

Barriers to Female Condom Use among Undergraduate Health Science Students

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Abstract

The female condom (FC), also known as the femidom, has been on the market since 1993, however, its use remains limited in many parts of southern Africa, including in Eswatini (formerly Swaziland). There is a dearth of literature on the reasons for the limited use of the FC, especially from the perspective of health science students who would otherwise be expected to be knowledgeable about and have favourable attitudes to it. The aim of this study was to explore and describe the barriers to FC use among undergraduate health science students at a selected tertiary institution in Eswatini. A qualitative, exploratory descriptive study was conducted among nine conveniently sampled, unmarried undergraduate students at a selected tertiary institution in the Hhohho region in Mbabane, Eswatini. Responses to an unstructured interview guide, using in-depth interviews were analysed thematically following Creswell's steps of qualitative data analysis. Five themes emerged from the data: (1) inadequate knowledge about the FC, (2) the FC hinders sexual pleasure, (3) insertion of the FC is time-consuming and uncomfortable, (4) the FC is bigger than the vagina, and (5) fear of being labelled "promiscuous". Generally, the participants stated that they did not use the FC because of societal myths. Therefore, there is a need to strengthen health education campaigns for the femidom to clear the myths and misconceptions that limit its use.

Keywords: barriers; female condom; femidom; tertiary students; youth

Introduction

The female condom (FC), also known as the femidom, is the only female-controlled contraceptive that offers protection against both sexually transmitted infections (STIs), including the human immunodeficiency virus (HIV), and pregnancy (Campbell et al.



2011, 329). In sub-Saharan Africa (SSA), even though the FC has been on the market for more than two decades, its uptake remains low (Peters, Van Driel, and Jansen 2014, 35). In Eswatini (formerly Swaziland), where heterosexual intercourse accounts for 94 per cent of all HIV infections (Mngadi et al. 2009, 23), the distribution, i.e. the number of condoms issued to the public (Figure 1), and the use of the FC remain low (MoH 2016, 58). Eswatini is a country in southern Africa with a population of about 1.1 million, an HIV prevalence of 27 per cent among adults (15 years and older) and up to 32.5 per cent among women (15 years and older), and with an annual HIV incidence of 1.36 per cent among the same age group. The HIV prevalence among 20- to 24-year-olds (a sub-population in which tertiary students fall under) is five times higher among females (20.9%) than males (4.2%) (MoH and CSO 2017, 1–2).

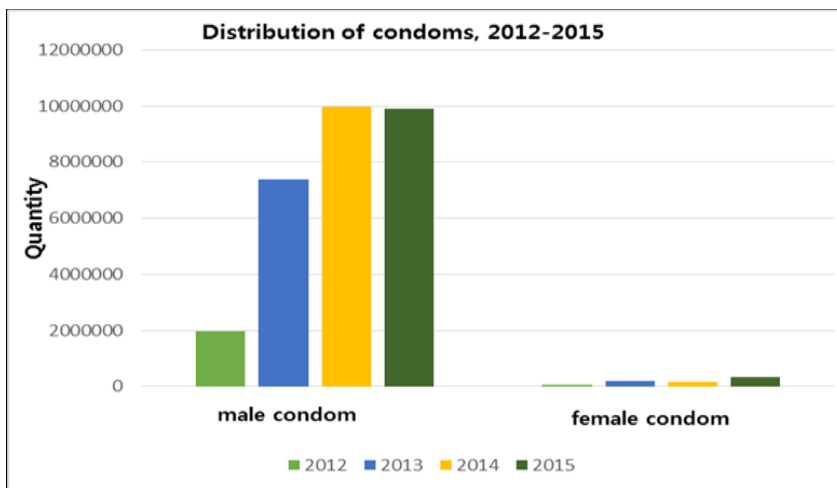


Figure 1: Distribution of condoms from 2012 to 2015 in Eswatini (MoH 2016, 59)

In the United States of America, reasons for non-use of the FC include prohibitive cost and limited accessibility, gendered power differentials in heterosexual relationships, acceptability of the design, an initial learning curve for proper use, and resistance to overt criticism about the dangers of heterosexual sex (Campbell et al. 2011, 330). In SSA, a recent literature review (Peters, Van Driel, and Jansen 2014, 39) reported that the low use of the FC is mainly owing to non-acceptability caused by unfamiliarity, and its unavailability or unaffordability in many settings. However, qualitative studies on the FC that exclusively used samples of health professionals or health science students from this region are limited.

