



Knowledge, Acceptability and Barriers to Female Condom Use among Women Visiting Kisumu East Sub-County Hospital

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Abstract: Women account for more than a half of all people living with HIV worldwide. This has prompted prevention actions targeting women. Female condom is one of the prevention measures that provide simultaneous protection against unpregnancy and STIs, including HIV/AIDS. Despite its introduction in 1993, its knowlegde and acceptability remains limited mostly in developing countries literature. The main objective of this study was to assess knowledge, acceptability and barriers to female condom among women visiting Kisumu East Sub-County Hospital. The sample size was 438 selected using simple random sampling techniques. Data was collected using semi-structured questionnaires and was analyzed using descriptive statistics. Findings revealed that despite most women having heard and seen the female condom, a significant number had no knowledge about it at all; most women were willing to use it if had knowledge about it; difficulties in inserting it, holding it during the sex intercourse, making noise during sex intercourse, and lack of its availability were some of the barriers faced. It was concluded that knowledge and awareness of the female condom use and acceptance was insufficient despite technical barriers faced in using it. Female condom knowledge was very important factor in its usage for family planning and STIs prevention at Kisumu East Sub-County Hospital. The study recommended intervention strategies regarding more education, accessibility and availability of the female condom to majority women in their localities as an effort to increase knowledge, acceptability and usage of female condom in Kisumu East Sub-County.

Keywords: Female condom, Knowledge, Acceptability, Women, Kisumu

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1. Introduction

HIV/AIDS is the leading world killer disease which causes death than other diseases in some developing countries. In 2019 for example, 38 million people were living with HIV/AIDS globally. 19.2 million were women. Out of 1.7 million new infections, 48% were women and girls. 85% of pregnant women were living with HIV/AIDS. Its prevalence in Southern Africa is high among women than men. That is to say, 59% of new infections in 2019 were women and girls

(UNAIDS, 2020). This high prevalence in women emantes from gender inequalities where women have limited decision making in regard to sex (Roser & Ritchie, 2018). This situation makes it necessary to increase measures of prevention which target women, favouring empowerment and providing innovative preventive tools. Such measures include safe sex where condoms of both gender can be used-female and male condom (Roser & Ritchie, 2018). When condoms are used correctly and consistently, they can be effective in preventing HIV/AIDS, STIs, and unintended pregnancies at 80%-95% (UNAIDS, 2016). The female

condom is a device which allows women to choose a barrier method of protection against both unwanted pregnancies and STIs (Sexually Transmitted Infections) transmission. It is a thin, loose-fitting and flexible plastic tube worn inside the vagina. It is made of polyurethane and unlike latex, is not damaged by oil-based lubricants. A soft ring at the closed end of the tube covers the cervix during intercourse and holds it inside the vagina; Another ring at the open end of the tube stays outside the vagina and partly covers the lip area. A female condom provides a barrier between partners to prevent sharing bodily fluids which helps to ensure that sexually transmitted infections are not passed and pregnancy does not occur (Johanna, Jansen & Van Driel, 2010; UNAIDS, 2016).

The female condom is considered a valid alternative to the male condom. Despite that, however, the female condom is considered to have gained little attention and marginalised in the international response to curb the HIV/AIDS pandemic. For instance, one female condom per eight women per year was supplied in 2013 (UNAIDS, 2016). Other studies highlight its limited knowledge and accessibility as the main challenges faced by its potential users (Johanna, Jansen & Van Driel, 2010; UNAIDS, 2016). Joana's (2015) study on knowledge, attitude and practices of condom use among out of school adolescent girls and young women aged 15-24 illustrate challenges associated with condom use as low knowledge about the female condom, reduced sex pleasure, which in turn affects its acceptability level. Furthermore, the available knowledge about the condom didn't guarantee its usability during sex. Peters, Van Driel, and Jansen (2014) concluded that Sub-Saharan Africa women accepted the female condom use when given access to it, as well as when exposed to health interventions that supported its use. Amu & Nyarko (2016) concluded that lack of knowledge, acceptability and usability of the female condom among reproductive women was a main public health concern.

