increased U.S. support for comprehensive programming of female condoms

in family planning and HIV/AIDS programs. Comprehensive female condom programming includes activities like social marketing strategies to encourage behavior change, capacity building and training, and community outreach. It can involve teaching men and women not only how to use female condoms, but how to negotiate condom use and talk about sexuality (United Nation Fund Population Association, 2011).

Female condom use has received considerable attention in the fight against pandemic due to its high effectiveness (Peltzer, 2000)^[47]. In Zimbabwe and Sub-Saharan region condoms are widely and freely distributed with the aim to improve accessibility. Several studies have shown that among actors affecting female condom use are unavailability, shortage, partner trust, lack of knowledge and gender inequality, (Gruer, 1991)^[35].

Limited skills and knowledge of health care service providers have impacted on female condom uptake. In Botswana female condom usage have increased among different sexually active groups. A cross sectional study of female condom awareness usage and concerns among the female undergraduates of the university of Ibadan (2004) reveals that 850 out of 879 female students over 80% had knowledge of the female condom use. The results of the same study reviewed that 40% used the female condom to prevent both unwanted pregnancy and sexually transmitted diseases.

Zimbabwe National AIDS Co-Ordination Programmed (ZNACP) 2004), reflects that 42.7% female were using female condoms. Females in their mid-twenties and late thirties use female condom quite often. A study conducted in Kenya agricultural cited a female condom use revealed that only 29 % used female Condom main reason being partner rejection (Welsh, 2001)^[17].

A randomized controlled trial of 409 women, recruited from family planning clinics in northern California, who were randomly assigned to the experimental 4-session female condom skills training intervention or the comparison 4-session women's general health promotion intervention and in which participants received condom use instructions at baseline and male and female condoms during the study established that at 3 and 6 months, women in the experimental group were more likely than those in the comparison group to have used the female condom at least once in the prior 3 months. The increase in the percentage of sexual acts protected by female condoms from baseline to the 6-month follow-up was greater for the experimental group. The percentage of sexual acts during which any condom was employed was higher in the experimental group at 6 months. There were no group differences in male condom use. Outcomes suggest that skills training can increase female condom use and protected sexual acts without reducing male condom use among women (Kyung, Choong, Jin, Jun & Hyung, 2008)^[33].

A workshop on "the potential role of the female condom" held on 22nd, October 1993 by the Contraceptive Research And Development Project (CONRAD) of Family Health International (FHI) in collaboration with U.S.A.I.D reported that before approving the female condom in May 1993, the U.S.F.D.A required a six-month clinical trial in the effectiveness of the female condom in protecting against pregnancy, HIV and other STIs. The resulting study was an

open-label, non-comparative and multi-centre clinical trial conducted in nine research cities (Six in the U.S and three in Latin America).

Women in mutually monogamous relationships and who agreed to use the female condoms were enrolled. 328 women in that group contributed data for assessing contraceptive efficacy of the device.

Henry Gabelink (CONRAD, 1993) presented a study on reinfection, Trichomoniasis, vaginalis and Chlamydia which found that compliant use of the female condom prevented any cases of reinfection, whereas inconsistent use resulted in combined (Trichomoniasis, vaginalis plus Chlamydia) reinfection rates of 23%. The findings also revealed that the risk of acquiring HIV infection from an infected partner could be reduced from 1 in 5 (with no barrier method used) to 1 in 167 when the female condom was used.

Female condoms awareness, usage and concerns among the female undergraduates of the University of Ibadan was conducted in September 2004 reveals that 850 out of the 879 female students research participants over 80% had knowledge of the female condoms as a form of modern contraception and the majority of them learnt about it through the mass media (39.9%) and health workers (34.4%). However, only 11.3% had ever used the female condom; with most (40%) using it to prevent both unwanted pregnancy and sexually transmitted infections including HIV.

In Ghana in 2008 revealed that despite high awareness of the Female Condoms in the years following the launch, most people currently have Limited awareness and knowledge of it, since marketing efforts and product visibility have Recently been limited;. Minimal efforts are in place to identify and target appropriate sub-groups, so information and supply points are generalized, not tailored for the most likely prospective users.

Though early acceptability studies of the Female Condoms in Ghana were positive, many in the provider and programming communities perceive that acceptability is low due to concerns that the product is big, messy, noisy, costly, and cumbersome to use; Socio-cultural factors may play a role in dissuading use of the Female Condoms. For example, gender dynamics may limit women's ability to negotiate use of a female condom, adolescent girls and women may feel shy to buy the Female Condoms for fear of being seen as promiscuous, and females may feel uncomfortable with the idea of having to touch or guide the penis prior to or during intercourse;

High cost of the Female Condoms may deter some prospective buyers, especially youth and others with limited income. Prices vary in the public versus private sector; however, there is at least a 10- fold difference in price between male and female condoms. Due to a relatively low national HIV prevalence (2.2%), the perceived need for dual protection is low; many couples do not view themselves as the intended users of the Female Condoms. For example, some see the Female Condoms as a product for commercial sex workers, while others perceive it as something used by the more educated or "elite." Many providers have a bias against the Female Condoms, often due to negative perceptions about acceptability and lack of personal experience with the product. Thus, providers are likely not promoting or championing the product very actively.

Attitudes regarding the use of the female condom

States that beliefs are important regarding the use of the female condom. Beliefs provide strength and motivation to consumers of female condom in the uptake of prevention precautions Ruminjo, 2002^[32] reveals that there is limited use of the female condom particularly among married couples who mainly trust in God for protection. According to a study done in China many woman perceived the female condom as big, messy noisy costly and cumbersome to use. According to Consumers of this product consider it as promiscuous and religiously unacceptable.

Gender dynamics may limit woman's ability to negotiate use of the female condom and are very uncomfortable with the idea of having to touch or guide the penis prior or during sexual intercourse. Negative attitude towards variation in cost as compared with other barrier products defer consumers and hence prefer the cheaper male condom mention that due to a relatively low national HIV prevalence 22% of consumers express the need for dual protection low. Many couple do not view themselves as the intended users of the female condom. Some people see the female condom as a product for commercial workers while others perceive it as the product for the elite class.

Cites that many service providers have a bias against the female condom often due to negative perceptions about acceptability and lack of personal experience with the product hence providers are likely not to promote the product actively. The Commercial Sex Workers (CSW) cited fear of losing customers as a motivation. Another study done by the medical research council research program on AIDS in Uganda, (1999) reveals that the female condom was relatively popular but attitudes were ambivalent because woman do not like the shape size and discomfort caused during sexual intercourse. Improved attitudes among female condom consumers would contribute to the prevention of unwanted pregnancy, HIV AIDS and sexually transmitted infections.

The belief that is inherent among most Africans countries that the female condom is for the elite influence the uptake of the product.

