Original Research Article

Intentions, Barriers and Attitudes Towards Improving Postpartum Long-acting Reversible Contraceptive Usage Among Pregnant Women in Urban Ghana

ABSTRACT

Aims: Long-acting reversible contraceptives (LARCs) are the most effective reversible methods of contraception with a failure rate of less than 1%. Despite their safety and effectiveness, LARCs are underutilized. This study investigated postpartum LARC use intentions and suggestions to improve postpartum LARC usage among pregnant women seeking antenatal care services in a Ghanaian Urban municipality.
Study design: A facility-based cross-sectional design.
Place and Duration of Study: The study was conducted at the antenatal care unit of the Ashanti Regional Hospital in the Kumasi Metropolis of Ghana among 298 pregnant women from August to September, 2018.
Methodology: A systematic sampling technique was conducted. A 55-item questionnaire containing socio-demographic, reproductive, intention and attitude, barriers and contraceptive knowledge characteristics was used to gather responses. A multivariable logistic regression analysis was done using (IBM-SPSS version 22.0) to determine predictors of the women's intention and attitude towards postpartum LARC use.
Results: Out of 298 pregnant women included for analysis, 33.9% had postpartum intentions to use LARCs. "I like implant for myself" (AOR=9.00, 95% CI: 4.75-17.05), "I like IUD for myself" (AOR=7.38, 95% CI: 2.93-18.58) and previous use of LARC (AOR=7.03, 95% CI: 2.41-20.52) were predictors of postpartum intentions to use LARC. Intensive education and "worried about the side effects" were the main recommendations and barriers to postpartum LARC usage respectively.
Conclusion: Postpartum intention to use LARC was minimal. I like implant for myself", "I like IUD for myself" and previous use of LARC were associated with intentions to use LARC postpartum. Intensive education and "worried about the side effects" were the main recommendations and barriers to postpartum LARC usage respectively. Attitudinal change towards LARC use through intensive education, easy accessibility of LARC and religious body involvement is key to increase postpartum LARC usage in Ghana and clearing its myths and misconceptions could advance modern contraceptive usage.

Keywords: *Family Planning, Ghana, Long-acting reversible contraceptive, Postpartum, Usage.*

1. INTRODUCTION

In Ghana, unintended pregnancy is an important public health concern [1] with potential detrimental effects on women, their ability to carry the baby to term, the viability of the infant, and the overall development of the child [2]. Family planning methods are said to contribute either directly or indirectly to the realization of sustainable development goal 3 (SDG 3). For example, contraceptive prevalence rate (CPR) was set as one of the indicators for measuring the success of target 5B (achieving universal access to reproductive health by 2015) of the Millennium Development Goal 5 (MDG5) [3,4]. However, the CPR in some parts of the world, especially Sub-Saharan Africa is still low [4]. The use of modern methods of contraception has been shrouded by various myths and misconceptions, which often deter people from patronage [5]. The World Health Organization (WHO) in 2013 indicated that, the