This means that the majority women in Sab-Saharan Africa, including Kenya lack sufficient knowledge about the female condom, its purpose and how to use it. This lack of knowledge subsequently affects its acceptability during the sex act. This study assessed knowledge, acceptability and barriers of female condom use among women of reproductive age visiting FP and MCH clinics in Kisumu East Sub-County Hospital in order to recommend intervention strategies as an effort to increase knowledge, attitude, acceptability and practices that are paramount to its usage. It is based on the following study questions to gather data:-what are the gaps in knowledge about female condom among women of reproductive age? What is the acceptability of female condom among women of reproductive age? What are barriers to female condom knowledge, acceptability and use among women of reproductive age?

2. Literature Review

This section provides the theoretical framework of the study and discusses the existing literature about knowledge, acceptability and barriers to female condom use as highlighted below.

This study on the knowledge, acceptability and barriers to female condom use is founded on the Health Belief Model. This model as established in 1950s in the USA on peoples response to health intervention measures, is based on the individual health and health behavior. That is to say individual threat perceptions and behavioural evaluations (Abraham & Sheeran, 2015). Threat perceptions are explained as the main beliefs which include perceived susceptibility to health challenges like illness and the predicted severity of the result of the health challenge. On the other hand, behavioural evaluations is understood as constituting beliefs that related to the benefits of the chosen behavior, as well as those related to barriers/cost to practice the behavior. In addition, the model further assumes that cues to action can stimulate health behavior when health beliefs are held. Such cues include social influence, health awareness campaigns, and the symptoms perceived by the individual. The model also further extends to include the individual general readiness about the health matter (Abraham & Sheeran, 2015; Green & Murphy, 2014). The model is applied to a variety of health behaviors which include health risk behaviors, health preventive behaviors, health promoting behaviors, vaccination and contraceptive behaviors. This implies that the model puts emphasis on health behavior change. It thus fits in this study on the knowledge, acceptability and barriers to female condom use.

Despite that, however, the model is criticised of not considering environmental and economic factors that may inhibit the promotion of recommended health intervention measures; it doesn't consider personal attitudes, beliefs and other factors that may influence a person's acceptance of the health behavior intervention action. It doesn't also provide clear guidelines on how to operationalise the links between construed susceptibility, severity, and the overall threat perception (LaMorte, W.W. (2019; Abraham & Sheeran, 2015; Green & Murphy, 2014).

The female condom device is an exotic device that was invented in 1993 and distributed in all countries especially developing countries including Kenya under the recommendation of the World Health Organisation so as to help curb the HIV/IDS the STIs spread and unwanted pregnancies. Its knowledge and usability is promoted by the governments and other organisations and civil rights activists that deal in Health behavior intervention measures. They are promoted through various channels like media adverts, health/medical centers, News Papers, schools, and public meetings. So as to raise the knowledge about its benefits. This female condom knowledge, is however not well diffused among its potential users (UNAIDS, 2016). For example, in study conducted in Zimbabwe showed that despite most respondents (81.4%) having heard about the female

condom, 53.3% had not received education about its use. Furthermore, although 36.3% had knowledge about it, 83.5% had not used it, implying that the female condom knowledge was linked to its usage (Chipfuwa, Manwere, & Kuchenga, et al., 2014). Female condom was further found to be the most least used method of contraceptives, implying its lack of knowledge by the mass population (Moore, Beksinska, & Rumphs et al., 2015; Amu & Nyarko, 2016). In study by Valens and Joseph (2013) that investigated 429 students' knowledge and attitudes about the female condom use at the former Kigali Health Institute revealed that 79% were aware of the female condom while only 24% knew how to use it. Implying that the majority participants lacked knowledge on the female condom use. Low knowledge about condom use was also found to exist among the urban and rural women in Ghana (Amu & Nyarko, 2016).

The acceptability of the female condom depends on the knowledge the potential user has about it in regard to its benefits. It also depends on the cultural beliefs, religion, and associated challenges to its usability. For example, a study in Ghana revealed that during sex action, the female condom interfered in sex pleasure, made noise and was caused discomfort (Amu & Nyarko, 2016; Ananga, et al., 2017). In Zimbabwe, the partner refusal and the unavailability were found as reason for not accepting to use the female condom. This is evidenced by 4.1% of the total surveyed respondents who indicated to be using it consistently (Chipfuwa, Manwere, & Kuchenga, et al., 2014). Other low acceptance reasons were also identified by Moore, Beksinska & Rumphs et al. (2015) as cultural beliefs, partner approval and religion. Peters, Van Driel, and Jansen (2014) concluded that Sub-Saharan Africa women accepted the female condom use when given access to it, as well as when exposed to health interventions that supported its use.

