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Enhancing Utilization of Long-Acting Contraceptive Methods among Women: A Study in Hoima Regional Referral Hospital

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ABSTRACT

Family planning is crucial for reducing fertility rates, maternal mortality, and infant welfare. Reversible long-acting contraceptives (LACMs) are effective for women who want to limit child bearing and space births, potentially playing a significant role in reducing maternal mortality. However, the use of LACMs has not kept pace with short-acting methods like oral contraceptives and injectables. A study was conducted to determine the level of utilization of long-acting contraceptive methods among women attending the MCH clinic at Hoima Regional Referral Hospital and related factors. The majority of participants (50.9%) were aged 30-39, married (68.4%), housewives (40.4%), protestant (36.8%), and had attained tertiary education (47.4%). The most common contraceptives used were pills (33.3%), injectable (24.6%), condoms (15.8%), implants (10.5%), IUCD (3.5%), and others (12.3%). Eight participants were using long-acting methods, accounting for 14.0% of the study. Factors associated with the utilization of long-acting contraceptive methods included marital status, level of education, residence, partner involvement, knowledge of LACMs, attitude towards LACMs, and access to the desired method of contraception. The study highlights the need for improved access to long-acting contraceptive methods among women of reproductive age.

Keywords: Long-Acting Contraceptive, Women, MCH Clinic, Maternal mortality

INTRODUCTION

Family planning allows people to attain their desired number of children and determine the spacing of pregnancies. It is achieved through the use of modern contraceptive methods and the treatment of infertility [1]. Modern contraceptive methods are divided into three categories: long- Long acting reversible contraceptive methods (IUCD and implants); permanent contraceptive methods (tubal ligation and vasectomy); and short-term contraceptive methods (oral pill, injectable, male and female condoms, foam tablets, and cervical caps) [2]. Because of their long-lasting protection and reversibility, the reversible long-term contraceptive is an effective contraceptive method appropriate for women wishing to limit childbearing as well as space births, thus potentially playing an enormous role in reducing maternal mortality [3, 4]. Globally, 214 million women of reproductive age in developing countries who want to avoid pregnancy are not using a modern contraceptive method ([5]. This unmet need for contraception is too high, and variation in different regions is observed. This inequity is fueled by both a growing population and a shortage of family planning services. In Africa, 24.2% of women of reproductive age have an unmet need for modern contraception. In Asia, Latin America, and the Caribbean—regions with relatively high contraceptive prevalence—the levels of unmet need for family planning are 10.2% and 10.7%, respectively [6]. Unintended pregnancy remains an alarming global public health problem with its subsequent socioeconomic impact on individuals, families, and society [7]. Though there is a considerable variation in the prevalence of unintended pregnancy across regions, the global burden is very high [8] and responsible for 27% of maternal deaths [1, 9]. Different cross-sectional studies around the globe noted that there has been a high prevalence of unintended pregnancy, for example, 69% in Malawi [10], 27% in Uganda [11], and 44% in in another Malawian study[12], highlighting the need for effective contraceptive utilization [13]. The 2016 Uganda Demographic and Health Survey (UDHS) report showed that there was a 28% and 32% unmet need for family planning among married and unmarried sexually active women, respectively [14, 15]. Evidence suggests that

women who have more than four children are at increased risk of maternal mortality [16]. By reducing rates of unintended pregnancies, family planning also reduces the need for unsafe abortions [17]. The Uganda Ministry of Health and private partners campaign for the use of long-acting contraceptives; however, the contraceptive method mix is dominated by short-term methods like pills and injectable [18]. There are no studies that have examined the factors contributing to long-acting contraception method utilization in the study area. The present study is intended to contribute to bridging the information gap about and, subsequently, the coverage of long-acting contraceptive method utilization in the local setting.

Family planning is essential in the effort to reduce the fertility rate and the consequential maternal mortality and morbidity, as well as contributing to improvement in infant welfare [19]. Notably, Uganda's MMR stands at 336 per 100,000 live births, which is among the highest in the world [14]. This will further strain reproductive health services and increase the unmet need for contraception. Over time, the use of LACMs has not kept pace with that of short-acting methods such as oral contraceptives (pills) and injectable[20]. Data from demographic and health surveys show that the proportion of women currently using LACMs is significantly lower than the proportion using short-acting methods [14]. It is known that despite women requiring long-term child spacing needs of more than two years, most still opt for short-term methods of contraception, hence the use of LACMs. The later are unreliable with high failure rates, health concerns, and a high discontinuation rate of the methods [21]. However, the reasons responsible for this low uptake of long-acting contraceptive methods remain undefined. Hence the study.