(Smith, 2005)^[49] mentions that the major motivator to reuse female condoms is identified as protection from disease and pregnancy. Distrust of male partners is common and contributed to reuse motivations. Other report motivations included the need for protection if one is in a hurry and getting barrier protection.

The Commercial Sex Workers (CSWs) cite fear of losing a customer as a motivation. In 1994, the National Department of Health and the Reproductive Health Research Unit (R.H.R.U) of South Africa in conjunction with the World Health organization (WHO) undertook an assessment of reproductive Health Services in South Africa. In this study, it was established that the initial female condom acceptors were mainly females because most were family planning clinic clients.

Women of over 30 years of age were likely to return for re-supplies of the female condom. The majority of the initial female condom acceptors were not male condoms users and there was generally a negative attitude towards the male and female condom users (T Shukudu, Helen, Welsh, Nutley, Mqhayi, Mqoqi & Hazels, 2001)^[17].

In Uganda use of female condom is a method for protection against HIV and other STIs. The female condom was relatively popular, but attitudes were ambivalent, the women

did not like its size and shape, some complained of discomfort and the fact that they could not use it secretly and some generally liked it because it offered more certain protection against pregnancy, STIs and HIV.

There is a significant increase in consistent female condom use among female sex workers in Kenya.

However, there was a high degree of substitution of the female condom for male condoms. It was concluded that the female condom has some potential for reducing unprotected sex among sex workers. However, given its high cost, and the marginal improvements seen here, governments should limit promotion of the female condom in populations that are already successfully using the male condom (Peltzer, 2000)^[47].

Practice regarding the use of female condoms

Practice encourages the individuals to take care of themselves (Lule, & Gruer, 2013)^[35]. Choices made by females regarding use of female condom are made by themselves and not by other people like health professionals. This is done by adhering to the rules and regulations that guide the use of female (Condon Anderson, Santelli & Mugalla, 2003)^[2].

According to Zimbabwe National Family Planning guidelines (2004) reluctance in the use of female condom has been attributed to the spread of sexually transmitted infections. In addition adequate female condom use modification has reduced unplanned pregnancies and the spread of HIV infection. Baradaran, (2004) reveals that reluctance in the use of female condom in practice safer sex. The sexual partners' approval was appreciable, accounting for about 42.7% among those that had experience of the female condom usage. Major concerns mentioned such as difficulty of inserting it into the vagina and lack of sexual satisfaction, were not different from those in earlier studies. The result of this study looks promising judging from a high awareness level of the female condom, even though its usage is low.

The efficacy is high if the device is used consistently and correctly. (Trussell, James 2013)^[26].

Fifty percent (50%) of the women cites that female condom is comfortable. An equal percentage stated that female condom had a negative impact on sexual mood. Four-fifth (45th) of the women states that female condom is easily torn. Some (70%) of the women cite that, female condom is easy to keep in place. 3/5 of the women mention they will use the female condom in the future. Most women recommend the female condom to a friend

States that change in lifestyle intervention by accepting wide variety of safer sex method improves the health of the people. Reports that client education is the most effective way to improve the lifestyle of people. The relevance of evidence based practices has been emphasized by earlier studies which anticipated effective education and behavioral change when client practices safer sex (SAADIA, 2010).

States that if woman use the female condoms every time they have sexual intercourse and follow instructs every time the female condom is 95 % effective. A study done by the United Nations Population Fund, (2014) states that gender inequality with male dominance in decision making affect females in the selection of choices regarding safer sex. In Chana, (2012) reflects that the correct use of female condom and safe sex practices can only be achieved through training of consumers of the product.

Furthermore the study cite that inadequate knowledge will lead to excessive oiliness, difficult in inserting the condom

leading to discomfort with the inner ring of the condom which sometimes causes pain. According to USAID, (2014) power relations between men and woman is stated as one of the factors that influences the correct use of the female condom resulting from no failure to negotiate for safer sex. The woman feels uncomfortable to expose female genitalia and these impacts negatively in women not using female Condom.

In Northern California (2004) women from family planning clinics cite that skills training can increase female condom use and protected sexual acts without reducing male condom use among women (Choi, Gregorich, Anderson, Grinsas single condom without doubling it & Gomez, 2013) female condom was ranked and among other barrier methods although the female condom was said to cause some difficulties in inserting and the lubrication makes it difficult to grasp.

With regards to evaluation of the perception of the female condom among new users in the United State. Reports that the main complaint was aesthetics. Many service providers have a bias against female condom often due to negative perceptions about acceptability and lack of personal experience with the product resulting in unskilled practices in using female condom.

A cross sectional study of female condom awareness usage and concern indicated that there is high probability of female condom preference by consumers of barrier methods.

Cultural factors such as desire for children and female sexual compliance as a way to achieving economic status are a hindrance to female condom use (Peltzer, 2000) [47]. According to CSO 2009:29 81% of woman aged between 15-49 who had sexual intercourse with more than one partner reported to have used the female condom. The results of the same study revealed that 88% of the commercial sex workers used the female condom. The female condom in an expansion option for safer Problems encountered by consumers include excessive illness difficulties in inserting the Condom, discomfort with the inner ring of the condom and dry sex preference, (UNAIDS 2004) [28]. Sexual behavior particularly for woman.

In April 1997, a study was done on the female condom in Sao Paulo, one of the largest cities in the world located in Brazil with about 15 million inhabitants. The study designed by AIDS CAP women's initiative Project of family Health International (FHI) focused on the users of the recently marketed female condom in the region. The research established that 92 percent of the 400 women recruited in the study had used the female condom. Only 2% had tried to use it but did not manage to insert it adequately.

The insertion of female condoms is considered easy at first attempt by 44% and difficult by 46%. (Stone, Timyan & Thomas, 2012) [52] conducted a study on general awareness and use of the female condom in five U.S cities among STD high-risk clinic clients. Of the 413 clients interviewed, 77% had heard of the female condom, 5.6% knew someone who had used it, and 2.7% had tried it themselves (Harris, Torres Allender, 1995) [23]. Conducted a non-use study of low-income African- American women entering health clinics.

The male condom is most often ranked first and the female condom was most often ranked second. Harrison, (1996) [24]. Reports on focus groups conducted in three sites in the United States in Delaware, St. Louis, and North Carolina. In the first session, 30 women were introduced to female condoms,

asked to discuss their initial reactions and instructed to use them, then to return in two weeks to discuss their positive and negative reactions. Virtually all of the women reported difficulties in inserting the Female Condom the first time because the lubrication made it slippery and difficult to grasp.

In the United States. Reports that the main complaint of the female condom users was aesthetics. Other individuals reported cases where the Female condom was dislodged during intercourse; the penis entered the Vagina outside the female condom (Penile misrouting) or the entire device was pushed up into or pulled out of the vagina during intercourse. Female condoms are a woman controlled protection method against unwanted pregnancy, HIV-AIDS and other STI's in Kenya was a study done by Ruminjo, Kamau, Karanja, Sekadde, Ruminjo, Nichols & Liku, (2002) [32]. The study revealed that before the introduction of the female condom, very few women were aware of their own risk of HIV infection. Their range of protective devices against HIV was also limited. Use of the male condom was minimal, particularly among married couples who mainly "trusted in God" for protection.

