

THE KNOWLEDGE AND ATTITUDE OF THE USAGE OF FEMALE CONDOM AMONG STUDENTS IN THE UNIVERSITY FOR DEVELOPMENT STUDIES TAMALE CAMPUSDr. Der E. M.¹, Dam M. R.,² Zakaria A. H.,² Zakaria A. ², Dr. Nakong N. V.³¹Department of Pathology, School of Medicine and Health Science, University for Development Studies (SMHS; UDS) – Tamale, Ghana.²Department of Nursing, school of Allied Health Science, University for Development Studies (SAHS; UDS) – Tamale, Ghana.³Department of Midwifery, school of Allied Health Science, University for Development Studies (SAHS; UDS) – Tamale, Ghana.***Corresponding Author: Dr. Der E. M.**

Department of Pathology, School of Medicine and Health Science, University for Development Studies (SMHS; UDS) – Tamale, Ghana.

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ABSTRACT

Background: The female condom (FC) has been identified as an important tool in preventing sexually transmitted infections (STIs) and unwanted pregnancy. The aim of this study was to assess the knowledge and acceptability of the usage of the FC among the undergraduate students in the Tamale campus of the University for Development Studies (UDS). **Material and methods:** A cross-sectional descriptive study was conducted among 153 undergraduates. Study participants were recruited by a simple random sampling technique. **Results:** The respondents were very young with mean age of 23.9 years, (SD±5.4), the great majority being single (81.0%). Approximately 88.2% (P<0.001) were aware of the FC, with the lecture rooms (45.2%) as common sources of information. Respondents identified FC as a tool that will prevent both unwanted pregnancies and STIs {87(64.4%), P<0.001}. Many of the respondents were not in any intimate sexual relationship {88(57.5%); P = 0.012}. Of those in intimate sexual relationships, the great majority never used the FC 81.5% (P<0.001). The common reasons for the low patronage of the FC were: the individual's religion {(79.7%); P<0.001}, lack of partner approval {(66.7%); P<0.001} and cultural beliefs {(56.9%); P = 0.022}. The great majority of the respondents intend to use the FC in their future sexual activity {121(79.1%); P<0.001}. **Conclusion:** The result of the study revealed a high awareness level of the female condom but a very low attitude towards its acceptance and utilisation. Therefore, there is the need for increased public education on the FC and the benefits among sexually active individuals.

KEYWORDS: Female condom, unwanted pregnancy, STIs, Knowledge, acceptability, Ghana, Tamale.**INTRODUCTION**

Unregulated reproductive and sexual needs of women globally have been found to post serious current and future public health problems, more so in Sub-Saharan Africa.^[1-4] The female condom (FC) has been identified as a contraceptive method that offers women double protection against sexually transmitted diseases such as HIV and unwanted pregnancies and thus regular their reproductive and sexual needs.^[5,6] Sexually active adolescents aged 10-24 years have the highest risk of unwanted pregnancies and contracting sexually transmitted diseases (STDs), this is more so with those within 15-24-years.^[7-9]

The average prevalence rate of contraceptive usage in Ghana is 26.5% but the Northern region has a relatively lower percentage of about 11.2% and the percentage of women not currently using any contraceptive method is

88.8% as against the nation-wide average of 73.5%.^[8] University for Development Studies (UDS), Tamale campus just like the numerous tertiary institutions in the country, has many sexually active students who should know the benefits of the female condom. This study aims at determining the knowledge and acceptability of the usage of the female condom among undergraduate students of the Tamale campus of the UDS Tamale, in the northern region of Ghana.

MATERIAL AND METHODS

Study area: The study was conducted at the Tamale campus of the University for Development studies (UDS) in the northern region of Ghana. The Tamale Campus is located in the Sagnarigu District of the northern region. The campus offers 9 courses; medicine, nursing, midwifery, health science education, medical laboratory and anaesthesia. The campus has a student

population of about 4,860 as at the time this research was conducted.

