A Cross-sectional study to assess the level of Utilization of Immediate Postpartum Family Planning among Postnatal women in Lira Regional Referral Hospital.

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Abstract

Background:

Over 214 million women globally have an unmet need for family planning. The majority of these women are in the postpartum period. About 336 mothers per 1000 live births in Uganda die due to pregnancy-related causes most of which are preventable. The use of contraception can prevent unwanted pregnancies and unsafe abortions that normally lead to the loss of lives of these women. Immediate post-partum family planning services need to be emphasized, where these women should leave the hospital with a safe and effective method of contraception in place. Despite the accepted demand for postpartum family planning, many women do not intend to use modern methods of contraception in the immediate postpartum period.

Objective:

This study aimed to assess the use and perceptions of women on immediate postpartum family planning among postnatal women attending Lira Regional Referral Hospital.

Methods:

This was a cross-sectional study conducted on 300 conveniently selected postnatal women in LRRH. The data was obtained and entered, cleaned, and analyzed using SPSS version 23. Univariate analysis was done to determine frequencies and percentages of the study variables and bivariate analysis was done using binary logistic regression to determine associations

Results:

From a total of 310 postnatal women invited to the study, 300(97%) participated in the study of which 13(4.3%) reported having utilized IPPFP services. Age (p=0.002), Religion, Counseling, and knowledge about IPPFP (p=0.000) respectively were found to be significantly associated with the use of IPPFP. There was also an association between the client's poor perceptions towards the use of IPPF with (P=0.005).

Conclusions:

The IPPFP use among postnatal women attending Lira Regional Referral Hospital is very low (4.3%).

Recommendations:

Therefore, multi-pronged Interventions should be implemented to address the poor perceptions of these postnatal women toward the uptake of IPPFP.

Keywords: immediate postpartum family planning, utilization of immediate postpartum family planning, Lira, Lira regional referral hospital, postnatal, Date Submitted: 2022-09-09 Date Accepted: 2022-09-16

1. BACKGROUND

Globally family planning (FP) is recognized as a key life-saving intervention for both women and their families. Delays in early initiation of postpartum contraceptives can lead to unintended and closely spaced pregnancies. These are very significant global public health concerns(World Health Organization, 2017).

Globally, about 41% of total pregnancies are unintended (Singh, Sedgh, & Hussain, 2010), and about 40% of pregnancies in low and middle-income countries are unintended(Usso, Adem, Dessie, & Tura, 2021). In Uganda, about 52% of pregnancies were registered as unintended, representing more than half of the country's 2.2 million pregnancies. (Hussain, 2013).

Immediate postpartum family planning (IPPFP) refers to the provision of FP counseling and services as part of immediate newborn care to postpartum women within 48 hours after childbirth and before discharge from the health facility(Arero, Teka, & Jarso, 2018). The postpartum period is a critical time that can be leveraged and utilized to address the high unmet need for FP among postnatal women which would help to reduce the risk of short inter-pregnancies that comes along with its complications such as infant, neonatal and prenatal mortality, low birth weight, small size for gestational age, preterm delivery, maternal anemia, unsafe induced abortion with associated complications(Jima & Bekeshie Garbaba, 2020).

Increasing accessibility to modern contraceptive methods among postpartum women is an important strategy to reduce the risk of unintended pregnancies and closely spaced pregnancies. This is because most women usually return to sexual activity before obtaining an appropriate FP method at the recommended six-week postpartum visit(El Arifeen *et al.,* 2013).

PPFP can avert more than 30% of maternal deaths and 10% of child mortality globally and also helps in the prevention of induced unsafe abortion(Demie, Demissew, Huluka, Workineh, & Libanos, 2018). The utilization of IPPFP services is quite significant as it helps postnatal women to prevent unintended pregnancies, and achieve their desired birth spacing interval before attempting the next pregnancy this helps to optimize the health of these women and those of their children, provides these women with adequate time for full physiological recovery and healing from the previous pregnancy. Similarly, the Provision of universal access to quality Contraception in the immediate postpartum period can decrease unintended pregnancy by 70%, maternal death by 67%, and neonatal death by 77% (Usso, Adem, Dessie, & Tura, 2021). All these can be stated as remarkable benefits of the utilization of IPPFP services.