METHODOLOGY

Study Design

An institution-based cross-sectional study design was used.

Study Area

The study was conducted at MCH clinic in Hoima Regional referral hospital.

Study Population

The study involved women attending MCH clinic.

Inclusion Criteria

i. women who were 18-49 years old
ii. Those who were willing to participate

Exclusion Criteria

i. Not willing to participate in the survey
ii. Below 18 years or above 49 years

Sample Size Determination

This was determined by using Kish's formula [22] which states that,

$$\mathbf{N} = \frac{Z^2(p(100-p))}{\varepsilon^2}$$

Where;

N = the required sample size

p= Proportion of women using LAPMs (3.5%) as per [14].

ε = margin of error on p (set at 5%)

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

$\mathbf{N} = \frac{1.96^2(0.035(1-0.035))}{0.05^2}$ =52, the researcher added 10%, therefore a sample size of 57 participants was used.

Data Collection Methods

This study used a questionnaire to collect information on socio-demographics and contraceptive use.

Data Analysis

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

Ethical considerations

Ethical approval was sought from Kampala International University Western Campus Faculty of clinical medicine in form of introduction letter after approval of the proposal. A written and verbal consent was sought from the patients before they participated in the study.

RESULTS

Socio-demographic Characteristics of the Respondents

Among the 57 participants in the study, majority (50.9%) were aged 30-39, married (68.4%), housewives (40.4%), protestant (36.8%) and had attained tertiary education (47.4%) as shown in the table below.

Table 1: Socio-demographic Characteristics of the Respondents

Variables	Frequency (N=57)	Percentage (%)
Age(years)		
18-29	15	26.3
30-39	29	50.9
40-49	13	22.8
Marital status		
Married	39	68.4
Single	18	31.6
Occupation		
Housewife	23	40.4
Business	13	22.8
Formally employed	21	36.8
Religion		
Catholic	17	29.8
Protestant	21	36.8
Muslim	06	10.5
Others	13	22.8
Level of Education		
No formal education	04	7.0
Primary	10	17.5
Secondary	16	28.1
Tertiary	27	47.4

Common Contraceptive Methods used among Women Attending MCH

The most common contraceptives used according to the study were pills (33.3%), injectable (24.6%), Condom (15.8%), implant (10.5%), IUCD (3.5%) and others (12.3%) as shown in the figure below.