Having knowledge and accepting to use it as a contraceptive doesn't guarantee its use. This is because there are barriers attached to it. These barriers or challenges are based on cultural beliefs, individual religion, individual perceptions, accessibility, knowledge, and technicalities in regard to its use. Longitudinal studies reveal limited access to female condom use as well as sex partner resistance to use it as the main challenge faced by sex workers in developing countries (UNAIDS, 2016). The associated challenges of the female condom use as revealed by Joana (2015) who studied knowledge, attitude and practices of condom use among out of school adolescent girls and young women aged 15-24. Her findings illustrate challenges associated with condom use as reduced sex pleasure, low level of condom use. Furthermore, the available knowledge about the condom didn't guarantee its usability during sex. A study by Ananga et al (2017) found limited access to, and acceptance of the use of the female condom as the challenges faced by women of reproductive age in Ghana. Cultural beliefs, religion, partner refusal, interference in sex pleasure, noise and discomfort have been identified by other studies as barriers to the acceptance of the condom use (Amu & Nyarko, 2016; Ananga, et al., 2017; Chipfuwa,

Manwere, & Kuchenga, et al., 2014; Moore, Beksinska & Rumphs et al., 2015).

3. Methodology

The research setting was Kisumu East Sub-County Hospital, which serves as a referral hospital in Kisumu town. It has different services including family planning (FP) and mother and child health (MCH), which were the target services areas for the study. The study adopted a cross-sectional survey design that used descriptive statistics to collect quantitative data from women of reproductive age (15-49). This population age category was considered appropriate because women at this age are at high risk of getting HIV and AIDS and also are the ones who need more information about contraceptive methods to practice family planning. The study population was 106,074 out of which a sample of 348 was selected using Yamane (1967) formula:

$$N = \frac{N}{1+N(e^2)}$$

where:

n: the desired sample size

N: the size of population

e: the level of precision (0.05)

$$n = \frac{106,074}{1+106,074(0.05^2)} = 399$$

$$= 399 + 10\% (\text{buffer for sampling error}) = 438.$$

Simple random sampling was used where every woman who visited FP or MCH during this study had a chance to participate in the study. In a population of 106,074 (24% of 441,978) a sample of 438 women was selected. This study included women of reproductive age (15-49) visiting FP and MCH services who gave consent for the study. A semi-structured questionnaire was used to collect data. The approval to carry out this study was obtained from Maseno University Ethics and Review Board and from Kisumu East Sub-County Medical health Officer. During data collection, the purpose of the study was explained to the volunteering respondents as well as ensuring safety and confidentiality of the data they provided so that they freely participate without coercion. Face validity was also checked by sending the tool to experts at the Maseno University, who approved it for final data collection. In data analysis, data were recorded and edited and entered into Microsoft Excel (2007) and exported to SPSS for analysis using descriptive statistics.

4. Results and Discussion

This chapter presents the interpretation and explanation of the findings of the study among women visiting MCH and FP clinics of Kisumu East Sub- county Hospital. Subsequent sections present the findings as guided by the study questions- knowledge of women on female condom; their acceptability of the female condom and finally the barriers to female condom knowledge,

acceptability and use. Data are displayed in charts and tables using descriptive statistics in form of percentages.

4.1. Knowledge about Female Condom

The first study question dealt with assessing whether the respondents were knowledgeable about the female

condom-have heard about it, have seen it, the knowledge about its advantages and disadvantages, and the willingness to know more about the female condom. Using descriptive statistics to analyse data, the majority respondents (90.87%) indicated that they had heard about it, 63% had ever seen it. The results are illustrated in the figures and tables below.

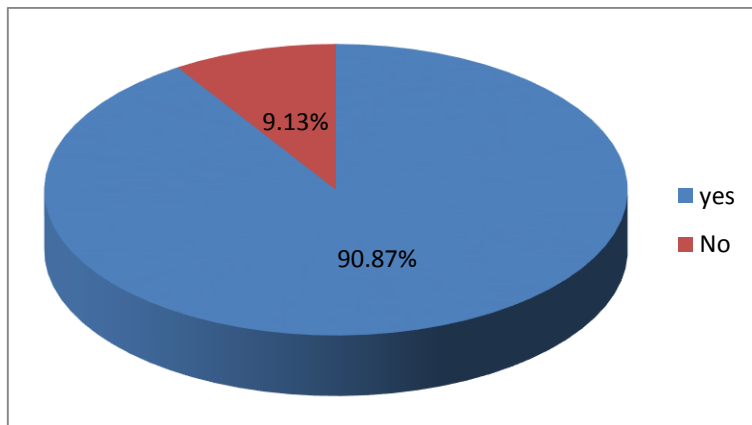


Figure 1: Women who had heard(knowledgeable) about the female condom

As indicated in figure 1 above, most women had heard about the female condom while the minority (9.13%) had no idea about it. This finding shows that most women have heard of the existence of the female condom among the women visiting the Kisumu East Subcounty Hospital. On the other side, the 9.13% who have not heard about it illustrate that they are at a very high risk of not using the female condom. Similarly, as

