



RESEARCH

Open Access

Knowledge, Attitude, and Use of Female Condoms among Female Health Care Workers in Uniosun Teaching Hospital, Osogbo Osun State

Sekinah B. Bola-Oyebamiji^{1,2}, Halimat O. Salahudeen², Adegboyega S. Afolabi¹, Adeniyi O. Fasanu¹, Sunday O. Olarewaju^{3,4}, Daniel A. Adekanle^{1,2}

¹Department of Obstetrics and Gynaecology, Osun State University, Osogbo

²Department of Obstetrics and Gynaecology, UniOsun Teaching Hospital (UTH), Osogbo

³Department of Community Medicine, Osun State University, Osogbo

⁴Department of Community Medicine, UniOsun Teaching Hospital (UTH), Osogbo.

*Correspondence should be addressed to Sekinah B. Bola-Oyebamiji: sekinah.bola-oyebamiji@uniosun.edu.ng

Received 16th April 2024; Revised 10th June 2024; Accepted 14th June 2024

© 2024 Bola-Oyebamiji *et al.* Licensee Pan African Journal of Life Sciences an official publication of Faculty of Basic Medical Sciences, Ladoke Akintola University of Technology, Ogbomosho. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

Background: Female Condom is a form of contraceptives and is an acceptable alternative barrier method to the male condom, providing women and girls with greater control in safeguarding themselves against sexually transmitted infections (STIs) and unintended pregnancies. This study aimed to assess the knowledge, attitude, and use of Female Condoms (FC) as a form of contraception among female healthcare workers in UTH, Osogbo, Osun state, Nigeria.

Methods: This quantitative cross-sectional study involved using a pretested self-administered questionnaire to evaluate the knowledge, attitude, and utilization of female condoms among 308 female healthcare workers in UTH, Osogbo. Analysis was done using SPSS Version 26.0

Results: The mean age of the studied population was 27.91 years. 96.1% were aware of female condoms. However, only 70.8% were familiar with their use. Most of the participants had a positive attitude toward FC.

Age, religion, and occupation were found to have statistically significant associations with knowledge of FC (p values = 0.001, 0.043, 0.001, respectively). 82.7% of respondents strongly agreed that FC is efficacious in preventing pregnancy. However, only 39 (12.6%) use female condoms as contraception. Availability was the most typical reason for non-usage of FC (43.5%).

Conclusion: The studied population is quite aware of FC. However, uptake is limited. Targeted interventions such as training, partner involvement, and improved access may promote the use of FC.

Keywords: Attitude, Female Condoms, Female Healthcare Workers, Knowledge, Use.

1.0 INTRODUCTION

Contraceptives are strategies employed to reduce the rates of unintended pregnancies and unplanned births. Family planning is one of the most cost-effective investments a country can make in the future as it has a lot of benefits ranging from economic development to improvement of maternal and child health indices and women's empowerment [1]. Contraception is indicated in women of reproductive age range of 15 to 49 years who are sexually active irrespective of marital status. Condoms prevent unintended pregnancies, reduce the risk of unsafe abortion, and reduce Sexually Transmitted Infections like HIV [2]. Female condoms (FC) provide dual protection against unwanted pregnancies and sexually transmitted infections. It has emerged as an acceptable alternative barrier method to the male condom.

Contraceptive prevalence refers to the number of women who are currently using, or whose sexual partner is currently using, at least one method of contraception, regardless of the method used [3]. Recent reports estimate that 218 million women of reproductive age in developing countries have an unmet need for contraception [4]. Reasons for this include limited access to contraception, a limited choice of methods, a fear or experience of side effects, cultural or religious opposition, poor quality of available services, and gender-based barriers [2]. In Nigeria, contraceptive prevalence has remained consistently low despite its many benefits and several efforts by government and development partners to increase its uptake [5]. While there are various methods of contraceptives, condoms remain the only form of contraceptives that provide dual protection against unwanted pregnancies and sexually transmitted infections and provide safer sex for partners [6].