Problem Statement

In Eswatini, the introduction of the second generation female condom (FC2) was one of the strategies employed by the Eswatini Ministry of Health to reduce the rate of HIV transmission. It was not only seen as one of the means to empower women to take control of their sexual health, but it was also anticipated that it will increase the uptake of the FC since it is cheaper and more user-friendly than the first generation female condoms (FC1) (Witte, Stefano, and Hawkins 2010, 1). However, only 1 per cent of Swazi women report using FCs (CSO and UNICEF 2016, 101). Knowledge about the FC is also low as a large proportion (45% of women and 56% of men) of the adult population does not know where to obtain the FC (CSO and Macro International Inc. 2008, 197). If the limited knowledge and low use of the FC are not redressed, the HIV pandemic will continue to disrupt and destabilise families and communal support systems, resulting in a prolonged increase in the number of orphaned and vulnerable children and subsequently child-headed homes (UNICEF n.d.).

Significance of the Study

Understanding the perspective of tertiary students is important as they are the future labour force, policymakers and well-being of the country. Intuitively, health professionals in general and tertiary students in the health sciences are expected to be knowledgeable about and have favourable attitudes to HIV prevention technologies, including the FC as they are taught about these during their training. However, since this sub-population is generally understudied, their views on the FC remain unclear.

Study Aim

The aim of this study was to explore and describe the barriers to FC use among undergraduate health science students at a selected tertiary institution in Eswatini.

Methods

Study Design

A qualitative approach using an exploratory-descriptive design was employed. Under this design, the data collected describe the phenomenon being studied (i.e. barriers to FC use in this case) from the perspective of the persons being studied. The current study is exploratory-descriptive because it involves an in-depth exploration and description of the phenomenon being studied (Brink and Wood 1998, 283–286).

Study Setting

Data were collected at a selected tertiary institution in the Hhohho region, in Mbabane, Eswatini, during the last two weeks of April 2017. Eswatini has three tertiary institutions that offer health-related programmes. This institution was chosen as a suitable study setting because it offers more health science and health-related

programmes compared to other local tertiary institutions, and hence it was assumed that the population in this university might be more diverse in terms of study programmes, and thus may provide rich data regarding the phenomenon being studied. The admission criteria to study in this institution are comparable to that of the other local institutions that offer similar programmes. In the year 2018, this institution had three faculties with about 900 students enrolled in its five departments.

Sampling Method and Procedure

We used convenience sampling to recruit the participants. Upon entry into the institution, the first author was introduced by the institution's Registrar's office personnel to the class representatives of the different programmes who then informed the students about the research, and referred those who wanted to participate in the study to visit the researcher during lunch time or during their free periods at a specific designated office within the institution. Only participants who came to the designated office and who met the inclusion criteria were invited to participate. During each visit, the researcher stayed on site for the whole day to afford participants ample time to approach the said office at any time. Eligibility criteria included being 18 years or older, being a Swati, enrolled in any programme within the Faculty of Health Sciences, and at any level or year of study. Written informed consent was obtained from the participants before the interviews were conducted. Participant recruitment continued until data saturation was reached (Polit and Beck 2014, 321). In this study, data saturation was deemed to have been reached by the ninth interview as no new themes or codes could be generated from the eighth and ninth interviews.

Data Collection Instruments, Method and Procedure

Face-to-face, individual in-depth interviews were conducted using an unstructured interview guide developed by the researchers, and a voice recorder. Two main research questions were asked from each participant: (1) "Have you ever used the female condom?" (2) "What are the main reasons for you (or your peers) for not using the female condom?" Examples of global probes that we used, depending on the participants' prior responses, included: "Would you tell me more about...? Would you elaborate more on...? Would you explain what you meant by...?" If the participants had used the FC, the probes were focused on the reasons why their peers said they did not use the FC. Before the start of each interview, each participant was asked if they knew what an FC was and was asked to identify it among a mix of packets of modern family planning devices comprising male condoms (of different colours), balloons, the loop, and the diaphragm. All the participants correctly identified the FC. The interviews were conducted in English and/or SiSwati, depending on the participants' preference. On average, each interview took 35 minutes; approximately 25 minutes for the actual interview and about 10 minutes for obtaining informed consent. No participant declined to be interviewed.

