Contraception and Reproductive Medicine

RESEARCH

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Barriers and enablers to utilisation of postpartum long-acting reversible contraception in Eastern Uganda: a qualitative study

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Abstract

Introduction In Uganda, although most women wish to delay or prevent future pregnancies, uptake of postpartum family planning (PPFP) is low. We explored behavioural factors influencing the utilisation of postpartum long-acting reversible contraceptives (LARCs) in Eastern Uganda.

Methods We conducted a qualitative study in two districts of Eastern Uganda. We conducted 20 in-depth interviews and three focus group discussions with postpartum women, male partners, midwives, and village health team members. We analysed transcripts using framework analysis, based on the COM-B framework.

Results The use of immediate postpartum LARC was affected by the capabilities of women in terms of their knowledge and misconceptions. Limited capabilities of health workers to provide counselling and insert IUDs, as well as shortages of implants, reduced the physical opportunites for women to access PPFP. Social opportunities for women were limited because men wanted to be involved in the decision but rarely had time to accompany their partners to health facilities, and health workers often appeared too stressed. Men also feared that PPFP would enable their partners to be unfaithful. Motivation to take up immediate postpartum LARC included the desire to space births, preference for contraceptive implants over intra uterine devices (IUD) at the 6-week postpartum period, resumption of sex and menses, partner support, and perceived effectiveness of postpartum contraception. Participants thought that uptake of immediate postpartum LARC could be improved by health education and outreach visits, male involvement and couples' counselling in antenatal clinic appointments, and enabling switching between family planning methods (in case of side-effects) .

Conclusion Low uptake of PPFP was caused by inadequate knowledge and misconceptions about LARC by women and their partners, insufficient numbers of midwives trained to provide PPFP, stock-outs of PPFP methods, and few social opportunities for couples to be counselled together. These factors could be addressed by scaling up effective,

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low cost and innovative ways to provide health education (such as films), involving men in decision-making, as well as training more midwives to provide PPFP services, and ensuring that they have sufficient time and supplies.

Keywords Immediate postpartum family planning, Long acting reversible contraception, Uganda, Modern contraceptives, Intrauterine devices, implant, qualitative

Introduction

After childbirth, almost all (95%) women in low-income countries wish to delay or prevent future pregnancies [1]. Despite this overwhelming desire, only 10% of women in Uganda use modern contraceptives in the postpartum period [2].

The unmet need for family planning is higher among postpartum women than in the general population [1]. The low utilisation of postpartum contraceptives predisposes women to short interpregnancy intervals and unwanted pregnancies, many of which end up as unsafe abortions, which are associated with adverse maternal, perinatal and infant outcomes including death [3–5]. Specifically, a short interpregnancy interval is associated with low birth weight, preterm birth, small for gestational age [6], and increased infant mortality [3, 4]. Short birth intervals affect the woman's ability to engage in income generating activities leading to socio-economic deprivation [7].

In low- and middle-income countries (LMICs), few women receive counselling regarding family planning during antenatal and postnatal care, which underscores the limited opportunities available for women to be informed about postpartum family planning [1]. Similarly, there are many missed opportunities to counsel and provide postpartum family planning along the continuum of maternal and child health services [8]. In Uganda, 41% of women who were not using family planning reported not receiving counselling regarding family planning during their visit to the health facility [9]. Although the Ministry of Health guidelines encourage provision of integrated services at all levels, which has increased rates of health facility deliveries, 90% of women still leave health facilities after childbirth without receiving postpartum contraceptives [6]. The high number of women who do not return to the health facility for postnatal care attendance highlights a missed window of opportunity to provide PPFP.

Postpartum contraception confers benefits of convenience, ease of insertion/provision, and increased utilisation of modern contraceptive services [10]. However, among the few women who opt for postpartum family planning in Africa, more than 90% preferred to use short-term contraceptives (oral or injectable contraceptives) [1]. The problems of inconsistent use and early discontinuation inherent in short-term contraceptives undermine their effectiveness in providing long-term contraception in the postpartum period [11]. The long-acting reversible contraceptives (LARCs), including implants and intrauterine devices, remedy the need to rely on the user [10]. LARCs provide highly effective, safe, long-term contraception for postpartum women [10].

Several quantitative studies have assessed demographic predictors of post-partum contraception use [2, 12, 13] and use of LARCs [14], but these do not provide information on how to improve the provision of post-partum contraception services. Several qualitative studies have explored the views of Ugandan men and women about contraception in general, but no specific findings have been reported about post-partum contraception [15–17], except in one study in South-Western Uganda [18]. However, Uganda is a very diverse country with over 26 different ethnic groups. South-Western Uganda is different from Eastern Uganda in terms of culture, ethnic groups, and languages [19]. The Bagwere and Bagisu peoples have different cultural beliefs and rituals about issues such as marriage and birth, so may also have different perceptions about PPFP compared to the Bakiga and Banyankole peoples of South-West Uganda.

This study was conducted to understand behavioural factors affecting the utilization of post-partum LARC within Mbale and Budaka districts in Eastern Uganda.

Methods

Study design

We conducted a qualitative study. The study was grounded on the COM-B theoretical framework [20]. This framework involves the capability (physical & psychological), opportunities (physical & social) and motivation (reflective and automatic) influencing postpartum LARC use (behaviour) [20, 21]. Capability to use postpartum contraception includes psychological capability (knowledge and attitudes) and physical capability (e.g., skills for inserting IUDs and implant, medical eligibility criteria) [20]. The opportunities were categorised under physical (health system factors) and social (e.g., convenience and social acceptability), while motivation includes automatic (subconscious beliefs about family planning) and reflective or conscious motivations for postpartum family planning use [20].