The world health organization (WHO) recommends at least 24 months after birth and six months after a miscarriage or abortion before attempting the next pregnancy(Starbird & Crawford, 2019). And with this, in 2015 the WHO developed the medical eligibility criteria (MEC) for contraceptive use (fifth edition), which provides postpartum women with varieties of modern FP methods that can be safely used during the immediate postpartum period. This includes progesterone-only pills, injectables (for non-breastfeeding women only), implants, postpartum intrauterine copper devices (PPIUCD), and permanent FP methods (bilateral tubal ligation).

However, Uganda still has a low contraceptive prevalence rate of only 28% in the postpartum period(Rutaremwa *et al.,* 2015) and this is attributed to belief in FP myths and misconceptions, Community and religious norms that prohibit non-marital sex and childbearing, mistreatment of postnatal women whenever they try to use any modern FP method and women's perceptions about the use of IPPFP(Gage, Wood, & Akilimali, 2021). Given the unpredictable time of the return of fertility after childbirth, postnatal women can get pregnant even right before the return of their menstruation(Blazer & Prata, 2016) Therefore, postnatal women have a high unmet need for FP compared to other women, which is

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the primary cause of unintended pregnancies and maternal mortality(Chethan, Anitha, & Savitha, 2018).

The prevalence of unintended pregnancies is the most challenging issue within maternal and child health and women's reproductive health because FP services are commonly provided during postnatal follow-up visits and together with other factors like shorter periods of exclusive breastfeeding (EBF), early return of menstruation and early resumption of sexual intercourse results in postnatal women ending up with a closely spaced and unplanned pregnancy(Rossier & Hellen, 2014). This, therefore, means that it is risky to rely on EBF as an FP method, and hence to address FP by waiting until six weeks of the postpartum period, appropriate contraception should be provided in the immediate postpartum period.

Furthermore, most of the studies conducted on postpartum FP focused on the extended postpartum period. Studies on IPPFP utilization, including in Uganda, are so limited. In addition, there is scarce data on the perceptions of postnatal women on IPPFP. Therefore, this study aimed to assess the perceptions of women on the use of immediate postpartum family planning among postnatal women attending Lira Regional referral hospital.

2. METHODOLOGY

Study Design:

The study will use a cross-sectional study design employing the quantitative method of data collection, the study design was chosen because the exposure (IPPF) and outcome (utilization of IPPFP) variables will be measured at the same time.

Study site and setting.

This study was carried out in lira regional referral hospital, Lira City west, Lango sub-region in northern Uganda**.** Lira City is located within Lira District, which is bordered by districts, Pader to the North, Otuke to the East, Dokolo to the southwest, and Kole to the West. It has an estimated population projection of about 119,323. It is about 380km from Kampala, the capital city of Uganda. kzLira Regional Referral Hospital is the referral hospital for the districts of Amolatar, Apac, Kwania, Dokolo, Lira, Kole, Otuke, Alebtong, and Oyam.

LRRH is located along Police Road, in the central business district of the city of Lira, approximately 101 kilometers (63 mi), southeast of Gulu Regional Referral Hospital, in Gulu City. This is approximately 124 kilometers (77 mi) by road, northwest of Soroti Regional Referral Hospital, in the city of Soroti.

Lira Regional Referral Hospital serves an average of 235,000 outpatients, 23,000 inpatients, and an average of 5,700 deliveries per year. It has a total bed capacity of 254

Study population.

Target population.

All postnatal women attending lira regional referral hospital.

Accessible population.

The study engaged all postnatal women available at the study setting during the time of data collection.

Eligibility Criteria.