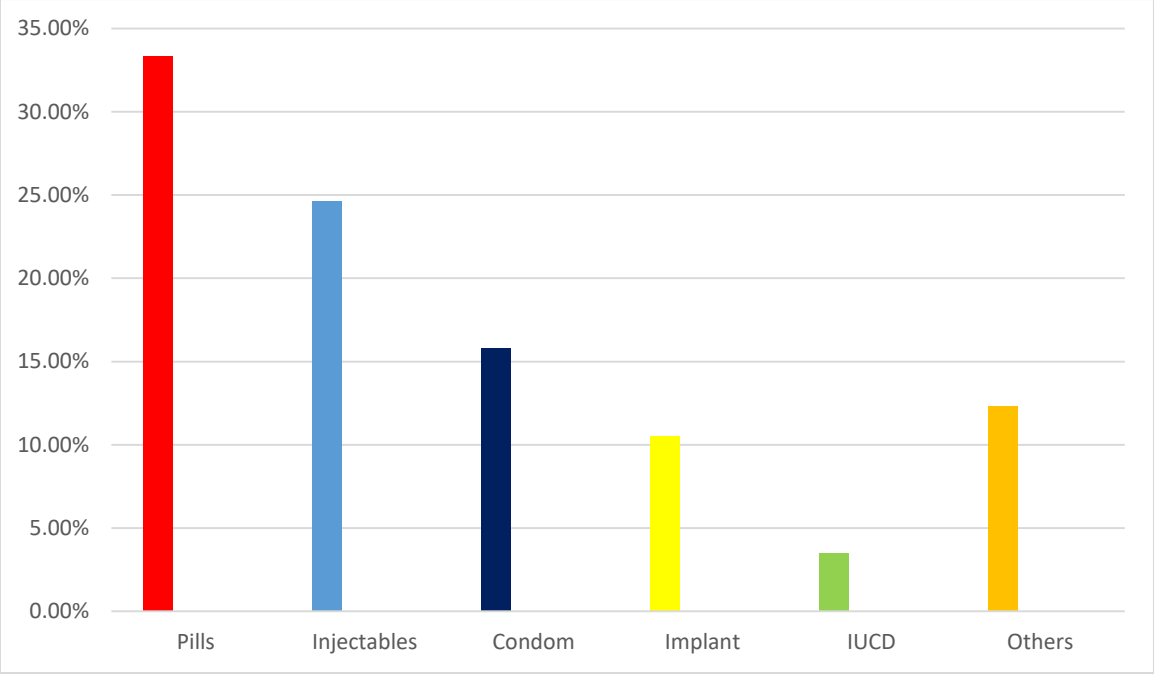

Figure 1: Common contraceptive methods used

Proportion of Women Utilizing Long-Acting Contraceptive Methods

Among the 57 participants in the study, 08 were using long-acting methods giving a proportion of 14.0% as shown in the figure below.

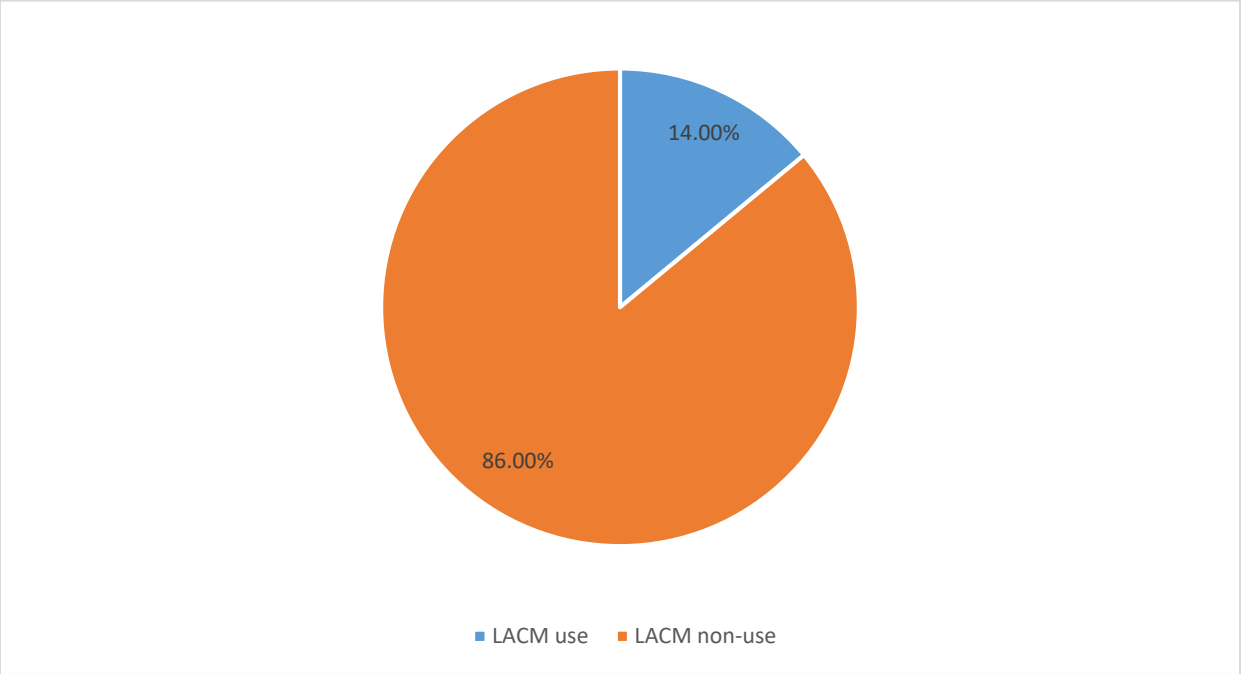

Figure 2: Proportion of women utilizing long-acting contraceptive methods

Bivariate analysis of the factors associated with utilization of long-acting contraceptive methods

Marital status, occupation, level of education, residence, parity, partner involvement, knowledge of LACMs and access to desired method of contraception were significant at Bivariate analysis and were therefore considered for multivariate analysis as shown in the table below.

