

Prevalence and factors associated with offering post-partum contraception by healthcare workers in Kayunga District: A cross-sectional study.

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Abstract Background.

Postpartum contraception is a critical component of maternal health, helping to prevent unintended pregnancies and reduce pregnancy-related risks. Despite high levels of awareness about family planning methods in Uganda, their uptake during the postpartum period remains low. This study sought to determine the prevalence and factors associated with the provision of postpartum contraception by healthcare workers in Kayunga District.

Methodology

The study employed a cross-sectional design using both quantitative and qualitative methods. The quantitative aspect involved a review of family planning and maternity records from January to June 2024 to determine the proportion of mothers who received postpartum contraceptive methods and their preferred choices. Additionally, self-administered questionnaires were used to assess healthcare workers' knowledge, attitudes, and practices regarding postpartum contraception. The qualitative component included key informant interviews with facility heads to explore facility-level factors affecting service provision.

Results.

A total of 2,502 women received family planning (FP) services before 6 months postpartum across all facilities. This accounted for 16.4% of all FP users (15,281) and 37.9% of all deliveries (6,597). Facility-level variation was wide, ranging from 0% in some health centers to as high as 290% in others. Overall, 47% demonstrated good knowledge; Attitudes were largely positive: 93% expressed good attitudes, while 73% demonstrated moderately good practices. Basic infrastructure exists in most facilities, but service delivery is constrained by inadequate training and inconsistent method availability.

Conclusions

Findings demonstrate that low postpartum contraceptive uptake is primarily driven by knowledge and training deficiencies, inconsistent supply systems, and weak supervision frameworks, rather than by lack of physical infrastructure.

Recommendations

Efforts to improve postpartum contraception should begin by enhancing early uptake through strengthened integration of family-planning counselling and service provision at all contact points along the maternal-child health pathway, including antenatal care, delivery, postnatal, and immunization visits.

Keywords: Postpartum contraception, Healthcare workers, Kayunga District.

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Background.

Family planning is defined as the ability of individuals to anticipate and attain their desired number of children, the spacing and timing of the births through the use of contraceptive methods, and the treatment of involuntary infertility.[1]

Globally, the uptake of family planning methods has greatly improved, with the prevalence currently at 65% [1]. This has led to a reduction in pregnancy-related health risks for women, especially for adolescents. It has been

documented that pregnancy-related risks affect younger adolescents.[2].

During postpartum, most mothers do not uptake modern contraception methods mainly due to a lack of knowledge and minimal information about the service, which can predispose them to unwanted and unintended pregnancies, hence reducing their health and well-being. [3] Health workers should provide this knowledge and information throughout the pregnancy and during hospital visits to help

equip the mothers to make informed decisions about their health. [4].

Access to contraception in Uganda is still a major underutilized arm in the prevention of pregnancy-related morbidity and mortality. Contraception is also one of the ways to eliminate mother-to-child transmission of HIV when used by women living with HIV.[5]. Women of childbearing age have several opportunities at which information about family planning can be communicated, counselling about the various methods, and the opportunity to offer the methods to those who accept. Some of the various opportunities include antenatal visits, post-natal visits, immunization visits, and immediately after delivery. Despite the high percentages of hospital deliveries (91%) [6], a substantial proportion of postnatal visits and 6-week immunisations, 55% and 91% respectively, the national percentage using postpartum contraception was low, as 18% and even lower at 8% in North central Uganda, where Kayunga district is found[7].

Due to the high patient burden, low staffing levels, and lack of supplies, many of these opportunities are underutilized; yet, health workers play a crucial role in disseminating information and providing healthcare services, including postpartum family planning (PPFP).

This study aimed to investigate the usage, facility, and health worker-related factors regarding PPFP. Understanding the perspectives of healthcare professionals is crucial for identifying potential barriers, refining training programs, and optimizing the delivery of family planning services during the postpartum period. This study sought to determine the prevalence and factors associated with the provision of postpartum contraception by healthcare workers in Kayunga District.

Methodology.

Research Design.

A cross-sectional study that used quantitative and qualitative approaches to collect data.

