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Acceptability of the Female Condom by Sub-Saharan African Women: A Literature Review

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Abstract

Sub-Saharan African women are affected disproportionately highly by AIDS, while experiencing lack of choice for devices which protect them against sexual transmitted diseases, including HIV. One should expect that global policy makers react positive to the female condom, a contraceptive device which offers dual protection. However, those policy makers often argue that the female condom is not acceptable to its users. Our objective is to find out whether this general statement is based on existing empirical data. Through a literature review we analysed empirical studies done between 2003 and 2013 and compared the extent to which female condoms were acceptable among women in sub-Saharan Africa. We found that acceptability was defined in different ways, along the line of two types of studies: intervention and non-intervention studies. The intervention studies defined acceptability as women who agreed to use the female condom several times. The non-intervention studies which were not linked to specific interventions, operationalized acceptability in terms of women who liked the female condom, not necessarily based on practical experience or use. Intervention studies led to a high proportion of women using the technology, rating the experiences as satisfactory, although recommending technical improvements. In contrast, non-intervention studies showed low use due to non-acceptability mixed with reasons of unfamiliarity, unavailability or unaffordability. We concluded that women in sub-Saharan Africa accepted the use of the female condom when potential users were given access to the device, and exposed to interventions which supported the use of a female condom. *(Afr J Reprod Health 2014; 18[4]: 34-44).*

Keywords: acceptability, female condom, sub-Saharan Africa, HIV/AIDS, contraception, policy and practice.

Résumé

Les femmes d'Afrique sub-saharienne sont touchées de manière fortement disproportionnée par le sida, tout en manquant la possibilité de faire un choix par rapport aux dispositifs qui les protègent contre les maladies sexuellement transmissibles, y compris le VIH. L'on devrait s'attendre à ce que les décideurs mondiaux réagissent de manière positive au préservatif féminin, un dispositif contraceptif qui offre une double protection. Cependant, ces décideurs poussent souvent l'argument que le préservatif féminin n'est pas acceptable à ses utilisateurs. Notre objectif est de savoir si cette déclaration générale est fondée sur des données empiriques existantes. Grâce à une étude de la documentation, nous avons analysé des études empiriques effectuées entre 2003 et 2013 et nous avons comparé jusqu'à quelle mesure les préservatifs féminins étaient acceptables chez les femmes en Afrique subsaharienne. Nous avons constaté que l'acceptabilité a été définie de différentes façons, en se fondant sur deux types d'études: études d'intervention et de non-intervention. Les études d'intervention définissent l'acceptabilité comme des femmes qui ont accepté d'utiliser le préservatif féminin à plusieurs reprises. Les études de non-intervention qui n'étaient pas liées à des interventions spécifiques, ont opérationnalisé l'acceptabilité dans la perspective des femmes qui ont aimé le préservatif féminin, et dont l'acceptation n'est pas nécessairement basée sur l'expérience pratique ou l'utilisation. Les études d'intervention ont à une utilisation par une forte proportion de femmes de la technologie, toute en considérant les expériences comme satisfaisantes, quoi quelles aient recommandé des améliorations techniques. En revanche, les études de la non-intervention ont montré une faible utilisation en raison de la non-acceptabilité y comprenant des raisons de méconnaissance, d'indisponibilité ou d'inaccessibilité. Nous avons conclu que les femmes en Afrique subsaharienne ont accepté l'utilisation du préservatif féminin lorsque les utilisateurs potentiels ont eu accès au dispositif, et ont été exposés à des interventions qui ont soutenu l'utilisation d'un préservatif féminin. *(Afr J Reprod Health 2014; 18[4]: 34-44).*

Mots-clés: acceptabilité, préservatif féminin, l'Afrique subsaharienne, le VIH / sida, la contraception, la politique et la pratique.