Table 1: Bivariate analysis of the factors associated with utilization of long-acting contraceptive methods

Variable	N=57	Utilization of LACMs n(%)	COR(95% CI)	P-Value
Age(Years)				
18-29	15	02(13.3)	Reference	
30-39	29	05(17.2)	0.50(0.08-1.56)	0.341
40-49	13	01(7.7)	0.61(0.10-1.80)	0.256
Marital status				
Married	39	06(15.4)	1.14(0.55-2.90)	0.014
Single	18	02(11.1)	Reference	
Occupation				
Housewife	23	03(13.0)	Reference	
Business	13	01(7.7)	1.38(0.61-4.49)	0.016
Formally employed	21	05(23.8)	2.16(1.01-5.66)	0.190
Religion				
Catholic	17	02(11.8)	Reference	
Protestant	21	04(19.0)	0.44(0.05-1.06)	0.322
Muslim	06	01(16.7)	0.52(0.08-1.32)	0.540
Others	13	01(7.7)	0.75(0.23-2.41)	1.205
Level of education				
No formal education	04	-	Reference	
Primary	10	01(10.0)	1.09(0.81-2.65)	0.026
Secondary	16	02(12.5)	1.53(1.02-3.03)	0.043
Tertiary	27	05(18.5)	2.47(1.40-4.29)	0.004
Residence				
Urban	24	06(25.0)	3.00(1.50-8.04)	0.051
Rural	33	02(6.1)	Reference	
Parity				
1-3	30	06(20.0)	2.10(0.91-5.21)	0.060
≥4	27	02(7.4)	Reference	
Partner involvement				
Yes	17	07(41.2)	3.82(1.01-6.80)	0.045
No	40	01(2.5)	Reference	
Knowledge of LACMs				
Yes	34	06(17.6)	4.22(0.88-9.12)	0.071
No	23	02(8.7)	Reference	
Attitude towards LACMs				
Good	43	07(16.3)	3.54(1.22-5.10)	0.003
Bad	14	01(7.1)	Reference	
Access to desired method of contraception				
Yes	26	03(11.5)	Reference	
No	31	05(16.1)	2.30(0.71-4.35)	0.018

Multivariate analysis of factors associated with utilization of LACMs

There was a significant association between marital status, level of education, residence, partner involvement, knowledge of LACMs, attitude towards LACMs, access to desired method contraception and utilization of long-acting contraceptive methods as shown in the table below.

Table 2: Multivariate analysis of factors associated with LACMs utilization

Variable	N=57	Utilization of LACMs n(%)	AOR(95% CI)	P-Value
Marital status				
Married	39	06(15.4)	1.02(0.21-2.05)	0.025
Single	18	02(11.1)	Reference	
Occupation				
Housewife	23	03(13.0)	Reference	
Business	13	01(7.7)	0.77(0.19-3.21)	0.068
Formally employed	21	05(23.8)	1.48(0.61-3.86)	0.084
Level of education				
No formal education	04	-	Reference	
Primary	10	01(10.0)	0.80(0.31-2.00)	0.033
Secondary	16	02(12.5)	1.13(0.74-2.12)	0.016
Tertiary	27	05(18.5)	1.69(0.40-3.52)	0.001
Residence				
Urban	24	06(25.0)	2.07(0.95-6.81)	0.008
Rural	33	02(6.1)	Reference	
Parity				
1-3	30	06(20.0)	0.74(0.46-3.57)	0.075
≥4	27	02(7.4)	Reference	
Partner involvement				
Yes	17	07(41.2)	1.45(0.87-4.15)	0.006
No	40	01(2.5)	Reference	
Knowledge of LACMs				
Yes	34	06(17.6)	2.79(0.63-7.00)	0.014
No	23	02(8.7)	Reference	
Attitude towards LACMs				
Good	43	07(16.3)	1.67(0.80-3.64)	0.002
Bad	14	01(7.1)	Reference	
Access to desired method of contraception				
Yes	26	03(11.5)	Reference	
No	31	05(16.1)	1.09(0.44-3.76)	0.037

DISCUSSION

Secure universal access to sexual and reproductive healthcare services, including family planning, information, and education, and the incorporation of reproductive health into national strategies and programs is one of the targets (3.7) in goal 3 of the Sustainable Development Goals (SDGs) of the United Nations [23]. The World Health Organization (WHO) has defined family planning (FP) as a person's or a couple's voluntary and informed decision regarding the number of children to have and when to have them [24]. It is distinguished by the use of contraceptives, whether through modern or traditional methods. Male and female sterilization, male and female condoms, depot implants, pills, the Lactational Amenorrhea Method (LAM), intrauterine devices (IUD), and emergency contraception are all modern methods of contraception [24]. On the other hand, traditional techniques include the withdrawal method and the rhyme approach (periodic abstinence) [25]. Modern contraceptives (contraceptives) have been proven to be the more successful of these two approaches for reducing fertility and are currently

being heavily marketed to slow down the population's rapid expansion, especially in developing nations [26]. Despite the well-documented advantages of family planning, the utilization of modern contraceptives, particularly in sub-Saharan African nations, is still very low [10]. With lower contraceptive failure rates, long-acting reversible contraceptives (LARC) offer women extended durations of pregnancy protection[18].