Data Analysis

The data were analysed thematically following Creswell's (2009, 185–186) steps of qualitative data analysis, whereby, at the end of each day, the audio-recorded interviews were transcribed verbatim by the first author. Each author independently listened to the audio tapes while rereading each transcript line by line to get meaning of the data, and manually generated codes for common themes. Independently, each author made a list of all the codes generated, and later, similar codes or topics would be clustered together and rearranged into columns of major, unique and left-over codes or topics. Thereafter, each researcher reread each transcript and reassigned the codes next to the appropriate segments of the relevant text in each transcript to merge any themes. Lastly, the researchers met to compare the codes and themes generated in order to harmonise the coding of the transcripts. Data analysis began after the second interview and occurred concurrently with the rest of the data collection process.

Trustworthiness

Trustworthiness was ensured using Lincoln and Guba's (1985, 289–327) criteria. To ensure the credibility of the study findings, firstly, we conducted peer debriefing, whereby we shared the preliminary findings (through an oral presentation) with an audience comprising faculty members with wide experience in qualitative research from our department, and students who were at the same age and field (peer examination) as those in our sample (Anney 2015, 276–77). Secondly, the first author was in the same age group as the study participants, which allowed her to easily understand the language and meaning of what the participants were saying. Thirdly, the results from this study were shared with a local audience (mainly from the health sector) as an oral presentation made by the first author at a national health research conference in Eswatini. During the question and comments session of the conference, some delegates validated the credibility of the findings as they said that they were familiar and could relate with what the participants had said, such as the use of expressions like “*umkhumbi*” (loosely translated: ship), a local expression referring to the FC, and reference to sexual intercourse as “the act”. Fourthly, we conducted negative case analysis as appropriate, for example, the finding about male participants' views of the FC as equally as good as the male condom (see results section, theme 3).

To ensure transferability of the study findings, we provided a rich description of the study setting, as well as thick descriptions of the characteristics of our respondents. Dependability was ensured by first performing a pretest of the research instruments among two health science students at a selected tertiary institution in the Manzini region. From the first pretest interview, the first author was able to assess her own interview skills and upon review of the recorded interview audio file with the second author, areas of improvement were highlighted and the second interview was deemed adequate to provide rich data, and commissioning of the main data collection began. By conducting a pretest study, we ensured researcher credibility (Polit and Beck 2014, 504), since in qualitative research, the researcher is also the instrument (Morrow 2005, 252, 259;

Patton 2002, 14). However, we did not include the results from the pretest study in this article as it was conducted only for trial purposes.

We ensured confirmability by independently coding the transcripts at the end of each day of data collection. We coded the transcripts separately and then later, we met to reconcile the codes generated during the individual coding to reach congruence on the interpretations of the information provided by the respondents. Where there were disagreements, the transcripts were reread to confirm the relevance and accuracy of what the participants meant. Additionally, a thorough literature review was conducted after data collection (i.e. literature control) as a way of bracketing the researchers from any potential preconceived ideas to maintain objectivity. Lastly, in their later work, Guba and Lincoln (1994, 114) added a fifth criterion for ensuring rigour in qualitative research, namely authenticity (i.e. the faithfulness and fairness of researchers in conveying the true feelings of the participants). In this study, we ensured the authenticity of the participants' responses by presenting their direct quotes and we even retained the local language and expressions for some of the results.

Ethical Considerations

Ethical clearance was granted by the National Health Research Review Board of the Ministry of Health in Eswatini (Ref: MH/599c/IRB0009688/NHRRB 191/17). Written administrative permission to conduct the study was obtained from the administrations of both the pretest and main study sites. Written informed consent to be audio-taped and for participation in the study was obtained from all participants before each interview. The participants were assured that their responses will be kept confidential, and that their responses will only be published in aggregate form, without revealing their names with each quote.

Results

Participants' Characteristics

A total of nine students participated in the study, at which data collection was terminated as data saturation had been reached. The age range of the participants was 20 to 26 years and the majority ($n = 6$) were female. Other participant characteristics are shown in Table 1.