Some women initially has difficulties with the female condom; both in inserting and removing it and some were afraid of inserting it. However, after continued use of the female condom and participation in the study, the women seemed to like it.

Among older women of high socio-economic status, the proportion of liking the female condoms decreased.

Further, the women felt more relaxed when using the female condom, and in particular could enjoy post-coital relaxation with their partner. This contrasted with their experience of using the male condom when they said, the partner "jumped out" after ejaculation in order to dispose of it leaving his female partner highly "dry" and sexually unsatisfied.

Welsh, Feldblum, Kuyoh & Bwayo, (2001) [17] conducted a cluster randomized community intervention trial at several Kenya Agricultural sites to measure the impact of the female condom on sexually transmitted infection prevalence. In the study, 6 intervention sites received a community risk-reduction campaign and distribution of both the female condoms and the male condoms, while six control sites received the same campaign with male condoms only.

Welsh, Feldblum, Kuyoh & Bwayo, (2001) [17]. Cites that in 6 months, (39%) of women never used female condoms, while some used inconsistently. The main reasons given by women for not using female condoms consistently were partner rejection (29% at 6 months and 30% at 12 months). The second most common reason was, did not need protection and mutually faithful with partner (8% and 9% respectively). In models of the frequency of female condom use, the effects of follow up visit, age group and marital status were not statistically significant.

Summary

This chapter addressed literature on the knowledge, attitude and practices regarding the use of female condom among females. It is in light of the aforementioned background that the investigator is motivated to establish the knowledge, attitudes and practices regarding the use of female condom among female students at Africa University. The next chapter discusses the methodology of the study.

Research Methodology

Introduction

Research methods are the steps, procedures and strategies for gathering and analyzing data in a research investigation. This Chapter presents research design, population, target population, and sample size, sample method and research instrument. Pretesting of instrument and data collection procedures was addressed. Data analysis and ethical considerations was also addressed.

Research Design

A descriptive quantitative study are those used to describe situation and event.

State that research design refers to the researcher's overall plan for ongoing training answers to research questions including strategies for enhancing the study integrity. A descriptive survey design was used to determine knowledge attitudes and practices regarding the use of female condom among female undergraduate students.

Convenience sampling, using the resident students as a sampling frame, was used to recruit participants comprising resident female student. A self-administered questionnaire was used to collect data from the female undergraduate students. The questionnaire will have 24 items in four sections which will be socio-demographic, knowledge, attitudes and practices on the female condom. The study was cleared by Africa University Research Ethics Committee. Informed consent was sought from all the participants.

Study Site

The study was carried out at Africa University which is an institution of higher learning in Matare, Manicaland province, Zimbabwe. Africa University community is dominated by sexually active students drawn from different African cultural backgrounds.

Population

Treece & Treece (2014) define population as the entire set of units under study. The population of this study was comprised of University female undergraduate students.

Inclusion Criteria

Female Undergraduate students of Africa University staying in the Africa University Halls of Residence. It did not matter whether they were married or not, or whether they were first year or not but as long as they were all undergraduate students.

Exclusion Criteria

Male and Post Graduate students of Africa University as well as Undergraduate female students not staying in the Halls of Residence will not be included in this study.

Target Population

Target Population was the entire population in which the researcher was interested and to which he or she would generalize the study results. In this study the target population was Undergraduate female students at Africa University.

Sample Size

A sample is a subset of a population selected to participate in a study. For this study the sample was comprise of 216 Undergraduate female students at Africa University out of a

total number of 490 female undergraduate students

Sampling Method

The sample was selected using the convenience sampling method. Convenience sampling method is selection of the readily available persons as participants in the study. A systematic sampling using the residence undergraduate female students as a sampling frame was used to recruit participants comprising residents Undergraduate female students.

Research Instrument

Research instrument is the device that is used to collect data. In this study a self administered questionnaire was used to collect data from female undergraduate students at Africa University. The questionnaire had 24 items in four sections which will be socio-demographic data, knowledge attitude and practices of female condom.

Pre-testing Instrument

Pre-testing in the process of testing the data collecting instrument for validity and reliability. Unforeseen anomalies frequently arise in the course of the project and by pre-testing the instrument they were identified early and corrected. The pre-testing of the instrument was conducted at Africa University clinic (Bishop Alfred Norris Health centre) on 5 Post graduate students.

Data Collection Procedures

Questionnaires were distributed to the Undergraduate female students staying in the University Residence. The filled questionnaires were collected by the investigator after 10 working days. Completeness of the questionnaires was checked. Collected data was kept in a locked cabinet.

Data Analysis

According to data analysis is the systematic organization and synthesis of data collected. Data was analyzed manually and descriptions strategies were used. The data was categorized using Epi Info.

Ethical Considerations

According to investigations have ethical responsibility to recognize and protect the rights of human subjects. Permission to carry out the study was sought from Africa University Research Ethics Committee (AUREC). Approval to pretest the instrument and conduct the study was sought from Registrar at Africa University. The purpose and benefits of the study was explained to the participants who gave informed consent. Privacy was observed. No coercion was used throughout the study. Participants were engaged on voluntary bases. Participants were to withdraw from the study anytime they wish with no prejudice. Anonymity and confidentiality was maintained throughout data collection. Collected data was kept under lock and key.

Summary

In this chapter research design, population, target population, sample instrument and data collection plan were stated. Data analysis and ethical considerations were also addressed.

Data analysis and presentation of findings

Introduction

In this chapter, data presented in the form frequency tables,

pie charts, and bar graphs followed by comments.

Section A

Demographic data

Age distribution of participants.

N=200

The age distribution of participants shows that the age of participants ranged from 19 years to 40 years. The mean age was 27 years. The median was 25 years and the mode was 22 years.

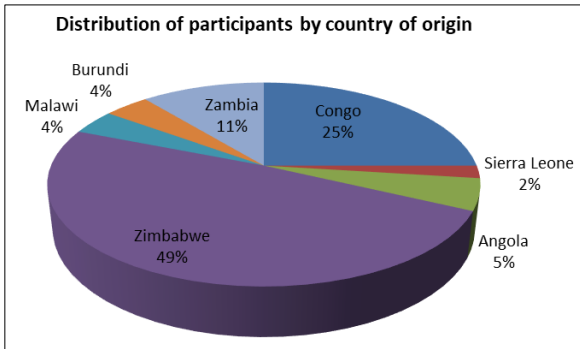


Fig 1: Country of origin N = 200

Figure 1 reveals the country of origin of the participants. Zimbabweans constituted 98 (49%) while the rest were international students from other states.