Study design: This was a cross-sectional descriptive study.

Study population: The study was conducted among 4,860 students within the Tamale campus.

Study variable: The dependent variable was the usage of female condom among students of UDS. The independent variables were; age, gender, religion and marital status.

Sampling method and data collection tool: A simple random sampling technique was used in the data collection. A structured questionnaire was used to collect the data. The questionnaire comprised of four sections that is: demographic information, knowledge of female condom usage, attitude and acceptability of the female condom and accessibility of the female condom.

Sample size: The sample size of participants recruited for the study was determined by using the Snedecor and Cochran (1998) formula for a point estimate sample:

$N = z^2 pq/d^2$ where: N = sample size, z = z- score of a 95% confidence level of the study equivalent to 1.96, p = estimated prevalence of contraceptive usage (11.2%=11.2/100=0.112) according to the GDHS 2014, q= proportion of female condom usage (1-p) and d= margin of error of the study thus 100% - 95%= 5% in this study.

Therefore, the sample size:

$N=1.962 \times 0.112(0.888)0.052$, thus N=153

The sample size used in this study was 153 participants.

Data entering and cleaning: Data was processed and analysed using Statistical Package for Social Sciences (SPSS) statistical software version 20. Frequency distributions; percentages and Fisher's exact test with 95% confidence level (C.I) was calculated for statistical significance tests between variables and the analysed data were presented by chart; tables; graph and texts.

Ethical consideration: Approval was sorted from the Dean of students before commencing on the data collection. Permission was asked from students before administering the questionnaires. Students who did not wish to take part were exempted.

RESULTS

Socio-demographic characteristics of respondents

A total of 153 undergraduate students in Tamale campus (Dungu) of the University for Development Studies were interviewed. The ages ranged from 18 - 60 years, with mean age of 23.9 years, (SD±5.4) and a modal age group of 18-25 years. Majority of the respondents were females

95 (62.1%, P = 0.003). Approximately 50.3% of the respondents were offering Bachelor of Nursing (Bsc Nursing) (**Figure 1**). The great majority of the respondents were single and never married before 124 (81.0%). Many were Christians were 81(52.9%; P <0.001), (**Table 1**).

Knowledge about female condom

Out of the 153 respondents interviewed, 135 (88.2%; P<0.001) had heard of the female condom. Of this number, 61 (45.2%) had the information from the lecture rooms (**Table 2**).

Many of those who have heard of the female condom identified it as a tool that will prevent both unwanted pregnancies and sexually transmitted infections {87(64.4%), P<0.001} (**Table 2**). Also many said it will not reduce sexual pleasure {(76(56.3%); P< 0.051}, (**Table 2**).

Attitude towards the usage of female condom

Majority of the respondents were not currently or previously been in any intimate sexual relationship. {88(57.5%); P = 0.012}. Of those in or previously in intimate sexual relationships, the great majority have never used the female condom before {53(81.5%); P<0.001}. Of the 12 (18.5%) who have used the female condom before, majority used it occasionally 9 (75.0%), (**Table 3**). When respondents were asked their future intentions regarding the female condom usage, the majority said they will {121(); P<0.001}, (**Table 3**).

Factors affecting female condom usage

Reasons for the low patronage of female condoms by the respondents were attributed to the following factors: Cultural beliefs {87(56.9%), P = 0.022}, lack of partner approval {102(66.7%), P<0.001} and the religion of the individual {122(79.7%), P<0.001}, (**Table 4**).