figure 2 below illustrates, among those who had heard of the female condom, only 63.47% had ever seen it. This implies that there is significant number of women who have never heard of and seen a female condom. This implies low knowledge of the female condom by the women visiting the Kisumu East Subcounty Hospital.

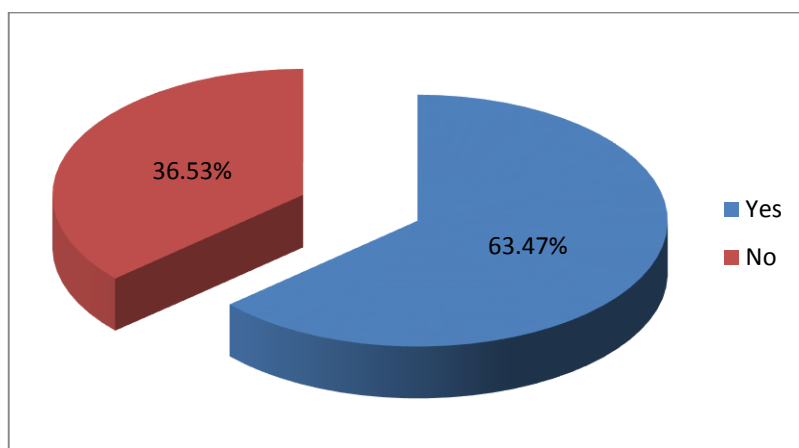


Figure 2: Women who have ever seen(knowledgeable) the female condom

About the issue of knowledge about the advantages and disadvantages of using the female condom, respondents

highlighted and listed them as indicated in the table 1 below.

Table 1: Respondents’ knowledge about the advantages and disadvantages of the female condom

Variable	Frequency n (%)
Advantages	
<i>Prevents pregnancy and STI'S</i>	32.0%
<i>Prevents pregnancy</i>	26.9%
<i>Prevents STI'S</i>	11.4%
<i>Women in control of their sex lives</i>	7.5%
<i>Strong does not burst</i>	4.6%
Disadvantages	
<i>Too expensive</i>	13.2%
<i>Not widely available</i>	18.3%
<i>Insertion is difficult</i>	11.4%
<i>Needs to be held in place during sex</i>	4.6%

As indicated in the table 1 above, respondents were asked to list the advantages and disadvantages of the female condom. As it can be observed, the listed advantages were- pregnancy prevention, pregnancy and STIs prevention, STIs prevention, women controlling their sex lives, and the female condom being strong (cannot burst). These findings as shown in percentages show that there is still low knowledge about the female condom. This is illustrated by the 32% who only understand its main advantage of preventing pregnancy and the STIs. On the other hand, disadvantages of the female condom were listed as too expensive, not widely available, difficulty in inserting, and the need to hold it in place during sex. These disadvantages still indicate

women’s low knowledge of its importance and how to use it.

Basing on that, the respondents were asked whether they were willing to know more about the female condom. As highlighted in figure 3 below, most respondents(86.76%) were willing to do so. Implying that more knowledge about the female condom use was still needed. On the otherhand, a small number (13.24%) were not willing. This signifies that coupled with the attached disadvantages and little knowledge about the female condom as explained in the previous sections, some women don’t care to know more about the female condom, which is a challenge in regard to preventing unwanted pregnancies and STIs.

