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Long-Acting Reversible Contraceptive Uptake and Associated Factors Among Women Attending Family Planning Clinic at Kampala International University Teaching Hospital.

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ABSTRACT

Although long-acting reversible contraceptive (LARC) methods are highly effective with minimal side effects and require minimal follow-up, their utilization in Uganda has remained low at 7.8%. The reason for this low uptake is not clear both at the country local level. Therefore, this study determined the uptake of LARC methods and explored associated factors among women of reproductive age attending Kampala International University Teaching Hospital (KIU-TH). A cross-sectional descriptive study design was used for this study. The data was collected using a pretested structured questionnaire in an exit interview of clients that had come to KIU-TH family planning clinic after obtaining their consent. Collected data was entered and analyzed in the computer using IBM SPSS version 25. Chi-squared analysis was done to determine the factors associated with LARC methods utilization and a point of significance was a p value ≤ 0.05 . Results were presented in tables and charts for descriptive analysis. Of the total 122 respondents in the current study, it was found out that seventy-three (59.8%) participants were aged 26 to 25 years, and the mean (\pm SD) age of participants was 27.3 (\pm 4.4) years. Eighty-five (69.7%) were married, 81 (66.4%) were urban residents, 61 (50.0%) were house wives, while only 25 (20.5%) had completed tertiary education. Findings show that only twenty-six (21.3%) were using LARC methods compared to the majority 96 (78.7%) who were using short term methods. Factors which were found to be significantly associated with LARC utilization were; age of 26-25 years (X²=6.13, P=0.047), rural residence (X²=8.59, P=0.003), business occupation (X²=7.93, 0.019), number of living children between 1 to 3 (X², P=0.034), how soon to have the next child (X²=23.93, 0.001) and awareness of modern contraceptive methods (X^2 =10.71, P=0.001). The utilization of LARC in this study was low and was associated with age, residence, occupation, number of living children, how soon to have the next child and awareness of modern contraceptive methods. The researcher recommends that; family planning education about the benefits of LARC should be done by health providers through media, and also get enough time at the health facilities for health education about different methods of contraception.

Keywords: contraceptive uptake, associated factors, women family planning

INTRODUCTION

Unintended pregnancy is common among sexually active women and can stem from incorrect, inconsistent, or nonuse of contraception, and contraceptive failure [1-4]. Long-acting reversible contraception (LARC), which includes intrauterine devices (IUDs) and sub-dermal implants, have many advantages, such as highly effective protection against unwanted pregnancies and few contraindications. In addition, they are cost-effective, do not require frequent visits for resupply and are reversible with a rapid return to fertility after removal [5].

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The World Health Organization (WHO) estimates that only one unintended pregnancy occurs among every 2000implant users in the first year of use; the effectiveness of IUDs is nearly the same [6]. In contrast, failure rates in the first year of typical use for popular short-term methods are considerably higher: 90 unintended pregnancies per 1000 users of pills, and 60 unintended pregnancies per 1000 users of the depo medroxyprogesterone acetate (DMPA) injectable, which contains progestogen hormone [7-11]. Thus, implants and IUDs are 120 times more effective than the injectable and 180 times more effective than the pill [12]. Other studies indicate that nearly a fifth of unintended conceptions are among women who use a modern, short-term contraceptive, mostly due to poor Page | 82 adherence [13, 14]. Uganda has made a great progress in increasing uptake of contraceptive use over the years. As per the Uganda Demographic Health Survey (UDHS), use of modern methods in Uganda has increased from 8% in 1995 to 35% in 2016 among married women aged 15-49 years, which has largely been driven by use of short-term methods [15]. However, use of LARC has remained low in the same period, currently standing at 7.8% [16]. Several studies have shown that the low uptake of LARC is attributed to socio-demographic factors such as age of women, marital status, education level $\lceil 17 \rceil$, place of residence $\lceil 13 \rceil$, and religion $\lceil 18 \rceil$. Reproductive health factors such as fertility intention, parity, and desire for FP have also been cited as influencers of uptake of LARC methods and contraceptive use in general [14]. In addition, parity [19], desired family size, women who gave birth prematurely, previous history of abortion [20], women who had ever experienced an unwanted pregnancy [21], and women who had visited a clinic in the past year for FP services [22] were identified as factors associated with LARC use. Health system related factors like, lack of trained staff to perform the procedures for insertion or removal and frequent stock outs of these contraception methods have also been reported by various studies [23, 13, 24]. While many studies on LARC have been carried out to prove the effectiveness of the methods, the literature regarding uptake and associated factors of LARC uptake among contraceptive users have focused mainly on certain women population groups, such as postpartum women and adolescents. Thus, this study sought to assess the uptake of long-acting reversible contraceptive methods and examine associated factors among women attending family planning clinic at Kampala international university teaching Hospital.