use of modern contraceptive methods has increased in many parts of the world though not as projected [6]. Globally, the use of modern contraceptive methods rose from 54% in 1990 to 57.4% in 2014. Regionally, usage varies, ranging from 27.6% in Africa to 66.7% in the Caribbean in 2014. Its usage in some parts of the world is very low; for instance, in 2012, it was 24% in Africa, 15% in West Africa and 23% in Ghana, compared to 67% in the Caribbean and 57% globally [7-12].Findings from various studies reveal even a lower rate of utilization of long-acting reversible contraceptives (LARCs) [13]. For instance, the Ghana Demographic and Health Survey (GDHS) of 2008 states that, all women within the age group 15-49 years currently using IUD and implants in Ghana amounts to 0.2% and 0.7%, respectively. Moreover, in Ashanti Region, the use of IUD and implants accounts for 0.0% and 1.0%, respectively [14]. The most current 2014 Demographic and Housing Survey (GDHS) in Ghana indicates that, the frequency of contraceptive usage among women of reproductive ages (15-49 years) is 22% [15]. LARCs are the most economical contraceptives for the prevention of unplanned pregnancies, and the use of these methods or devices after abortion period reduces the spate of repeated abortions [16]. Nevertheless, the inclination of women to use LARCs remains uncertain; sexual reproductive health characteristics, knowledge, intentions and attitudes to their use therefore requires further investigation [17].
To provide extensive, effective and high-quality approaches to LARC use, and to encourage the patronage of this method, it is important to explore and understand the knowledge and attitudes of LARC usage among Ghanaian women of reproductive ages and to inform effective counseling practices and promotional policies on LARCs usage. Even though, some studies have explored knowledge, attitudes and barriers to LARC usage among women in Ghana [18] but intentions and attitudes to improving postpartum LARC usage has not been widely studied. The current study is imperative for improving LARC usage in Ghana among pregnant after safe delivery.

2. MATERIAL AND METHODS

2.1 Study Location, Design, Participants and Sampling

A hospital-based cross-sectional design was used to sample 298 pregnant women attending antenatal care services at the Ashanti Regional Hospital from August to September, 2018 (including 10% to cater for missing data and inconsistencies) which were estimated following the Kish Leslie formula [19,20] with a contraceptive prevalence rate of 22% [15]. Kumasi in the Ashanti Region is a multicultural city with diverse clans or ethnic groups in Ghana and other nationals which makes it suitable for policy involvement [14]. Kumasi is the second-largest city in Ghana and the administrative capital of the Ashanti Region. It has an estimated population of 1,581,141 with an annual growth rate of 3.4%. Males constitute 49% and females 51% [14]. A 55-item questionnaire containing socio-demographic, reproductive, intention and attitude, barriers and contraceptive knowledge characteristics (see Supplementary File 1) was used to collect data via systematic random sampling technique. The questionnaires were adapted and adopted from several studies [12-16] and well-versed researcher opinions were sought to aid in modifying the questionnaires.According to the facility records, average daily antenatal care attendance was about 50. Thus, the initial participant was selected randomly from the first three women seeking antenatal care services on the first interview day. Subsequently, every third woman was selected until the desired sample size was met. Pregnant women aged 15-49 years living in the Ashanti Region for 6 or more months and accessing antenatal care services at the Ashanti Regional Hospital during the study period, those not diagnosed with cognitive impairment and were willing to participate in the study were selected. Also, women who were not willing to take part in the study were excluded.

2.2 Study Variables

2.2.1 Postpartum Intentions to Use LARCs

Firstly, the definition of "intention to use a LARC" is described as "intending to use either IUDs or implants in the immediate postpartum period", thus 6 months after a successful delivery. Subsequently, women were asked whether they intended to use a LARC after delivery (Yes or No). Typical questions were "Would you like to use an intra-uterine device for contraception in the immediate postpartum period?" Why don't you want to use LARC? Where do you access information on LARC from? What will you suggest to improve LARC usage among young women?

2.2.2 Socio-demographic and reproductive health variables

Socio-demographic characteristics including age, region of residence, marital status, ethnicity, religion, occupation and educational level of participants were examined. Twenty-two questions on sexual reproductive health history of participants were studied. Participants were asked questions relating to previous pregnancies, time from the latest abortion until present, previous child births, willingness to use any family planning method, willingness to use a modern contraceptive, previous use of LARC, current use of LARC and expected timing of next pregnancy may influence the use of LARC.

2.2.3 Knowledge of LARC among pregnant women

Participants' knowledge was measured by the number of correct responses to 6 unprompted questions. The first two unprompted questions asked were on knowledge about duration of effective protection from pregnancy by IUD, and implant contraceptives. The next two unprompted questions were on knowledge of the site of administration of IUD and implant contraceptives. Two additional questions on sources of the IUD and implants were administered.