Study Area

The area of study was the Kayunga District public health facilities that are licensed to conduct deliveries. Kayunga District lies in the central region of Uganda. It is 74 Km East of Kampala City, bordered by Mukono district to the south, Jinja & Buikwe to the east, Kamuli to the northeast, Amolator & Apac in the North, Luwero in the west, and Nakasongola to the northwest. It had an average population of 370,210 in 2017. Kayunga district has 25 health facilities, of which 21 are government-owned, and 4 are private not-for-profit. The facilities include one hospital, 2 health centres, 4 13 health centres, 3, and 9 health centres 2. Kayunga RRH is the largest government-owned hospital, and it replaced the former general hospital 3 years ago. It is located in Kayunga town and has a bed capacity of 200. There are 2 health centre IVs (Kangulumira Health center IV with 30 beds, and Bbaale Health Center IV with 17

beds); 8 HC IIIs (Kawongo, Galiraya, Lugasa, Wabwoko, Nkokonjeru, Ntenjeru, Busaana & Nazigo) and 13 HC IIs namely; Kasokwe, Nakyesa, Kakiika, Bulawula, Busaale, Buyobe, Namagabi, Nakatovu, Namusaala, Bukamba, Nazigo Mission, Kangulumira Mission, Kangulumira Intergrated some of which have been redesignated as center 3. Kayunga Regional Referral Hospital runs a family planning clinic from Monday to Friday from 8 am to 5 pm. They offer both short-term and long-term reversible methods. Kayunga district had a nurse-to-population ratio of 1:3245, a midwife-to-pregnant woman ratio of 1:361, and about 10,733 deliveries conducted in the health facilities in 2017/2018. Kayunga Regional Referral Hospital has filled 3 posts of obstetricians, 7 medical officer positions, 8 clinical officers, 24 nursing officers, 46 enrolled nurses, and 39 midwives. Kayunga RRF also serves as a teaching hospital for Kampala International University for undergraduates and postgraduates in the maternity department. Kayunga RRH is also an internship site and received 33 medical interns for 2023/2024. The health centres IV and III have staff from medical officers, clinical officers, nurses, and midwives.

Target population

Mothers who attended delivery and family planning services, and health workers in units that offer antenatal, delivery, postpartum, and family planning services in Ugandan public health centres.

Accessible population

Mothers who attended delivery and family planning service and health workers in units that offer antenatal, delivery, postpartum, and family planning services in the public facilities of Kayunga district.

Study population.

The study sample was taken from mothers who attended family planning and delivery services from 1st Jan 2024 to 30th June 2024 and healthcare workers who offer antenatal care, delivery, postpartum and family planning services in Kayunga district deployed in the 17 public health centres namely (Kayunga RRH, Kangulumira Health center IV, Bbaale Health center IV, Kawongo, Galiraya, Lugasa, Wabwoko, Nkokonjeru, Ntenjeru, Busaana, Nakatovu, Busana, Kawomya, Busaale, Buyobe, Nsotoka, Bukamba & Nazigo HC III), and have offered any of the levels of care in the last 6 months; are present during the study period and consent to participate in the study.

Sample size determination

For objective one, since secondary data was reviewed, all the mothers who attended care in the family planning clinic and delivery in the study facilities during the period of 1st January 2024 to 30th June 2024 were used.

For objective 2

The sample size calculation is: $n = Z^2 [p * (1 - p)] / e^2$
where: p = proportion e = required standard error

The required standard error can be calculated as e = half-width of 95% CI / 1.96

For a 95% CI of +/- 10% this would be: $e = 0.1 / 1.96 = 0.051$

Applying this ... to the survey uses $p = 50\% (0.5)$

The largest sample size required: $n = 384$ respondents

Adjusting for a finite number of health workers working in the Maternal and Child Health department, estimating the finite population ($N=200$):

Use the finite population correction formula:

Substitute for values

adjusted = 131.7, rounding to the nearest whole number 132

The adjusted sample size is approximately 132 health workers.

Sampling procedures.

Multi-level sampling techniques were used. Stratified sampling, followed by a Proportionate sampling method, was employed. The health facilities were divided into strata based on their level, ie, hospital, Health Centre IV, and Health Centre III. The regional referral hospital, the health center 4, and the health center 3 are estimated to have 120, 16, and 56 health workers in the maternal and child health departments, respectively. The proportions of 15 to 2 to 7 for hospitals, Health Centre IV, and Health Centre III, based on the number of staff possibly available in the respective levels of facility. Hence, giving the numbers 82, 11, and 39 in the regional referral, Health Centre 4 and Health Centre 3, respectively. After that, the sample will be taken consecutively and conveniently from each stratum of healthcare workers in those facilities during their available time in the health facility.

Key informants from each facility will be purposely selected for the facility-related factors questionnaire.