Introduction

Globally women comprise about half of all people infected with Human Immune-deficiency Virus (HIV) leading to Acquired Immune Deficiency Syndrome (AIDS), though in sub-Saharan Africa women form the majority (58%)[1]. This region accounts for the largest proportion of HIV-positive

women (76%)[2] and the prevalence among women aged 15 - 24 years (3.3%) is more than twice the prevalence rates for men (1.4%)[3]. This gender difference originates from biological, sociocultural, economic and political factors[4,5]. Sub-Saharan Africa has the highest percentage of women with an unmet need for contraceptive methods (about one quarter of women between 15-49 years: 47 of 195 million)[6]. Under these circumstances, accessibility to both male and female condoms appears important, since condoms are the only evidence-based technologies that provide dual protection.

The female condoms allow women to protect themselves[7], and have proved to help them gain more control over their sexuality[8]. Although it has been on the market since 1993, consumers, especially women in sub-Saharan Africa or women with low purchasing power are not in a position to access it[9]. The limited spread of female condoms is remarkable, given the widespread ambition to curb the AIDS epidemic and reduce high fertility rates, and moreover, according to the current international agenda, to enhance women's sexual and reproductive rights[9,10]. While the promotion of the female condom seems obvious in this context, global health agencies often express their concern about the low acceptability and low usage rates of the female condom[11-13]. Therefore, this review was conducted to find answers to our research questions: How has the concept of acceptability been operationalized in recent female condom acceptability studies, and how do any differences in the way acceptability is operationalized relate to the results of these studies in terms of whether women in sub-Saharan Africa accept or reject the female condom?

Methods

We searched literature in two databases: PubMed biomedical literature, and PsycInfo behavioural sciences and mental health; and searched 'grey' literature in relevant mailing lists (RectalMicro IRMA, AVAC, ShareNet) and earlier reviews[14,15] by screening titles and abstracts for combinations of the terms "female condom", "acceptability" and "rejection". In order not to miss out on publications, we included words in our search terms that might indicate acceptability or its opposite, such as accept(ance), adopt(ion), attitude (attitudinal), convenient (convenience), use (using), reject(ion), fail(ure), prefer(ence), perform(ance), skill, experience; terms that might indicate pilot interventions, such as introduce (introduction), promote (promotion), educate (education); communicate (communication), empower(ment), teach(ing), intervention. The review excluded economic analyses, cost-effectiveness and impact studies. We also left out female condom acceptability studies among men, health providers, (health) policy makers and the media, since this is not the focus of our study. All studies used a similar type of female condom, the type with the inner ring[16,17].

We searched recent literature published between 2003 – 2013 when increased funding was available for the global fight against AIDS[9]. Eligible papers were required to be, (1) retrievable, either as a full study or as an article in peer reviewed scientific journals; (2) based on empirical studies; (3) have a sound scientific methodology; (4) study female condom acceptability of the condom type with the inner ring; (5) deal with women in sub-Saharan Africa.

These were our five pre-set criteria. We found 30 studies of which 15 met and 15 did not meet all five pre-set criteria. This latter group was listed with the reasons for exclusion, which ranged from non-retrievability, to not being based on empirical data, employment of poor quality research methodology, not addressing acceptability, and involving men instead of women (this list is available from the first author). Fifteen eligible studies were subjected to an in-depth analysis.

Results

The 15 selected papers cover eight countries in sub-Saharan Africa and 9 (of 15) principal researchers came from the region. Table 1 lists the 15 studies: 9 intervention studies and 6 non-intervention studies. The latter category targeted sexually active women in general, while the target groups of the 9 intervention studies varied considerably: two studies targeted only commercial sex workers[18,19], while three studies had a mixed group of women, including HIV+

women, commercial sex workers, married women, and women who had undergone an abortion[17,20,21]. Almost half (4 out of 9 studies) involved a study population of sexually active women, not further categorised[22-25]. The data could not be systematically organised and profoundly analysed by target group or category of women, as the number of studies for each group was too small and the differentiations between the types of women within each study not clear enough to reassemble and compare the data. The table shows that the study results on female condom acceptability are highly variable and the reported acceptability rates range from 2% to 98%.

