



A Survey of Knowledge and use of Modern Contraceptives among Female Students in a Public University in Ghana

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: Studies have shown that knowledge of contraceptives, especially among undergraduate female students, remains limited and the rate of premarital unprotected sexual activity, unwanted pregnancies, and illegal abortions remain higher among university students in Ghana.

Aim: This study was carried out to assess the knowledge and use of modern contraceptives among female undergraduate students at the University of Education, Winneba, Ghana.

Methodology: A descriptive survey design was adopted as the framework for the study. A purposive sampling method was used to deploy 108 sexually active female undergraduate students from a department in the Faculty of Science Education using structured questionnaires. Data were

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analysed using Statistical Package for Social Science (IBM SPSS, Version 25) and presented using quantitative metrics.

Results and discussion: The results of the study showed that the majority of the respondents (89.8%) have heard about a modern contraceptive method. 57.4% of the respondents reported that they used contraceptives in the past, while 36 (58.1%) were current contraceptive users. The most popular methods of contraception used were pills (96.9%), female condoms (72.2%), and injectable (52.6%). The main sources of information about contraceptives were found to be social media and followed by peers, radio/TV, and health workers. Reasons that most influenced the decision of respondents to use modern contraceptives included knowledge of modern contraceptives, availability of service points, partner support, and religious beliefs. Even though participants were sexually active, the rate of contraceptive use was found to be relatively low.

Conclusion: Even though the majority of the respondent knew of a particular contraceptive, a significant number of them were found not utilising it. There is the need for active promotion of modern contraceptives among female university students to bridge the gap between knowledge and use.

Keywords: Female students; Ghana; knowledge; modern contraceptives; use.

1. INTRODUCTION

Avoiding unwanted pregnancies through the promotion of family planning methods has become important in achieving the health-related Sustainable Development Goals (target 3.2) on reducing child mortality and improving maternal health [1]. Proper family planning through contraceptive use also has other health benefits such as preventing unplanned pregnancies, ensuring optimum spacing between births, and improving the upon lives of women and children in general [2]. The use of modern contraceptives in persons of reproductive age is a vital tool that helps in controlling births through child spacing. Modern contraceptives like condoms also serve as protection against sexually transmitted infection. Even so, the use of contraceptives is generally much lower in underdeveloped countries than it is in developed countries [3]. A current study showed that the proportion of modern contraceptive use among adolescents was highest in Northern America and Europe at 94.6% and it was lowest in Western Asia and Northern Africa at 71.0% [4]. It is said that approximately, 37% of single sexually active females aged 15–24 in Sub-Saharan Africa use contraceptives with 8% using a non-barrier method [1]. In Ghana, the issue of low contraceptive use is also a public health challenge. The use of modern contraceptives is found to increase from 22% in 2014 to 25% in 2017 among women in their reproductive age [5]. The perception of contraceptive use according to a study conducted in the Kintampo district in Ghana revealed that the majority of males compared with the females thought that contraception leads to female promiscuity [6]. It

was also perceived that the use of contraceptives was the responsibility of women and so men should not be bothered about it. These perceptions of people do not enhance the use of contraceptives [6].

These indicators so far highlight the need for continuous research to examine the factors influencing the use of modern contraceptives among females in the Sub-Saharan Africa region. Previous studies have also emphasized contraceptive use among females in the general population but have failed to look at the phenomenon within special populations like female university students who are expected to become agents of change in the foreseeable future [7,8]. This gap in research needs to be addressed and for this reason, this study has been occasioned. The aim for this study is therefore to assess the knowledge and use of modern contraceptives among female undergraduate students in the University of Education, Winneba through the achievement of the following objectives:

- I. Assess the knowledge of modern contraceptive methods among female undergraduate students of the University of Education, Winneba-South Campus;
- II. Determine the modern contraceptive use prevalence among female undergraduate students of the University of Education, Winneba-South Campus; and
- III. Identify the factors influencing modern contraceptive use among female undergraduate students of the University of Education, Winneba-South Campus.