Table 1: Sociodemographic characteristics of participants ($N = 9$)

Characteristic	Description
Age	Between 20 and 26 years
Gender	The majority ($n = 6$) of the participants were female
Programme of study	Four of the participants were doing a degree in Medical Laboratory Science, two were doing Social Work and the rest were doing Psychology, Nursing, and Radiography

Characteristic	Description
Year of study	The majority ($n = 5$) of the participants were doing their second year, followed by three participants who were doing their first year and the rest were doing their fourth year
Marital status	All the participants were single
Nationality	All the participants were Swati
Residence	All the participants resided in peri-urban areas in Mbabane*

Notes: Characteristics were described narratively in line with the qualitative research approach

*At the time of data collection, the institution did not have dormitories, hence, all students resided off-campus.

Themes: Barriers to FC Use

Five themes emerged from the data, namely: (1) inadequate knowledge of the FC, (2) the FC hinders sexual pleasure, (3) insertion of the FC is time-consuming and uncomfortable, (4) the FC is bigger than the vagina, and (5) fear of being labelled “promiscuous”.

Theme 1: Inadequate knowledge of the FC

Even though all the participants had heard about the FC, the majority ($n = 7$) of them said that they did not know how it works or how to insert it, mainly because almost all of them ($n = 8$) had never used it. This is what some of them said:

I don't know how it is really used because of my general lack of interest in it. (Participant 8, female, 20 years)

I think we [as women] lack knowledge about this thing [the FC]. We have very little knowledge about it because when we watch TV, they advertise and educate more about the male condom. (Participant 9, female, 26 years)

They [healthcare workers] should educate more about the FC because nowadays they don't talk more about it, especially how it works ... (Participant 4, female, 21 years)

We need to be educated more about the FC because we know almost nothing about it. Personally, I don't even know how it works and how it is used, yet I am pursuing a health science degree. Imagine how low the level of knowledge should be in the general public then ... (Participant 3, male, 23 years)

Theme 2: The FC hinders sexual pleasure

Most of the female participants believed that the FC hinders sexual pleasure and interrupts the process of sexual intercourse. This is what they said:

I think it doesn't work properly during the 'act' ... you don't get to enjoy the 'act' ... I heard people say you have to hold it so that it does not sink in ... how can you say you're in the 'act' when on the one hand you're holding something, watching carefully that it doesn't sink in? (Participant 1, female, 21 years)

The woman is required to support it, causing her to work a lot during the 'act', compared to the male condom where he simply puts it on and it stays there throughout the 'act' ... there is no need for the male to hold it during the 'act'. (Participant 3, male, 23 years)

People claim that it hinders the sexual pleasure, even to us females ... girls want to impress the male in bed, so when you have put on the female condom, it hinders the enjoyment of the male ... as you know males; if he is happy, it's fine with him; he does not care whether the female enjoyed or not. (Participant 7, female, 22 years)

Theme 3: Insertion of the FC is time-consuming and uncomfortable

Most of the female participants also complained about the long waiting time (hours) that the FC stays in the vagina before having sex. Other participants stated that it takes too much time and effort to insert it as one has to squat. They said that such discomfort and inconvenience outweighs the purported benefits of the female condom, such as preventing STIs and pregnancies. Some participants had this to say:

The fact that you have to put it way before sexual intercourse ... it's frustrating because I have to stay with it for long hours so that it attaches well and wait for it to catch the body temperature. (Participant 9, female, 26 years)

I don't use it because I have read that you need to insert it hours before you can have sexual intercourse, which is not ideal for me as that can be so uncomfortable. (Participant 4, female, 21 years)

I can say that the FC is not ideal for me because it's time-consuming to insert it ... you need to take time, and you may find yourself losing interest of the intended 'act'. So, in a way you'd lose interest of engaging in sex while busy trying to insert it. (Participant 2, female, 22 years)

To the contrary, the male participants viewed the FC to be as effective as the male condom in preventing pregnancy and STIs, and hence they wondered why women do not use it. This was evident in the following excerpts:

I think it's good; it works same as the male condom, but the problem may be that ladies don't like it ... I don't know why because it works the same way ... (Participant 5, male, 22 years)