Table 1: Summary of results of 15 female condom acceptability studies among women in sub-Saharan Africa

Researcher(s), title, year of publication	Country and Study population	Objectives	Methodology	Results
9 INTERVENTION STUDIES				
Simons B. Over the threshold: female condom introduction, negotiation and use within heterosexual relationships in Lagos, Nigeria [dissertation]. Amsterdam: University of Amsterdam; 2009.	Nigeria: 12 women, 12 men, aged 20-33 years, with sexual relationships, who had never used female condoms.	To describe the socio-cultural factors influencing the introduction of, negotiation about, and use of the female condom between heterosexual partners.	Qualitative: in-depth interviews.	Preference for female condoms over currently used method (p 11). Good preparation, introduction increases acceptability, use (p 71).
Wanyenze R, Atuyambe L, Kibirige V, Mbabazi S, Tumwesigye NM, Djurhuus K, Namale A.The new female condom (FC2) in Uganda: perceptions and experiences of users and their sexual partners. Afr. J.AIDS Res. 2011; 10(3): 219-224.	Uganda: 8 women. 8 men who had used female condoms: female sex workers, HIV+ men, women.	Explore acceptance of female condoms by women users and their sexual partners.	Qualitative: focus group discussions, in-depth interviews.	No problems in using the female condom. Its neutral smell, strength, lubrication and looseness contribute to acceptability (p 219).
Mathenjwa T. Women's experiences with the female condom: a case of Lavumisa female commercial sex workers, in Swaziland [Dissertation]. Durban: University of KwaZulu-Natal; 2010.	Swaziland: 10 Female sex workers, 22-40 years, who used female condoms more than five times, with sustained access to integrated services.	Elicit female sex workers' experiences, perceptions of female condoms.	Qualitative: In-depth interviews and focus group discussions.	Appreciation for the female condom. Prerequisite for using female condoms is training on and practice with how to insert the device (p 32).
Rasch V, Yambesi F, and Kipingili R. Acceptance and use of the female condom among women with incomplete abortion in rural Tanzania. Contraception. 2007; 75(1):66-70.	Tanzania: 475 women admitted to hospital for incomplete abortion, received counselling on female condoms.	Describe the outcome of a post-abortion care intervention aimed at introducing the female condom as a means to prevent women from having unwanted pregnancies and STI/HIV.	Quantitative: case-control design.	39% women consented to use female condoms (p 68); 79% of those who consented were satisfied after 3 months of use (p 69). This group intended to continue using the device.
Napierala S, Kag M, Chipato T, Padian N, Van der Straten A. Female condom uptake and acceptability in Zimbabwe. AIDS Educ Prev. 2008; 20(2):121-134.	Zimbabwe: 379 sexually active women who visited family planning clinic.	Determine proportion of sex acts protected by female condoms; identify women reporting 100% female condom use.	Quantitative: survey.	Increase in users from 1% at baseline to 71% at the end (p 121).
Brady M, Austrian K, Geibel S, Mwangi D, Sudha	Kenya: 302 Women visiting VCT; 50	Explore clients' attitudes, knowledge,	Quantitative: survey.	56% women consented use (p 11); 60% of