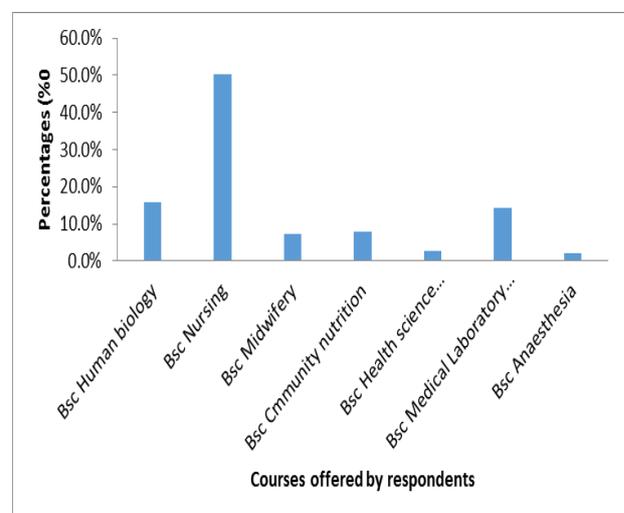


Figure 1: Courses offered by respondents.

Table 1: Socio-demographic characteristics of the Respondents.

Variables	Frequency(N)	Percentages (%)	P Value
Age group			0.001
18-25	118	77.1	
26-30	28	18.3	
30-60	7	4.6	
Total	153	100	
Gender			0.003
Male	58	37.9	
Female	95	62.1	
Total	153	100	
Tribe			
Ewe	10	6.5	
Akan	42	27.5	
Dagomba	44	28.8	
Others	57	37.3	
Total	153	100	
Marital status			<0.001
Married	27	17.6	
Divorced	2	1.3	
Single	124	81	
Total	153	100	

Table 2: Knowledge about female condom.

Variable	Frequency	Percentage	P Value
Students idea on female condom			< 0.001
Yes	135	88.2	
No	18	11.8	
Total	153	100	
Source of information on female condom.			
Electronic media	57	42.2	
Health promotion	12	8.9	
Literature rooms	61	45.2	
Others	5	3.7	
Total	135	100	
Students opinion on the importance of female condom			< 0.001
To prevent either unwanted pregnancies or STIs	48	35.6	
To prevent both unwanted pregnancies and STIs	87	64.4	
Total	135	100	
Students views on female condom reducing sexual pleasure			0.051
Yes	59	43.7	
No	76	56.3	
Total	135	100	

Table 3: Attitude towards the usage of female condom.

Variables	Frequency (N)	Percent (%) P values
Have you been in intimate relationship		
Yes	65	42.5
No	88	57.5 0.012
Total	153	100.0
If yes; do you use the female condom		
Yes	12	18.5
No	53	81.5 < 0.001
Total	65	100.0

How often		
Very often	3	25.0
Occasionally	9	75.0
Total	12	100.0
Those who experience side effect?		
Yes	9	75.0
No	3	25.0
Total	12	100.0
What are the side effects		
Rashes	7	58.4
Genital sore	1	8.3
Others	4	33.3
Total	12	100.0
Number of people who would accept female condom usage		
Yes	121	79.1
No	32	20.9 <0.001
Total	153	100.0

Table 4: Factors affecting female condom usage.

Factors affect female condom usage	Frequency(N)	Percentages (%)	P Value
1. Culture Does your culture accept it?			0.022
Yes	66	43.1	
No	87	56.9	
2. Sexual partner Will your partner approve it?			<0.001
Yes	51	33.3	
No	102	66.7	
3. Religion Does your religion approve it			<0.001
Yes	31	20.3	
No	122	79.7	
4. Peer pressure Have you been forced to have sex without female condom?			<0.001
Yes	8	5.2	
No	145	94.8	

DISCUSSION

Proper usage of the female condom (FC) has been identified by previous studies to be a life serving contraceptive method with several health benefits to the woman, the community and the country as a whole.^[1-6] In this current cross-sectional descriptive study at the Tamale campus of the University for Development Studies (UDS), the great majority of the respondents were aged 18 – 25 years (77.1%; $P < 0.001$), and that many were females and single. The age and gender characteristic of the current study is mainly due to the fact that it was conducted among undergraduate University students. This is in keeping with previous reports of the Ghana demographic and health survey,^[7,8] and findings of studies among undergraduates students by Mantell et al^[9] in South Africa and Silassie et al in Ethiopia.^[10]

The awareness of the FC was significantly high among the respondents (88.1%; $P < 0.001$). This high awareness level support reports of previous studies in Ghana,^[11,12] in Nigeria^[13] and Ethiopian.^[14] For instance, Umoh et

al^[13] study in South-south Nigeria at the Uyo clinic found 92.4% awareness level, similarly, Megabiaw study North-west Ethiopia^[14] found awareness level of 90.7%. This however differs from Ananga et al^[12] study among citizens in the Volta region of Ghana who report awareness level of 24.3%.