Study setting

The study was conducted in different settings in Mbale and Budaka Districts in Eastern Uganda. The main ethnic groups are the Bagisu and Bagwere who speak Lugisu and Lugwere languages. The majority of the population

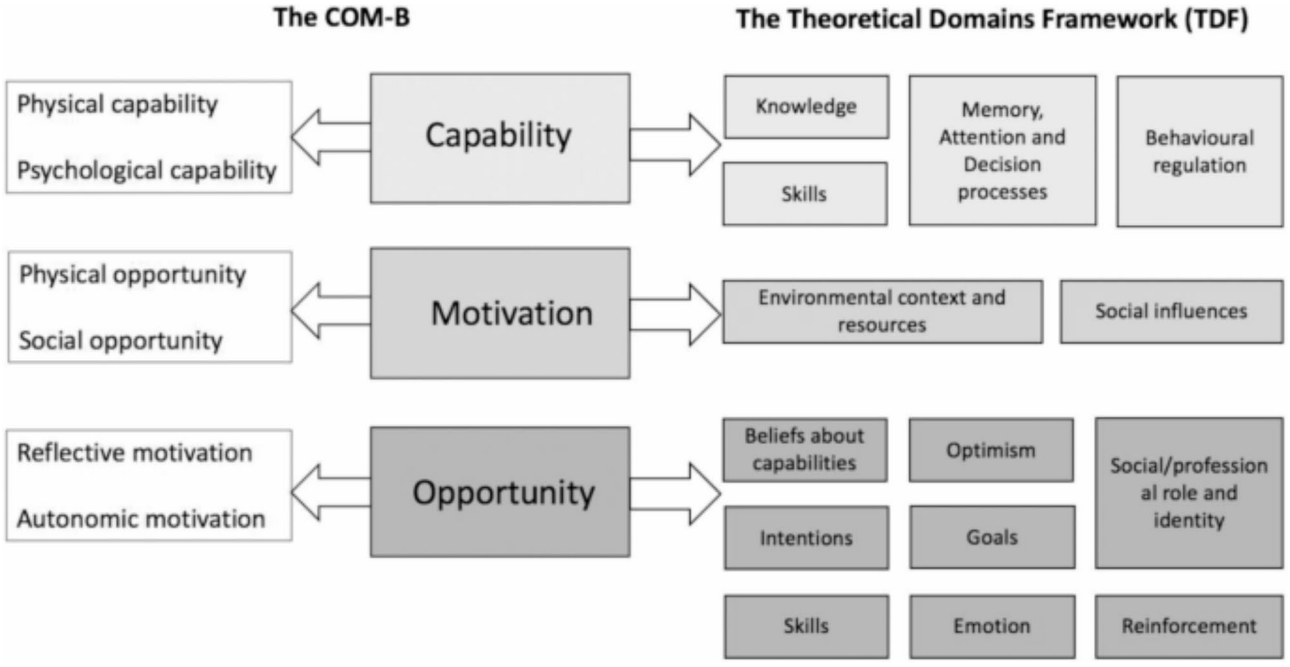

Fig. 1 Conceptual framework to explore enablers and barriers to uptake of LARC adapted from the COM-B Model [20]

is Christian.We included antenatal and postnatal units of Mbale Regional Referral Hospital (MRRH), Busiu Health Centre (HC) IV and Budaka HC IV. Outside of the health facility settings, the study was conducted among residents in both urban and rural areas of Mbale district (Busiu and Nakaloke) and a community in Budaka district. This enabled us to get a general representation from both the urban and rural areas of Eastern Uganda. We chose MRRH study site because it is a regional referral hospital with a large catchment area serving over 14 million people in Bugisu, Teso, Bukedi and Sebei sub-regions. The hospital provides a range of antenatal, intrapartum and postnatal services including postpartum family planning (PPFP) services.

Study population and sampling procedure

The study included pregnant women who were receiving antenatal care and postpartum women in MRRH (urban), Nakaloke (rural), Budaka (rural) and Busiu Health Center IV (rural). Male partners of women who had just given birth were included in the study as well. Women who had delivered within the last six months were included in the study whether they were breastfeeding or not. Midwives at MRRH and Nakaloke HC III and volunteer community health workers (known as Village Health Teams or VHTs) from the community of Nakaloke subcounty and Budaka district were also included in the study. Women who were critically ill and those who were more than six months post-delivery were excluded from the study. We used maximum variation purposive sampling to select the study participants who could provide a rich in-depth description of the phenomenon under study [22]. The VHTs were used to identify the study participants from the community. Sample size was based on the principle of data saturation. In our study, data saturation was reached after 22 in-depth interviews (IDIs) with 11 women, four male partners, three VHTS and 4 healthcare workers who were midwives. Three focus group discussions of 6–7 participants per group were conducted among pregnant women in antenatal clinic, postpartum women and male partners.

Data collection procedures and methods

Semi-structured interviews were conducted using an interviewer administered guide. The questions for the guide were based on the COM-B framework. The guide had questions about family planning in general (discussed family planning use with the male partner and ever used family planning). Women in postpartum clinics were asked whether they had been offered family planning in general and/or LARC immediately and/or within six months after child birth. The women were further probed for their perceptions, willingness to use PPFP, perceived enablers and barriers to use of immediate PPFP. Women who were not offered immediate PPFP after delivery were asked about their interest to receive counselling on PPFP, their intention to use contraception, perceived enablers and barriers to contraception use and their preferred method of PPFP. The format of questions for male partners and pregnant women was similar to that used for women in the postpartum period.

The interviews were conducted by DA, BN, PN, (female midwives with a degree in midwifery), FO & DN, (female medical officers) and JW & SW (male midwives with degree in midwifery) who spoke the native languages of the study participants (Luganda, Lugwere, Lumasaba). Data collection was between April and December 2023. The in-depth interviews lasted 25 to 80 min, while the FGDs lasted from one hour and 30 min to two hours. Note-taking was done during the interview to capture impressions.

