

# Knowledge, Attitude, Acceptance and Utilization of the Female Condom Among Population in Brazzaville

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Citation: Massala Peya J, Iviga Doufouilou EN, Eya CS, Wando Obaya NF, Bankazi OKE, Ghoma Linguissi LS (2022) Knowledge, Attitude, Acceptance and Utilization of the Female Condom Among Population in Brazzaville. J Aids Hiv Inf 7(1): 103

## Abstract

**Introduction :** Knowledge and use of the male condom is not uncommon. This study sought to fill this gap by exploring Female Condom knowledge, attitude, acceptance and use in a sample of population to inform intervention measures aimed at increasing the acceptability and usage of the Female Condom taking into cognizance its safety and effectiveness.

**Method Study:** A cross-sectional survey conducted between May and July 2019, was used to explore knowledge, attitudes and practices on the female condom targeting Congolese population at Brazzaville, Republic of Congo. To allow the participants to respond to the questionnaire at a time comfortable to him/her.

**Results:** Seven hundred and twenty questionnaires were administered and 567 questionnaires were included in the final analysis giving a response rate of 81%. In total, 277 men and 290 women aged 14 to 63 participated in the study. Among the participants who have already seen the female condom, 80 have already used it, *i.e.* 21.3%. Of the 80 individuals who reported ever using a female condom, 43 (53.7%) used the female condom with a usual partner and 17 (21.3%) used it with a new partner. Concerning factors contributing to low usage of the female condom, the majority either had difficulty installing (26.3%); great difficulty in fitting (17.5%); the use of the female condom was simply uncomfortable (25%).

**Discussion:** Our study population included 68.3% of participants with higher education, which explains the fact that there is (93.8%) has heard talk about the female condom and among them 66.3% have already seen the female condom. Only 66.3% of people have ever seen a female condom, on the other hand very few people have used it. The majority of people had difficulty using the female condom, including difficulty in inserting the female condom. Difficulties related to the female condom insertion were reported by the majority of the respondents.

**Conclusion:** This study revealed critical gaps in knowledge, condom use, and negotiation skills and highlights the unmet need for interventions to further educate and empower women with and without HIV to prevent spread of HIV in this high-prevalence, high-risk population.

**Keywords:** Female Condom, Knowledge, Attitude, Brazzaville, Utilization of Female Condom

## Introduction

HIV continue to be a major global public health issue. The annual number of new HIV infections globally continued to decline gradually in 2018. The declination has passed from 2.1 millions in 2010 to 1.7 million in 2018, a 16% reduction that leaves the world far off the 2020 target of fewer than 500 000 new infections [1].

In 2020 an estimated 37.7 million people were living with HIV (including 1.7 million children), with a global HIV prevalence of 0.8% among adults. The vast majority of people living with HIV are located in low- and middle- income countries, with an estimated 68% living in sub-Saharan Africa [1]. Sub-Saharan Africa is hardest hit. It is home to over 70% of young people living with HIV/AIDS and to 90% of the AIDS orphans in the world (12.1 millions children). In sub-Saharan Africa, young women are twice as likely to become infected with HIV as their male counterparts. And in sub-Saharan Africa, three out of four new HIV infections among 15–19-year-olds are among young women, and seven out of 10 young women do not have comprehensive knowledge about HIV[2]. Young people are vulnerable to HIV because of risky sexual behaviour, substance use and their lack of access to HIV information and prevention services [3]. Ignorance about the epidemic remains pervasive among young people, many of whom do not know how to protect themselves from HIV [4].

Central Africa is the cradle of HIV and remains the region most affected by the HIV/AIDS pandemic in the world[5]. This situation is associated with limitations in national HIV prevention programs [6]. High-risk behaviors and the abandonment of potential preventive measures are also important risk factors [7].

Condom is among the most popular forms of mechanical barriers as it gives protection for the genital tract from sexually transmitted infections (STIs) [8]. It also prevents pregnancy by acting as a barrier stopping semen from passing into the vagina [9]. Authors, in a previous study, argues that the female condom must be acceptable to both men and women in order to prevent STIs and unwanted pregnancies [10]. Several studies have documented that female condom is one of the family planning methods that is being promoted as the only female-initiated prevention device that offers dual protection against pregnancy and sexually transmitted infections including HIV and / or AIDS [11-13]. The female condom has been widely used for HIV prevention in several developing countries with a high incidence of HIV infection 14. Female condoms holds similar potential than male condom, it is also a tool in preventing the spread of HIV [14,15].