2.2.4 Attitudes towards LARC usage among pregnant women

The items on attitude of participants towards use of LARC were scored using a 5-point Likert scale with 9 responses. These are the attitudinal questions; LARC effectively prevents occurrence of pregnancy, LARC methods can cause permanent infertility, LARC should be free, partner should decide your contraceptive method to use, health workers should explain contraceptive side effects, LARC causes severe crumps, bleeding; and LARC interferes with sexual gratification. The responses were rated as; 'strongly agree', 'agree', 'not sure', disagree' and 'strongly disagree'. These 5 responses were then buckled into binary variables; agree and disagree. 'Agree' for those who responded 'agree' or 'strongly agree' and 'disagree' for those who responded 'disagree', 'strongly disagree' or 'not sure'.

2.2.5 Quality control

Four bilingual research assistants were trained to ensure effective collection of data. Field editing of questionnaires was conducted by the supervisor on daily basis to check for correctness and completeness. Double data entry was adopted.

2.2.6 Statistical analysis

The International Business Machine-Statistical Package for Social Sciences (IBM-SPSS, version 22.0) was used for all data entries and analysis. Descriptive statistics were produced for frequencies, percentages, means and standard deviations. Differences in the demographic and reproductive characteristics, women's knowledge, intentions and attitudes

towards LARCs usage were computed using the chi-square test. Variables identified as being significant ($p<0.05$) in these initial tests were then inputted into a multiple logistic regression model to determine predictors of the women's knowledge, intentions and attitudes towards LARC usage after delivery.

3. RESULTS

3.1 Socio-demographic characteristics of pregnant women

The basic demographic and reproductive health characteristics of participants are summarized in Table 1. Most of the pregnant women had an age greater than or equal 25 (68.5%) and were married (62.1%). Majority of the participants had some form of education (90.3%) and were employed (78.5%). Most of the pregnant women were Christians (94.0%) with partners who were educated (96.6%). More than half of the pregnant women had disapproving attitude towards contraceptive usage (64.30%), unintended pregnancy (59.1%), history of abortion (55.4%), and frequency of sexual activity (once a week; 65.8%). Most of the pregnant women (45.3%) reported to have used contraceptives occasionally. The sources of their knowledge on contraceptives were family and friends (37.6%), health professionals (30.5%), mass media (25.8%), and course education (6.0%; Table 1).

Table 1: Socio-demographic and reproductive health characteristics of participants after delivery in the Kumasi Metropolis

Variable	Frequency	Percentage
Age		
Early adult (<25)	94	31.5
Late adult (≥25)	204	68.5
Marital Status		
Married	185	62.1
Never married	113	37.9
Educational status		
Never attended	29	9.7
Attended	269	90.3
Employment Status		
Employed	234	78.5
Unemployed	64	21.5
Types of residence		

Rural	50	16.8
Urban	248	83.2
Religion		
Christian	280	94
Muslim	17	5.7
Other	1	0.3
Educational status of partner		
Never attended	10	3.4
Attended	288	96.6
Ever had abortion		
No	133	44.6
Yes	165	55.4
Frequency of contraceptive use		
Never	108	36.2
Occasionally	135	45.3
Always	55	18.5
Attitude to contraceptive use		
Negative/unfavorable	191	64.3
Positive/favorable	106	35.7
Had unintended pregnancy before		
No	121	40.9
Yes	175	59.1
Frequency of sexual activity		
Once a week	196	65.8
Once a month	102	34.2
Source of contraceptive knowledge		

Mass media	77	25.8
Family and friends	112	37.6
Health professionals	91	30.5
Course education	18	6

3.2 Awareness and intentions to use LARC after delivery in the Kumasi Metropolis

The majority (87.2%) of the participants were informed about LARC (Table 2). The percentage of pregnant women who had the intention to use IUD only and implant only were 14.4% and 26.8%, respectively after delivery. Less than ten percent (7.4%) of the pregnant women had the intention to use both IUD and implant. One third (33.9%) of the women reported that they have the intention to use LARC (either IUD or implant) postpartum (Table 2).