The common source of information on FC in this study was the lecture room. This is partly so because the study was conducted among University students, majority of whom, are offering health related programmes. This is similar to the main source of information on FC reported in Silassie et al^[10] study. The current finding however differs from Umoh et al^[13] study which reported medical officers as the major source of information on FC. The finding of the Tamale study also differs from Bankole et al^[15] study which identified electronic media as the main source of information on female condom.

Proper use/application of the FC during sexual activity is a pre-requisite for its intended function as a barrier contraceptive. Respondents in this current study

identified the FC as a major tool in preventing both unwanted pregnancies and sexually transmitted infections ($p < 0.001$). This is line with studies in China,^[16] the United States of America and Latin America,^[17,18] which reported the contraceptive efficacy of the FC during typical use to be similar to other barrier contraceptives, especially the male condom.

The acceptability and the use of the FC depend on the background of the study population. In this study, the great majority of the students were not in any intimate sexual relationship. Even the majority of those who had previous or who are currently in intimate sexual relationships, never used the female condom before (81.5%; $p < 0.001$). The minority even who used it did so occasionally. The low level of FC condom usage among the respondents in this current study may be attributed to the fact that the study was conducted among very young University undergraduates who were offering health related programmes. Low usage of FC has been reported previously in Ghana,^[19,20] and other African countries.^[21,22,23] However, studies in Costa Rica,^[24] Côte d'Ivoire,^[25] and Zimbabwe,^[26] among sex workers reported high acceptability rates.

Factors that influenced the low patronage level of the FC in this current study were attributed to the following in descending order were: the religion of the individual {122 (79.7%), $P < 0.001$ }, lack of partner approval {102 (66.7%), $P < 0.001$ } and Cultural settings {87 (56.9%), $P = 0.022$ }. These factors are similar to those reported in previous studies in Africa and beyond.^[27,28,29]

Although the current usage of the FC was very low among the students, they had great/high future intentions regarding the female condom usage {121(79.1%); $p < 0.001$ }. The high future intention of the FC usage among undergraduate students in this study is comparable with reports among undergraduates in Congo,^[30,31] but differs from study in Kenya^[32] among university students that reported lower future intentions.

CONCLUSION

The result of the study revealed a high awareness level of the female condom but a very low attitude towards its acceptance and utilisation by the undergraduate students. Therefore, there is the need for increased public education on the FC and its benefits to women in preventing unwanted pregnancies and sexually transmitted diseases (STDs).

RECOMMENDATIONS

We would like to recommend the following for the University health directorate:

- To implement specific and focus policies that will continue to strengthen health education on contraceptive usage among students, particularly the female condom.

- To make contraceptives available and affordable in all the clinics and hospital within the university community to promote patronage among students.

LIMITATION OF THE STUDY

This is a sensitive topic and some students, particular the females, may have found it inconvenient to answer some of the questions, especially by a research that is conducted by their colleagues.

ETHICAL CONSIDERATION

The study protocol was presented to the University's ethics committee of the School of Allied Health Sciences (SAHS) for approval. Approval for the study through introductory letters was obtained from the Heads of the institutions where the study was conducted. Verbal informed consents were sought from participants. Participants were informed that participation was voluntary and that they were at liberty to decline to answer any question or to stay out of the study at any point in time if they wished. Confidentiality was highly upheld during and after the study.

COMPETING INTEREST

Authors have declared that no competing interests exist.

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CONFLICT OF INTEREST: Non declared.

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