More recently, Female Condoms (FC) have emerged as an acceptable alternative barrier method to the male condom, providing women and girls with greater control in safeguarding themselves against sexually transmitted infections (STIs) and unintended pregnancies [7,8]. Research indicates that females have higher prevalence rates of STIs compared to males, exemplified by Nigeria's national HIV prevalence [9]. Among adults aged 15 to 49, women in this age group are more than twice as likely to be living with HIV than men [9,10]. Moreover, prevalence rates are particularly elevated in young women aged 20 to 24, with more than three times the likelihood of living with HIV compared to young men in the same age group [7-9]. Additionally, studies suggest that female

condoms may be more effective than male condoms in preventing STIs and could be as effective as male condoms in preventing HIV transmission [7,10,11].

Healthcare providers, including female healthcare workers, are often viewed as community role models, wielding considerable influence in guiding contraceptive decisions and sexual health behaviours among their patients [12]. Their knowledge, attitudes, and practices regarding female condoms can influence patient counseling, education, and access to these contraceptives. It can also influence the broader community's perception and behaviour toward female condom use. Findings from a systematic review of female condom use among low and middle-income countries showed that there are factors that serve as barriers to the use of FC, and the four key barriers include partner acceptability, functionality, aesthetics, and access [13].

While there is a lot of data on knowledge and practice of contraceptives among various populations in Nigeria, there is a gap in knowledge on female healthcare workers' knowledge, attitude, and use of female condoms in Osogbo, Osun State in particular, and Nigeria in general. This study is therefore aimed at assessing the knowledge, attitude, and use of female condoms as a form of contraception among female health care workers in UniOsun Teaching Hospital, Osogbo, Osun state, Nigeria (UTH). We seek to identify factors that influence adopting this health behaviour and an individual's self-efficacy in taking up this health habit.

Findings from this study will add to the existing body of knowledge on female condom use, particularly among healthcare workers. They can be used in informing policy advocacy and program planning, which can ultimately result in increased uptake and use of female condoms among both healthcare workers and the general population.

2.0 METHODOLOGY

2.1 Study Design and Population

This quantitative, cross-sectional study involved obtaining responses to a self-administered questionnaire administered to 308 consenting female healthcare workers in UTH, Osogbo. The female healthcare workers included doctors, nurses, pharmacists, medical laboratory scientists, health assistants, record officers, ward orderlies, technicians, and Physiotherapists. The study excluded

healthcare workers who declined consent to participate.

2.2 Study Area

The study was conducted in UNIOSUN Teaching Hospital (UTH), Osogbo, Osun State, Southwest Nigeria, between November 2023 and January 2024. Osogbo is a state capital located in the country's western region. It is made up of two local governments, namely Olorunda and Osogbo.

2.3 Sample Size Determination

The sample size was calculated using Leslie Fischer's formula: $n = z^2 pq / d^2$.

Where n =sample size; z =the standard average deviation corresponding to the 95% confidence level (1.96); p =estimate of key proportion (24% or 0.24). This prevalence is derived from an earlier study [7] conducted in Kigali; $q = 1 - p$ ($1 - 0.24 = 0.76$); d =degree of accuracy desired (0.05), resulting in a sample size of 280. We added a 10% attrition rate to account for the possibility of non-response; this increased our calculated sample size to 308.

2.4 Pretesting of Research Instrument

A research assistant administered the instrument to twenty female State Specialist Hospital, Asubiaro, Osogbo nurses. This evaluation evaluated the questions' clarity and the questionnaire's reliability.

2.5 Data Collection

The questionnaire was administered to willing health workers after explaining the purpose of the study. The respondents were told not to write names on the self-administered questionnaire to ensure confidentiality. Respondents were encouraged to ask questions about what they did not understand in the question, and an explanation was given as required to aid their understanding of unfamiliar terms. The questionnaires were retrieved from each respondent immediately after completion and were reviewed for completion.

2.6 Data Analysis

The data obtained were analyzed using Statistical Product and Service Solutions for Social Sciences, version 26.0. Continuous variables were represented as mean (standard deviation), while categorical variables were summarized as percentages. Bivariate and multivariate analyses were used to compare the association between variables. A confidence limit of 95% was used, and a P-value less than 0.05 was considered significant.