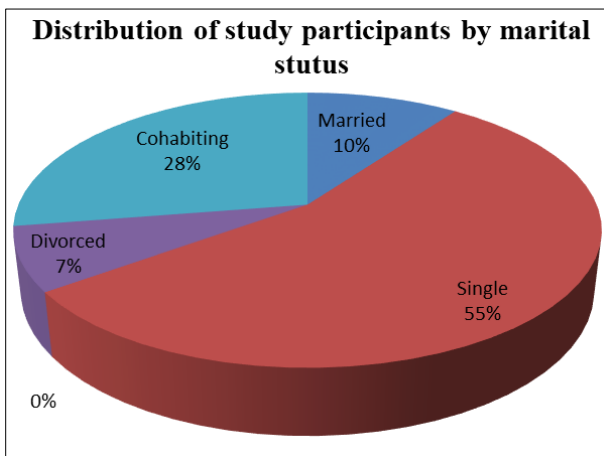


Fig 2: Marital status N = 200

Figure 2: 110 (55%) were single while 55 (28%) were cohabiting, 20 (10%) and 15 (7%) divorced.

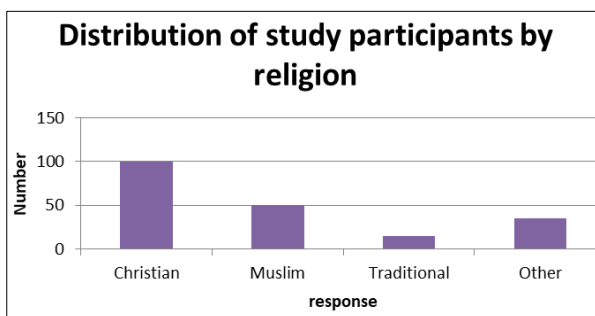


Fig 3: Religion N = 200

Figure 4: reflects that 100 (50%) participants were Christians.

Muslims were 50 (25%), Traditional were 20 (10%) while others constituted 30 (15%).

Section B

Knowledge regarding female condom

Table 2: Definition of female condom N = 200

Variable	Frequency (N)	Percentage (%)
Definition of female condom		
Physical barrier for contraceptive only	40	20
Physical barrier for prevention for STI's and HIV only	9	4.5
Both A and B	150	75
Barrier for protection from cervical cancer	1	0.5
I don't know	0	0
Total	200	100

Table 2: Shows that 40 (20%) participants stated that a female condom is a physical barrier for contraception only. Nine (4.5%) cited that it is a physical barrier for HIV prevention only. Majority

150 (75%) mentioned that a female condom prevents STI's, HIV and pregnancy. One indicated that female condom prevents cervical cancer.

Table 3: Sources of information on female condom N = 200

Variable	Frequency (N)	Percentages (%)
Sources on female condoms use		
Mass media	80	40
Health workers	20	10
University female students	50	25
Male friends	50	25
Total	200	100

Table 3: shows that majority 80 (40%) of participants cited sources of information on female condoms from mass media. 20 (10%) participants cited health workers. 50 (25%), University female students while 50 (25%) mentioned University male friends.

Table 4: Material made of female condoms N = 200

Variable	Frequency	Percentage (%)
Material of female condom		
Cotton wool	0	0
polyurethane	200	100
Leather	0	0
Total	200	100

Table 4: Reflects that all 200 (100%) participants knew that female condom is made of polyurethane material.

Table 5: Effectiveness of female condom use N = 200

Variable	Frequency (N)	Percentage (%)
Effectiveness of female condoms		
When used as single condom without doubling it	50	25
When correctly and consistently used	50	25
All of the above	60	30
When used with a male condom	40	20
Total	200	100

Table 5: Reflects that 60 (30%) of the participant stated that they agreed with all of the options on the effectiveness of female condom while 50 (25%) stated that female condoms are only effective when correctly used. 50 (25%) said that female condoms are only effective when used as single without doubling it, while 40 (20%) cited that female condoms are only effective when used without a male condom.

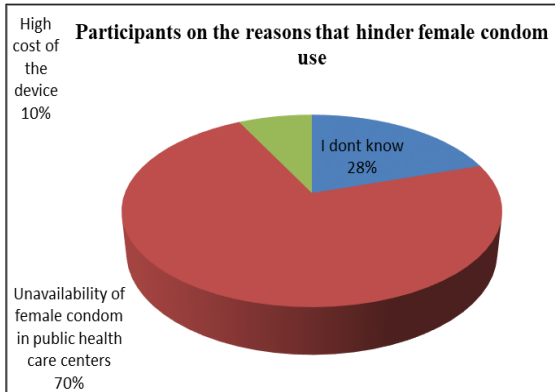


Fig 4: Reasons that hinders female condom use N = 200

Figure 4: Regarding reasons for not using female condom 140 (70%) participants cited non availability of the female condom. Twenty (10%) mentioned that female condom is expensive while 56 (28%) said that they do not know.

Section C
Attitudes regarding the use of the female condoms

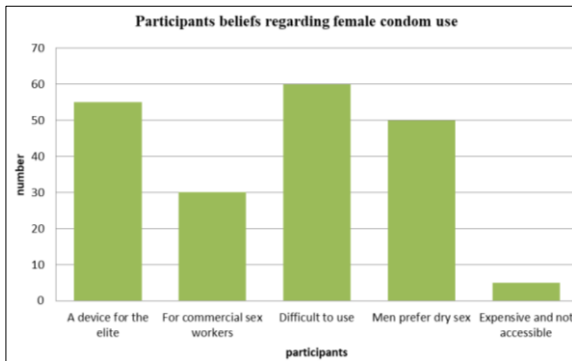


Fig 5: Beliefs regarding female condom use N = 200

Figure 5: Regarding beliefs about female condom use 55 (27.5%) cited that female condoms are for the elite. Thirty (15%) stated that it is for commercial sex workers. Others cited that it is difficult to use, 60 (30%), men prefer dry sex 50 (25%) and said it is expensive 5 (2.5%).

Table 6: Factors that have a negative impact on female condom use N= 200

Variable	Frequency (N)	Percentage (%)
Cultural norms	90	45
Religious beliefs	48	24
Network exposure	62	31
Total	200	100

Table 6: Shows that 90 (45%) participants mentioned cultural norms as having a negative impact 48 (24%) participants stated religious beliefs while 62 (31%) stated network exposure.

Table 7: Factors that have a negative impact on female condom use N = 200

Variable	Frequency (N)	Percentage (%)
Cultural norms	90	45
Religious beliefs	48	24
Network exposure	42	21
Total	200	100

Table 7: States that ninety (45%) feel that culture influences condom use. Religious belief 48 (24%) also has a negative impact on female condom use. Networking 42 (21%) also influence female condom use.

Table 8: Preference number of choice for female condom use N = 200

Variable	Frequency (N)	Percentage (%)
First choice	5	2.5
Second choice	2	1
Third choice	18	9
Forth choice	29	14.5
No choice	146	73
Total	200	100

Table 8: Shows that 146 (73%) participants rated the female condom as their no choice of use. The least number 5 (2.5%) participants rated the female condom as their first choice.