Researcher(s), title, year of publication	Country and Study population	Objectives	Methodology	Results
S, Kilonzo N, Ngari H, Njoki E, Khisa G, Ajema C. Female-initiated Prevention: Integrating Female Condoms into HIV Risk-reduction Activities in Kenya. Nairobi: Population Council 2009.	women visiting family planning clinic.	use female condoms.		those who consented found female condoms comfortable to use after having gained some experience (p 17).
Zachariah R, Nkhoma W, Harries AD, Arendt V, Chantulo A, Spielmann MP, Mbereko MP, Buhendwa L. Acceptability and technical problems of the female condom amongst commercial sex workers in a rural district of Malawi. Trop. Doct. 2003; 33(4): 220-224.	Malawi: 90 female sex workers were trained, requested to use female condoms.	Assess acceptability of female condoms, identify common technical problems, discomforts associated with its use.	Quantitative: survey.	88 of 90 sex workers (98%) consented to use female condoms. 98% of the users were satisfied (p 220).
Smit J, Beksinska ME, Vijayakumar G, Mabude Z. Short term acceptability of the Reality polyurethane female condom and a synthetic latex prototype: a randomized crossover trial among South African women. Contraception. 2006; 73(4):394-398.	South Africa: 276 young sexually active women: family planning clients, students, STI clients, commercial sex workers.	To explore the short-term acceptability of the synthetic latex female condom and the polyurethane female condom.	Quantitative survey.	All agreed beforehand to try the female condom. About 50% rated female condoms satisfactory (p 394).
Ezire O. Oluigbo O, Archibong V, Ifeanyi O and Anyanti J. Barriers to repeated use of female condom among women and men of reproductive age in Nigeria. J. AIDS HIV Res. 2013; 5 (6): 206-213.	Nigeria: men and women of reproductive age who are currently using and/or have previously used female condom.	Study possible reasons for low levels of repeated use of female condom among women and men reproductive age and options to address issues related to repeated use female condom	Qualitative: 16 Focus group discussions and 16 in-depth interviews	Major solution of low repeated use of female condoms lies primarily in awareness creation through more education on how to use (p 209).
6 NON INTERVENTION STUDIES				
Okunlola MA, Morhason-Bello IO, Owonikoko KM, Adelkunde AO. Female condom awareness, use and concerns among Nigerian female undergraduates. Journal of Obstetrics and Gynaecology 2006; 26(4): 353-356.	Nigeria: 879 female university undergraduates.	Find out knowledge about, attitude to, use of female condoms.	Quantitative survey	11% 'ever used' a female condom. Major concern: difficult insertion. Even though the use was low, the high acceptance level in terms of willingness to use the device was seen as positive (p 353).
Meekers D and Richter K. Factors associated with use of the female condom in Zimbabwe. Int. Fam Plan. Perspect. 2005; 31(1):30-37.	Zimbabwe: 1740 sexually active consumers visiting retail outlets selling male and female condoms	Assess factors associated with ever-use and consistent use (always or often) of the female condom among marital and non-marital partners.	Quantitative survey	2% 'ever used' a female condom. Perceived ease of use, affordability of the product, prior use were factors associated with women's ever-use (p 30).
Francis-Chizororo M and Natshalaga NR. The female	Zimbabwe: 700 women visiting health	To generate data for developing an action	Quantitative survey.	2% 'ever used' a female condom. Sexual

Researcher(s), title, year of publication	Country and Study population	Objectives	Methodology	Results
condom: acceptability and perception among rural women in Zimbabwe. Afr. J. Reprod. Health. 2003; 7(3)101-116.	clinic.	plan for accessing the female condom through primary health care centres in Zimbabwe.		satisfaction, the fact that the female condom can be inserted before sexual intercourse, and the dual role of preventing pregnancies and STIs were greatly appreciated (p 101).
Dube CC. Exploring women's perceptions on the use of the female condom among female attendees at an inner-city family planning clinic in Durban, South Africa [Dissertation]. Durban: University of Kwazulu Natal; 2011.	South Africa: 30 women aged 18-35 visiting clinic, sexually active, users, non-users.	Describe perceptions, general information, myths, misconceptions, experiences, difficulties with female condoms.	Qualitative: In-depth interviews, focus group discussions	Acceptance of the female condom depends on personal, cultural, societal, programmatic aspects of sexual decision-making (p 75).
Gwebu N. Knowledge and attitudes of women attending the antenatal care clinic at Piggs Peak government hospital as regards the female condom in HIV prevention [Dissertation]. Stellenbosch: University of Stellenbosch; 2012.	Swaziland: 28 women attending antenatal care clinic aged 18-49 who were pregnant or had come for contraception.	To find out the attitudes to and knowledge concerning female condom use in HIV prevention.	Qualitative: In-depth interviews and focus group discussions.	Acceptance can be high and use low due to lack of training on use and little marketing of the device (p iii). Women who didn't like the design did not want to try (p iii).
Naidu M. Perceptions around second generation female condoms: reporting on women's experiences. Anthropological Notebooks. 2013; 19(1):25-34.	South Africa: 1220 (originally 1290) sexually active women (18–52 years) in heterosexual relationships.	Conduct an empirical study on the knowledge and perceptions of the female condom.	Quantitative: A survey with semi-open ended interviews.	3-4% used the female condom (43 of 1220). The rest had almost no exposure and knowledge of female condoms (p 29).