2.7 Ethical Approval

Research approval was obtained from the UNIOSUN Teaching Hospital Ethics and Research Committee (UTH/REC/2023/11/927), and participants were informed of their voluntariness to participate in the study. Confidentiality of information shared was also assured.

3.0 RESULTS

Out of the 308 female healthcare workers that participated in the study, most of them, 61.7% ($n = 190$), were within the age range of 20 to 39 years with a mean age of 27.9 ± 3.72 while respondents of 40 years and above, accounted for 115 (37.3%). The number of married women was highest at 77.9% ($n = 240$), with the majority practicing Christianity (75.3%). Also, the majority (89.3%) of the respondents had tertiary education, and Nurses made up the most significant percentage, 34.3% ($n = 106$) (Table 1).

Table 1. Socio-demographic Characteristics of the Participants

Variable	Frequency	Percentage
Age group		
≤19yrs	3	1.0
20-24yrs	51	16.6
25-29yrs	36	11.7
30-34yrs	46	14.9
35-39yrs	57	18.5
≥40yrs	115	37.3
Mean ± SD	27.91 ± 3.72	
Marital Status		
Married	240	77.9
Single	57	18.5
Divorced	3	1.0
Widowed	5	1.6
Cohabiting	3	1.0
Religion		
Christianity	232	75.3
Muslim	76	24.6
Level of education		
None	3	1.0
Secondary	30	9.7
Tertiary	275	89.3
Occupation		
Doctor	80	26.0
Nurse	106	34.3
Pharmacist	12	3.9
Medical Lab Scientist	12	3.9
Health Assistant	21	6.8
Record officer	15	4.9
Ward orderly	30	9.7
Technician	20	6.5
Physiotherapist	12	3.9

Table 2 shows that most respondents have heard about the female condom (96.1%), and in most cases, the first source of information was school (43.2%). Furthermore,

Table 2. Knowledge of Respondents on Female Condom (FC)

Table 2: Knowledge of Respondents on Female Condom (FC)

Variable	Frequency	Percentage
Have you ever heard of female condoms?		
Yes	296	96.1
No	12	3.9
If yes, what was your first source of information (N=296)		
Media	42	14.2
Colleagues	18	6.1
Family planning clinic	105	35.5
School	128	43.2
Others	3	1.0
Do you know how to use a female condom?		
Yes	218	70.8
No	90	29.2
How did you learn the use (N=218)		
Media	20	9.2
Training	83	38.1
Colleagues	18	8.3
Family planning clinic	97	44.5

70.8% (n=218) of the respondents know how to use a female condom, while 44.5% learned how to use a female condom at the family planning clinic.

In Table 3, a significant association was found between age, religion, occupation, and awareness of female condoms. Respondents aged 29 to 38 showed the highest level of awareness compared to others (34.8%). Also, the awareness level was higher among Christians and Nurses (74.3% and 35.8%, respectively). However, the association between awareness about FC and marital status, as well as the level of education, was not statistically significant (p-value 0.472, 0.183, respectively).

In Table 4, about 82.7% (n= 255) of the participants strongly agreed/agreed that the FC is efficacious in preventing unwanted pregnancy. A similar percentage also agreed with the fact that FC can prevent sexually transmitted infections and HIV (88.3% and 83.5%, respectively). About two-thirds (62%) of the respondents disagree/strongly disagree with the use of female condoms. 72.1% of the participants think that a female condom is as effective as a male condom regarding the level of protection. Furthermore, an average of 65% think that religion and culture affect the use of female condoms and that female condom confers more safety for women. The use of female condoms was affected by a lack of acceptance by male partners in about one-third (34.1%) of the respondents. A similar percentage agreed that it is easier to remove compared to a male condom (31.8%) and can be worn for several hours before sexual intercourse (34.8%), while 55.2% disagreed/strongly disagreed that insertion is easier compared to the male condom. Half of the respondents believed that female condom interferes with sex, while one-third of them had a contrary opinion.