Congo has a 3.1% HIV/AIDS prevalence [16]. Knowledge and use of the male condom is not uncommon. However, HIV prevalence among young women was 2.2% while it was 0.6%, an HIV prevention initiative (female condoms) is needed to empower women to protect themselves against the risk of HIV infection [14]. Adolescent girls and young women continue to experience elevated HIV risk and vulnerability [2].

Mokgetse et al., (2018) explained that women may be able to negotiate use of the female condom more easily than the male condom, giving them potentially more power to protect themselves in a sexual relationship [12]. Bogale, Boer and Seydel (2010) found that women who use condoms have a significantly higher attitude, perceived a significantly higher level of self-efficacy, felt more vulnerable to HIV infection and perceived condoms to be more effective in preventing [17].

No documentation is available regarding condoms and more about the knowledge, attitude, acceptance and use of the female condom among Congolese population. Health authorities should take action for developed health promotion initiatives to encourage the use of the female condom and to educate the public about female condom use. This study sought to fill this gap by exploring Female Condom knowledge, attitude, acceptance and use in a sample of population to inform intervention measures aimed at increasing the acceptability and usage of the Female Condom taking into cognizance its safety and effectiveness.

## Problem Statement

No exact date is known regarding the introduction of female condoms in Republic of Congo as the only female-initiated method that offers dual protection for STIs, HIV and/or AIDS and pregnancy. The factors related to this low distribution are also unknown. Therefore, it was important to study the knowledge, attitude, acceptance and utilization of the female condom among population in Brazzaville.

## Study Area

Brazzaville is one of the 10 Departments that makes the Republic of Congo. It has a population of about 5.2 million persons according to the 2018 the overview World Bank estimate. It is made up of 25 local government areas/councils.

## Definition of Concepts

**Knowledge:** Knowledge in this study refers to awareness of female condoms measured by exposure to health promotion.

**Acceptance:** This study defines acceptability or acceptance as the potential users' level of female condom use as a method to prevent unintended pregnancies, STIs and HIV/AIDS.

**Attitude** is the "state of mind" of a subject or group vis-à-vis an object, an action, another individual or group. It comes out in someone's know-how.

**Female condom** is worn inside the vagina and acts as a barrier to prevent semen getting to the womb.

**Utilization of the female condom:** Insertion it into your vagina before intercourse.

**Views:** Refers to attitude, opinions and beliefs of Congolese population regarding the female condom.

**Barriers:** Situations or problems that prevent or hinder Congolese population from using female condoms.

**Population:** Women and men between the ages of 15 and 50 years old, residing in Brazzaville.

## Method Study, Area and Population

A cross-sectional survey was used to explore knowledge, attitudes and practices on the female condom targeting Congolese population at Brazzaville, Republic of Congo. This study was conducted between May and July 2019 at Institut National de recherche en Science de la Santé which is a higher Researching institution for Health and medicinal plants. A self – administered questionnaire in the french language was used to collect the data. The questionnaire had 30 items in four sections which were socio-demographic, knowledge, attitudes and practices on the female condom. The demographic characteristics were age, gender, matrimonial status, level of education, number of sexual partners. The study consisted of 567 participants over the age of 15 years. Each participant signed an informed consent form before completing the questionnaire after an explanation had been given fully about the objectives of the study. The study was cleared by Comité d'éthique de la Recherche en Science de la Santé (CERSSA). Informed consent was also sought from all the participants.

## Procedure of Data Collection

A covering letter which informed the participants of the significance of the study was obtained from the relevant department and it also assured them of the confidentiality and anonymity of the information they gave. The explanation about the content of the questionnaire was made at the time of the delivery of the questionnaire. To allow the participants to respond to the questionnaire at a time comfortable to him/her, questionnaires were collected later at a time agreed upon by the participant.

## Instrument

To assess the knowledge, the participants were asked if they had ever seen or heard of the female condom, and the sources of first information regarding the female condom. Participants were also asked if they knew how to use the female condom where they had learnt it. The assessment of attitudes was performed on the efficacy of the female condom in preventing sexually transmitted infections (HIV/AIDS included) and unplanned

pregnancies with comparison to the male condom; the participants beliefs whether the female condom reduces the sexual intercourse pleasure or interferes with it, and the fear of being negatively considered by the sexual partner or by the society in general. Participants were also asked to give their opinion on the female condom insertion and its aspect, their intention for future use.