Inclusion Criteria.

Postnatal women who were at the study setting, at the time of data collection and those who consented to participate in the data collection.

Exclusion Criteria

All Postnatal women who were mentally incapacitated and those who were weak or ill were excluded.

2.1. SAMPLE SIZE.

$$n_0 = \frac{Z^2 pq}{e^2}$$

Where n_o = estimated sample size of postnatal women utilizing immediate postpartum family planning.

Z= Z-score (standard deviation) corresponding to 95% confidence interval and it is equal to 1.960

e = Absolute error between the estimated and true population prevalence of MA of 5%, =0.05

p= assumed true population prevalence of postpartum family planning use. A recent analysis

of results by ()found the Prevalence of postpartum contraceptive use to be equal to 28.0%, so P=28.0% =0.28

q=1-p = the probability of not using contraceptives in the postpartum period, so q= 1-0.28, hence q=0.72.

Thus, n= (1.960x1.960x0.28x0.72)/05x0 05 =309.7866

Therefore, n ~ 310.

Study procedure

The report was presented to the department of nursing and midwifery, lira university, and approval for this research was sought from GUREC clearance for data collection was then sought from the hospital director LRRH and the ward incharge postnatal LRRH. The participants were consecutively selected and the data was collected by the researcher himself. Data collected was checked for completeness and consistency every day. Hard copy data were kept under lock and key accessible only by the researcher, soft copy data was password protected on the computer, accessible only by the researcher. The questionnaires were cross-checked at the end of data collection to ensure proper documentation of variables before entry into the computer the women identified were approached; the purpose of the study was explained to them after which they were provided with a written consent form were included in the study. Data was collected using a researcher-administered structured (close-ended) questionnaire and the interviews ran for about 10 to 15 minutes for each participant. This was repeated for every recruited study participant until the required sample size was attained.

Sampling technique and procedure:

This was a quantitative study that used a consecutive selection technique. Where every participant was selected to participate in the study as they come, except those who declined to participate. This was due to the limited time available for data collection.

Data collection method.

The researcher used a survey method to collect primary quantitative data concerning postnatal mothers at the facility using a structured pretested questionnaire. The oversight role was done by the researcher and the supervisor, to check filled questionnaires for accuracy and any missing information.

The data on sociodemographic characteristics, level of IPPF utilization, and perception of women on IPPFP use were collected using an interviewer-administered and structured questionnaire. The questions in the questionnaires were closed-ended.

The survey method involves asking specific and essential questions whose answers are usually numerical and data analysis was quickly done. It requires minimal investment to develop and administer and is relatively easy for generalizing.

Data collection instruments.

Primary quantitative data on perceptions of women and level of utilization of IPPFP among postnatal women was collected using structured interviewer-guided questionnaires written in English and interpreted in Langi for participants who didn't understand English.

Quality control

Validity

To ensure the validity of the instruments of study, relevant questions from other previous research studies were adapted into the questionnaire, and the questionnaire was checked by experts including the supervisor.

Reliability.

Reliability is used to measure the degree to which the questionnaire will produce consistent results under similar and different conditions; this was ensured by pre-testing the questionnaires before data collection and sticking to the inclusion and exclusion criteria In order not to miss out any information and to ensure the quality of data, the questionnaire was pretested on 5 women from Lira university teaching hospital. Getting feedback on the research process and data itself from the participants increases the chances of results being implemented.

Data management

Each questionnaire was checked immediately after the interview for completeness by the researcher. At the end of data collection, the questionnaires were entered using Epidata software version 3.1.

Data cleaning was done and data was password

protected to avoid a breach of confidentiality.

3. Data analysis.

The quantitative data was collected and analyzed in a descriptive and inferential analysis using Statistical Package for Social Sciences (SPSS) version 23, and the outcomes were illustrated using tables, pie charts, and bar graphs. Univariate analysis for frequencies and percentages was done and bivariate analysis using binary logistic regression to determine the associations was done at a 95% confidence interval with p-value$<$0.005.