Discussion of the Results

The concept of acceptability

Intervention studies operationalized acceptability in terms of women who are prepared to use the female condoms[17,20,21,23,24], and or who have already used it[18,19,22,25] and who are thus in a position to rate their experiences as being satisfactory or unsatisfactory. Intervention studies operationalized acceptability that women who accept the female condom are the ones who have a positive attitude and/or willingness to use female condoms. Non-intervention studies assessed mixtures of general attitudes, perceptions and fears towards the female condom, which were often grounded on hearsay and myths, rather than user experiences. Acceptability (or rejection) of the female condom is difficult to measure when society is not familiar with the female condom, and when women, who generally lack the information about the device, are asked to judge its acceptability. We will therefore discuss these two groups separately.

Intervention studies

Intervention studies[18-25] reported the results from pilot projects that actively invited sexually active women to participate in the project activities, and to be counselled and trained on whether and how to use the female condom. Some intervention studies recruited women who already had some experience with the female condom, that is, women who had used it at least five times[18,] or sexually active women who agreed in advance to use the female condom, even before the intervention commenced[17,20]. Four of the 9 intervention studies[18,20,22,25] used qualitative methods to assess acceptability, while another

four[19,21,23,24] used quantitative methods to calculate acceptability rates. One study used both methodologies[17].

The majority of the participants in the intervention studies (71%[23], 56%[24] and 98%[19]) consented to use the female condom. The study with the highest percentage of women (98%) willing to use the female condom involved commercial sex workers[19]. The study with the lowest percentage of women willing to use the device consisted of women who visited a clinic for the purpose of post abortion care and family planning and among these, more than one-third (39%) chose to use the female condom[21]. The findings about the satisfactoriness of the female condom, according to the women who used the device were also clear: between 50% to 98 % of these users (50%[17], 60%[24], 79%[21] and 98%[19] in four of the studies) rated their experiences as satisfactory after having used it several times. The highest satisfaction rate (98%) was found in the study done among commercial sex workers[19], though the proportion of women in the other studies who found the female condom to be satisfactory was also consistently above 50%. About the same percentages were found in earlier pilot intervention study in Uganda: about half of the women were interested in trying out the female condom, and three quarters rated it as satisfactory[32]. The evidence suggests that through the implementation of well-planned interventions, normalisation of the female condom is possible and improves with practice[8].

> *Before the demonstration many feared the inner ring might cause pain to the woman or damage a man's penis, but afterwards this no longer seemed to be the case. There was also not any negative talk of the large size of the female condom anymore[22].*

The project interventions helped to remove some of the initial fears of the women about using a female condom:

> *It should be just the same thing as the male condom because the male condom is more or less like the shape of the penis and I believe the one for the female will be like the shape of the vagina[22].*

Some participants did not experience any hesitation to try out the use of the female condom, even after a false start.

> *You try it and it is uncomfortable or it hurts, but you have to try again. You do not have to say: well it is difficult, and then give up[18].*

Women, who had used the female condom frequently (defined as more than five times)[18], stressed that the adaptation to the female condom is a gradual process of gaining confidence in inserting the female condom. This shows how important support and opportunities to gain experience are in the process of getting used to the female condom.

Non-intervention studies

Non-intervention studies[26-31] assessed acceptability at one point in time and asked whether women had ever seen or used a female condom, at least once in their lives. In contrast to the intervention studies, considerably lower rates of women had used female condoms. In four of the six non-intervention studies in which the user rates were measured, these were 11%[26], 3-4%[31], 2%[27] and 2%[28] respectively. The other two non-intervention studies[29,30] were small scale qualitative studies, involving too small a number of respondents to calculate user rates. The generally lower rates in this type of studies might be attributed to factors other than rejection, such as unavailability, unaffordability and unfamiliarity, since these studies were not embedded in a project.