Table 3. Knowledge of FC and socio-demographic characteristics

Variable	Have you ever heard about the female condom?		Df	Chi-square	p-value
	Yes	No			
Age group					
19-28yrs	84(28.4)	0	3	16.353	0.001*
29-38yrs	103(34.8)	3 (25.0)			
39-48yrs	74(25.0)	3 (25.0)			
49-58yrs	35(11.8)	6 (50.0)			
Marital Status					
Married	228(77.0)	12 (100.0)	4	3.535	0.472
Single	57(19.3)	0			
Divorced	3 (1.0)	0			
Widowed	5 (1.7)	0			
Cohabiting	3 (1.0)	0			
Religion					
Christianity	220 (74.3)	12 (100.0)	1	4.090	0.043*
Muslim	76 (25.7)	0			
Level of education					
None	3 (1.0)	0	2	3.392	0.183
Secondary	27 (9.1)	3 (25.0)			
Tertiary	266 (89.9)	9 (75.0)			
Occupation					
Doctor	80 (27.0)	0	8	59.623	0.001*
Nurse	106 (35.8)	0			
Pharmacist	9 (3.0)	3 (25.0)			
Medical Lab Scientist	12 (4.1)	0			
Health Assistant	21 (7.1)	0			
Record officer	15 (5.1)	0			
Ward orderly	24 (8.1)	6 (50.0)			
Technician	20 (6.8)	0			
Physiotherapist	9 (3.0)	3 (25.0)			

*Statistically significant if p-value ≤ 5% (0.05)

In Table 5, of those of the respondents who are not using female condoms, 16.7% (n=45) of them are not aware of its existence, while 35.7% (n=96) find it cumbersome to use. Almost half of them (43.5%) feel it is not readily available, while in about two-thirds (38.3%) of them, their partner does not approve of its use, or they do not know how to use it (29.4%).

For those of the respondents who use female condoms, 69.2% of the participants find it readily available, and 53.8% believe that it is easier to use compared to male condoms. Close to half (46.2%) use it because it can be worn for some hours before sexual intercourse. More than two-thirds of them use female condoms because they improve sexual satisfaction and better protect against sexually transmitted infections (69.2% and 76.9%, respectively). Table 6 shows a significant association between the attitude and practice of the respondents (P<0.001), which implies that the attitude of the respond-

Table 4. Attitude of participants toward the use of FC

	Strongly Agree N (%)	Agree N (%)	Neutral N (%)	Disagree N (%)	Strongly disagree N (%)
Efficacious in preventing unwanted pregnancy	90(29.2)	165(53.5)	41(13.3)	9(2.9)	3(1.0)
Efficacious in preventing sexually transmitted infections	87(28.2)	185(60.1)	30(9.7)	3(1.0)	3(1.0)
Efficacious in preventing HIV	96(31.2)	161(52.3)	30(9.7)	15(4.9)	6(1.9)
The use of FC implies mistrust in a sexual partner	21(6.8)	60(19.5)	36(11.7)	126(40.9)	65(21.1)
FC protects as the male condom does	84(27.3)	138(44.8)	45(14.6)	35(11.4)	6(1.9)
Religious beliefs can affect the use of FC	50(16.2)	139(45.1)	57(18.5)	44(14.3)	18(5.8)
Culture affects the use of female condom	47(15.3)	163(52.9)	39(12.7)	44(14.3)	15(4.9)
Use of FC will not be accepted by a sexual partner	27(8.8)	78(25.3)	99(32.1)	89(28.9)	15(4.9)
FC provides more safety for women	57(18.5)	152(49.4)	62(20.1)	34(11.0)	3(1.0)
Use interferes with sexual intercourse	40(13.0)	107(34.7)	81(26.3)	62(20.1)	18(5.8)
FC use improves sexual satisfaction for females	18(5.8)	50(16.2)	103(33.4)	104(33.8)	33(10.7)
Use affects sexual satisfaction for males	41(13.3)	97(31.5)	78(25.3)	74(24.0)	18(5.8)
FC is easier to use compared to the male condom	12(3.9)	57(18.5)	69(22.4)	117(38.0)	53(17.2)
Insertion is easier compared to male condom	12(3.9)	75(24.4)	51(16.6)	113(36.7)	57(18.5)
Removal is easier compared to male condom	15(4.9)	83(26.9)	65(21.1)	109(35.4)	36(11.7)
Can be worn for some hours before sex	15(4.9)	92(29.9)	51(16.6)	117(38.0)	33(10.7)