Data analysis and rigor of the study

Interviews were audio-recorded on a digital voice recorder. All voice recordings were carefully transcribed verbatim by DA, BN, PN, FO, and SW and they also translated to English by a native of the local languages (Lumasaba, Luganda, and Lugwere). Atlas.ti.9 was used in the analysis. We used the framework method of analysis [23], based on the COM-B framework to organise our results. We coded different barriers and facilitators into the appropriate component of the COM-B model (Fig. 1).

Trustworthiness and rigor of the study findings was maintained through triangulation of data sources (pregnant women, postpartum women and male partners), study sites (hospital and community setting), and data collection methods (in-depth interviews and focus group discussion) [22]. Male interviewers were used to interview male partners, while female interviewers were used to interview women. The interviews were conducted by midwives which ensured credibility of the findings [22]. These midwives were skilled in conducting in-depth interviews and focus group discussions. This enabled them to appropriately ask open ended questions. However, it is possible that their position as midwives could have influenced the way participants responded. Data analysis was conducted by one medical doctor and two midwives (AK, DA, & BN).

Table 1 Characteristics of participants

Characteristics	Postpartum Women (*N*=16)	Antenatal women (*N*=07)	Men (*N*=09)	Health workers (*N*=4)	Village health teams (*N*=3)
Age					
<20	1	0	0	0	0
20–35	15	7	6	3	0
>35	0	0	3	1	3
Marital Status					
Single	0	0	0	1	0
Married	16	7	9	3	3
Education level					
No education	2	0	0	0	0
Formal education	14	7	9	4	3
Occupation					
Peasant	12	4	4	0	0
Housewife	3	1	0	0	0
Teacher	1	0	0	0	0
Self employment	0	2	3	0	0
Motorcyclist	0	0	2	0	0
Nurse/ Midwife	0	0	0	4	0
Village health team	0	0	0	0	3
Ethnic Group					
Bagwere	4	0	4	2	3
Bagisu	3	6	5	2	0
Baganda	0	1	0	0	0
Place of Delivery					
Home	1	0	0	0	0
Health facility	15	7	9	4	3
Parity					
1–3	10	5	3	2	1
4–6	4	2	6	2	2
>7	2	0	0	0	0

Ethical considerations

The study obtained ethical clearance from the Busitema University Research and Ethics Committee (BUREC NO. BUFHS-2023-51). Written informed consent was obtained from the study participants while administrative clearance was obtained from all the units where the study was conducted. All the participants enrolled into the study were above 18 years and received modest compensation of 20,000 Ugandan shillings (approximately £5) as per the guidance from the Busitema University Research and Ethics Committee. Participants (three in number) who requested to use postpartum LARC method were referred to family planning services.

Results

We interviewed 39 participants (Table 1). Twenty of these were in-depth interviews (nine postpartum mothers, three male partners, one ANC mother, four midwives and three VHTs) and three were FGDs (one with six antenatal mothers, another with seven postpartum mothers and one with six men whose partners were in the postpartum period). Among the in-depth interviews, we interviewed 3 couples. None of the people we invited declined to enroll in the study. The age range of most participants was 20 to 35 years (n=31), while the majority had received formal education (n=37) and were peasants (n=20). Most of the participants were of the Bagwere (n=13) and Bagisu (n=16) ethnic groups, had one to three children (n=14) and delivered from a health facility (n=31).

Enablers and barriers to uptake of immediate postpartum LARC

We identified enablers, barriers, and recommendations, structured around the COM-B framework. The enablers

and barriers were aligned into capability, opportunities, and motivation of behaviour (Table 2).

Theme 1: capability

We did not identify any issues regarding women`s physical capability to take up immediate PPFP. There were issues with health workers' skills in offering PPFP, but from the womens' perspective, these have been classed under challenges in their physical opportunity to access PPFP.

All the challenges identified in this theme were about "psychological capability". The main issues were lack of knowledge and misconceptions about PPFP. For a few respondents, religious beliefs were also important.

Misconceptions

There were more misconceptions regarding the use of IUDs compared to implants. These included interference with sexual intercourse, disappearance in the body, causing weight gain, excessive bleeding and infertility. Women thought that insertion of the IUD required measurement of the length of partners' penis.

> *Yes, women always complain. That if they insert that coil, it disappears in your body; that it destroys ovaries; ….that it …goes up to the heart. (23 year old postpartum woman).*

> *If it(the IUD) starts to harm me during sexual intercourse, then I feel pain, I start to ask myself that what is it? Or sometimes then we divorce (53 year old male partner).*

> *That coil- me I hear the people who go for it say that they measure the length of your husband's penis and they say that if you go for that coil you cannot cheat, that when you cheat you get problems because men*

Table 2 Applying the COM-B model to explore the barriers, facilitators and recommendations to uptake of immediate postpartum LARC