Table 9: Own opinion on female condom use N = 200

Variable	Frequency (N)	Percentage (%)
Lack of awareness contributes to low uptake of the device	10	5
Improve knowledge of its proper insertion	10	5
Lead to decrease in unprotected sex	75	37.5
Prevention of STIs and HIV/AIDS	90	45
Lead to behavior change	15	7.5
Total	200	100

Table 9: Reflects that 90 (45%) participants expressed that their own opinion on female condom use prevents STI's and HIV and AIDS. 75 (37.5%) cited that own opinion on female condom use was based on the decrease in unprotected sex while 15 (7.5%) stated that its led to behavioral change. And 10 (5%) cited that it was due to lack of knowledge of its proper insertion and the other 10 (5%) mentioned that lack of awareness contributions to low uptake of the device.

Practices regarding female condom use

Table 10: Almost all 178 (89%) were not satisfied sexually if they use female condom during sex. Twenty (10%) cited that it is excited sometimes, while only 2 (1%) mentioned that, she always gets sexual satisfaction.

Table 10: Sexual satisfaction when using female condoms N =200

Variable	Frequency (N)	Percentage (%)
Sexual satisfaction when using female condoms		
Not at all	178	89
Sometimes	20	10
Always	2	1
Total	200	100

Table 11: Use of the female condom when having sex. N = 200

Variable	Frequency (N)	Percentages (%)
Use of female condoms when having sex		
Yes	25	12.5
No	175	87.5
Total	200	100

Table 11: Majority 175 (87.5%) of participants mentioned that they have never used the female condom when having sex while 25 (12.5%) cited that they have used the female condom.

Table 12: Frequently use of female condoms. N=200

Variable	Frequency (N)	Percentage (%)
Frequently used of female condoms		
Regularly	0	0
Rarely	20	10
Always	0	0
Never	180	90
Total	200	100

Table 12: Shows that 180 (90%) participants mentioned they have never used female condoms. 20 (10%) stated rarely. 0 (0%) cited regular use while 0 (0%) stated always.

Table 13: Frequent visits to the clinic for advice on female condom use N = 200

Variable	Frequency (N)	Percentage (%)
How often do you visit clinic on female condom use advice		
Once a month	5	2.5
Twice a month	12	6
Thrice a month	13	6.5
More than a month	18	9
Not at all	152	76
Total	200	100

Table 13: Majority 152 (76%) of the participants mentioned that they have never visited the clinic for advice on the use of female condoms. 18 (9%) cited that they visit the clinic more than a month while 13 (6.5%) mentioned that they do thrice a month. 12 (6%) said they visit the clinic for advice of female condom use. cited twice a month and the least 5 (2.5%) said once a month.

Table 14: Majority 188 (94%) of the participants mentioned they have never collected female condoms from the clinic.7 (3.5%) stated they do twice a month while 2 (1%) cited they do once a month. 2 (1%) mentioned they collect female condoms three times a month while the least number 1 (0.5%) stated four times a month.

Table 14: Frequent collection of female condoms from the clinic N = 200

Variable	Frequency (N)	Percentage (%)
Frequent collection of female condoms from clinic		
Once a month	2	1
Twice a month	7	3.5
Three times a month	2	1
Four times a month	1	0.5
Not at all	188	94
Total	200	100

Table 15: Factors that reduces female condom use effectiveness as a barrier method. N=200

Variable	Frequency (N)	Percentage (%)
Factors that reduce female condom use effectiveness as a barrier method		
Drinking alcohol	20	10
Failure to follow instruction	15	7.5
Use of double protection	1	0.5
Lack of network exposure	2	1
I don't know	162	81
Total	200	100

Table 15: Shows that 162 (81%) participants did not know any factors that reduce female condom effectiveness as a contraceptive method while 20 (10%) of participants stated that drinking of alcohol reduces female condoms use effectiveness. 15 (7.5%) mentioned failure to follow instruction while 2 (1%) cited lack of network exposure and uses of double protection 1 (0.5%).

Table 16: Factors that contribute to low uptake of the female condom use. N = 200

Variable	Frequency (N)	Percentage (%)
Factors that contribute to low uptake of female condom use		
Lack of mass campaign	22	11
I dont know	9	4.5
Male condom preference	33	16.5
Lack of particular interest	70	35
It is noisy	28	14
Discomfort while putting it on	38	19
Total	200	100

Table 16: Shows 70 (35%) of participants cited lack of particular interest as the factor that contribute to low uptake of female condoms. Discomfort while putting it on 38 (19%). 33 (16.5%) cited female condom preference over male condoms while 22 (11%) participants mentioned lack of mass campaign, 28 (14%) stated that female condom is noisy. 9 (4.5%) cited they don't know.

Table 17: Factors that increase female condom use N = 200

Variable	Frequency (N)	Percentage (%)
Factors that increases female condom use		
Women empowerment levels	37	18.5
Desire for dual protection	80	40
Gender equity in sexual relations	78	39
Redesign of the female condom by the manufacturer to become user friendly	5	2.5
Total.	200	100

Table 17: Shows that 80 (40%) participants mentioned the desire for dual protection increases.

Female condom use. 78 (39%) cited gender equity in sexual relations. 37 (18.5%) stated women empowerment levels while 5 (2.5%) stated redesign of the female condom by the manufacturer to become user friendly.

18: Frequently cited reasons for low uptake of female condom by University students.

N = 200

N = shows that 22 (11%) of participants stated that lack of mass campaign contributes to low uptake of female condoms. 9(4.5%) participants mentioned failure to understand the advantages 33 (16.5%) male condoms preference over female condoms. 70 (35%) stated lack of particular interest 28 (4%) cited the negative attitudes towards female condoms.

19: Places where used condoms are deposited

N = 200

100 (50%) participants cited that they deposits used condoms in toilet and flushed, and 68 (34%) participants stated that used condoms are wrapped in tissue paper and puts in the dust bin to be discarded outside and 32 (16%) participants mentioned that they put water inside in used condoms empty in the toilet and then put condom in dust bin.

Discussion and Recommendations

Introduction

This chapter Addresses discussion of the study findings, implications to nursing, limitations and delimitations of the study. Recommendations and the summary of the study are also highlighted.

Discussion of findings

The purpose of this study was to assess the knowledge, attitudes and Practices of female condom among undergraduates of Africa University. Descriptive research design was used to obtain information. Questionnaires were used to solicit information from the participants. The questionnaires were comprised of four sections namely the demographic factors, Knowledge regarding female condom use of Africa University undergraduate female students, Attitudes regarding female condom use of Africa University undergraduate female students, and practices regarding female condom use of Africa University undergraduate female students. Data from 200 respondents was analyzed.