METHODOLOGY

Study design

This was a hospital-based study which used a descriptive cross-sectional study design $\lceil 25 \rceil$.

Study Area

The study was done in family planning clinic of Kampala International University teaching hospital which is one of the teaching hospitals in Uganda.

Study population

The study population included all females using modern contraceptives who were attending family planning clinic at KIU-TH during the study period.

Inclusion criteria

Able to consent for the study

Exclusion criteria

- Not willing to participate in the study
- Those who were seriously ill and/or unable to communicate for any reason were excluded

Sample size determination

This was determined by using Kish's formula $\lceil 26 \rceil$ which states that,

$$\mathbf{N} = \frac{Z^2(p(1-p))}{\varepsilon^2}$$

Where:

N = the required sample size

p= Proportion of women using LARC methods (7.8%) as per $\lceil 16 \rceil$.

 $\varepsilon = \text{margin of error on p (set at 5\%)}$

z = standard normal deviate corresponding to 95% confidence level (=1.96)

 $N = \frac{1.96^2(0.078(1-0.078))}{2.02^2} = 111$. Plus 10% of the calculated sample to cater for those who might withdraw from the 0.05² study for any reason. So, final sample will be 122.

Sampling Procedures

The study used consecutive sampling where each woman that came and agreed to participate in the study was enrolled until the required number (122) was reached.

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Data collection techniques and management

The data was collected using a structured questionnaire in an exit interview of clients that came to the hospital for family planning services. Participants provided written, informed consent before data was collected. The questionnaire was designed to obtain information on the socio-demographic characteristics of contraceptive users, as well as ascertain their reproductive history, utilization of modern contraceptive family planning use and factors affecting LARC methods.

Data Analysis

Collected data were entered and analyzed using IBM SPSS version 25. Categorical variables were presented in a table of frequencies for descriptive statistics. A Chi-square test was computed to test for the factors influencing utilization of LARC methods. The point for statistical implication was a p-value of ≤ 0.05 .

Ethical consideration

Ethical approval was sought from the KIU-WC faculty of clinical medicine and dental surgery in form of introduction letter after approval of the proposal. Permission to collect data was sought from the KIUTH director. A written and verbal consent was sought from the respondents before they participated in the study.

RESULTS

Of the total 122 respondents in the current study, it was found out that seventy-three (59.8%) participants were aged 26 to 25 years, and the mean (\pm SD) age of participants was 27.3 (\pm 4.4) years. Eighty-five (69.7%) were married, 81 (66.4%) were urban residents, 61 (50.0%) were house wives, while only 25 (20.5%) had completed tertiary education. Table 1.

Table 1: Socio-demographic characteristics of study participants

Characteristics	Frequency	Percent
Age (years)		
≤ 25	4.1	33.6
26-35	73	59.8
≥36	8	6.6
Marital status		
Married	85	69.7
Single	37	30.3
Residence		
Rural	41	33.6
Urban	81	66.4
Occupation		
House wife	61	50.0
Business	37	30.3
Employed	24	19.7
Religion		
Catholic	37	30.3
Protestant	61	50.0
Muslim	24	19.7
Education level		
Non	25	20.5
Primary	58	47.5
Secondary	14	11.5
Tertiary	25	20.5

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Ninety-four (77%) of the respondents had 1 to 3 living children and 62 (50.8%) were expecting to have another child in 3-4 children. Eighty-six (70.5%) attended ANC adequately in their last pregnancy, 74 (60.7%) were aware of examples of modern contraceptives on the market of which 61 (50.0%) had received the information regarding family planning from the health facilities and the common sources of contraceptives mentioned were hospitals/health Centres 73 (59.8%). Table 2.