Reasons for satisfaction

Women who evaluated the female condom as satisfactory did so for a variety of reasons. Generally, the condoms made them feel well protected. A participant in a study in South Africa said:

> *I use female condoms as often as possible. I prefer them over male condoms. They are nice and big, impossible to burst and break like it always happens with male condoms[31].*

Women liked the flexibility of the female condoms that they are long lasting and safe enough to protect from contracting HIV/AIDS and

unintended pregnancy. Three studies of the 15 resulted in female condom preference by women who experiences negative side effects to hormonal contraceptives[18,20,31] and perceived female condoms as being the best solution to prevent pregnancies and giving them control.

> *The female condom came to free us from being controlled by men. Now I do not have to keep asking a man for protection. I ask him, if he refuses I just wear my [female] condom[18].*

Or

> *It is difficult to insist on condom use with your steady partner when you have been in the relationship for a long time, because it always comes across as a question of trust and is always accompanied with accusations. But the female condom helps you avoid all that drama because you do not have to ask him for anything. You just tell him that you are using a new method of contraception that has no side effects[18].*

These studies showed that women were satisfied with the female condom as it empowers them and provides them with more freedom, greater autonomy and makes them less dependent on the cooperation of men. Women who agreed to use the female condom seemed unworried about a negative reaction from their partners:

> *My husband said he likes it[25].*

Or

> *The lubrication is good and you do not get bruised. My husband said it felt like we had unprotected sex; it seems he liked it more than the male condom which is tight[20].*

One study recorded various ways in which the women introduced the new device to their partners, showing a lot of creativity[22]. The intervention studies which measured acceptability on the basis of real users' experiences showed that women did not mention complaints from men. Apparently this was not a reason for dissatisfaction.

Reasons for dissatisfaction

Women who found the female condom unsatisfactory cited reasons for their lack of acceptance. In particular, the first impression of the appearance of the female condom was a trigger to reject the device.

> *There is a need for a different model. This one is not appetising. When you see it, all desire disappears[30].*

Or

> *Female condom does not look 'decent' or 'charming' because of its size[28].*

Some women commented that the outer ring looked too big, sending negative impressions to their sexual partners about the size of their vaginas[31]. Others were of the opinion that the inner ring looked "painful"[I] and feared it would not fit into the vagina[19]. The first literature review of female condom acceptability studies by World Health Organization in 1997 documented exactly the same findings: namely, that the appearance and the big size of the female condom are the most common reasons for rejection[33]. Occasionally, some women reported negatively about an aspect that others were positive about. For example, some perceived the lubrication of the female condom as negative,

> *Often the ring slipped out of their fingers, which was attributed to the slipperiness of the inner ring caused by the lubrication[22].*

Or

> *Although a fourth of the participants did not experience any difficulties during the insertion, most participants found it difficult to squeeze the inner ring and hold it firmly in order to be able to insert it[22].*

While others perceived the lubrication of the female condom as positive:

> *...there is no time to make you wet. So the female condom has got a lot of oil that compensates for the fact that you are not turned on, so it does not hurt[18].*

Lubrication appears to be a personal preference. Extra lubrication might be useful for groups like sex workers and teenagers. However, acceptability of the female condom among teenagers has never been researched. Aversion to the process of inserting the female condom was often mentioned as another reason for not liking it[25]. When women used the female condom for the first time, they often experienced insertion difficulties and commented negatively

about the amount of time it took them to insert it. Moreover, women were afraid of the possibility that it might slip inside the vagina when they used it for the first time[25]. The data suggests that interventions which support women in the process of getting used to the female condom are crucial for acceptability of the device. Consequently, we analysed the studies to try and understand the interventions which seemed to be key for increasing acceptability.