4. Ethical consideration.

Ethical Approval.

This research report was presented to the department of nursing and midwifery, Lira University, and approval was sought from Gulu University Research And Ethics Committee and National Council for Science and Technology, an administrative clearance was obtained from the hospital director, LRRH, and the in-charge of the postnatal ward, LRRH.

Informed consent.

An informed written informed consent form was provided to every participant after a thorough explanation of the participants' rights. The participants were informed about the study, and its aims, and they were requested to sign the consent forms if they agreed. Therefore, all the participants voluntarily participated in the research study and also were able to withdraw at any time if they felt uncomfortable. They were entitled to retain a copy of the consent to take home with them.

Privacy and confidentiality

Privacy was maintained by interviewing respondents in private places and not conducting interviews in public places.

Confidentiality was guaranteed, the researcher avoided identifiers like names on participants' information and put passwords on the laptop containing participants' data. Honesty was maintained throughout the research process; in collecting and reporting data, results, methods, and procedures used during data collection to avoid fabrication, falsification, misrepresentation, and or misreporting of data.

5. Results:

Socio-demographic characteristics of study participants.

A total of 300 postnatal women were included in the survey and making a response rate of 97%. Of the study participants (74%) were aged between (19-28) years with a mean age of 26(S.D $\pm$3.0), majority of the participants were married (75.7%), with a greater percentage coming from rural areas (51.7%) and more likely to be an Anglican by religion (53.0%) as shown in(table1) below;

Prevalence of immediate postpartum family planning.

A total of 13(4.3%) study participants reported having ever received a modern contraceptive method of family planning immediately after giving birth. The majority reported having received implants (28%) and followed by PPIUCD (14.0%) before discharge. Half of the postnatal women reported having never used any modern contraceptive method immediately after delivery (50.3%).

A total of 197(65.7%) reported never receiving any counseling about IPPFP with the majority still reporting having never heard about IPPFP 224(74.7%) some of the reasons suspected for non-use of IPPFP.

Variables associated with the use of IPPFP.

Using binary logistic regression to determine the relationship between the study variables and the use of IPPFP was done and presented in tables. This indicated that the relationship between the participant's perceptions and the use of IPPFP was found to be statistically significant ($<$0.005), there was also a statistically significant relationship between age and use of IPPFP where women with extremes of ages showed more interest in IPPFP (p$<$0.002).

Counseling on the use of IPPFP, religion, and knowledge about IPPFP were all found to be sta-