Table 5. Practice of Female Condom (Reasons for not using Female Condom and Reasons for Usage) N=269

Variable	Sub-Variable	Frequency	Percentage
Reasons for Not Using Female Condoms			
Not aware of its existence	Yes	45	16.7
	No	224	83.3
I find it cumbersome to use	Yes	96	35.7
	No	173	64.3
It has a high failure rate	Yes	40	14.9
	No	229	85.1
Not readily available	Yes	117	43.5
	No	152	56.5
My partner disapproves of its use	Yes	103	38.3
	No	166	61.7
Do not know how to use it	Yes	79	29.4
	No	190	70.6
Reasons for using Female Condom (n=39)			
It is readily available	Yes	27	69.2
	No	12	30.8
It is easier to use compared to the male condom	Yes	21	53.8
	No	18	46.2
It can be worn for up to 8 hours before sexual intercourse	Yes	18	46.2
	No	21	53.8
Improves sexual satisfaction	Yes	27	69.2
	No	12	30.8
Better protect against sexually transmitted infections	Yes	30	76.9
	No	9	23.1

ents determines the usage of female condoms. However, there was no statistical association between occupational status and the use of female condoms (p = 0.116).

4.0 DISCUSSION

Healthcare workers' knowledge, skills, attitudes, and be-

Table 6. Relationship between attitude and use of female condom

Variable	FC usage			chi-square value	p-value	
	Yes	No	Total			
Attitude				22.632	<0.001*	
	Poor	6(15.4)	151(56.1)			157 (51.0)
Good				2.465	0.116	
		33 (84.6)	118(43.9)			151 (49.0)
Occupation				2.465	0.116	
	Professional	15 (38.5)	71(26.4)			86 (27.9)
	Non-professionals	24 (61.5)	198(73.6)			222 (72.1)

Statistically significant if p-value ≤ 5% (0.05)

haviour play a crucial role in contraceptive utilization, particularly for methods like the female condom, which faces perceived barriers [14].

This underscores the significant role of healthcare workers in promoting increased contraceptive usage. Therefore, this study investigated the factors that influence the use of female condoms among female healthcare workers in our institution.

Most of the respondents had tertiary education, which is consistent with similar studies such as one conducted in Botswana [15]. This is probably because the population is made up of health professionals. We found a high level of awareness of FC among the respondents, although familiarity with use was relatively low. This is consistent with some studies among nurses [16, 17] and, surprisingly, among nursing mothers in Osogbo [18]. We postulate that education in the case of the nurses and health education provided to the nursing mothers in family planning units contributed to the higher awareness rates [15].

However, utilization rates in these studies were lower than our findings [16,17]. This may be attributed to the composition of our study population, which is primarily doctors and nurses. The primary sources of information about female condoms reported in our study included educational institutions and family planning units. This underscores the importance of health education programs in disseminating contraceptive information.

However, despite knowledge and availability, significant underutilization of FC was observed in our study. The most typical reason cited for this was non-availability (43.5%). This reason can be averted by increased provision of FC in a proportion like the male condom. Reduced demand for FC despite availability was reported by earlier studies [19,20]. This is surprising given the protection against STI and control by the female partner that the use of FC affords women. The primary reason cited was a need to agree to the use of FC with their partner before initiation of sexual intercourse and stigma [19,20]. This reduced acceptability cut across developed countries and LIMCs. [18,19]. Continuous education programs targeting correct utilization and better designs were suggested as measures that may improve acceptance [20].

Married participants were more aware of and used FC than their unmarried counterparts. This aligns with findings from Migori County, Kenya [21]. In contrast, single women in Botswana reported higher usage, possibly due to greater autonomy in decision-making and the need to protect themselves against STIs., [22].

Overall, participants demonstrated positive attitudes towards FC, consistent with reports from other studies [2,16,23,24]. Culture, religious belief, and sexual satisfaction were the foremost attitudes that affected FC uptake in our study population. Our study is limited by not examining barriers to FC usage, which a qualitative study may explore better. Earlier studies cited religious and cultural factors, limited availability, partner disapproval, and perceived difficulty in use as barriers [19-22, 24-27].