Key interventions

Interventions enhanced acceptability and use of the female condom. Informed and supported female condom users were willing to repeat its use[25]. Well-trained providers were essential to counsel or train women to overcome their initial aversion to the female condom, and their perceptions about the difficulties in using it. In one study which reported high user rates:

> *The counsellors were well trained and equipped with skills to empathically listen to their clients[21].*

Another study noted:

> *The best predictors of female condom uptake were measures taken after the counselling intervention[23].*

Four of the nine intervention studies clearly and specifically emphasised the importance of a personal approach to women, through attentive listening to the experienced of the users[18,21,22,23]. These findings are in line with findings from studies on contraceptive acceptability and use, where poor service quality and lack of empathy by service providers precludes the successful introduction of new contraceptives[34,35]. The World Health Organisation has warned that technological innovations never fulfil all requirements of "user-friendliness" and pointed out that each time there is a technological innovation, users and providers will need to consider different sets of trade-offs to satisfy user needs and create market demand[36].

Pre-conceived ideas about condom use

Consumers' acceptance and use of contraceptives is complex, accentuated by the fact that many people would prefer not to use any protective method at all during sex[37]. For example, there is evidence that many men often dislike the male condom or some of its features, while others may still accept and use it[38]. If the level of provision, ease, cost and education related to the female condom is stepped up for women, as it has been over the past decade for men with respect to the male condom, the same higher levels of acceptance might result. Another comparison could be made with the acceptability of the technological innovation of the tampon which is designed to be easily inserted into the vagina during menstruation and absorb the user's menstrual flow.

Latka[39] studied the history of the gradual acceptance of the use of tampons, which also require vaginal insertion. The tampon became successful only after at least 30 years of intensive promotion and adaptation[39]. Technical improvements of female condoms currently take place and might increase choice, and also overall acceptability and use, aspects strongly related to personal preferences[35,40]. Female condoms are concerned not only with social norms about women's personal hygiene and vaginal insertion, but also with norms about sexual relations[41,42]. Unlike the tampon, the female condom needs acceptance by both partners. However, current dominant social and gendered norms on sexuality often expect women not to be active, carrying a female condom and making autonomous decisions on sexuality. Married women, especially, are often thought to have no agency. The idea of women using a condom on their own initiative is generally perceived as socially unattractive, appearing strange, even to some women themselves[43-47]. In this context, it appears that when respondents are not given the opportunity to experience use of the female condom, and acceptability is measured without providing an intervention to assist with this, the resulting data might be misinterpreted, as pre-conceived ideas may be measured. Pre-conceived ideas are often gendered as societies base them on typical gender roles[48].

In sub-Saharan Africa, condom use is often equated with promiscuity, making it difficult to negotiate condom use within marriage[49-52]. It is also associated with limiting sexual pleasure or sexual performance[53]. The metaphors of "eating a

sweet in a wrapper" or "farming with your hoe in a sack", typify some of these gendered ideas about (male) condom use in sub-Saharan Africa[54,55]. Such socially constructed ideas about female condoms have not been explicitly researched for this article. However, evidence suggests that these can be restrictive and negative[56,57]. Such socially constructed ideas can also, depending on how the concept of acceptability is operationalized in these studies, influence the outcomes of acceptability studies.

Conclusion

The way the concept of acceptance has been operationalized is a key factor influencing the results of acceptability of studies on the female condom. A person who has never used, tried or tested it may find it difficult to accurately judge whether it is comfortable and efficacious. Non-intervention studies which gave the respondents no opportunity to experience or use the female condom tended to conclude negatively about its overall acceptability, as these studies measured existing pre-conceived ideas, rather than perceived satisfaction based on actual experience. Intervention studies showed opposite results concerning acceptability. When programmes created free access to the female condom accompanied by key interventions such as empathic support to women by skilled providers in the period during which women became accustomed to the device, acceptability rates were high. This was true for women with varied backgrounds with consistently more than half rating their experiences as satisfactory. Resistance from men was not a significant factor, though the women do suggest that technical improvements be made to the design of the device. Based on our literature review we concluded that women in sub-Saharan Africa accepted the use of the female condom when potential users were given access to the device, and exposed to interventions which supported the use of a female condom.

Conflict of interest

None

Contribution of Authors

Anny Peters conceived and designed the study, collected and analysed the data and prepared the manuscript under supervision of the two co-authors, Francien van Driel and Willy Jansen. All three authors approved the article.

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