Table 2: Percentage distribution of participants on awareness and intentions to use LARC after successful delivery.

Variable	Frequency	Percentage
Awareness on LARC		
Yes	260	87.2
No	38	12.8
Intentions to use		
IUD only	43	14.4
Implant only	80	26.8
Either IUD or implant	101	33.9
Both IUD and implant	22	7.4

3.3 Bivariate Analysis of factors associated with intentions to use LARC after successful delivery in the Kunasi Metropolis

The association of intention to use LARC and socio-demographic characteristics among pregnant women after successful delivery was analyzed using the chi-square test (Table 3). Variables that were significantly associated with intentions to use LARC were frequency of contraceptive usage *($p = 0.005$),* 'I like implant for myself' *($p < 0.0001$),* 'I like IUD for myself' *($p < 0.0001$),* previous unintended pregnancy *($p = 0.005$),* perception on whether implant can be done by themselves ($p = 0.005$), and previous use of LARC *($p < 0.0001$).* However, from the demographic variables, age *($p = 0.176$),* marital status *($p = 0.150$),* educational status *(p*

= *0.732),* employment status *(p = 0.199),* place of residence (p = 0.106), religion *(p = 0.500),* and educational status of partners *(p = 1.000)*not associated with intention to use LARC. From the reproductive health variables, history of abortion *(p = 0.820),* attitude towards contraceptive usage *(p = 0.861)*, frequency of sexual activity *(p = 0.685),* source of knowledge on contraceptives *(p = 0.119),* effectiveness of LARC in preventing pregnancy *(p = 0.172),* and mothers' perception on whether IUD can be done by themselves *(p = 0.372)* were not associated with intention to use LARC (Table 3).

Table 3: Association between intentions to use LARC and demographic/reproductive health characteristics after delivery in the Kumasi Metropolis

Variable	Intention towards LARC use after delivery			
	No (%)	Yes (%)	X^2-value	p-value
Age				
Early adult (<25)	57 (60.6)	37 (39.4)	1.83	0.176
Late adult (≥25)	140 (68.6)	64 (31.4)		
Marital status				
Married	128 (69.2)	57 (30.8)	2.07	0.15
Never married	69 (61.1)	44 (38.9)		
Educational status				
Never attended	20 (69.0)	9 (31.0)	0.12	0.732
Attended	177 (65.8)	92 (34.2)		
Employment status				
Employed	159 (92.4)	75 (7.6)	1.65	0.199
Unemployed	38 (59.4)	26 (40.6)		
Place of residence				
Rural	37 (74.0)	13 (26.0)	1.67	0.196
Urban	160 (64.5)	88 (35.5)		
Religion				
Christian	187 (66.8)	93 (33.2)	0.46	0.501
Muslim	10 (58.8)	7 (41.2)		

Educational status of partner				
Never attended	7 (70.0)	3 (30.0)	*	1.000
Attended	190 (66.0)	98 (34.0)		
Ever had abortion				
Yes	87 (65.4)	46 (34.6)	0.05	0.82
No	110 (66.7)	55 (33.3)		
Frequency of contraceptive use				
Always	28 (50.9)	27 (49.1)	10.48	0.005
Occasionally	87 (64.4)	48 (35.6)		
Never	82 (76.0)	26 (24.0)		
Attitude to contraceptive use				
Negative/unfavorable	126 (66.0)	65 (34.0)	0.03	0.861
Positive/favorable	71 (67.0)	35 (33.0)		
I like implant for myself				
Agree	40 (34.8)	75 (65.2)	82.01	<0.001
Disagree	157 (85.8)	26 (14.2)		
I like IUD for myself				
Agree	10 (25.0)	30 (75.0)	34.85	<0.001
Disagree	187 (72.5)	71 (27.5)		
Had unintended pregnancy before				
No	69 (57.0)	52 (43.0)	7.73	0.005
Yes	127 (72.6)	48 (27.4)		
Frequency of sexual activity				
Once a week	128 (65.3)	68 (34.7)	0.16	0.685
Once a month	69 (67.6)	33 (32.4)		
Source of contraceptive knowledge				