## Method for Data Analysis

The data were analyzed in Epi Info 7.1, to carry out descriptive statistical analyses on all variables. The data collected were sociodemographic variables (age, marital status, religion), the level of knowledge of the female condom, the attitude towards the female condom, and the actual use of the female condom. Specifically, mean was calculated for continuous variables and frequencies and percentages for categorical variables. We then used Chi Square and Fisher exact test to examine the relationship between demographic variables, sexual behaviors, HIV testing, discussion of HIV/STDs, perceived risk of contracting HIV/STDs, condom self-efficacy and consistent condom use.

## Results

### Socio-Demographic Characteristics of Participants

Seven hundred and twenty questionnaires were administered and 567 questionnaires were included in the final analysis giving a response rate of 81%. In total, 277 men and 290 women aged 14 to 63 participated in the study, the mean age of the participants was  $25.74 \pm 7.82$  years for a median of 24 years. The majority of participants had higher education (68.3%), were unemployed (63.3%), single (65.6%). The socio-demographic characteristics by sex are presented in Table 1.

Variables	Male (%)	Feminine (%)	Total
Age groups			
14 to 24	130(41.4)	184(58.6)	314(54.4)
25 to 35	111(55.0)	91(45.0)	202(35.6)
36 to 46	20(65.5)	11(35.5)	31(5.5)
47 to 63	16(80.0)	4(20.0)	20(3.5)
Marital status			
Single	190(51.1)	182(48.9)	372(65.6)
In a relationship with	40(37.7)	66(62.3)	106(18.7)
Married	19(63.3)	11(36.7)	30(5.3)
Free Union	23(47.9)	25(52.1)	48(8.5)
NP	5(45.5)	6(54.5)	11(1.9)
Education			
Primary	4(26.7)	11(73.3)	15(2.6)
Secondary	70(44.9)	86(55.1)	156(27.5)
Superior	197(50.9)	190(49.1)	387(68.3)
NP	6(66.7)	3(33.3)	9(1.6)
Profession			
Student	15(60.0)	10(40.0)	25 (4.4)
Unemployed	153(42.6)	206(57.4)	359(63.3)
Formal sector	49(52.7)	44(47.3)	93(16.4)
informal sector	60(66.7)	30(33.3)	90(15.9)
<b>Total</b>	<b>277(48.9)</b>	<b>290(51.1)</b>	<b>567(100.0)</b>

NB : Not specified

**Table 1:** Socio-demographic characteristics by sex of survey participants

## Knowledge and Use of the Female Condom

The results regarding knowledge and use of the female condom, as a whole and by sex, are presented in Tables 2 and 3. Of all study participants, 532 (93.8%) have heard talk about the female condom. On the other hand, 376 (66.3%) have already seen the female condom. Among the participants who have already seen the female condom, 80 have already used it, *i.e.* 21.3%. Among respondents who had used female condoms, half had used them more than twice. A quarter admitted to having used it at most once and three quarters at most three times (Table 2). The participants (53.3%) answered that they used condoms with their usual partner and 21.3% with a new partner. (Table 3).

	Sex		Total
	Male (%)	Female (%)	
<b>Hear about</b>			
<b>No</b>	13 (37.1)	22(62.9)	35(6.2)
<b>Yes</b>	264 (49.6)	268 (50.4)	532 (93.8)
<b>Already seen</b>			
<b>No</b>	89 (46.6)	102 (53.4)	191 (33.7)
<b>Yes</b>	188 (50.0)	188 (50.0)	376 (66.3)
<b>Total</b>	<b>277(48.9)</b>	<b>290(51.1)</b>	<b>567(100.0)</b>

**Table 2:** Knowledge of female condom by sex of survey participants

	Sex		Total
	Male (%)	Female (%)	
<b>Condom Use</b>			
<b>No</b>	151 (80.3)	145 (77.1)	296 (78.7)
<b>Yes</b>	37 (19.7)	43 (22.9)	80 (21.3)

**Table 3:** Use of female condom by sex of those who have already

In terms of gender distribution, almost as many women (50.4%) as men (49.6%) have heard of the female condom. Relatively, as many women as men have seen the female condom (50% for each group), but only 37 (19.7%) of these men and 43 (22.9%) of these women have used it.

## Condom Use

Of the 80 individuals who reported ever using a female condom, 43 (53.7%) used the female condom with a usual partner and 17 (21.3%) used it with a new partner (Table 4).