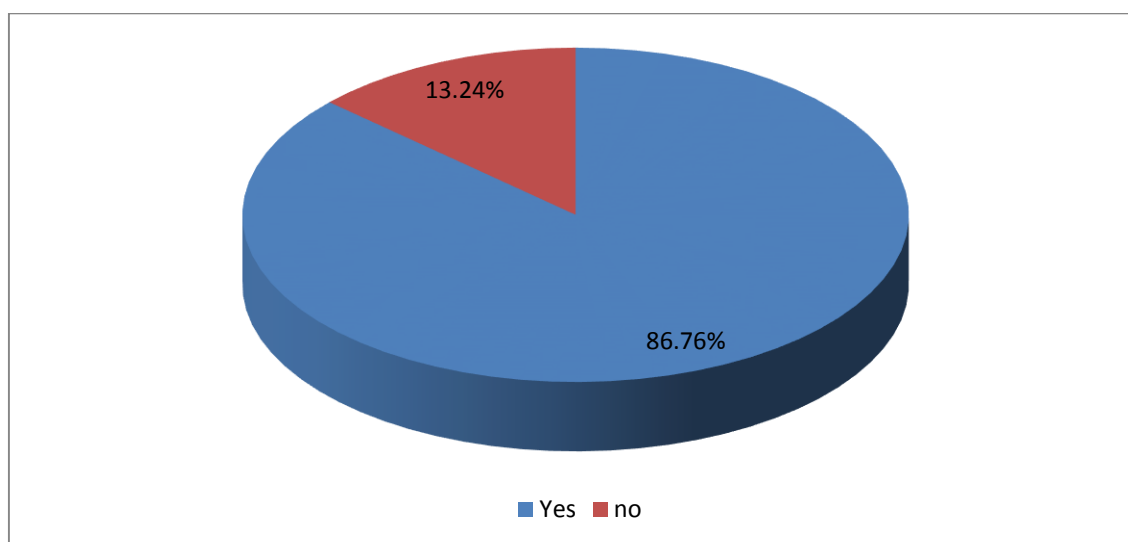


Figure 3: Respondents’ willingness to know more about the female condom

The above findings on knowledge about female condom use are backed by the existing literature. For example, in a study conducted in Zimbabwe showed that despite most respondents(81.4%) having heard about the female condom, 53.3% had not received education about its use.

Furthermore, although 36.3% had knowledge about it, 83.5% had not used it, implying that the female condom knowledge was linked to its usage (Chipfuwa, Manwere, & Kuchenga, et al., 2014). Female condom was further found to be the most least used method of

contraceptives, implying its lack of knowledge by the mass population (Moore, Beksinska, & Rumphs et al., 2015; Amu & Nyarko, 2016).

4.2. Acceptability of Female Condom

The second study question analysed women's acceptability of the female condom use (acceptability and willingness to use it) and the perceived reasons for not accepting and not willing to use it. Data were also analysed using descriptive statistics and presented in figures and tables in form of percentages as highlighted below. As illustrated in figure 4, the female condom use was acceptable by more than a half of the respondents (66.2%).

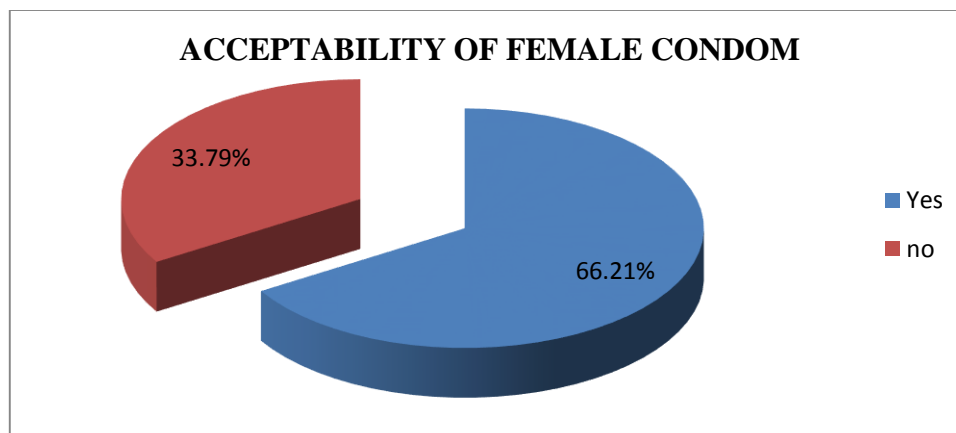


Figure 4: Respondents' acceptability of the female condom use

However, as the 33.79% of those who don't accept the female condom use cannot be ignored. Factors that are

behind the refusal to accept it were listed as indicated in the following table.