Com-B domain	Sub-domain	Barriers	Enablers	Recommendations
Capability	Psychological	• Lack of knowledge • Misconceptions (need to wait for menses, effect of birth trauma on use of LARC, perceived body fragility immediately after birth) • Religious beliefs	• Accurate knowledge on LARCs	• sensitization by health workers while in health facilities • community sensitization by health workers and VHTs.
Opportunity	Physical	• Lack of health worker-initiated family planning services, • overburdened health workers, • Shortage of equipment used to offer LARCs • stock outs of LARCs . • health workers do not have skills in offering LARC services.	• Availability of PPFP LARC • Health workers have skills to offer the LARCs.	• Lobby for LARC from other health facilities. • Training Midwives to enhance their skills in PPFP.
	Social	• Men do not accept LARC if the decision is made without them • No time to attend health facilities • health workers appear stressed or harsh	• Good attitude of health workers • Joint decision-making with partner to take up FP: • Partner support	• Provision of privacy and confidentiality to women • Offering both individual and couples' counselling about PPFP during ANC visits and at postnatal units.
Motivation	Automatic	• Social norms • Negative influence of family and friends about use of LARCs. • Desired family size • lack of sexual intimacy after delivery	• Resuming sexual activity after delivery • Educated mothers • Positive attitude towards couple counselling and FP use, • Positive influence by partners, family members, and health workers. • Having attained a desired family size	• male involvement in ANC and other health services, sensitization by expert clients.
	Reflexive	• Discomfort of insertion and removal of LARC methods • Fear of infidelity • Side effects • Negative experience • Differing fertility goals	• Desire to space births / avoid conceiving too soon • Long duration of action • Approval to the utilization of LARC • Preference for LARC	• Sensitization, need for individualized FP • Sensitization by use of poster images about PPFP and media.

are not the same (in terms of the length of the penis) and that the coil is not good. (27year old postpartum woman)

"If they put it (implant) there the whole arm becomes dead to the extent of not doing any work. …If they do so to that arm, you will not be able to carry any heavy stuff. (23year old postpartum woman)

Misconception for the need to wait for menses to return

The use of LARC in the immediate postpartum period was perceived to be unnecessary since the menstrual periods had not yet returned. Women thought that absence of menses meant that they could not conceive, while others thought that LARC uptake in the immediate postpartum period was only relevant for those whose menses had returned early. Return of menses was also key for women who thought that implants would cause amenorrhea. Some women wanted to know when their menses would return after birth, and so, were reluctant to use family planning methods which would interfere with the return of their menses.

if they fit it (implant) in you, you keep being there but without going into your menstrual periods. (23 year old postpartum woman)

Misconception about body fragility after delivery and the need to recover

Immediate postpartum LARCs, especially the intrauterine device, were perceived to cause more pain to those who had experienced a traumatic delivery. Women, therefore, preferred to first recover from the birth trauma before taking up any method.

basing on what I went through (having a painful vaginal tear repair after birth), I feel that you would be adding me more pain (if you insert a coil immediately after child birth). Yes, in the process of putting it. When you are still fresh, like there they have vaginally repaired them, those ones who are vaginally repaired. Ok the stitches are still painful then you add (30 year old postpartum woman).

The psychological capability to use LARC, especially the IUD, was affected by the nearly universal disapproval of its use in the immediate postpartum period. Women and male partners were reluctant to use the IUD immediately after birth because of the perceived need for the woman to fully recover from the after-effects of childbirth. Women thought that their bodies were still too fragile to use family planning immediately after birth. The fact that women were still bleeding made them more hesitant to use the IUD as they thought it would make bleeding worse. This was especially important given that women believed that they lack enough blood during this postpartum period. Women also viewed pelvic pain during the postpartum period, still fresh vaginal tears and repairs, as reasons to avoid the insertion and use of the IUD during the immediate postpartum period.

At least six weeks after birth. Immediately after birth I see she is still bleeding because she has just given birth, the "way" is still very wide,… So, if you put when the way is still wide, when it goes back to normal it (IUD) might affect her(cause her pain) (38 year old Male partner).

…I cannot accept. the uterus can be when it has not yet gone back to its original position. And you are still over bleeding. And you do not know when that bleeding is going to stop, in what period. You may say that you insert it (IUD) in, then you bleed over and over. And you say, this thing is the one causing the bleeding. Yes, so for me I cannot accept it (the IUD). (35 year old Pregnant woman attending ANC).

Misconceptions also existed amongst some health workers. Some incorrectly informed women that they were not eligible for immediate postpartum LARC.

I have never heard that they put immediately after birth,…Yes, the health workers…then said, "but we cannot insert it (Implanon) in you right now [after abortion], go home and spend one month then you come back here and then we insert it in you." (35 year old Pregnant woman attending ANC at HC III).

Preferences for contraceptive implants

Some women were opposed to the use of the IUD and indicated that they would be willing to use contraceptive implants instead, because they perceived that the side effects were less for contraceptive implants especially those related to vaginal bleeding, interference with sexual intimacy with the male partner, and the effect on fecundity.

Misconceptions surrounding the use of implants were less than for the IUD. Some of the women had previously used contraceptive implants, which made them more likely to accept it in the immediate postpartum period. The method of inserting contraceptive implants was also thought to be compatible with the immediate postpartum period as it was thought not to interfere with the healing and recovery process after childbirth.

For the arm, it is also not bad. I see it does not cause difficulty….it is not like the coil….for it just, they put on the arm, then they treat you for just a short time. Few days it can be ok. You will be healed. Not like the other one (IUD), when you will be in pain.

However, a few women preferred using the IUD due to its long term effectiveness compared to the implant.

ok, for me if they are to give me a method, they have to give me the IUD. I would want it; the one for the opening of the uterus (IUD). Why? Because it's similar to the other one (implant - in being long acting compared to short acting methods). Reason being if they have fitted it (IUD) in you, for it, you have enough protection in you (protection from conceiving soon) (23 year old postpartum woman).

Women and men recommended sensitization by health workers, experienced clients and community outreaches as ways to increase their knowledge about PPFP.

Theme 2: opportunity

Sub-theme 2.1: physical opportunities

Some women lacked the opportunity to receive PPFP methods due to lack of health worker-initiated family planning services, overburdened health workers, shortage of equipment used to offer LARCs and stock outs of LARCs.