Eligibility criteria

Inclusion criteria

Data of mothers who attended delivery and or family planning clinic in the study period, 1st January to 30th June 2024, at the 17 public facilities (Nakatovu Health Centre III, Busana Health Centre III, Galiraya Health Centre III, Kawongo Health Centre III, Kawomya Health Centre III, Lugasa Health Centre III, Busaale Health Centre III, Buyobe Health Centre III, Nsotoka Health Centre III, Ntenjeru Health Centre III, Wabwoko Health Centre III, Bukamba Health Centre III, Nazigo Health Centre III, Nkokonjeru Health Centre III, Bbaale Health Centre IV, Kangulumira Health Centre IV, and Kayunga Regional Referral Hospital) were included for objective one.

For objective Two, healthcare workers who offered antenatal, delivery, postpartum, and family planning services in Kayunga district and were deployed in the 17

public health centres that were licensed to conduct deliveries and had offered any of the levels of care in the last six months. They had to be present at the time of the study and consented to participate in the study.

Exclusion Criteria

Healthcare workers who didn't routinely offer antenatal, delivery, postpartum, or family planning services at the study facilities.

Data collection methods

The data for objective one was obtained by reviewing the monthly records of family planning and maternity registers for January to the end of June 2024 to determine the number who received postpartum contraceptive methods and their preferred methods using a data extraction tool. Self-administered questionnaires were used to collect factors associated with the health workers.

A key informant questionnaire was administered to the facility or unit heads using a preset questionnaire.

Data management

Data from the collection tools were double-entered into Epi Data version 4.6.0.6 and checked for consistency and completeness. The raw data was kept under lock and key and only accessible by the primary investigators (PI), and electronic data was password-protected and backed up.

Study Variables

Independent variables

Social demographic factors such as: Age, gender, level of training, recent training or Continuous Medical Education (CME), religion, years of practice, etc.

Individual-related factors include knowledge, attitude, and practices of healthcare workers.

Health facility-related factors like the level of the facility, the services provided as far as contraception is concerned, and policy, among others.

Dependent variables

The dependent variables were the prevalence of postpartum contraception use, knowledge, attitudes, and practices of health workers, and factors associated with the health care facilities.

Data analysis

Data analysis was done in Statistical Package for Social Scientists (SPSS) version 26.

The prevalence was measured as a proportion of live births recorded and total family planning.

The study variables were summarized as continuous and categorical. Mean with standard deviation and median with interquartile ranges were used to compute the descriptive statistics for the continuous variables, and frequencies and proportions were used for the categorical variables.

Bivariate and multivariate analyses were done to infer an association between the independent and dependent variables through logistic regression following factor analysis, interaction, and confounding testing. The association was deemed significant if a variable had a p-value less than 0.05.

Data collected from the key informants were summarized into themes, and these were grouped to form the facility-based factors associated with family planning in the district.

Ethical Considerations

Ethical approval was sought from the institutional review board, Mildmay Uganda Research Ethics Committee (MUREC), and the National Council of Science and Technology. Administrative clearance was obtained from the Kayunga district DHO and various heads of units for the participating Centre. A waiver of consent was obtained for the data extracted, and written informed consent was obtained from participating health workers.

Privacy and confidentiality: All efforts were made to maintain privacy and confidentiality by ensuring that questionnaires were marked by coded numbers, and no individual identifying information was used. Filled questionnaires were kept in a lockable safe, and data was entered in a password-protected computer. We ensured that all research assistants, as well as investigators, had completed the training on protection of human subjects and had a recent "Certificate of Human Subjects Protection".

Compensation for study participants: Study participants were compensated for the time and inconvenience caused by the study procedures.

Risks and mitigation: There were minimal risks related to participating in the study. There could have been discomfort discussing contraception-related topics due to cultural sensitivities. This was **mitigated by using** culturally sensitive language and emphasizing the health benefits of the study.

Quality control

Research assistants were trained before the study procedures.

The staff to be interviewed were crosschecked on the duty roster to ensure their deployment in the hospital, antenatal, delivery, postnatal, or family planning units. The data collection tool was piloted in a non-participating facility to ensure its appropriateness to collect the desired data. The collected data was double-checked for completeness and correctness.

Results.

Prevalence of the use of postpartum contraception

Overall, 2,502 women received FP services before 6 months postpartum, representing 16.4% of all FP users and 37.9% of all deliveries. Substantial variability was observed across facilities, with some showing no uptake and others recording uptake that exceeded deliveries. This indicates that many clients accessed PFP services at facilities different from their delivery sites.