Characteristics Frequency Percent No. of live children 1 - 394 77.0 4 +2823.0 When soon to have another child 1 - 233.6 4150.83-4 62 ≥ 5 19 15.6ANC attendance in the last pregnancy 70.5 Adequate 86 Inadequate 36 29.5Aware of modern contraceptives No 39.3 48 Yes 7460.7 Sources of information about FP Media 37 30.3 Health facility 61 50.0 Friends and family 19.724 **Common sources of contraceptives** Hospital/Health centre 7359.8Private clinic 19.724Pharmacy/ drug shop 2520.5

Table 2: Reproductive characteristics of study participants

Of the total respondents in this study, it was found that, only twenty-six (21.3%) were using LARC methods compared to the majority 96 (78.7%) who were using short term methods. Figure 2.

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Among socio-demographic characteristics examined, it was found that age of 26-35 years (X^2 =6.13, P=0.047), rural residence (X^2 =8.59, P=0.003), and business occupation (X^2 =7.93, 0.019) were the only statistically significant factors associated with LARC methods utilization a shown in table 3 below.

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Variables		FP method currently used		Chi square (X²)	P square
		Non LARC	LARC		-
Age (years)				6.13	0.047*
≤25		36(37.5%)	5 (19.2%)	0.10	01011
26-3	5	56~(58.3%)	17 (65.4%)		
≥36		4(4.2%)	4 (15.4%)		
Marital status				1.93	0.165
Marı	ried	64(66.7%)	21 (80.8%)		
Singl	le	$32\ (33.3\%)$	5(19.2%)		
Residence				8.59	0.003*
Rura	ıl	26 (27.1%)	15(57.7%)		
Urba	an	70(72.9%)	11(42.3%)		
Occupation				7.93	0.019*
Hous	se wife	54(56.3%)	7(26.9%)		
Busin	ness	24(25.0%)	13 (50.0%)		
Emp	oloyed	18(18.8%)	6(23.1%)		
Religion				3.97	0.137
Cath	olic	26 (27.1%)	11(42.3%)		
Prote	estant	48 (50.0%)	13 (50.0%)		
Musl	lim	22(22.9%)	2(7.7%)		
Education level				2.31	0.51
Non		17 (17.7%)	8 (30.8%)		
Prim	nary	47 (49.0%)	11 (42.3%)		
Seco	ndary	11 (11.5%)	3 (11.5%)		
Tert	iary	21 (21.9%)	4 (15.4%)		

Table 3: Socio-demographic factors associated with LARC methods utilization

*Significant association

Table 4 below shows results of chi square analysis for the association between reproductive characteristics and LARC methods utilization. It was found that, number of living children (X^2 , P=0.034), when soon to have the next child (X^2 =23.93, 0.001), awareness of modern contraceptive methods (X^2 =10.71, P=0.001).

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Variables	FP method currently ued		Chi square (X²)	P value	-
	Non LARC	LARC			Pao
No. of living children	-	-	4.49	0.034*	= 1 ug
1-3	78 (81.3%)	16 (61.5%)			
4+	18 (18.8%)	10(38.5%)			
When soon to have another child			23.93	0.001*	
1-2	40(41.7%)	1(3.8%)			
3-4	48 (50.0%)	14(53.8%)			
≥ 5	8(8.3%)	11(42.3%)			
ANC attendance for last pregnancy			3.17	0.075	
Adequate	64(66.7%)	22 (84.6%)			
Inadequate	32(33.3%)	4 (15.4%)			
Aware of modern contraceptives			10.71	0.001*	
No	45 (46.9%)	3 (11.5%)			
Yes	51 (53.1%)	23 (88.5%)			
Sources of FP information			3.29	0.193	
Media	29(30.2%)	8(30.8%)			
Health facility	45 (46.9%)	16 (61.5%)			
Friends and family	22(22.9%)	2(7.7%)			
Common sources of Contraceptives			4.53	0.104	
Hospital/Health centre	59 (61.5%)	14(53.8%)		-	
Private clinic	21 (21.9%)	3 (11.5%)			
Pharmacy/Drug shop	16 (16.7%)	9(34.6%)			