Lack of Health worker-initiated family planning services All the mothers attended antenatal care, and only one of them delivered at home. Although the majority (n=14) had delivered in a health facility, most were not counselled for postpartum LARC during antenatal care or postnatal care. Postnatal care was poorly attended except for the purpose of bringing the child for immunization. There was no mention of postpartum LARC in the majority of cases during antenatal and postnatal care, while in isolated cases, postpartum family planning was mentioned perfunctorily during history-taking in antenatal care. Consequently, some women had never heard that family planning in general can be used in the immediate postpartum period.

No, she (health worker) didn't talk about it at all. And still they just discharged us" (38 year old male partner whose wife delivered from Busiu HC1V).

They don't give it [family planning] to you immediately. I didn't know that you can get it. After some time, then you can go and get it. The health workers had never told me. (22-year-old postpartum woman)

Nevertheless, women and male partners expressed palpable demand and interest to receive information and counselling regarding postpartum LARC. Participants thought that informing them about postpartum LARC would help them decide on whether to use LARC in the immediate postpartum period.

It is good [to receive health education during ANC] because I [will] know as a mother when I give birth, I need to go to the health worker and they give me family planning to use" (28 year old Postpartum mother currently user of implant).

Now there it needs when you… maybe teach us and we might also be happy or get responsible to see that we join family planning" (32 year old Postpartum mother with 12 children).

Health workers lack skills for offering the IUD All except one of the midwives we interviewed lacked skills for inerting the IUD, which denied many women the opportunity women to take up the IUD.

Around me l have them (other nurses and midwives) but they are not confident (skilled). Me I feel there is a way they are not confident because every time a mother comes for IUD, when I am not there they wait for me (40 year old midwife).

Lack of FP equipment and shortage of LARCs Stockouts of the implants hindered health workers from offering PPFP services. This was also associated with unavailability of equipment used to offer PPFP such as lignocaine, autoclaves, and procedure couches.

Here I cannot insert an IUD where there is no couch. There should be a couch because you have to put this mother in lithotomy position then you do it. (38-year-old midwife)

Sometimes when we have stock-outs and maybe a mother has come, we don't have lignocaine. We don't have the gloves, we don't have even syringes, no cotton, and sterility is a problem. Usually that's what affects us as a facility. (35-year-old Nurse).

Healthworkers reported that training on Postpartum Family Planning and borrowing PPFP methods from other health facilities during stockouts or shortages medical supplies would increase physical opportunities for women receive PPFP.

Sub-theme 2.2: social opportunities

Joint decision making with a partner about family planning For most women who received health education after birth regarding the importance of using postpartum LARC, the six-week period enabled them to share the new information with their male partners, a step which was critical in joint decision making. Partner approval following joint decision as a couple was thought by both women and men to promote utilisation of LARC after six weeks, rather than immediately after birth, since women needed to first seek guidance and approval from their husband when they returned home after being discharged. The utilisation of LARC in the six weeks was facilitated by the postnatal care services especially immunization which was thought to be suited for postpartum LARC.

> *So, if they give me something [health education] and then I come back after one and a half months, I come back and sit with my partner and explain to him that and we agree with each other. Then there is no problem. (23-year-old postpartum woman)*

> *The one and a half months (starting contraception 6 weeks after delivery) would be better for us the women….there on going back at one and a half months [for immunization], it's better you receive it because you would have agreed with your partner. (23-year-old postpartum woman).*

Women and male partners expressed interest to receive information and counselling together regarding postpartum LARC. Participants thought that informing them about postpartum LARC would help them decide on whether to use LARC in the immediate postpartum period. However, some feared that men would change their minds after leaving the health facility.

> *It looks better if we are counselled when we are all together, me and my wife, because we shall decide on one issue. And the questions that will be asked, we (my wife and I) will be able to answer together. (30 year old FGD Male partner).*

> *other husbands don't allow their women to receive FP or if the women do it out of their way and go to the hospitals then it'll make him angry. Because he will not have known what advantages are nor the disadvantages in what method the woman has decided to receive. But if the sensitizations are done for both men and women, then there it gives us some agreement points with my partner. (22 year old postpartum woman).*

> *The disadvantage in it (couple counselling on PPFP) is, he (husband) might accept (his wife to get a method at 6 wks postpartum) from there (in the presence of the health worker) in deceit. But when you get out and then get home, then he says that,"I accepted because the health worker was there and I did not have what to do, but for me I don't want (you to get any FP method). (30 year old postpartum mother).*

Provision of privacy and confidentiality to women and offering family planning counselling during ANC visits and at postnatal units were recommended as social opportunities for women to take up Postpartum Family Planning.

Men do not accept LARC if the decision is made without them When women obtained LARC without involving their partner, this was often met with a negative reaction. The lack of involvement of male partners in the consenting and decision-making processes in addition to misconceptions about side effects of LARC made male partners reluctant to allow the use of LARC. This could even cause marital conflicts. One woman reported that some husbands disliked family planning services to the extent that they could divorce their wives if they took up any method.

> *When they reach there, sometimes the health workers sensitize them and they get courage. Then she decides to take it. So, from there then she gets back, others [women] even divorce when the husband doesn't agree with what she has done [taking up postpartum LARC]. (23 year old postpartum woman).*

> *Yes, what will you do? Now when the important thing you have to hide yourself (meaning to get Implanon and not inform the partner) and when you tell him, he does not accept. (30 year old postpartum mother).*

This dislike was linked with a fear of infidelity, especially amongst husbands who worked far from home. Some women feared that their husbands would think that the use of postpartum LARC would encourage them to have sexual relations with other men.

> *Now he might be thinking that if I go for family planning and yet he is not always around, I might cheat on him. You know how men can be - they might think you are here doing different things, yet in actual fact you are doing your work and he thinks you are*

cheating - that is why he does not want. (27 year old postpartum woman).