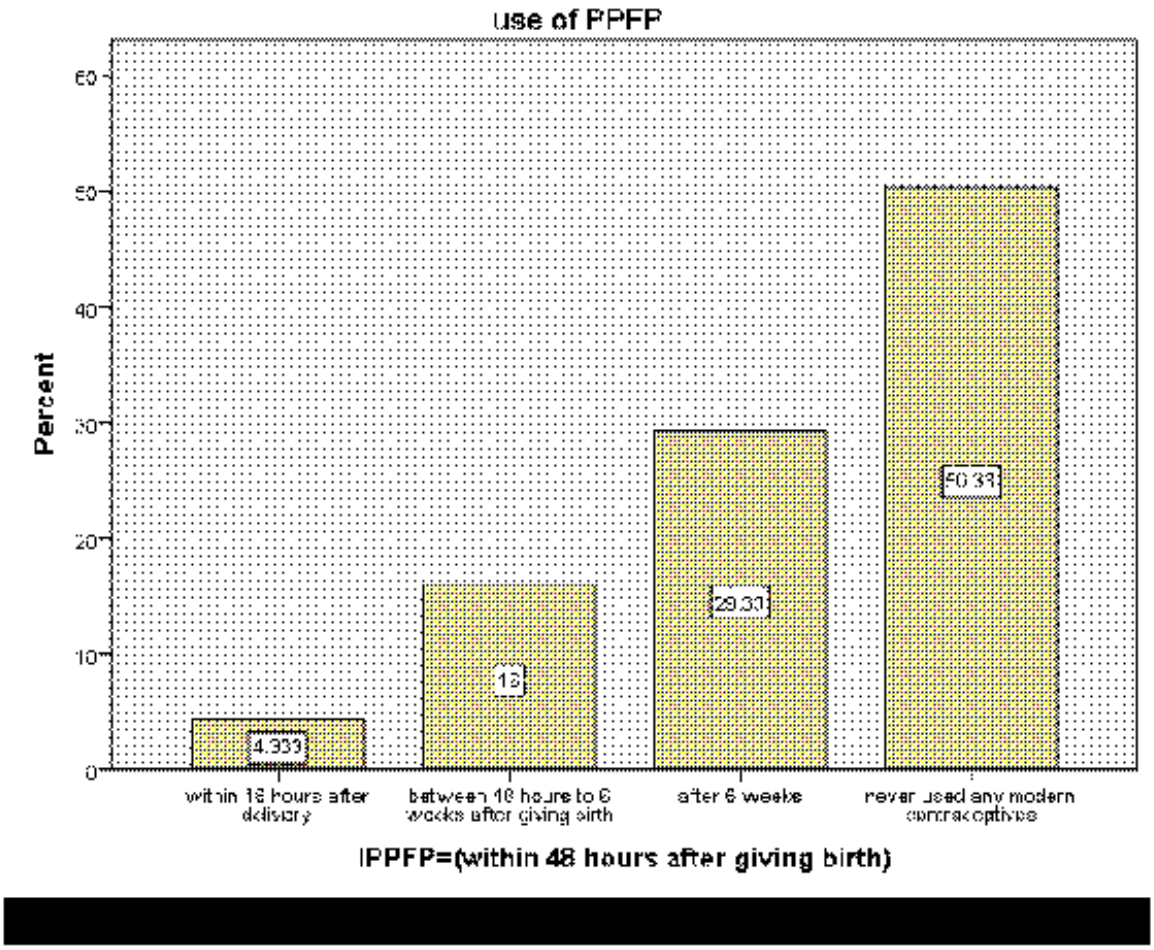

Figure 1: Showing prevalence of immediate postpartum family planning among the study participants (N=300)

Table 1: showing social-demographic characteristics of the study participants (N=300)

Variable	Frequencies(N)	Percentages (%)
Age (Years)		
19-28	222	74
29-39	78	26
Place of residence		
Urban	145	48.3
Rural	155	51.7
Marital status		
Married	227	75.7
Single	46	15.3
Divorced	18	6.00
Widowed	09	3.0
Mother's occupation		
House wife	150	50.0
Self employed	53	17.7
Government employed	9	3.0
Subsistence farmer	88	29.3
Husband's occupation		
Self employed	158	52.3
Government employed	50	16.7
Subsistence farmer.	92	32.0
Education level		
Informal education	43	14.3
Primary	140	46.7
Secondary	95	31.7
Tertiary	22	7.3
Religion		
Anglican	159	53.0
Catholic	125	41.7
Islam	16	5.3

tistically significantly associated with the use of IPPFP ($p<0.000$).

Factors associated with immediate postpartum family planning use among postnatal women at multivariate level.

On running Binary logistic regression age, mothers' counseling, and knowledge about IPPFP were found to be significant at p-value of (<0.05).

6. DISCUSSION:

Even though immediate postpartum family planning utilization is very important in reducing the unmet need for family planning and preventing short birth to pregnancy intervals, the level of utilization is still very low.