Table 2: Reasons given by women for not accepting female condom

Reason	Frequency n (%)
<i>The FC is not well known</i>	110 (74.3)
<i>Religion</i>	28 (18.9)
<i>Not available</i>	10 (6.8)
<i>Never seen it</i>	50 (33.7)
<i>Didn't know it existed</i>	38 (25.7)
<i>Too expensive</i>	40 (27.0)

The major reason to some women for not accepting female condom was that it was not well known 74.3%, 33.8% had never seen it, 25.7% did not know that it existed, 18.9% were prohibited by their religion, 27% highlighted it was too expensive, and 6.8% indicated it was not available. These findings signify that the

acceptability of the female condom use was dependent on the knowledge, availability, cost and religion.

Basing on those findings, the respondents were asked about their willingness to use the female condom. As illustrated in the figure 5 below, the majority respondents (70.32%) indicated their willingness to do so while 29.68% were not willing.

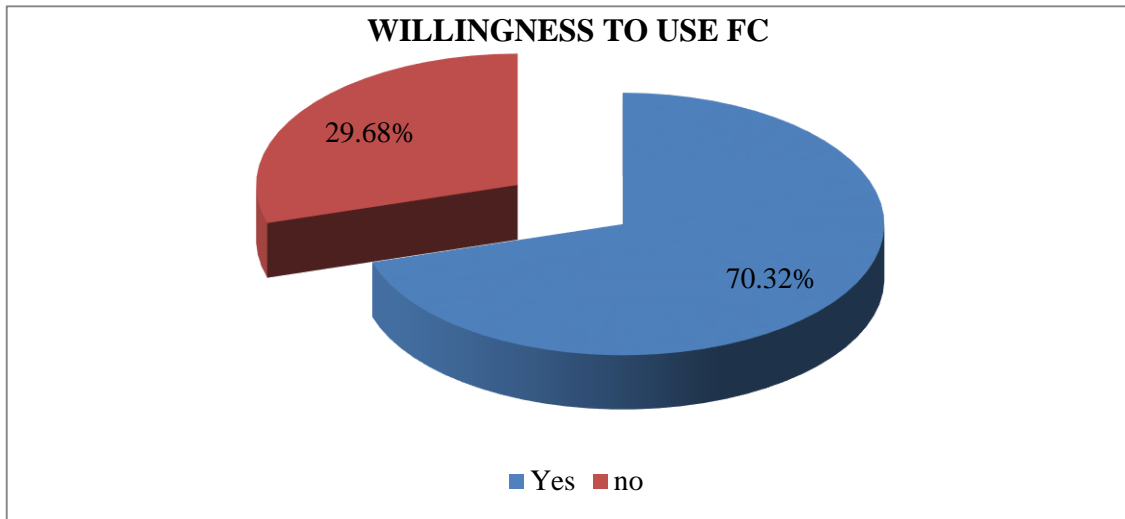


Figure 5: Respondents’ willingness to use the female condom

The 29.68% in the above figure that were unwilling to use the female condom reasoned that they fear to use it (23.1%), they are married (23.1%), religion (15.4%), not available(30.8%), sex not enjoyable (7.7%), too expensive (38.5%), partner does not like it(19.2%), prefer other methods (15.4%). These are shown in the

table 3 below. These findings imply that some women (married) perceive the use of female condom as concerned with only the unmarried or the sex workers. Besides, being fearful to use it indicates the lack of knowledge on the female condom among women of the reproductive age.

Table 3: Respondents’ unwillingness to use female condom

Reason	Frequency n (%)
<i>Fear</i>	23.1%
<i>Married</i>	23.1%
<i>Religion</i>	15.4%
<i>Not available</i>	30.8%
<i>Sex not enjoyable</i>	7.7%
<i>Too expensive</i>	38.5%
<i>Partner does not like it</i>	19.2%
<i>Prefer other methods</i>	15.4%

Relating the above findings to literature on the acceptability of the female condom use, a study in Ghana revealed that during sex action, the female condom interfered in sex pleasure, made noise and was caused discomfort (Amu & Nyarko, 2016; Ananga, et al., 2017). In Zimbabwe, the partner refusal and the unavailability were found as reason for not accepting to use the female condom. this is evidenced by 4.1% of the total surveyed respondents who indicated to be using it consistently (Chipfuwa, Manwere, & Kuchenga, et al., 2014). Other low acceptance reasons were also identified by Moore, Beksinska & Rumphs et al. (2015)

as cultural beliefs, partner approval and religion.