Mass Media	59 (76.6)	18 (23.4)	5.84	0.119
Family and Friends	67 (59.8)	45 (40.2)		
Health Professionals	59 (64.8)	32 (35.2)		
Course Education	12 (66.7)	6 (33.3)		
LARC effectively prevents pregnancy				
Agree	157 (64.3)	87 (35.7)	1.87	0.172
Disagree	40 (74.1)	14 (25.9)		
IUD can be done by yourself				
Yes	85 (63.0)	50 (37.0)	0.8	0.372
No	108 (67.9)	51 (32.1)		
Implant can be done by yourself				
No	151 (62.4)	91 (37.6)	7.91	0.005
Yes	46 (82.1)	10 (17.9)		
Previous use of LARC				
Yes	6 (18.2)	27 (81.8)	*	<0.001
No	191 (72.1)	74 (27.9)		

**Fisher's exact test was used as at least 25% of the cells had expected count less than 5. X^2 -test was used in the analysis.*

3.4 Multivariate Analysis of factors associated with intentions to use LARC after delivery in the Kumasi Metropolis

Variables which were significant at bivariate level were retained for further multivariate analysis to control confounding effects (Table 4). At multivariate level, the variables 'I like implant for myself' *(p < 0.0001),* 'I like IUD for myself' *(p < 0.0001),* and previous use of LARC *(p < 0.0001)* were significant determinants of the intentions to use LARC after delivery. Those mothers who agreed with the statement 'I like implant for myself' had 9 times more (AOR = 9.00, 95% CI: 4.75-17.05) intentions to use LARC than those who disagreed. Similarly, pregnant women who agreed with the statement 'I like IUD for myself' had 7.38 times more (AOR = 7.38, 95% CI: 2.93-18.58) than those who disagreed. Pregnant women who used LARC previously had 7 times more (AOR = 7.03, 95% CI: 2.41-20.52) intentions to use LARC after delivery than those who did not use. However, frequency of contraceptive use (*p = 0.1800),* history of unintended pregnancy *(p = 0.100)* and possibility of doing

implant by themselves *(p = 0.345)* were not significantly associated with intentions/attitudes to use LARC after delivery (Table 4).

Table 4: Predictors of intentions to use LARC after delivery in the Kumasi Metropolis

Variable	AOR	95% CI	p-value
Frequency of contraceptive use			0.180
Always	2.33	0.95-5.72	
Occasionally	1.41	0.67-2.97	
Never	Reference		
I like implant for myself			<0.001
Agree	9.00	4.75-17.05	
Disagree	Reference		
I like IUD for myself			<0.001
Agree	7.38	2.93-18.58	
Disagree	Reference		
Had unintended pregnancy before			0.100
Yes	0.58	0.30-1.11	
No	Reference		
Implant can be done by yourself			0.345
Yes	1.56	0.62-3.90	
No	Reference		
Previous use of LARC			<0.001
Yes	7.03	2.41-20.52	
No	Reference		

AOR = Adjusted Odds Ratio, CI = Confidence Interval, p ≤ 0.05.

3.5 Reasons for not using LARC

Participants without intentions to use LARC during their postpartum period were asked to justify their decisions. The main reason given was being worried about the side effects (80.29%; Table 5). Equal proportion of women were found to respond, 'religion is against its usage' (5.77%) and 'partner didn't want me to use a method' (5.77%). Participants also indicated that, they were using other methods (3.37%), unable to access them (2.40%), affect sexual gratification (0.96%), thought the occasional sex could not lead to pregnancy (0.96%) and thought contraceptive methods were too expensive to buy (0.48%) (Table 5).