This study showed that only 13(4.3%), of the study participants, reported having used a modern contraceptive method during the immediate postpartum period translating to less than a quarter of the study population. The results are low compared to similar studies in Ethiopia on the prevalence of LARCD which showed a prevalence of 26.6%(Gebremedhin, Alemayehu, Yihune, Melis, & Fikadu, 2021). This might be due to differences in the study area, sample size,

Table 2: showing the association between study variables and use of immediate postpartum family planning at bivariate level (N=3000)

Variables(N=300)	Use of IPPFP	No use of IPPFP	COR	P-Value
Age(Years)				
(19-28)	92(30.7%)	130(43.3%)	2.261	**0.002**
(29-39)	48(16.0%)	30(10.0%)		
Marital status.				
Married	101(33.7%)	126(42.0%)		
Single	24(8.0%)	22(7.3%)		0.2610
Divorced	8(2.7%)	10(3.3%)		
Widowed	7(2.3%)	2(0.7%)		
Religion.				
Anglican				
Catholic.	34(11.3)	91(30.3%)	3.441	**0.023**
Islam.	9(3.0%)	7(2.3%)		
Husband's Occupation.				
Subsistence farmer	44(14.7%)	47(15.7%)		
Civil servant.	27(9.0%)	23(7.7%)	0.000	0.628
Business man	67(23.0%)	90(30.0%)		
Knowledge.				
Yes	56(18.7%)	80(28%)	0.214	**0.000***
NO	20(6.7%)	140(46.7%)		
Area of residence				
Urban	67(22.3%)	78(26.0%)	1.036	0.877
Rural	73(24.3%)	82(27.3%)		
Counseling.				
Yes	71(23.7%)	69(23.0%)	0.243	**0.000***
No	32(10.7%)	128(42.7%)		
Perceptions.				
Poor	98(32.7%)	134(44.71%)	2.209	**0.005***
Good	42(14.0%)	26(8.7%)		
Education Level.				
Illiterate	18(6.0%)	25(8.3%)		
Primary	64(21.3%)	76(25.3)	2.976	0.226
Secondary	43(14.3%)	52(17.3%)		
Tertiary	15(5.0%)	7(2.3%)		

Table 3: showing factors associated with use of IPPFP at multivariate level.

Variable	cOR (C95%I)	P-Value	aOR (C95%I)	P-Value
Age (Years)	2.261(1.333-3.836)	0.002	3.224(1.742-5.964)	0.000
Religion	3.441(1.188-9.966)	0.023	1.994(0.597-6.656)	0.262
Knowledge	0.214(0.120-0.382)	0.000	0.459(0.229-0,921)	0.028
Counsellling	0.243(0.146-0.404)	0.000	0.258(0.133-0.499)	0.000
Perceptions	2.209(1.269-3.844)	0.005	1.321(0.620-2.433)	0.553

and study period. Another explanation can be related to the difference in health system policies on how much emphasis has been directed towards immediate postpartum family planning services and support from other non-profitable organizations.

However, these results were slightly higher than for a similar study done in sir-lanka (3.4%)(Dasanayake, Patabendige, & Amarasinghe, 2020) though the study focused only on the use of PPIUCD, and still the results are higher than the results from the national report of Ethiopian mini DHS 2019 which showed a prevalence of 2% (Zeleke & Zemedu, 2022).

According to this study, most of the participants preferred implants (28.67%) more than compared to other modern methods such as PPIUCD (14.67%), injectables (4.7%), condoms (0.33%), and permanent methods of contraception. This could be due to personal preference, ease of insertion of implants, and less perceived harm as compared to other methods like the PPIUCD which is inserted into the uterus and possess a greater chance of being perceived negatively.

The study findings indicated that a higher frequency of women in the age group of 19-28 years was less likely to adopt immediate postpartum family planning as compared to their counterparts who are in the older age groups of 29-35 years. This is in line with a similar study done in Karamoja(Omona *et al.,* 2021). This could be due to the reason that majority of younger postnatal women in such age groups are still unmarried and do not want to carry the burden of bearing many children for a man whom they are not sure they will get married to and also increased desire to finish studies and have a stable career as compared to older individuals who have achieved most in the younger stages of life.