Partner type	n	Percent (%)
New partner	17	21.3
Occasional partner	20	25.0
Usual partner	43	53.7
<b>Total</b>	<b>80</b>	<b>100.0</b>

**Table 4:** Type of partner with whom the female condom is used

## Attitudes Concerning the Female Condom

Forty of the eighty individuals (50%) who use the female condom, recognized the importance of the condom in preventing HIV / AIDS. There were only 19 people who said that using the female condom (23.8%) was an alternative against pregnancy. On the other hand, less than a quarter (23.8%) recognize its role in preventing pregnancy.

### Factors Contributing to Low Usage of the Female Condom

Only 25 out of 80 individuals have no difficulty using the female condom. The majority either had difficulty installing (26.3%); great difficulty in fitting (17.5%); the use of the female condom was simply uncomfortable (25%) (Table 4). Some respondents (23.7%), said that the quality of the female condom is noisy.

### Quality and Appreciation

Table 5 shows the variables associated with condom quality. There were 65.8% of participants reporting good condom quality while 10.5% felt that condom quality was poor (Table 5). More than two-thirds (68.8%) of participants said that condoms reduce sexual pleasure (Table 6). Regarding the reduction in pleasure, 55 (68.8%) of individuals revealed that the female condom decreased pleasure (Table 7). Only 16.2% of participants had a preference for female condoms compared to 57.5% who preferred male condoms (Table 8). More than half (57.5%) of the participants intend to continue using condoms in the future (Table 9). A total of 60 out of 80 participants recognized the usefulness of the female condom (Table 10).

Difficulties	n	Percent (%)
Easy installation	25	31.2
Difficult pose	21	26.3
Very difficult pose	14	17.5
Uncomfortable	20	25.0
<b>Total</b>	80	100.0

**Table 5:** Difficulties encountered during integration

Quality	N	Percent (%)
Noisy	19	23.7
Normal	53	66.3
Bad	8	10.0
<b>Total</b>	80	100.0

**Table 6 :** Condom quality

Reduction of pleasure	n	Percent (%)
No	25	31.2
Yes	55	68.8
<b>Total</b>	80	100.0

**Table 7:** Opinion on pleasure reduction

Preference	N	Percent (%)
Feminine	13	16.2
Male	46	57.5
Without reference	21	26.3
<b>Total</b>	80	100.0

**Table 8:** Preference between female and male condoms

Intention to use	n	Percent (%)
No	34	42.5
Yes	46	57.5
<b>Total</b>	80	100.0

**Table 9:** Intention to continue using the female condom in the future

Utility	N	Percent (%)
No	20	25.0
Yes	60	75.0
<b>Total</b>	80	100.0

**Table 10:** Usefulness of the female condom

Half of the participants recognized the importance of the condom in protecting against HIV/AIDS. However, less than a quarter (23.8%) recognized its role in preventing pregnancy (Table 11). A total of 32.5% of the participants who answered the question on condom improvement thought that it should be implemented (Table 12).

Importance	n	Percent (%)
HIV / AIDS	40	50.0
STI	19	23.8
Pregnancy	19	23.8
Alternative to male condom	11	13.8

**Table 11:** Importance of using female condoms

Proposal	n	Percent (%)
Set up	26	32.5
Pleasure	20	25.0
Resistance	14	17.5
Sliding	11	13.8
Opening	4	5.0

**Table 12 :** Condom improvement

## Discussion

As in some Central African countries, such as Cameroon, with a high prevalence of HIV/AIDS [18], in the Republic of Congo, no study has investigated the factors influencing use of the female condom. Female condoms help curb the spread of HIV/AIDS/STIs and unwanted pregnancy only if they are used correctly and consistently [19].

In the area of population health prevention, the female condom may be a valuable option for some women. Efforts to increase the public supply of female condoms need to be supported by behavior change communication strategies for safer sex [20]. Women avoid asking their partners to wear a condom for fear of a violent reaction or accusations of their own suspected infidelity [21].

More women responded to our survey; women are more likely to use female condoms than men. In addition, the suggestion to use a male condom is more of a male trend, so few men suggest the use of a female condom to their partner. Our study population included 68.3% of participants with higher education, which explains the fact that there is (93.8%) has heard talk about the female condom and among them 66.3% have already seen the female condom. The female condom is not common in our environment, and is not commonly used in health prevention and in reproductive health, hence the low proportion of users (21.3%). The female condom is a proven effective female controlled HIV prevention device [22]. When used correctly, they're a reliable method of preventing pregnancy. It's a form of contraception you only need to use when you have sex.