2. MATERIALS AND METHODS

A descriptive survey design was adopted as the framework for this study. The study was carried out at the University of Education, Winneba-Ghana with a population comprising female undergraduate students in the department of Health Administration and Education. Due to the small number of females in the department (that is, 118 at the time of the study), all the female undergraduate students were invited to take part in the study. The main instrument used for the study was a structured questionnaire with closed-ended questions. The questionnaires were administered to the respondents at the comfort of their halls and hostels by the various department female course representatives who served as volunteers. These female course representatives were briefed about the study including the content of the questionnaires and the exclusion criteria. One week was taken to complete the data collection exercise. Questionnaires were checked for completeness before they were collected. In all, a total of 108 valid responses were received.

Data collected were entered into and analysed using Statistical Package for Social Science (IBM SPSS, Version 25). Questionnaires were

numbered during data entry to ensure that they were not entered two times. The results thereof were presented using quantitative metrics such as tables and figures. Meanwhile, before the study, permission was sought from the University of Education, Winneba, and a letter of acceptance was issued through the researchers' department by the University for the study to commence. Also, during the research, consent from the participating respondents was sought before their participation. Throughout the study, efforts were also put in place to ensure the respect, dignity, anonymity, and confidentiality of the study respondents to ensure that the research was conducted in line with the code of ethics of the University of Education, Winneba, and general ethical standards.

3. PRESENTATION OF FINDINGS

3.1 Socio-Demographic Characteristics of Respondents

The socio-demographic information of respondents was taken to put the results of this study in the right context. The results of the analysis have been summarised in Table 1 below.

Table 1. Socio-Demographic Characteristics of Respondents

Variable	Options	Frequency	Percentage%
Age	15-20 years	9	8.3
	21-26 years	83	76.9
	27-32 years	15	13.9
	33 years and above	1	0.9
	Total	108	100%
Religion	Christian	100	92.6
	Islam	8	7.4
	Total	108	100%
Marital status	Married	8	7.4
	Single	95	88.0
	Other	5	4.6
	Total	108	100%
Level in University	100	36	33.33
	200	25	23.15
	300	25	23.15
	400	22	20.37
	Total	108	100%

Source: Researchers' Field Survey (December, 2021).

The results of the study as shown in Table 1 above indicate that majority of the female students who responded were within the age brackets of 21-26 years (76.9%). Most of the respondents were Christians (92.6%) and single (88.0%) with a significant number of them being in their first year (33.33%) in the university.

3.2 Knowledge of Modern Contraceptives

Results of the study as shown in Table 2 depict that at least 89.8% of the respondents have heard about a modern contraceptive method. Social media (63.9%), peers (61.9%), radio/TV (47.4%), and health workers (46.4%) were the common media through which respondents heard about modern contraceptive methods. Pills (96.9%), female condoms (72.2%), and injectable (52.6%) are the most popular modern

methods known to respondents. Also, information on the knowledge of respondents on the accessibility of modern contraceptives was assessed and the results have been summarised in Table 2.

Assessing the knowledge of respondents on the accessibility of modern contraceptives as presented in Table 3 revealed that the majority of the respondents (93.5%) know where to get access to modern contraceptives. When asked about the places to get access to modern contraceptives, the most popular places mentioned were pharmacies (96.0%) and family planning clinics (46.5%). Also, the majority of the respondents were aware that modern contraceptives do not provide 100% protection against pregnancy.

Table 2. Knowledge of Modern Contraceptive Methods

Variable	Options	Frequency	Percentage%
Have you ever heard about any modern contraceptive method?	Yes	97	89.8
	No	11	10.2
	Total	108	100
If yes, through what medium did you hear about it?	Radio/TV	46	47.4
	Peers	60	61.9
	Parents	16	16.5
	Partner	19	19.6
	Health worker	45	46.4
	Teacher/lecturer	37	38.1
	Social media	62	63.9
Modern methods respondents know of.	IUD	38	39.2
	Pills	94	96.9
	Female Condom	70	72.2
	Injectable	51	52.6
	Lactation amenorrhea (LAM)	18	18.6

Source: Researchers' Field Survey (December 2021).

Table 3. Knowledge of Access to Modern Contraceptive Methods

Variable	Options	Frequency	Percentage %
Do you know where to get any modern contraceptives within the community?	Yes	101	93.5
	No	7	6.5
If 'Yes', where is this place?	Total	108	100
	Clinic	29	28.7
	Pharmacy	97	96.0
	Health worker	21	20.8
	Family planning clinic	47	46.5
	Peers/ friends	15	14.9
	Family members	8	7.9
Do you think the use of modern contraceptives provides 100% protection from becoming pregnant?	Yes	34	31.5
	No	68	63.0
	Do not know	6	5.6

Source: Researchers' Field Survey (December, 2021).