The FC is like the male condom. They are of the same quality, right? I don't see any reason for it not to work the same way ... I really do not know why females do not use it, because it does the same thing ... it prevents pregnancies and STIs. (Participant 3, male, 23 years)

Theme 4: The FC is bigger than the vagina

The female participants also complained about the size of the FC, that it is big and that the rings are too big. Some had this to say:

It is too big ... I don't really understand where you can insert it ... that is the thing about it ... I feel like it's too big! Where will you insert it? The rings that you find there are way too big compared to the vagina. (Participant 2, female, 22 years)

When the FC was introduced, people labelled it using names, for example '*umkhumbi*' [ship]. People view it as way too big and associate it with people who have had sex many times ... I guess those are the people who would be more comfortable to insert it than those who do not have sex regularly ... (Participant 8, female, 20 years)

Theme 5: Fear of being labelled promiscuous

Some of the participants expressed concern on being labelled as promiscuous by members of society if they see them taking the FC from public toilets or buying it at a shop. Some participants said:

The moment you take it at a public toilet or buy it from a shop, you have already exposed yourself that you are having sex, and you are assumed to be having sex with a lot of people. Otherwise, they would ask you why you need to protect yourself if you are having sex with only one person. They say it means that you are having multiple concurrent sexual partners. (Participant 7, female, 22 years)

The fact that it looks way too big, I feel like it's for people who have had sex many times. (Participant 9, female, 26 years)

Discussion

The participants in this study stated that they did not use the FC because it hinders sexual pleasure, takes time to insert and has to be inserted long before sex, is bigger than the vagina, and out of fear of being labelled promiscuous. Even though all the participants stated that they had heard about the femidom and were all able to identify it among a mix of sachets, they reported that they had inadequate knowledge about how to use it. These findings are similar to findings from other studies in Botswana (Mashanda-Tafaune and Monareng 2016, 166-167), Rwanda (Mbarushimana and Ntaganira 2013, 18), and Cameroon (Ekono et al. 2019, 23). However, Tarkang and Bain (2014, 173) found that a high proportion of female high school students in Cameroon knew about the FC and how to correctly use it. In the current study, the limited knowledge about how to correctly use the FC may be attributed to the minimal advertisement or promotion of the FC locally, as alluded to by the participants.

The participants did not use the FC because of societal myths associated with its use, such as that it hinders sexual pleasure, which is consistent with the findings by

Nwaokoro et al. (2015, 137, 141). However, Rutgers and Association for Reproductive and Family Health (2016) argued that the femidom does not hinder sexual pleasure because of the nitrile rubber it is made of, as it conducts heat and adjusts to body temperature easily, and stays warm, making sex to feel more natural and that the external ring of the FC rubs against the clitoris, increasing sexual pleasure for many women. Koster, Bruinderink, and Janssens (2015, 130), in a multi-country (Zimbabwe, Nigeria and Cameroon) study, found that men favoured the FC because it increased sexual pleasure. Similarly, in India, Bowling et al. (2018, 223) found that the most dominant theme in their study was that the FC increased pleasure through alleviating stress related to the risks of pregnancy or STI transmission. Therefore, in the current study, the notion that the FC decreases sexual pleasure might be owing to inadequate knowledge or skill on how to use the FC.

Additionally, the finding that the femidom needs to be supported during sex is inconsistent with the position from manufacturers such as the Dahua Medical Apparatus Company (2013) in China, which argued that the only instance where the FC needs support is when guiding the penis into the vagina to prevent it from slipping in. Studies (Bradley et al. 2012, 167; Masvawure et al. 2018, 641–642) conducted elsewhere revealed that the probability of a slippage or breakage is higher with a male condom than an FC (Beksinska et al. 2015, 86). However, quantitative studies are warranted to determine if this view or experience is generally held by many women and men in Eswatini.