Table 5: Possible reasons for postpartum LARC non-use (n = 208).

Reason	Total N=208 (%)
Worried about the side effects	167 (80.29)
Thought contraceptive methods were too expensive to buy	1 (0.48)
Thought the occasional sex could not lead to pregnancy	2 (0.96)
My religion is against its usage	12 (5.77)
Partner didn't want me to use this contraceptive	12 (5.77)
I use other methods	7 (3.37)
It affects sexual gratification	2 (0.96)
Unable to access it	5 (2.40)

3.6 Recommendations to improve LARC usage

Participants were offered the opportunity to suggest ways to improve LARC usage during the study. Half of the participants (mothers) suggested intensified sensitization (education) to improve LARC usage (Figure 1). Others suggested house-to-house sensitization (15.44%), easing access to LARC (13.42%), involvement of religious bodies (7.38%), establishing an independent commission to champion the usage of contraceptives (6.04%). However, 7.72% of the participants offered no suggestion to improve LARC usage (Figure 1).

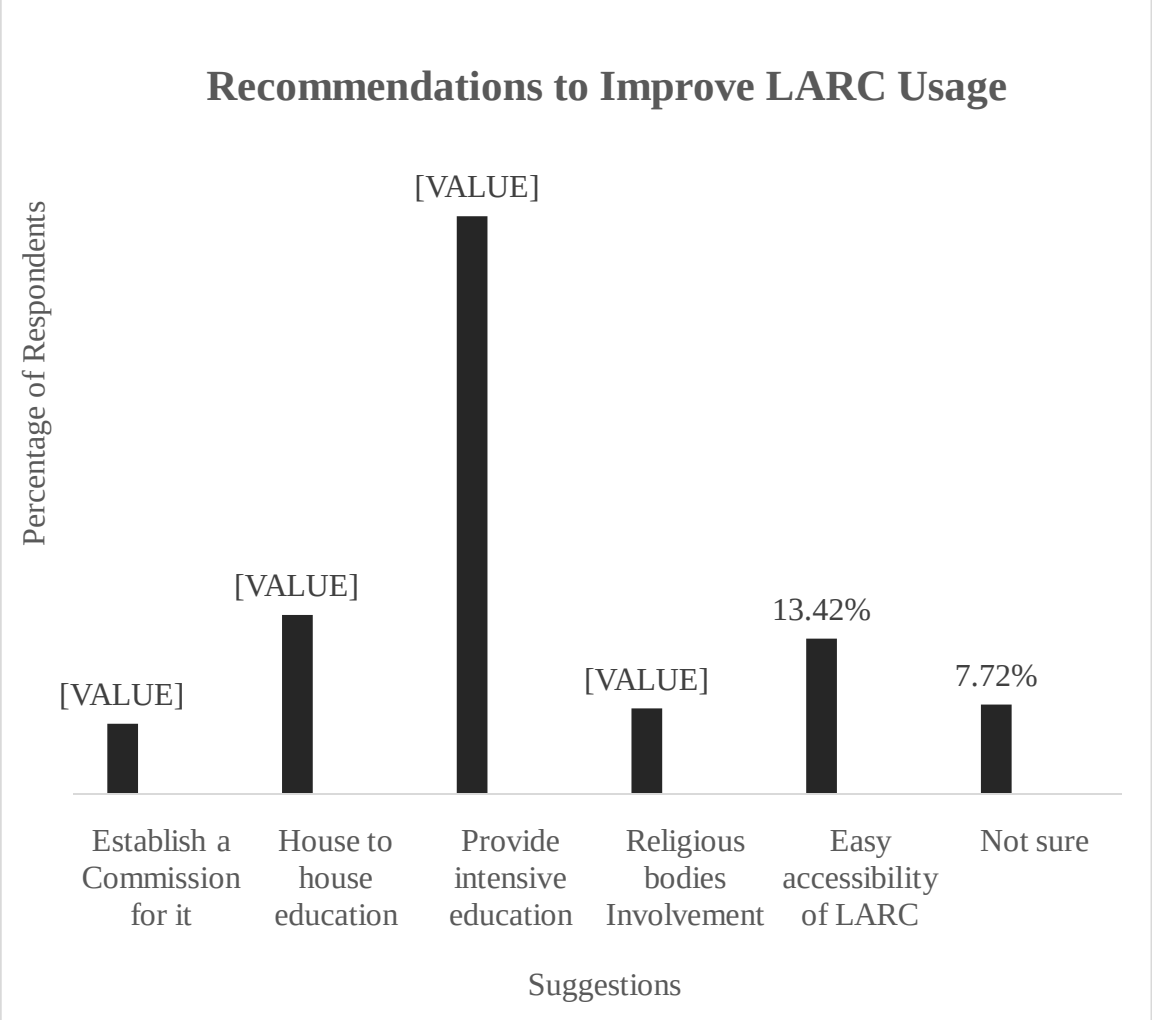

Figure 1: *Suggestions to improve LARC usage by the participants after delivery in the Kumasi Metropolis (n = 298).*

4. DISCUSSION

LARCs are methods of birth control that provide effective contraception for an extended period without requiring user actions. They include intrauterine devices (IUDs) and sub-dermal contraceptive implants [21] and are the most effective reversible methods of contraception as compliance and failure rate is less than 1% [22]. LARC users can save thousands of dollars over a five-year period compared to use of condoms and birth control pills [23]. Despite their safety and effectiveness, LARCs are underutilized; only 15.5% of women worldwide use IUDs and only 3.4% use sub-dermal implants [23]. This study was undertaken to assess user knowledge, intentions, attitudes and to document user-based recommendations for improving LARC usage in Ghana after safe delivery. The study showed that, the participants (pregnant women) who had intentions of using either IUD or implant were 33.9%. This result is consistent with a report from the US in which majority of women intended to use IUD as a result of their convenience [24]. However, a study by Chacko et al. [25] among pregnant adolescents revealed lower intentions to use LARC postpartum compared to short term hormonal contraceptives [25]. The study indicated that