4.3. Barriers to female condom knowledge, acceptability and use

The third study question investigated the barriers to the female condom knowledge, acceptability and use. Respondents were asked to list the barriers they faced in regard to the use of the female condom. The following table illustrates the listed barriers by those who had used the female condom.

Table 4: Respondents' barriers to knowledge, acceptability and use of the female condom

Variable	Frequency (n=10)
Challenges	
<i>Hectic to put on</i>	100%
<i>Noise during sex</i>	100%
<i>Not available</i>	80%
<i>No sexual pleasure</i>	60%
<i>Not comfortable using it</i>	80%

As indicated in the above table, most respondents who had used the female condom experienced challenges in regard to not feeling sex pleasure, lacking comfort in using it, facing difficulties/hectic in regard to putting it on, causing noise during sex, as well as not easily available when needed.

Other barriers indicated included lack of knowledge about it. In this case, respondents were asked whether the health care providers/nurses do discuss with them the issue of condom use. As shown in the table 5 below

the majority of respondents(61.2%) agreed while 38.8% disagreed. Again, 88.8% indicated they had discussions on both female and male condoms while 11.2% had discussions on the male condom, while none (0%) discussed about the female condom only. This implies that even health care providers do not provide enough information/knowledge about the female condom use as they concentrate mostly in providing it on the male condom at the expense of the female one.

Table 5: Respondents' discussion about condom use with the health care provider

Variable	Frequency n (%)
Discussed with Nurse	
<i>Yes</i>	61.2%
<i>No</i>	38.8%
Type of condom discussed	
<i>Male</i>	11.2%
<i>Female</i>	0%
<i>Both male and female</i>	88.8%

Another question was asked related to whether the provided information on the female condom use is obtained through demonstration. Results indicated that 45.2% of women had chance to follow a demonstration of how condoms(male and female) are used. While 50%

said that they did not follow that demonstration because nurses did not ask, 29.2% said that there was no model for demonstration especially for female condom while 20.8% refused the demonstration. The following table 6 indicates the results.

Table 6: Respondents' views on the female condom demonstration

Variable	Frequency n (%)
Demonstrated by Health care provider	
<i>Yes</i>	45.2%
<i>No</i>	54.8%
Reason for Not Demonstrating	
<i>Refused</i>	20.8%
<i>Did not ask</i>	50%
<i>No model</i>	29.2%

These findings on the barriers to knowledge and acceptability of the female condom do concur with the existing studies. A study by Ananga et al (2017) found limited access to, and acceptance of the use of the female condom as the challenges faced by women of reproductive age in Ghana. Cultural beliefs, religion,

partner refusal, interference in sex pleasure, noise and discomfort have been identified by other studies as barriers to the acceptance of the condom use (Amu & Nyarko, 2016; Ananga, et al., 2017; Chipfuwa, Manwere, & Kuchenga, et al., 2014; Moore, Beksinska & Rumphs et al., 2015).

5. Conclusion and Recommendations

5.1. Conclusion

This study aimed at assessing the knowledge, acceptability and barriers to the female condom use among women visiting Kisumu East Sub-County Hospital. Basing on the established findings, we concluded that knowledge and awareness of the female condom use and acceptance at Kisumu East Sub-County Hospital was insufficient; the willingness/acceptance to use it was high if its information was available; and the main barriers to its usage was the lack of knowledge and its discomfort when in use. Therefore, female condom knowledge was a very important factor in its usage for family planning and STIs prevention at Kisumu East Sub-County Hospital. This study is significant as it brings new insights and shed light to the existing literature in regard to female condom knowledge and acceptance. It also informs policy on female condom usage as a preventive intervention measure that alleviates the STIs spread as well as family planning promotion.

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5.2. Recommendations

Basing on the above findings, we recommend the following:

1. Establishment of information and education interventions programmes that aim to increase knowledge of and acceptability towards female condoms by the government and partner agencies are highly recommended. These should stress the advantages and address the disadvantages, be tailored to local ideas and appropriate target groups.
2. Train the service providers to meet the needs of the potential female condom users.
3. Female condom programmes should explore the reasons why female condoms are acceptable or not with certain partners and address the objections.
4. Educating men and women together and letting men take the lead in introducing female condoms may be of paramount behavior change in regard to female condom knowledge and usage.
5. Female condoms should be made more widely available in both rural and urban centres at affordable prices.
6. Studies involving males are needed to get a holistic view of potential barriers that could reduce female condom acceptability and use.

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