Common Contraceptives used among Women

Measuring progress in meeting the need for family planning requires not only an assessment of overall levels and trends in contraceptive prevalence and the unmet need for family planning but also an assessment of the range and types of contraceptive methods used. Different forms of contraception are used far more often in different parts of the world. The method mix has changed over time as a result of adjustments to associated regulations, adjustments to the healthcare system, the development of new technology, and adjustments to the availability of the various ways [23]. This study revealed that pills (33.3%) were the most commonly used contraceptive methods, followed by injectable (24.6%), condoms (15.8%), implants (10.5%), IUCD (3.5%), and others (12.3%). This is not consistent with global reports, which showed that female sterilization (23.7%) was the most common contraceptive method used among females, followed by male condoms (21%), IUDs (17%), and pills (16%) [23]. The variation may be attributed to availability, beliefs, and myths about some family planning methods.

Proportion of Women Using Long-Acting Contraceptive Methods

The use of long-acting reversible contraceptives was this study's outcome variable. Intrauterine devices (IUCD) and implants were the long-acting reversible contraceptives considered in this study. A key tactic to guarantee service continuity in nations with high fertility rates and unmet family planning needs is to move toward long-acting family planning methods (LAFPMs) [27]. Nonetheless, short-term techniques are currently the most widely used forms of modern contraception [28]. According to this study, only 14.0% of women utilizing family planning were using long-acting contraceptive methods. This premise is higher compared to the findings of a European survey, which revealed that only 11.3% were using long-acting contraceptive methods [29]. However, this finding is lower than a proportion of 20.1% reported in Sub-Saharan Africa [27]. Further, the finding is lower than the prevalence of LACM reported to be 20.6% in Kenya [30]. Interestingly, this reveals an improvement in the utilization of long-acting contraceptive methods from the 7.8% reported previously [14]. This may be due to intensive government intervention, which has improved access to modern family planning with a concomitant increase in women's knowledge about the different family techniques.

Factors Associated with the Utilization of Long-Acting Contraceptive Methods

There was a significant association between marital status, level of education, residence, partner involvement, knowledge of LACMs, attitude towards LACMs, access to the desired method of contraception, and utilization of long-acting contraceptive methods. The study revealed that married women had higher odds of using long-acting contraceptive methods compared to single women. This is supported by the findings of a study that showed a positive correlation between marriage and the utilization of LACMs [31]. This may be due to the need for child spacing among married women. The current study found that utilization of long-acting contraceptive methods increased with level of education. Similar findings were reported by a study in Ethiopia, which revealed that women who have completed secondary or higher education were more likely to use LACMs than those who have not [31]. This is due to the fact that more educated women have easier access to knowledge on the drawbacks and advantages of utilizing LACMs. As a result, they are aware of the myths and misconceptions that frequently serve to discourage the use of LACMs. Urban dwellers had a higher chance of utilizing long-acting contraceptive methods compared to rural dwellers. A study showed that use of LACMs varied with area of residence, with urban dwellers having a higher rate of utilization [32]. According to the majority of studies, rural women have limited access to and use of reproductive health services, including contraception [32]. Women whose partners were involved in family planning decision-making had a higher likelihood of using long-acting contraceptives than those whose partners were not involved. This is consistent with the finding of a study in Ethiopia where no partner support was an obstacle to LACM use [33]. This is supported by another finding in Ethiopia, which revealed similar results [2]. The present study found that women with good knowledge and attitude towards long-acting contraceptive methods were more likely to use them compared to those with poor knowledge and a bad attitude. A similar finding was reported by a study in Ethiopia, which found that good knowledge and attitude led to the utilization of LACMs, while poor knowledge and attitude were negatively associated with their use ([33]. Women with good knowledge and attitude will understand that LACMs are highly

effective and safe choices; therefore, they should be utilized.

CONCLUSION

The use of long-acting contraceptive methods among women of reproductive age remains low. Predictors of utilization of long-acting contraceptives include marital status, level of education, residence, partner involvement, knowledge of LACMs, attitude towards LACMs, and access to the desired method of contraception.

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