Section A

Demographic data

A total of 200 participants coming from different ethnic groups and with different cultural background in Africa University were sampled for the study. The participants were from first to fourth year in all courses of undergraduates. The ages of participants ranged from 19 years to 40 years. Most participants 110 (55%) were single, few 20 (10%) married, 15 (7.5%) divorced while 55 (27.5 %) cohabiting. Further findings showed that 100 (50%) were Christians, and 50 (25%) were Muslims respectively. The country of origin of participants indicated that Zimbabwe constituted 98 (49%), while the rest were international students from other African country states. Congo 50 (25%), Zambia 22 (11%), Angola 10 (5%), Malawi and Burundi 8 (4%) respectively and the least Sierra Leone with 4 (2%). The age of the participants ranged from 19 to 40 years old. The mean age was 27 years

old. The median age was 25 years old, and the mode age was 22 years old.

Section B

Knowledge of undergraduate female students regarding female condom use.

Knowledge: To know is to “learn or find out about something”. Knowledge is “what someone knows about a particular subject. Cambridge advanced learner’s dictionary (2010) defines knowledge as “understanding of or information about a subject which a person gets by experience or study, and which is either in a person's mind or known by people generally”. Oxford online dictionary (2010) defines knowledge as “acts, information, and skills acquired through experience or education; the theoretical or practical understanding of a subject, awareness or familiarity gained by experience of a fact or situation”. In this study knowledge refers to what participants knew about the use of female condoms among Africa University undergraduate students.

In this study all the participants 200 (100%) knew that female condoms are made of polyurethane. The percentage of participants who had knowledge about the female condom was higher than reported in a previous study done in Rwanda (Mbarushimana & Ntaganira, 2013) ^[39]. In the study done in Rwanda. 80% of the respondents knew about the female condom. High percentage of awareness of female condom among Africa University undergraduate students is also shown by, study in Ibadan University who found 80% had knowledge of female condom.

Majority participants 150 (75%) correctly stated that a female condom is a contraceptive and prevention against STI's and HIV. These findings revealed that the female University students are knowledgeable about female condom use.

There is need in continually reinforce their knowledge through health educational talks. This finding concurred with the findings of a previous studies, which showed that 75.6% of participants who knew that female condoms prevents the transmission of HIV and STIs (Enowbeyang Tarkang, Engelbert Bain, & Shen, 2015) ^[15] in their study done in Italy in 2001 where they found 71.4% women had heard the device from mass media (magazines or newspapers and television) and few from friends (22.2%). Spizzichino, Giovanna, also noted that female condom was regarded as a method of preventing unwanted pregnancies (87.0%) and protection against STIs infection.

With regards to the effectiveness of female condoms although majority of participants 100 (50%) knew the functions of female condom only knew that effectiveness of female condom is assured when the users follows instructions, use as a single condom without doubling it 30 (15%), when correctly and consistently use 50 (25%). A significant number 10 (5%) wrongly cited that together with a male condom. Therefore, there is need to continue giving health education so that females have correct information on female condom use.

With reference to not using female condoms, almost all 80 (40%) participants cited that the female condom were not available and were expensive. The findings show that most of the students are aware that non utilization of the female condom is attributed to high cost and lack of the commodity. The findings are in contrast with a study done in Ghana which stated High cost of the Female Condom may deter some prospective buyers, especially youth and others with limited income. Prices vary in the public versus private sector;

however, there is at least a 10- fold difference in price between male and female condoms. Due to a relatively low national HIV prevalence (2.2%), the perceived need for dual protection is low; many couples do not view themselves as the intended users of the FC. For example, some see the Female Condom as a product for commercial sex workers, while others perceive it as something used by the more educated or “elite.” Many providers have a bias against the Female Condom, often due to negative perceptions about acceptability and lack of personal experience with the product. Thus, providers are likely not promoting or championing the product very actively.

Section C

Attitudes of undergraduate female students regarding female condom use

Attitude refers to “someone’s opinion or feeling about something, expressed through behavior. Cambridge advanced learner’s dictionary (2010) defines attitude as “a feeling or opinion about something or someone, or a way of behaving that is caused by this”. Oxford online dictionary (2010) defines attitudes as “a settled way of thinking or feeling about something”. In this study attitudes refer to the opinions and feelings of the participants regarding the use of condoms among Africa University undergraduate female students.

Regarding beliefs on female condom use, the result revealed that participants a variety of beliefs regarding female condom use, such as device is for the elite 55 (27.5%), 30 (15%) cited it is for commercial sex workers, difficult to use 60 (30%), men prefer dry sex 50 (25%), and it is expensive and not accessible 10 (5%). The findings reflects that its influenced the utilization of female condom. Therefore is need to correct these misconceptions through health education talks.

All the participants cited that, cultural norms 90 (45%), religious beliefs 48(25%), and network exposure 42 (21%). Findings reflect that it has the most negative impact on female condom use. Among the studies reviewed, in areas where information on female condom induced respondents and provided answers to questions raised on prevention of HIV, STIs infections and unwanted pregnancy as shown by Hovland Crano & Lawrence, (1995)^[14] there was relative fair acceptance of female condoms and were using it.

For example Kagera Region study, Tanzania, female condom was accepted by 39% and was used by 30% of potentially users. The study noted that women who had experienced an unsafe abortion, had attended secondary school or earned an income were more likely to accept the female condom. The women were generally satisfied with the method, and the majority intended to use it again.

Also a study done in Uganda has shown positive attitude towards the use of female condoms (PSI/Tanzania Health lives, 2014). The results showed almost all women liked the female condom fairly well PSI/Tanzania. Health lives (2014). Further more than 90% of the prostitutes and rural women reported that their steady partners also liked it PSI/Tanzania. Regarding sexual satisfaction, when using female condom almost all 178 (89%) experienced not satisfaction while only 2 (1%) commented positively. The findings revealed that the female students are not satisfied sexually when using female condoms hence this will influence them not to use the female. There is need to dispel that the mind set in female students regarding female condoms should be intensify.

In contrast, a study on some couples in Kenya revealed that

the majority of women liked the female condom, but sexual pleasure reduction was also expressed (WHO, 2011). Studies suggested that the distribution of the female condom is linked to its cost. Raw material is expensive and the manufacturing technology is high.

Regarding the factors that hinders female condom use, most 145 (72%) participants indicated high cost of the device. 40 (20%) of participants mentioned that the factors that hinders female condom use was based on lack of knowledge while 15 (7.5%) commented the unavailability of female condom in public health centre. The findings were that there is need for health education programs to intensify knowledge on uptake of female condom use.

In connection to the number of choices for female condom use, 146 (73%) mentioned no choice, 29 (14%) indicated forth choice, 18 (9%) third choice, 5 (2.5%) second choice, while 2 (1%) first choice as their choices. The findings also stated that there is need for female condom campaign so that students can improve on the use of female condom.