3.3 Modern Contraceptive Prevalence

As presented in Table 4, the result of the study showed that the majority of the respondents have ever used modern contraceptives (57.4%). Out of this percentage, all of them (100%) reported using pills. The rest of the modern contraceptives were unpopular among the respondents. Also, 58.1% of those who reported that they have ever used contraceptives were still using them. Understandably, the majority of them were still using pills (94.4%). The majority of those who reported that they have stopped using modern contraceptives said they stopped because of the side effects (84.6%). On the issues of how often they use modern contraceptives, the majority of them said they use them once in a while (50%). Most of them also said they used contraceptives to avoid pregnancy.

3.4 Factors Influencing Modern Contraceptive Use

From the analysis of the data as evidenced in Table 5, availability of service points (45.4%), partner support (43.5%), knowledge of modern contraceptives (62.0%), and religious beliefs (34.3%) were the factors that most influenced the decision of respondents to use modern contraceptives. Also, an overwhelming majority (91.7%) of the respondents were confident they would go to facilities where there was a place dedicated to sexual reproductive health issues to get access to modern contraceptives. Moreover, most (62.0%) of the respondents agreed that the public held a negative perception of females who used contraceptives. However, more than half (58.3%) of them claimed that they were not influenced by that perception.

Table 4. Modern Contraceptive Use prevalence

Variable	Options	Frequency	Percentage%
Have you ever used a contraceptive before?	Yes	62	57.4
	No	46	42.6
	Total	108	100
If "Yes", which of the methods have you used before?	IUD	3	4.8
	Pills	62	100.0
	Implants	2	3.2
	Female condom	4	6.5
	Injectable	5	8.1
	LAM	2	3.2
	Total	78	100
Are you currently using a contraceptive method?	Yes	36	58.1
	No	26	41.9
	Total	62	100
If "YES" which one are you using?	IUD	1	2.8
	Pills	34	94.4
	Implants	0	0.0
	Female condom	1	2.8
	Injectable	2	5.6
	LAM	0	0.0
	Total	38	100
If "NO" why have you stopped using?	To become pregnant	3	11.5
	Side effects	22	84.6
	No longer have a partner	9	34.6
	Total	34	100
How often do you use any of the methods?	Every time	8	7.4
	Once a while	53	50.0
	Not at all	46	42.6
Why did you use or are you using modern contraceptives?	Delay childbirth	5	8.1
	Avoid pregnancy	45	72.6
	Prevent STIs	10	16.1
	My partner wants it	3	4.8
	Total	63	100

Source: Researchers' Field Survey (December, 2021).

Table 5. Factors Influencing modern contraceptive Use

Variable	Options	Frequency	Percentage%
Which of the following can influence you to or not to use a modern contraceptive?	The attitude of health workers	20	18.5
	Availability of service points	49	45.4
	Partner support	47	43.5
	Knowledge of modern contraceptives	67	62.0
	Religious/cultural beliefs	37	34.3
	Peer influence	9	8.3
	Parent support	9	8.3
Will you go to any facility if there is a place made specially to take care of sexual reproductive health-related issues?	Yes	99	91.7
	No	9	8.3
	Total	108	100
Does the public perceive females who use modern contraceptives as promiscuous?	Yes	67	62.0
	No	41	38.0
	Total	108	100
Will this perception of the public stop you from using modern contraceptives?	Yes	45	41.7
	No	63	58.3
	Total	108	100

Source: Researchers' Field Survey (December, 2021).

4. DISCUSSION OF RESULTS

The result of the study revealed the majority of the respondents (89.8%) asserting that they had heard about modern contraceptives with pills followed by female condoms being the modern contraceptives that they are most knowledgeable of. The prominent means through which they got to hear of these modern contraceptives was found in the decreasing order of social media (63.9%), peers (61.9%), radio/ television (47.4%), and health workers (46.4%). Most respondents also knew where to get these contraceptives and also recognised the fact that the contraceptives they are familiar with cannot guarantee 100% pregnancy prevention. These findings seem to be in line with a similar study meant to assess the knowledge of contraceptive use among female undergraduates in Kilimanjaro-Kenya which indicated the majority of the respondents knew of some modern contraceptives with 78% and 60.4% of respondents being familiar with condoms and the pills respectively [9]. The result also seems to partly support the assertion made by Nyongesa and Odunga in their paper which articulates that there is abundant information regarding contraceptive knowledge and awareness among the Sub-Saharan Africa population [10]. This is because even though the results suggest the