No time to attend health facilities However, most men did not have time to accompany their wives to health facilities due to their busy work schedules.

Me, I am a motorcyclist. I can wake up early morning and say let me go to work, I will come back and we go with my wife for the ANC appointment. Then time reaches when I have not yet come back from work, perhaps I might be still very far, therefore my wife comes alone to hospital. (61 year old FGD Male partner).

Some women could not get time either to come back to the health facility after delivery, because of their busy domestic duties at home. Long waiting times at the health facility also discouraged most mothers from seeking family planning services.

We have a lot of work as mothers, so you decide to go home and I will come back another day. Now when you reach home, you may be caught up with work, you say you will get time and go back to the health facility. (27 year old postpartum woman).

Health workers appear stressed or harsh Women and their families were reluctant to approach healthcare providers regarding postpartum LARC, becausethe healthcare workers were perceived to be so busy, very tired and unavailable to provide postpartum LARC, while the fear of burdening healthcare workers with need for postpartum LARC services further discouraged women to seek counselling on the utilisation of postpartum LARC. Some women also missed the opportunity of taking up LARCs because some health workers communicated harshly with them.

Now, sometimes, the health workers may be busy…, she might be tired. So, you may fear to talk to them because they have worked the entire night, they are tired and they want to go and rest….I fear to talk to them that is why I just keep quiet,. (27 year old postpartum woman).

Just she [health worker] became harsh. When she became harsh I saw ah-ah that I am not managing [to wait for family planning counselling]. (30 year old postpartum woman).

Theme 3: motivation

Sub-theme 3.1: automatic

Resuming sexual activity after delivery Some women and men did not even think about using PPFP when they were not sexually active after their delivery. The return of menstrual periods indicated to women the possibility of conception and the need for family planning. The return of menses was also accompanied by sexual resumption which women thought would put them at risk of pregnancy.

Now I knew that I was becoming fine and my husband could want to be intimate [have sexual relations]. So I knew I might conceive accidentally. (22 year old postpartum woman).

…as the husband, I cannot be with her intimately immediately after birth…. So, at least I wait for her to return to her normal way. When she bleeds following birth, time comes and she is dry [lochia stops], but even if she is dry, as the partner you can give her another one week before you can resume your game [sex] (38 year old male partner).

Social norms Social norms relating to use of family planning in the postpartum period among the peers encouraged some women to use postpartum LARC. The healthcare provider had a strong influence on utilisation of postpartum family planning methods especially among women with childbirth complications. The family social circles, the grandmothers and other senior women further influenced women on the use of postpartum LARC. Some were encouraged, and some were discouraged to use LARC by their family and friends.

I have seen from my sister, she delivered by C/S. She gave birth to twins and my mother looked at their income as a couple and it was not good so she told her, "if you do not space, you will not be in good conditions. So do not produce again soon. (22-year-old postpartum woman).

However, another respondent felt that women should make their own decisions, rather than assuming that they would have the same experience as others:

Yes, they have to be reassured a lot to stop listening to experiences of other women because, you, you are you. Me, I am me. (30 year old postpartum woman).

The society of Nakaloke perceived that women`s primary role was to give birth while that of men was to provide

for the family. This was influenced by the muslim religion which is mainly in Nakaloke region. This negatively influenced mothers by preventing them from taking up postpartum LARCs.

Some men say that they leave their women to produce because they(men) take care of the family. (35-year-old antenatal woman).

Desired family size Men and women whose marriages had lasted long with evidence of grandchildren present were automatically motivated to take up postpartum LARCs due to having attained a desired family size.

Ok, for family planning, I want and I want it 100% because even the number of children is that one (enough), I have even started having grandchildren. (32 year old postpartum woman with parity of 12).

Others desired a large family size. Although one participant reported that some women wanted to give birth to as many children as possible, none of the participants expressed this view themselves.

There are those who do not listen even if you tell them to (take-up FP), they just want to continue producing. Some say, 'let me produce the children until they get finished in the womb.' (27 year old postpartum woman).

Sub-theme 3.2: reflexive

Reflexive motivation involves thinking about reasons for wanting - or not wanting - to take up PPFP. Positive reasons to use LARC included the desire to space births and the long duration of action. Reasons not to use LARC included fear of infidelity, side effects, discomfort of LARC insertion and removal, and negative experiences.

Desire to space births Willingness to use postpartum LARC was related to the need to promote child spacing and promote proper recovery from childbirth especially women who had complications during child birth.

Considering how the health workers explained to me that I should not conceive soon since my uterus is now very weak. I should take some time before producing again. …She told me that it is true when you use family planning, you will space your children and even if you get pregnant again, these other children will not be sickly. If you do not space children they disturb you because they are always sickly and you will not be able to take care of them. (22 year old postpartum woman).

Long duration of action Women were motivated to take up postpartum LARCs because of their long duration of action and perceived effectiveness when used. Women reported that in cases of stockouts for short-acting reversible contraception methods at health facilities, those who already received the LARC methods are already protected from conceiving and will not be affected by stock outs.

Because for the short acting methods, it's difficult. You might go to the hospital and…then that we are out of stock…And sometimes because of unavoidable issues the dates might reach when you're not around….But with the other method (implants& coils) when they say that it's 5 years it will be 5. (23 year old postpartum woman).

Discomfort of insertion and removal of LARC methods Some women feared that inserting an IUD immediately after birth would be difficult, painful and uncomfortable for them, especially when they were still experiencing vaginal bleeding. Women also feared that the invasive mode of removal of implants would cause them discomfort.

Because of the way they insert it in down there. Yes, I see it is difficult/uncomfortable to be with….Yes, in the process of putting it. (30 year old postpartum woman).