We established a significant association between attitudes towards FC and its usage, suggesting that positive attitudes influence behavioural outcomes. This finding was also reported by Obembe *et al.* [23]. However, there was no statistically significant association between occupational status and female condom usage, indicating that factors beyond professional roles contribute to contraceptive decision-making. This factor could be further explored in a qualitative study, as education and awareness should influence self-efficacy in adopting health behaviours [16]. Furthermore, the health belief model has been shown to influence the uptake of health habits such as

condom use [28]. This model involves accepting a health habit (female condom use) due to the perceived adverse effect of not doing this (in this case, unwanted pregnancies, HIV infection, and other STIs) [23,28].

In conclusion, while awareness and positive attitudes towards female condoms are prevalent among female healthcare workers in UTH, Osogbo, there remains a considerable gap between knowledge and attitudes towards FC and its uptake. Targeted interventions such as health promotion, male partner involvement, and continuous sensitization at family planning clinics using the health belief model may enhance uptake. Thereby further promoting sexual and reproductive health and sexually transmitted disease prevention.

Acknowledgement

We acknowledge the UTH, Osogbo management, and all hospital staff members for their support during this study.

Conflicts of Interest

The authors declare that there is no conflict of interests.

Authors' Contributions

SBB-O conceived and designed the study, contributed to data collection, data analysis tools, and manuscript writing. **HOS** contributed to study design, data collection, data analysis tools and analysis of data. **ASA**, **AOF** contributed to data analysis tools and manuscript writing. **SOO** contributed to analysis of data and manuscript writing. **DAA** contributed to study design and manuscript writing. All authors approved the final copy of the manuscript..

REFERENCES

1. Pillai VK, Nagoshi JL. Unmet Family Planning Need Globally: A Clarion Call for Sharpening Current Research Frame Works. *Open Access J Contracept.* 2023 20; 14:139-147.
2. Fasehun LK, Lewinger S, Fasehun O, Brooks M. Barriers and Facilitators to Acceptability of the Female Condom in Low-and Middle-Income Countries: A Systematic Review. *Ann Glob Health.* 2022;88(1):1-15.
3. Festin MPR. Overview of modern contraception. *Best Pract Res Clin Obstet Gynaecol.* 2020; 66:4-14.
4. Bearak J, Popinchalk A, Ganatra B, et al. Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990-2019. *Lancet Global Health.* 2020;8(9):e1152-e1161.
5. Fadeyibi O, Alade M, Adebayo S, Erinfolami T, Mustapha F, Yaradua S. Household Structure and Contraceptive Use in Nigeria. *Front Glob Women's Health.* 2022; 3:1-9.