With reference to own opinion on female condom use, 90 (45%) agreed on the prevention of STI’s and HIV & AIDS. 75 (37.5%) believed that own opinion was lead to the decrease in unprotected sex, 10 (5%) agreed that their own opinion were based on lack of contributions to low uptake of the device and improvement of knowledge proper insertion respectively while 15 (7.5%) cited behavioral change. These findings show that there is need on education on proper insertion, and need for behavioral on female condom use. Which was in agreement with another study done by the Medical Research Council Research Program on AIDS in Uganda in acceptability methods for protection against HIV and other STIs in South Western Uganda revealed that; the female condom was relatively popular, but attitudes were ambivalent, the women did not like its size and shape, some complained of discomfort and the fact that they could not use it secretly and some generally liked it because it offered more certain protection against pregnancy, STIs and HIV (Nyanzi, Pool, Harrison, Green, Hart, Wilkinson, Mbonye, & Whitworth, 2000).

Most of the participants 60 (30%) in this study cited that the female condom is difficult to use, 55 (27.5%) mentioned female condom is for the elite. 50 (25%) cited men prefer dry sex. 30 (15%) participants stated it is for commercial sex workers while 5 (2.5%) agreed that it is expensive and not available. This finding supports another study finding in which the majority of the participants cited that the female condom is difficult to use (Mahlalela & Maharaj, 2015). Cultural norms was cited by 45% of the participants as having negative impact on the use of female condoms.

In this study for example, the device was difficult to use (30.6%) and some did not know where to get female condom (12.4%) in study done in USA 1996-1997 found barriers for not using female condom included; mechanical, psychosexual, interpersonal, and situational. In Uganda in a study even though many women had positive attitude towards use of female condom it was learnt that main obstacle to use female condom was the cost PSI/Tanzania. Health lives (2014). Other problems included inner ring being uncomfortable during intercourse, outer ring pushed into vagina and too much lubrication for a culture that prefers a relatively dry vagina.

Health lives (2014). Similar problems have been reported by, Promoting use of female condom with the aim of ensuring females controlled safe sex method; the listed problems need

to be ironed out. Mass media as a tool of awareness creation should be followed by interpersonal communication and interaction between potential users and health workers (Crano & Lawrence, 1995) ^[14].

It is being noted out of 40 million living with HIV and AIDS, 50% are women and 60% are living in sub-Saharan Africa UNAIDS, (2012) ^[27]. The cost of female condom should be greatly subsidized to almost zero cost, and should be available in health facilities and pharmacies as is male condom. The female condom should not be marginalized but should be promoted and popularized through adverts on its benefits for women and the general population as is male condom.

The majority (73%) of participants did not rate the female condom as a number of choice for use. This finding explains the low use of the female condoms among female undergraduate students. However in contrast, a study was done in Nigeria Ibadan which stated that majority rated or took female condom as a number of choice for use.

Section D

Practices of undergraduate female students regarding female condom use

Practices According to, practice refers to “[a] way of doing something especially as a result of habit, custom or tradition” Cambridge advanced learner’s dictionary (2010) defines practice as “something that is usually or regularly done, often as a habit, tradition or custom”. (Oxford online dictionary, 2010) defines practices as the “actual application or use of an idea, belief, or method, as opposed to theories relating to it or the customary, habitual, or expected procedure or way of doing of something”. In this study practice refers to the habit, custom or tradition surrounding female condoms among Africa University undergraduate students.

The study showed that most undergraduate studies female 175 (87.5%) did not use the female condom during sex. This research finding supports a previous study done at University Of Yaounde which also concluded that majority(80%) of female undergraduate studies did not use female condoms during sex (Baye, 2013) ^[6].

Another study was done in contrast to my findings. In April 1997, a study was done on the female condom use in Sao Paulo, one of the largest cities in the world located in Brazil with about 15 million inhabitants. The study designed by AIDS CAP women’s initiative Project of family Health International (FHI) focused on the users of the recently marketed female condom in the region. The research established that 92 percent of the 400 women recruited in the study had used the female condom. Only 2% had tried to use it but did not manage to insert it adequately. The insertion of the device was considered easy at first attempt by 44% and difficult by 46%.

Another study done by (Mbarushimana & Ntaganira, 2013) ^[39] also showed that 92% of female undergraduate students did not use the female condom. The low utilization of the female condom can also be explained by the fact that most of the respondents had never been at the Africa University to get advice on female condom thus they might not be aware of how to properly use the condom.

Regarding the factors that contributing to the low uptake of female condoms, 70 (35%) of participants stated they lack particular interest in female condom use. 38 (19%) indicated the discomfort of female condoms while putting it on. 33 (16%) agreed on female condom preference over male

condoms. 28 (14%) participants mentioned they have negative attitudes towards female condoms. 22 (11%) cited lack of mass campaign while 9 (4.5%) stated failure to understand the advantages of female condoms contributes to low female condoms uptake. The findings concur that in connection to discomfort of female condom, there should be changed of material or redesign of female condom that is used to make female condom so that female students will be able to use it.

Majority participants 80 (40%) on the factors that increases female condom use mentioned desire for dual protection. 78 (39%) indicated gender equity in sexual relations. 37 (18.5%) stated women empowerment levels while 5 (2.5%) cited the redesign of female condoms by the manufacturer to become user friendly. The findings show that there is need for redesigning of female condom and education on its use to encourage its use by female students.

Regarding the cited reasons for low uptake of female condoms by Africa University undergraduate students 22 (11%) of participants stated that lack of mass campaign contributes to low uptake of female condoms. 9(4.5%) participants mentioned failure to understand the advantages 33 (16.5%) male condoms preference over female condoms. 70 (35%) stated lack of particular interest 28 (4%) cited the negative attitudes towards female condoms.

This is in contrary with Several studies that was shown amongst the factors affecting female condom use which were the unavailability, shortage, partner trust, and knowledge and gender inequality. Cultural factors such as desire for children and female sexual compliance as a way to achieving economic status are a hindrance to use (Lule & Gruer, 1991; Peltzer, 2000) ^[35, 47]. Also lack of acceptance of the family planning concept has often evidenced itself as a barrier to condom use (Peltzer, 2000) ^[47].

Findings conclude that there should be women empowerment on female condom campaign and health education at Africa University clinic to increase its use by Africa University students. Findings indicate that, there should be health education on the use or uptake of female condoms at Africa University clinic to encourage female condom use by Africa University students.

Majority of participants 100 (50%) cited that they deposits used condoms in toilet and flushed, and 68 (34%) participants stated that used condoms are wrapped in tissue and puts in the dust bin to be discarded outside and 32 (16%) participants mentioned that they put water inside in used condoms empty in the toilet and then put condom in dust bin. Findings concur that there should be proper health education on depositing of used female condoms to enhance its proper dumping site.

Almost all the participants 180 (90%) stated on the frequent use of female condom that they have never used it, 20 (10%) commented they rarely use it. The findings proved there is need for mass campaign on the use of female condom.