Respondents' religious beliefs can influence the acceptance and use of modern contraception by couples in the immediate postpartum period. In this study, women of Protestant denomination also reported more use of 99 (32.3%) significantly than Catholics 34 (11.3%) and Islamic9 (3.0%) religions respectively. This may be related to the fact that there were more Protestants in this study. However, some other studies also agree with these findings. Worth noting from the study there was a great degree of variation amongst different religious groups where there was no absolute non-utilization of IPPFP, meaning the use and non-use of IPPFP were not related to religious beliefs but rather personal intentions.

In this study, participants who were counseled 71(23.7%) about IPPFP were more likely to utilize IPPFP compared to those who were not counseled 32 (10.7%). This finding is similar to a study conducted in Ethiopia(Gebremedhin *et al.,* 2021) which showed that, counseled clients were more likely to utilize IPPFP. This can still be compared to results from clustered randomized data in Tanzania which showed that giving women informational materials on IPPFP and counseling after admission for delivery is likely to increase the number of women choosing IPPFP.

Similarly, a study in India proved that counseling in the antenatal period was a key point in increasing acceptance of IPPFP (Pradhan, Kshatri, Sen, Behera, & Tripathy, 2017). This might be because women who received family planning counseling during ANC and PNC might be highly motivated to use IPPFP and also because counseling helps to solve religious and traditional myths and attitudes.

The result from this study showed a statistically significant association between participants' knowledge and utilization of IPPFP. Respondents who had good knowledge 56(18.7%) about IPPFP were more likely to utilize PPIUCD compared to those who had poor knowledge 20 (6.7%). This is similar to a study conducted in Ethiopia (Gebremedhin *et al.,* 2021) where women who had good knowledge utilized IPPFP more compared to those who had poor knowledge. This can be explained by a study done in India which showed that women who had good knowledge had a better experience with the use of IPPFP. (Yadav, Joshi, & Solanki, 2017).

7. CONCLUSIONS

The immediate postpartum family planning use among postnatal women attending Lira Regional Referral Hospital was found to be very low 4.3%

representing less than a quarter of the study participants. Participants' age, religion, knowledge of IPPFP, and counseling on the use of IPPFP were found to be significantly associated with the use of IPPFP.

RECOMMENDATIONS

Interventions towards improving access to and utilization of IPPFP services in the setting. These included ensuring that skilled health care providers are available in adequate numbers, supplies and equipment are readily available and that community sensitization is adequately carried out. These suggestions indicate that the support of key stakeholders including the various implementing agencies and international NGOs rendered towards the district health services delivery is critical to improving sexual and reproductive health services including IPPFP family planning.

For Lira Regional Referral Hospital administrators and other stakeholders, there is a need to work on immediate postpartum family planning services by improving antenatal care services and integrating standard immediate postpartum family planning counseling programs throughout the whole process of pregnancy i.e. (ANC, delivery, and PNC) and facilitate for the education of women on the benefit of immediate postpartum family planning use and address myths and negative attitudes.

In addition, better ways of communicating modern contraceptive methods, including the side effects, should be researched and applied to bridge the information gap and address negative perceptions.

Furthermore, research should be done to investigate individual, community, and health service providers, and related factors that hinder immediate postpartum contraceptive acceptance and utilization, and most preferably using a mixed method study.

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9. LIST OF ABBREVIATIONS

FM: Family Planning.
HCP: Health Care Providers.
HIP: High Impact Practices.
IPPFP: Immediate Postpartum Family Planning.
IUCD: Intrauterine Contraceptive Device.
LARC: Long Acting Reversible Contraceptives.
LMIC: Low- and Middle-Income Countries.
LRRH: Lira Regional Referral Hospital.
MOH: Ministry Of Health.
PPFP: Postpartum Family Planning.
SSA: Sub-Saharan Africa.
WHO: World Health Organization.

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This research was not funded

CONFLICT OF INTEREST:
No conflict of interest declared.

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