6. Berer M. Dual Protection: More Needed than Practised or Understood. *Reprod Health Matters*. 2006;14 (28):162–70.
7. Mbarushimana V, Ntaganira J. Knowledge and Attitude to Female Condom Use among Undergraduates of Kigali Health Institute. *Rwanda Journal of Health Sciences*. 2013;2 (1):16–25.
8. Masvawure TB, Mantell JE, Mabude Z, Ngoloyi C, Milford C, Beksinska M. “It’s a Different Condom, Let’s See How It Works”: Young Men’s Reactions to and Experiences of Female Condom Use During an Intervention Trial in South Africa. *The Journal of Sex Research*. 2014 20;51(8):841–51.
9. Adebawale AS, Titiloye M, Fagbamigbe AF, Akinyemi OJ. Statistical modeling of social risk factors for sexually transmitted diseases among female youths in Nigeria. *The Journal of Infection in Developing Countries*. 2013 15;7 (01):017–27.
10. National Population Commission (NPC) [Nigeria] and ICF. 2019. Nigeria Demographic and Health Survey 2018 Key Indicators Report. Abuja, Nigeria, and Rockville, Maryland, USA: NPC and ICF.; <http://ngfrepository.org.ng:8080/jspui/handle/123456789/3145>
11. Wiyeh AB, Mome RKB, Mahasha PW, Kongnyuy EJ, Wiysonge CS. Effectiveness of the female condom in preventing HIV and sexually transmitted infections: A systematic review and meta-analysis. *BMC Public Health*. 2020;20(1):1–17.
12. Okonko I, Okerentugba P, Adejuwon A, Onoh C. Prevalence of sexually transmitted infections (STIs) among attendees of Lead City University Medical Centre in Ibadan, South-Western, Nigeria. *Arch Appl Sci Res*. 2012;4 (2):980–7.
13. Mantell JE, West BS, Sue K, Hoffman S, Exner TM, Kelvin E, et al. Health care providers: A missing link in understanding acceptability of the female condom. *AIDS Education and Prevention*. 2011;23(1):65–77.
14. Segosebe K, Kirwan M, Davis KC. Barriers to Condom Negotiation and Use Among Female Sex Workers in the United States and United States-Mexico Border Cities: A Systematic Review. *AIDS Behav*. 2023 Sep;27(9):2855-2864.
15. Preethy D’Souza, Julia V. Bailey JS and SO. Factors influencing contraception choice and use globally: a synthesis of systematic reviews. *The European Journal of Contraception & Reproductive Health Care*. 2020;27(5):364–72.
16. Petkova MS, Elabor ZB, Djarova-Daniels T, Pavlova EG, Omole OB. Nurses’ knowledge of and willingness to promote female condom use in Johannesburg Health District. *S Afr J Sci*. 2018;114(7–8):41–7.
17. Mokgetse M, Ramukumba MM. Female condom acceptability and use amongst young women in Botswana. *Curationis*. 2018, 20;41(1).
18. Akinwande OE, Adeyemo MO, Oluwatosin OA. Knowledge and Utilization of Female Condom Among Nursing Mothers Attending Immunization Clinics In Public Hospitals In Osogbo Metropolis, Osun State, Nigeria. *West African Journal of Nursing*, 2018;24(1):15.
19. Hart GJ, Pool R, Green G, Harrison S, Nyanzi S, Whitworth JA. Women's attitudes to condoms and female-controlled means of protection against HIV and STDs in south-western Uganda. *AIDS Care*. 1999;11(6):687-98. doi: 10.1080/09540129947596.
20. Burton J, Bedford R, Graham C, Nadarzynski T. Perceived barriers and facilitators to female condoms among UK based healthcare professionals. *Eur J Contracept Reprod Health Care*. 2020 (4):299-304. doi: 10.1080/13625187.2020.1777966 32567987.
21. Boraya JO, Githae C, Atandi TA, Gachau A. Social and psychological factors affecting utilisation of female condom among youths in Migori County, Kenya. *Health Psychol Open*. 2018;5(2).
22. Mokgetse M, Ramukumba MM. Female condom acceptability and use amongst young women in Botswana. *Curationis*. 2018;41(1):1–6.
23. Obembe TA, Adebawale AS, Odebunmi KO. Perceived confidence to use female condoms among students in Tertiary Institutions of a Metropolitan City in Southwestern, Nigeria. *BMC Res Notes*. 2017 11;10(1):398.
24. Aमेvor E, Tarkang E. Determinants of female condom use among female tertiary students in the Hohoe Municipality of Ghana using the Health Belief Model. *Afr Health Sci*. 2022; 22(1).
25. Okunlola MA, Morhason-Bello IO, Owonikoko KM, Adkunle AO. Female condom awareness, use and concerns among Nigerian female undergraduates. *J Obstet Gynaecol (Lahore)*. 2006; 26(4):353–6.
26. Peters A van DFJW. Acceptability of the female condom by sub-Saharan African women: a literature review. *Afr J Reprod Health*. 2014;18(4):34–44.
27. Obasohan PE. Religion, Ethnicity and Contraceptive Use among Reproductive Age Women in Nigeria. *Int J MCH AIDS*. 2015; 1:63–73.
28. Tarkang EE, Pencille LB. Psychosocial predictors of consistent condom use among migrant road construction workers in the Southwest Region of Cameroon using the Health Belief Model. *Pan African Medical Journal*. 2018;29-34.
29. Endeshaw, D., Dessie, G., Kasa, A.S. et al. Consistent condom utilization among sexually active HIV positive individuals in Sub-Saharan Africa: systematic review and meta-analysis. 2024. *Sci Rep* 14, 5837.