Table 4: Reproductive factors associated with LARC methods utilization

DISCUSSION

In this study, the utilization of LARC methods was low at 21.3%. This finding is consistent with the findings of a study conducted in Ethiopia [27] which reported that LARC use stood at 19.9%. Similar results were reported by other previous studies in Kenya [23], Tanzania [28] and Australia [29] which reported 22.2%, 20.7% and 21.6% respectively. The agreement in findings could be due to the fact that both studies were done in Hospitals which are likely to attract women of similar characteristics. However, the prevalence in this study is higher than the Uganda national prevalence of 4.1% [16] and that of a study in Nepal [30] which found 4.7% LARC utilization rate. The difference in prevalence of LARC utilization between this study and afore mentioned studies could have resulted from sample size difference where by the afore mentioned studies were national level studies with larger sample size while this study was done in one Hospital with a sample size of just 122 participants. In this study, clients with age arrange of 25-35 years were found to use LARC more often (65.4%) than their counterparts. This finding is consistent with studies conducted in Gambia [31], Pennsylvania [32] and Malawi [33] in which women who utilized LARC were below 35 years old. In contrast, a systematic review conducted in North Kivu, Democratic Republic of Congo showed that older women above 35 years were positive towards LARC use [34]. Differences in patterns of LARC use among these studies can be explained by differences in the study population and settings. From this point, it would be of paramount importance for policy makers and health planners to be focused on strategies that can increase LARC use among women of all ages. In this study, it was found that participants who © Abdimajid, 2023

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were residing in rural areas (57.7%) were using LARC more than those in urban areas (42.3%). This finding is inconsistent with many studies done in Britain [35], Kenya [36] and Guatemala [37] in which Urban residence was highly associated with LARC utilization. The contradiction in findings between this study and afore mentioned studies could be due to the fact that there are many outreach centres in the villages than in Urban areas in Uganda. This could have increased the LARC intake among the rural participants. Whereas it may be assumed that women in urban areas have more information about family planning, it would be good for health managers and promoters to work in creation of public awareness about the effectiveness of LARC in preventing unintended pregnancy Page | 88 especially in urban centres. In this study, women who desired to have another child after 3 years (3-4 years) were utilizing LARC (53.8%) than those who desired to have a child in less than 3 years. This finding is consistent with the results of a study in Urban Cameron [38], Australia [17] and Gambia [31] in which LARC methods were mainly used by women who did not expect to have children within a few years. One of the most important benefits of LARC methods is their long duration of use once they are placed. For this reason, more women who want to limit their family size may tend to utilize LARC methods which are long term, effective and reversible. In the present analysis, being aware of modern contraceptive methods was found to be associated with LARC use. Majority of women who were using LARC methods (88.5%) had good knowledge of modern contraceptive methods. This finding is similar to studies done elsewhere which showed that better/good knowledge led clients to LARC methods utilization [32, 39, 40]. Client's awareness of the services enhances the possibility of their utilization. With good knowledge about modern contraceptives, clients will understand that LARC are highly effective and safe choices, and therefore utilize them. Activities aimed at increasing the public's awareness and knowledge about the benefits of LARC methods should be a focus of the health promoters and the government.

Moreover, the lack of knowledge or awareness about LARC methods may also reflect inadequacy of training for health workers on how to educate clients appropriately, or lack of time to perform appropriate client sensitization due to health workers being few and busy [41-45]. In this study, 50% of respondents who were utilizing LARC methods were business women. This finding concurs with that of a study in Ethiopia [41], Nepal [40] and Australia [42] which noted that business and employed women were more likely to utilize LARC methods than their counterparts. This may be due to the fact that business women may be more informed about the various family planning services thus more likely to utilize LARC. Moreover, a study in Malawi $\lceil 33 \rceil$ showed that business women are likely to be economically independent which makes decision making about the contraceptive use easy, this may increase the likelihood of LARC utilization.

CONCLUSION

The utilization of LARC in this study was low (21.3%). Factors which were found to be significantly associated with LARC utilization were; age of 26-25 years (X²=6.13, P=0.047), rural residence (X²=8.59, P=0.003), business occupation (X^2 =7.93, 0.019), number of living children between 1 to 3 (X^2 , P=0.034), how soon to have the next child (X^2 =23.93, 0.001) and awareness of modern contraceptive methods (X^2 =10.71, P=0.001).

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