The fear is during removal (of implant). As you know, some of us drink alcohol, so they may give the drug to reduce pain and it may not work. So when they cut to remove (the implant), you feel the pain (28 year old FGD pregnant woman).

This fear was compounded by bad experiences of health workers refusing to remove the implant when it was causing side-effects. Some health workers communicated harshly to them and disrespected client rights to remove a method which was causing them significant side effects.

I was bleeding all the time, I was washing stains all the time. Then I tried and I went to the health worker, I used it (the implant) for almost one year. I went to the health worker and told her, "But this thing (implant) as I am over-bleeding", then she just became harsh. (22 year old postpartum woman).

Side effects Bleeding was the most common side-effect reported to be experienced by women. They reported that they became dizzy whenever they over-bled especially using the implant method. Other side effects that were commonly reported with implants included gaining weight.

Now I gave birth to him in 2018,(by then) that is when I used it (implant) but I did not use it to the end. It would make me bleed a lot, I would always feel dizzy so I used it for one and a half years after I came and it was removed. (22 year old postpartum woman).

If they fit in you, it (implant) might accept (or work in) your body and then you fatten. The whole of you fattens and then someone thinks that you're pregnant yet not. The second one, there is finishing two"weeks" while "bleeding" when you go to the hospital and they give some tablets then it stops. (23 year old postpartum woman).

Lack of sexual drive was also reported by some women and men. Women associated it with feeling pregnant.

My wife was not having sexual desires. Then I asked her, "how come when we are in one bed when I want to have sexual relations you say you don't have the sexual desire?" Then I said, "what can we do, we go and remove the method." (30 year old FGD Male partner).

When he is with you (getting aroused to have sexual intercourse) at least you delay (the woman delays to get aroused), it's like saying when he is so turned on, you (the woman) are not in the mood to have sexual intercourse. (30 year old postpartum woman).

Discussion

The study was conducted to understand behavioural determinants of utilization of LARC among postpartum women. Women`s psychological capability to use PPFP was mainly affected by their level of knowledge and misconceptions. Their physical opportunites to receive PPFP were limited because health workers did not usually offer these services proactively, and many lacked relevant skills and/or supplies. Social opportunities were limited because of the need to involve partners, who wanted to be involved in the decision-making, but often did not have enough time to come to health facilities. Their motivation was affected by desired family size and birth intervals, support from their family and partner, and their desire for a long-acting method with few side-effects. Our study has important implications to address missed opportunities for provision of postpartum LARC and reduce the high fertility rates in our settings.

In LMICs, only 10% of postpartum women use LARC [24]. Despite women's demand to be informed about postpartum LARC, participants in our study reported that the lack of healthcare provider-initiated counselling and provision of postpartum LARC greatly hindered the utilization of LARC. This was compounded by healthcare providers being overstretched, lack of agency of women to request for postpartum contraception and the fragmented nature of healthcare services provision. The lack of healthcare provider-initiated counselling and provision may be related to the lack of integrated services. Similar studies in LMICs have also reported lack of integrated services and postpartum counselling as the main factors that hinder uptake of postpartum LARC [18, 24, 25].

Our findings are consistent with studies in Africa which reported the role of resumption of menses in uptake of immediate postpartum LARC [26, 27]. This could be related to women's perception that the risk of pregnancy was low during the postpartum period because menses had not yet returned and the perception that breastfeeding supresses return of fecundity [26, 28]. Healthcare providers have been noted to perpetuate the misconception of the association of return of menses with return of fertility [26]. Therefore, it is important to counsel women and healthcare providers regarding the high risk of pregnancy given that ovulation may precede menses during the postpartum period [26]. Women in our study valued the need to recover from vaginal bleeding and their menses to resume after childbirth because implants were thought to cause heavy bleeding. Therefore, it is important to address the existing limited knowledge and misconceptions surrounding postpartum use in an effort to promote uptake of immediate postpartum LARC.

Poor partner support lowered women`s opportunites to take up PPFP as well as demotivating them. This hindered the utilisation of postpartum contraception. Male partners' disapproval of immediate postpartum LARC was related to misconceptions, and lack of involvement in decision making to use family planning. This was consistent with other studies from similar settings which cited lack of partner approval as a deterrent to uptake of immediate postpartum LARC [26–29]. In patriarchal societies with deeply entrenched gender inequalities, the male partner makes all the decisions in the family, including the decision to use postpartum contraceptives [18, 25, 27]. Women who desire to use PPFP may not accept it for fear of retribution, gender-based violence and reproductive coercion [25, 29]. Although male partners do not always escort their women for deliveries, their

involvement is key in the uptake of immediate postpartum LARC [28].

In our study, poor utilization of LARC in the immediate postpartum period was related to misconceptions and fear of side effects, a finding which was similar to other studies [18, 26, 28, 29]. This was particularly important given the low utilization of LARC (1% for IUD) in the general population compared to other modern contraceptives (27% for injectables) [6]. Although most women were opposed to using IUD in the postpartum period, some preferred to use contraceptive implants. The contraceptive implant was seen to cause fewer side effects, and could not interfere with the healing process after childbirth, which suggests an opportunity to promote contraceptive implants in the immediate postpartum period. This is consistent with other studies in Uganda [18]. Women were willing to use postpartum LARC after 6 weeks of childbirth, a finding which was consistent with a study in DR Congo and Burkina Faso [27]. The six-week period was perceived to allow them time to heal but was also thought to provide an opportunity to discuss and make a joint decision to use family planning with the male partner.