Only 66.3% of people have ever seen a female condom, on the other hand very few people have used it. It could be the lack of availability of female condoms; the Congolese government must continue to play its role in educating people about condoms, especially the female condom, as is the case in Botswana where various strategies need to be developed to effectively promote the female condom amongst young women [12]. The knowledge and understanding of individuals must also improve.

Those of those who understood the importance of the condom in preventing HIV were generally aware of the role of the condom. Unfortunately, very few responded that the female condom could be used for reproductive health, particularly in the fight against unwanted pregnancies.

The majority of people had difficulty using the female condom, including difficulty in inserting the female condom. Difficulties related to the female condom insertion were reported by the majority of the respondents as it was the case in another studies [23-25]. In our African countries, it is not customary to distribute female condoms, and even in pharmacies, they are not supplied [26,27]. Men and women therefore cannot get used to using the female condom, due to a lack of popularization. Habit of use would lead to better ownership. The low rate of female condom use could also suggest that the health authority distributes more male condoms in primary health centers and in NGOs compared to the female condom.

Concerning, the quality and appreciation, the female condom merit special attention for their performance in a dual role. The participants stated, first, that the installation of the condom (32.5%) and the resistance of the condom (17.5%) should be improved. Pleasure was also cited as an area for improvement in condom quality. Female condom use can be quite surprising and confusing at first. While studies have shown that the female condom is more resistant than the male condom, it offers more security, if properly applied.

## Limitations

The study was affected by institutional limitations, inability to access some of the required information relating to the study as the access needed to be authorized by the administration of the Institute. The investigators addressed this limitation by assuring the institutional authority that the information required was purely for academic purposes and that confidentiality would be observed. The study was sensitive and had some cultural connotations. This was addressed by ensuring anonymity confidentiality was afforded in order to get willing subjects and also to avoid biases. The study was conducted at one site with a study sample of 50 female students hence findings cannot be generalized to all universities at national or international level.

The intent of this study was to collect exploratory data on the female condom use in an academic setting. Given this, the results of this study cannot be generalizable to the rural setting populations, mostly with low levels of education and with different environmental characteristics. Indeed, the sample population was made of future health professionals that might have higher knowledge related to health care than others. The results can worsen in non-health professional participants and there is a need for nationwide research on the knowledge, attitudes and practice of the female condom.

## Conclusion

This survey could help generate data for the development of an action plan for female condom access in primary health care centers in the Republic of Congo. A similar study in rural Zimbabwe found that women had problems inserting condoms and were concerned about lubrication, size and appearance, and how to dispose of used condoms [27].

This study revealed critical gaps in knowledge, condom use, and negotiation skills and highlights the unmet need for interventions to further educate and empower women with and without HIV to prevent spread of HIV in this high-prevalence, high-risk population.

## Recommendations

The study highlights the significant challenges related to of shape, material, size and low marketing of female condoms in Brazzaville. It is recommended that the Sexual-Reproductive Health unit of the Ministry of Health develop new strategies to promote the female condom, with the intent to increase utilization in order to reduce the transmission of HIV and/or AIDS and other STIs. Involvement of men in all female condom health promotion campaigns should be ensured. Further research is needed into methods to improve the material, shape, and size and insertion time.



## **Acknowledgements**

We wish to thank all our participants for voluntarily agreeing to be part of the study and we appreciate their valuable information and the Institut National de Recherche en Science de la Santé (IRSSA) authorities for granting permission to conduct the study.

## **Funding**

No funding received for this study. Availability of data and materials data is available upon request.

## **Authors' Contributions**

GLLS conceptualized, designed the study and drafted the manuscript. JMP, EID, and CSE collected the data for the study. JMP and CSE performed the data analysis. All the authors read and approved the final manuscript for submission.

## **Competing Interests**

The authors declare that they do not have any conflict of interest.

## **Consent for Publication**

Not applicable.

## **Ethics Approval and Consent to Participate**

Ethical approval for the study was obtained from the Ethical Review Committee the Comité d'Ethique de la Recherche en Sciences de la Santé (CERSSA) and consent to participate was sought from all the participants. Permission to conduct the study was obtained from the management of the Institut national de Recherche en Science de la Santé (IRSSA). A written, oral informed consent was obtained from the respondents. Confidentiality, anonymity and privacy were ensured by omitting respondents' names and contact details on the questionnaire.

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