personal preferences ("I like implant for myself"), user experience ("I like IUD for myself and previous use of LARC)" were significant determinants of LARC usage after safe delivery. Previous user experience of LARC and outcome is key to ongoing decision-making to re-use the methods [26]. Thus, previous use of LARC was significantly associated with intentions to use LARC methods. This finding corroborates other studies in Mainland China and Uganda [6,26].

Attitude is a tendency to respond positively or negatively towards a certain idea, person, object and situation. Attitude is often as a result of experience or upbringing and has powerful influence on behaviors towards contraception [27]. The attitude of women towards LARC partly dictates their intentions to use LARC [28,29]. This study showed that, pregnant women with positive attitude towards LARC usage ('I like implant for myself and I like IUD for myself') were more likely to use LARC than their counterparts. Our findings are consistent with report by Luo et al. [16] among women seeking abortion in China. However, reports from Nigeria indicates that, various promotional programs across the country to create awareness about the calamitous consequences of not using contraceptives failed to achieve desired results. This was partly attributed to people's attitude towards contraceptives as 78.5% of the sub-population that affirmed the existence of reproductive health centers in their neighborhoods were unwilling to purchase contraceptives [30].

Health education about family planning is the basic right for every woman. This equips them with the right information on family planning and make informed decisions [31]. Half of the mothers suggested intensified sensitization (education) to improve LARC usage across the country. Thus, health care workers have a greater role to play in disseminating information about LARC. This will ensure that, women make informed choices [32]. The government through the Ministry of Health may collaborate with non-governmental organizations to intensify sensitization programs on sexual reproductive health in Ghana [33].