Strengths and limitations

Our study provides insight on the barriers and enablers to use of LARCs in the immediate postpartum period. We recruited participants from antenatal care, women who delivered in a health facility or home. We also included their male partners. The collaborative approach especially the approach to involve the participants in suggesting recommendations to improve uptake of immediate postpartum contraceptive was very empowering. However, the study was limited to a small portion of eastern Uganda which was mainly Mbale and Budaka districts which might not reflect the entire eastern region. Since the interviewers were all health workers, this may also have introduced social desirability bias.

Implications for policy and practice

Strengthening the interventions that promote utilization of immediate and 6 weeks postpartum services could play a critical role in the use of immediate postpartum LARC. Understanding the behavioural determinants will enable better targeting of interventions. First, to improve women's capability of taking up PPFP, it is important to improve their knowledge and address misconceptions. Although recommendations were made for talks and outreach visits, these are time-consuming. Health education films, shown on screens in waiting rooms, may be a more cost-effective way of doing this. Films developed in local languages, using the person-based approach, can improve knowledge and attitudes towards family planning in Uganda [30].

Second, to address physical opportunities to access PPFP, it is essential to train all midwives to provide LARC and to ensure adequate supplies of commodities. The increasing rate of health facility deliveries in Uganda presents an opportunity to scale up utilization of immediate postpartum LARC especially given the corresponding low attendance of postnatal care services [6]. Our study notes that women were reluctant to come back to the health facility after delivery for family planning methods, a finding which was consistent with other studies [25, 27]. Therefore, identifying feasible ways of integrating immediate postpartum LARC into routine facility deliveries would tremendously improve the utilisation of immediate postpartum LARCs [24].

Third, there is a clear need to increase social opportunities for partners to be involved in decision-making around PPFP. This could be done by offering couples' counselling during antenatal clinics, or even by Village Health Teams in the community [31]. Attendance of partners might also be improved by offering counselling outside of their normal working hours [18]. However, it is also important to offer individualized counselling if needed, because it may help women (especially those who are shy or fearful or with low self-esteem) to freely open up to health workers about their concerns on family planning.

Last but not least, it is important to increase motivation to use PPFP. Counselling and health education films can also help by addressing concerns about side-effects and discomfort of the procedure, as well as changing social norms [30].

Our study findings did not majorly differ from those of a similar study done in south western Uganda [18] except for a few findings like fear to coomunicate to busy health workers and certain misconceptions by women. Therefore similar interventions to improve PPFP uptake could benefit women in both Western and Eastern Uganda. It is probably not necessary to develop different health education films in each area; the same films could simply be translated with a few minor adaptations, which would save time and money.

Priorities for further research

Further research should be done to test the effectiveness of integration of family planning services along the continuum of maternity care. The cost-effectiveness of difference methods of health education to increase utilization of immediate postpartum contraception, such as videos or counselling, could be compared in trials. However, the largest impact is likely to be achieved by a complex intervention involving not only health education but also training of health workers and couples' counselling [31]. It is important to evaluate the cost-effectiveness of this

intervention in a randomised controlled trial, in order to inform decisions by funders and policy-makers.

Conclusion

The utilization of immediate postpartum family planning in Eastern Uganda was hindered by limited knowledge and misconceptions among women and men. Physical opportunities were limited because health workers lacked skills, supplies and time to offer counselling. Social opportunities were limited because partners wanted to be involved in decision-making yet did not have time to attend health facilities. Motivation was affected by social norms, desire for spacing pregnancies, desired family size, concerns about infidelity and fears of side-effects. These factors could be addressed by scaling up effective, low cost and innovative ways to provide health education (such as films), involving men in decision-making, as well as training more midwives to provide PPFP services, and ensuring that they have sufficient time and supplies.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s40834-024-00308-5.

Supplementary Material 1

Acknowledgements

We would like to acknowledge God, RSTMH, NIHR for funding this study and the research mentee group or the moral support given during the study. We would also like to acknowledge the research assistants and participants who consented to be interviewed. We would like to thank them for willingly taking the time to provide the information and data needed to complete this study.

Author contributions

AK, MW, DM, and MM did conceptualization, MW and DM provided the methodology; software, AK, DA, and RN did the formal analysis. AK and DA wrote the original draft manuscript, MD, MM, JE, MW, JNW, BN, DA, SW, DN, PAMN, FO, JW, and AN, reviewed and edited, MW did visualization, MW, DM and MM did supervision, AK was project administrator, AK acquired funding. All authors have read and agreed to the published version of the manuscript. AK and DA had full access to all study data and took responsibility for the integrity of the data and the accuracy of the data analysis.

Funding

Partial financial support was received from the National Institute for Health Research (NIHR 302412) The research leading to these results received funding from the Royal Society of Tropical Medicine and Hygiene (RSTMH), but no funding was received to assist in the preparation of this manuscript. This study was funded by the Royal Society of Tropical Medicine and Hygiene (RSTMH). This work was supported by the Royal Society of Tropical Medicine and Hygiene (RSTMH) and partially by the National Institute for Health Research (NIHR 302412).

Data availability

Additional data and materials can be accessed on reasonable request from the corresponding author.

Declarations

Ethics approval and consent to participate

Ethical approval was sought from Busitema University Research and Ethics Committee and the Uganda National Council of Science and Technology; UNCST. Permission from the District Health Officer and relevant health centre "in-charges" was sought to recruit participants. Written informed consent was sought from study participants before enrolling them into the study after comprehensively explaning to them about the study. Participants who are 18 years below and emancipated were given written informed consent. Those not empancipted were not included in the study. Each participant was compensated for their time and transport with 20,000 Ugandan Shillings (approximately £5). Participant pertinent information was handled with utmost confidentiality.

Consent for publication

The authors consent for publication.

Competing interests

The authors declare no competing interests.

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Received: 13 May 2024 / Accepted: 21 September 2024
Published online: 10 October 2024

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