Majority 152 (76%) commented on the frequent visit to the clinic for advice on female condom use that not at all have they gone to the clinic for advice. Participants of 18 (9%) cited that they do more than a month, 13 (6.5%) mentioned thrice a month, 12 (6%) cited twice a month while 5 (2.5%) stated once a month. Findings show there is need for health education on female use.

With reference to the frequent collection of female condoms from the clinic concur that 188 (94%) participants commented not at all have they gone to the clinic to collect female condom for use. 7 (3.5%) participants indicated twice

a month, 2 (1%) indicated once a month, and three times a month respectively. Findings concur there should be free access of female condom in the clinic and education on its use and that it is free of cost and not for sale in order to increase its use.

Regarding the factors that reduces female condom use effectiveness, 162 (81%) participants lamented they don't know the factors that reduces the female condom effectiveness. Participants of 20 (10%) mentioned alcohol drinking, 15 (7.5%) cited failure to follow instruction. 2 (1%) participants stated lack of network exposure while 1 (0.5%) state used of double protection. Findings concur there should be mass campaign on effectiveness of female condom use this is in contrast with a study that was done on female condom's effectiveness which was rated between 94% to 97% by US FDA. Therefore, condom promotion has received considerable attention in the fight against AIDS pandemic because of high effectiveness (Peltzer, 2000) [47].

Many countries including those in the sub-Saharan African also embarked on strategies to fight HIV and AIDS, through the promotion and use of condoms, and indeed condoms are widely and freely distributed with the aim to improve access. stated in a workshop on "the potential role of the female condom" held on 22nd, October 1993 by the Contraceptive Research And Development Project (CONRAD) of Family Health International (FHI) in collaboration with U.S.A.I.D reported that before approving the female condom in may 1993, the U.S.F.D. A required a six-month clinical trial in the effectiveness of the female condom in protecting against pregnancy, HIV and other STIs.

The resulting study was an open-label, non-comparative and multi-centre clinical trial conducted in nine research cities (Six in the U.S and three in Latin America). In this study a total of 377 women in mutually monogamous relationships and who agreed to use the condom were enrolled. 328 women in that group contributed data for assessing contraceptive efficacy of the device.

In this clinical trial the overall 6month pregnancy rate was 15.1 per 100 women. Perfect use resulted in pregnancy rates considerably lower: 4.3 per 100 women and were similar to perfect use rates of the diaphragm. The efficacy was found to be high if the device is used consistently and correctly. Half of the women in the study said the device was comfortable.

An equal percentage said the device had a negative impact on sexual mood. Four-fifths of the women perceived the device as easily torn. Some 70% of the women said the device was easy to keep in place. (3.5%) of the women said they would use the female condom in the future and most would recommend the female condom to a friend.

At a workshop, Henry Gabelink (CONRAD, 1993) presented a study on reinfection by Trichomoniasis, vaginalis and Chlamydia which found that compliant use of the female condom prevented any cases of reinfection, whereas inconsistent use resulted in combined (Trichomoniasis, vaginalis plus Chlamydia) reinfection rates of 23%. The findings also revealed that the risk of acquiring HIV infection from an infected partner could be reduced from 1 in 5 (with no barrier method used) to 1 in 167 when the female condom was used.

Implications to nursing practice

The majority 100 (50%) participants knew what female condom is. There is need to implement female condom use in

the clinic and in the area of nursing so as to fully appreciate the use of female condom.

However, 20 (10%) mentioned that it is also a dual protection. The findings revealed that there is also need for workshops regarding female condom use so it will improve their knowledge on the practices or uptake of female condom use. Managers should conduct supportive supervision whereby they will be able to interact with students on the use of female condom use, and continuous exposure to information on female condom use will increase the knowledge on female condom practices.

Implication to nursing research

The findings reveals that 144 (72%) participants cited reasons for not using female condoms was based on the non availability of female condoms, while (16%) mentioned that female condoms are expensive, and 40 (20%) stated they don't know. The findings indicates that, undergraduates students may want to try the use of female condoms but base on the non availability and cost of the female condoms will not let them. Therefore, there is need for further research to be conducted to determine the uptake of female condoms in nursing research.

Implications to nursing education

The education program needs to be updated by research and literature. The practices on female condom use should be universally practiced. Health education workshops should be put in place to combat female condom use. This will strengthen the female condom use worldwide.

Study Limitations and delimitations

The delimitations of the study are those characteristics that limit the scope and define the boundaries of a study, while limitations are potential weakness in a study and are of the researcher's control.

The study was conducted at Africa University campus on 200 undergraduate female students

The research instruments was developed and used for the first time by the investigator who is a novice in research. The instruments might have been inaccurate and might not have yielded detailed information, despite being pretested for validity and reliability. Convenience sampling was used to select participants. This sampling method has an element of bias.

Study conclusions

Knowledge on the female condom was high but few participants had knowledge that the female condom prevents transmission of STIs and HIV. Most participants did not use female condoms. To sum up from the present study and those reviewed suggest there are negative attitudes towards female condom use considering the fact that it is not well marketed by mass media as male condoms and somehow being marginalized. As shown in this study 15 (7.5%) had positive attitude and practices towards female condoms, and thought female condom could increase a woman's ability to safe sex. Similar trend was shown in other studies reviewed. More advocacies are needed using appropriate channels, appropriate advocacy skills and availability of device at the right time

When one wants to use it as is in male condom. The present study has shown there was an

Association between knowledge and attitude. Majority of those with high knowledge had a positive attitude towards female condom and vice versa.

Recommendations

The following recommendations emanated from the study findings

1. To intensify Health education at Universities to reinforce the knowledge they have on female condom use.
2. To clear myths and misconceptions that students clearing myths misconceptions will influence students on female condom use to adopt the positive attitude towards female condom use
3. That promotion of practices on female condom use be available within the University free of charge, and placed at strategic place where people students can take.
4. To enhance practice there should be continuous education of female condom use and demonstration on correct application

Dissemination of results

The findings from the study will be shared with the Department of Health Sciences staff and nurses working at Africa University clinic, who will in turn inform the office of the Dean of students. A copy of the research report will be given to the registrar of Africa University.

Summary

A descriptive survey design was used to acquire information. A sample of 200 undergraduate female students with an age range from 19 to 40 years was selected using convenience sampling method. Data was collected using questionnaire with four components addressing demographic data, knowledge, attitudes and practices on the use of female condoms among Africa University undergraduate female students.

The mean age was 27. The median 25, and the mode 22. The results revealed that the majority participants were Zimbabweans with 98 (49%) and the least number of participants came from Sierra Leone with 4 (2%). 110 (55%) were single, 55 (27%) were cohabiting and 20 (10%) were married.

Regarding the definition of female condom, most 200 (100%) participants knew that female condom is made of polyurethane material but only 15 (7.5%) do not use female condom. Findings revealed that here is low uptake in female condom use among Africa University undergraduate female students.

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