majority of the respondents are knowledgeable in some modern contraceptives, it is worth recognizing that these respondents are tertiary students and so are prone to large access to information through the various media platforms as even evidenced by the study (refer to Table 2). Their location thus being in the city and age (most above 21 years) may also play a role in their level of knowledge on contraceptives however, the same argument cannot be made for the significant number of Sub-Saharan Africans or Ghanaians who have less or no level of education and are also situated in rural areas where there is poor network and speaking of sex issues seems abomination. Such assertions can only be true when it is made concerning a certain group of people in the population such as tertiary students.

Even though respondents seem to have some level of knowledge on some modern contraceptives, the results of the study showed a significant number of them (46%) not utilising these modern contraceptives even though they were all sexually active. These findings seem to support other studies whose findings also showed a significant number of respondents not utilising contraceptives [11-13]. Pills were found to be the most utilised contraceptive in the study perhaps because of their accessibility and

convenient mode of usage, however, as evidenced in the study respondents were not using it any longer mainly because of its side effects (refer to table 5). This infers that if we want even the very few who are using contraceptives, for example, pills to continue using them, there is the need for more scientific inquiry to produce contraceptives (pills) that are more biologically friendly with very minimal side effects on the user. There must also be intensive education on the need to utilise the other equally effective contraceptives with very minimal side effects like the female condoms which also have the extra advantage of preventing STDs during copulation. There is the need to emphasize the ultimate reason to prevent STDs and prevent unwanted pregnancy to the very small reduction of “enjoyment” which is often associated with the usage of condoms. There must also be the continual improvement in the production of condoms, especially the female ones to help alleviate this perceived challenge that comes with its usage.

Assessing the factors influencing respondents' contraceptive usage revealed that respondents' knowledge of a type of modern contraceptive and the presence of a special facility to offer sexual reproductive healthcare services played a major role in their decision to utilise contraceptives. This matches with a study that also identified knowledge about modern contraceptives as one of the factors accounting for the use of modern contraceptives in Kenya's city slums [14]. Knowledge does not only sensitise or create awareness about a particular phenomenon but also has the ability to influence decisions as it is even being emphasized in many marketing concepts. People who know a given product or service are potential customers or clients of that product or service and the same is true in health decision making. One's knowledge of the long-term effect of STDs and pregnancy may deter him/her from having unprotected sex. However, as evidenced by this study, knowledge alone is not always enough. Other factors that can equally influence modern contraceptives utilisation include: the availability of service points; partner support; and public influence areas also indicated in other previous studies [15, 16]. Taking Ghanaian society, for example, it is not uncommon to hear even a very typical educated Ghanaian male and female assert “I want it raw” implying he/she does not want any rubber intermediary in as much as sex is a concern and so in this context, approval from the male side is very critical for the utilisation of a

modern contraceptive like female condom by the female. It is obvious that irrespective of the knowledge one may possess, if one cannot get access or if there is no availability of a particular modern contraceptive then one can equally not be able to utilise it. The public will continue playing a major role in the utilisation of modern contraceptives, especially in a Ghanaian society where the culture of almost all ethnic groups seems to portray the utilisation of modern contraceptives with a negative connotation. If the youth and the elderly must improve upon their contraceptive usage then a lot of work must be done to sensitise and educate the general public on the need to embrace and accept the use of modern contraceptives.

5. CONCLUSION

The study was carried out at the University of Education, Winneba South Campus to assess the knowledge and use of modern contraceptives among female undergraduate students. The study revealed that the majority of respondents have heard of at least one modern contraceptive. Even though the majority of the respondents knew of a particular contraceptive, a significant number of them were found not utilising it. Major factors found to be influencing the utilisation of modern contraceptives were knowledge of the modern contraceptive, availability of modern contraceptive service points and public perception concerning modern contraceptives. There is the need for active promotion of modern contraceptives among female university students to bridge the gap between knowledge and use. Such promotion efforts should be participatory and based on the available evidence about the factors that influence the low usage of modern contraceptives among female university students in order to achieve user focused outcomes.

CONSENT

As per international standard or university standard, participants' written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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