Improving access to LARC to women has the potential to help women and couples achieve their desired family size and prevent unintended pregnancies and unwanted births [34-36]. It may also have long-term effects by improving women's health, educational attainment and socio-economic status [37]. The women in this study suggested that, easing access to LARC will be an ideal intervention to improve LARC usage [38,39]. Therefore, the government of Ghana through the Ministry of Health with all health stakeholders should work together to ensure easier access to LARCs. This will lessen the seeming challenge with access to LARC by women in rural and urban Ghana [36].

Religious leaders could get involved in this family planning campaign. The common challenge in advancing family planning is overcoming the misconceptions religious leaders have about the use of contraceptives [40-44]. Concerns from religious leaders are often based on misconceptions about family planning methods rather than their religious beliefs [45]. The fear of family planning methods causing infertility are usual among religious leaders [35]. Hence, health workers working together with religious leaders will potentially erase such misconceptions. Participants suggested that, religious bodies' involvement is another intervention to improve LARC use as religious leaders have a great impact on their followers both spiritually and socially [35].

Establishment of an independent commission or statutory body is another intervention proposed by participants to improve LARC usage. This body will work closely with key stakeholders in the health sector in promoting LARC usage in the community. This statutory body may equally spearhead management and distribution of logistics, promoting effective education, training, monitoring and evaluation of progress made by government towards achieving sustainable LARC usage as a sustainable family planning method [46]. Lack of

interest and negative attitudes towards contraceptive use is directly proportional to educational level of users [47]. Countries such as China and Zimbabwe had recorded high contraceptive usage as a consequence of high literacy rate and established statutory bodies which effectively monitor and manage family planning programs [48]. Those who are educated are able to read and understand the challenges and benefits of modern contraceptives to make informed decisions for their health and family [47,49,50].

The cross-sectional nature of the study may prevent making any causal inference about the association. The study was conducted only in the Ashanti Regional Hospital without taking into consideration other Hospitals, health facilities and clinics within the Kumasi Metropolitan Assembly. This may limit generalization of the findings to the entire Kumasi Metropolis. The sample size of the study was relatively small, and this could lead to conclusions which may not be representative of the wider population in the study area. Also, information on contraceptive use was self-reported; hence, the chances of reporting bias should not be ignored while interpreting the findings. Future studies could increase the sample size and also include husband/partner's perspectives on extended postpartum LARC usage to better understand and identify predictors of postpartum LARC use in Ghana. Mixed methods studies could be employed in the future to produce more comprehensive findings.

5. CONCLUSION

This study revealed that 14.4% and 26.8% of women had the intention to use IUD only and implant only respectively and 7.4% of the mothers had the intention to use both methods postpartum. "I like implant for myself", "I like IUD for myself" and previous use of LARC were significant determinants of intention to postpartum LARC use. Intensive education and "worried about the side effects" were the main recommendations and barriers to postpartum LARC usage respectively. Hence, the use of LARC methods can be increased in Ghana by intensifying user education, easing access to LARCs, involvement of religious bodies and establishment of statutory body to supervise, implement and monitor various policies to enhance family planning adoption.These interventions can be improved through training frontline family planning healthcare providers and upscaling programs support interventions to address all identified gaps. Inclusive stakeholder programs in sexual reproductive health would improve family planning services among women. The Ghanaian government should exercise political will, increase funding and equip reproductive healthcare facilities and re-skill personnel to promote the use of family planning services in the country.

CONSENT

All authors declare that 'written informed consent was obtained from the participantsduring the data collection process.

Ethical approval

Approval was obtained from the Ashanti Regional Hospital and the various heads of departments before the study. The aim and process of the study were well explained to the participants to obtain their consent and the right to discontinue at any time. They were also guaranteed confidentiality and privacy. All authors hereby declare that all experiments have been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and been examined and approved by the committee on human research publication and ethics of the Kwame Nkrumah University of Science and Technology (CHRPE/AP/546/18).

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declares that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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