The finding that the waiting time after inserting the FC is long may be owing to the participants remaining stereotyped on the FC1, and thus in unplanned sexual intercourse, the waiting time could dissuade some women from sex, which is similar to findings from other studies (Ezire et al. 2013, 210; Mahlalela and Maharaj 2016, 2668). It is true that the FC1, which was made of polyurethane, needed to be inserted some eight hours before having sexual intercourse, however, the FC1 has since been replaced by the FC2, which is made of synthetic nitrile, and which does not require insertion several hours before coitus (Caucus on New and Underused Reproductive Health Technologies 2012, 1). The perception that the insertion time is too long can also be owing to the lack of experience using the FC, as insertion time is said to improve and insertion difficulties decrease with more experience (Mack et al. 2010, 152).

The finding that the male participants perceived the FC as equally as good as the male condom was surprising for a traditional and culturally conservative setting like Eswatini, where males (especially older and traditional ones) have unfavourable attitudes to the FC as they say it “sinks into the vagina” during sex, hence its local name “*umkhumbi*” (which means ship). In Cameroon and Nigeria, Koster, Bruinderink, and Janssens (2015, 128–129) found that nearly all the male participants in their study believed that the FC had superior effectiveness in preventing pregnancies and protection against HIV and STIs over other contraception methods and male condoms. At the University of KwaZulu-Natal, Ogunlela (2013, 104) also found that the majority of

male participants were more supportive of the FC than the female participants. In this study, it is worth noting that the male participants were astonished why women did not like or did not use the FC. Future studies that use mixed-method approaches are warranted to probe this finding further and to investigate if this view is held by a larger proportion of males in Eswatini.

The perception that the FC is too big has also been reported in other studies (Ezire et al. 2013, 210; Mack et al. 2010, 152; Naidu 2013, 29). This perception could be attributed to some people having a poor understanding of the anatomy of the female genitalia, which healthcare workers can clarify to women during health talks when dispensing the FC. In fact, the FC is designed in such a way that it has the same length as the male condom (Peters, Jansen, and Van Driel 2010, 119), but is wider to cover a woman's vagina more comfortably. Lastly, the finding about fear of being labelled promiscuous if using the FC is similar to findings from studies conducted elsewhere (Francis-Chizororo and Natshalaga 2003; Malmbolwa et al. 2015; Mugadza et al. 2016). In the current study, the participants stated that owing to the FC's perceived big size, people associate it with those who have sex with multiple partners. Such societal perceptions highlight the need for more education on the advantages of the FC and on the anatomy of the female genitalia.

Conclusion

The participants in this study stated that the FC is underutilised because it hinders sexual pleasure, takes time to insert, has to be inserted long before sex, is bigger than the vagina, and out of fear of being labelled promiscuous. The study was conducted in a high HIV prevalence setting, of which the FC is one of the major interventions to prevent heterosexual transmission of HIV in the general population. This study contributes to the body of knowledge on the FC in that the study population was not just the general public, but future healthcare workers, of which it is important that their perceptions and knowledge of the FC are investigated so that pre-service education can be strengthened to enable them to impart knowledge to the general public.

Recommendations

The study findings highlight the need to strengthen in-service education among health science students about the FC, how it is used, and its advantages in order to dispel myths and misconceptions around its use. Healthcare workers should also clarify the difference between the FC1 and FC2 condoms, especially the insertion time of the FC2 and how it works. Healthcare workers should also sensitise the media to enhance knowledge on the technical use of the FC2. Mass campaigns should specifically target tertiary health science students so that they can acquire knowledge on the FC2 that will enable them to impart that knowledge to the general public. Future research should quantitatively investigate the factors associated with the use and non-use of the FC in order to enhance generalisability of the study findings.

Strengths and Limitations

To our knowledge, this is the first study to be published on the barriers to FC use in Eswatini, and therefore the findings provide insight and baseline information regarding the studied phenomenon. Even though the sample size used is relatively small, it is acceptable in qualitative studies as the main aim when utilising this approach is not to achieve generalisability, but to ensure a rich description of the phenomenon being studied. Additionally, the convenience sampling technique used in this study is not free from selection bias as the participants who volunteered to be part of the study might be different from the students who did not participate owing to a characteristic that might be related to their perceptions or experience with FCs. Since only students from one faculty were sampled in this study, transferability of the study findings remains limited to the studied population, and cannot represent the views of all students at the selected institution or in the entire country.

Acknowledgements

The researchers are grateful to the administration of the selected university for the permission to conduct the study at the institution. A special thanks to all the students who participated in this study.

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