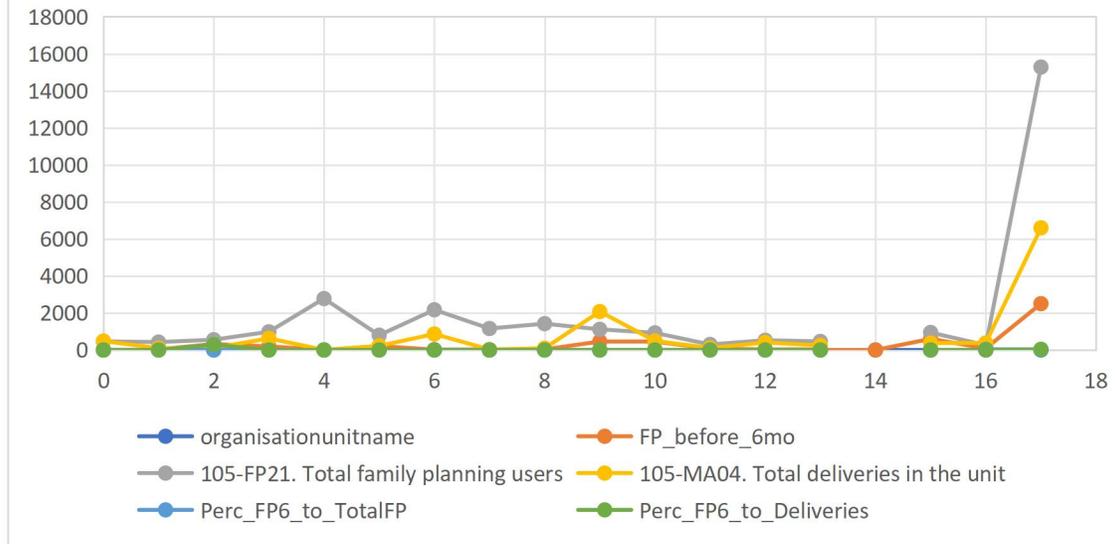
Table 1: Prevalence of The Use of Postpartum

Indicator	Value	Percentage
Total FP users	15,281	100%
Total Deliveries	6,597	-
Proportion FP before 6 months	2,502	16.4% of total FP; 37.9% of deliveries

Table 2: Presentation of total deliveries, total FP, and FP within six months.

	facility name	FP before 6months	Total family planning users	Total deliveries in the unit	PercFP6_to _TotalFP	FP to Deliveries
1.	Bbaale Health Centre IV	0	464	481	0	0
2.	Bukamba Health Centre III	33	426	94	7.74647887 3239436	35.1063829787234
3.	Busaale Health Centre III	319	554	110	57.5812274 368231	290
4.	Busana Health Centre III	194	983	626	19.7355035 60528993	30.9904153354632 58
5.	Buyobe Health Centre III	0	2777	4	0	0
6.	Galiraya Health Centre III	208	798	221	26.0651629 07268167	94.1176470588235 2
7.	Kangulumira Health Centre IV	20	2171	863	0.92123445 41685858	2.31749710312862 1
8.	Kawomya Health Centre III	0	1160	28	0	0
9.	Kawongo Health Centre III	31	1421	94	2.18156228 00844476	32.9787234042553 2
10.	Kayunga Regional Referral Hospital	457	1116	2075	40.9498207 8853047	22.0240963855421 7
11.	Lugasa Health Centre III	451	925	489	48.7567567 5675676	92.2290388548057 2
12.	Nakatovu Health Centre III	76	297	107	25.5892255 89225588	71.0280373831775 6
13.	Nazigo Health Centre III	28	525	407	5.33333333 3333334	6.87960687960688
14.	Nkokonjeru Health Centre III	0	463	244	0	0
15.	Nsotoka Health Centre III	0				
16.	Ntenjeru Health Centre III	599	945	376	63.3862433 8624339	159.308510638297 86
17.	Wabwoko Health Centre III	86	256	378	33.59375	22.7513227513227 5
18.	ALL FACILITIES	2502	15281	6597	16.4	37.9

Figure 1: Graphical presentation of total deliveries, total FP, and FP within six months.



Individual-Related Factors (Knowledge, Attitudes, Practices) Of Healthcare Workers

Socio-demographics:

A total of 133 healthcare workers participated. The mean age was 36.9 years (SD 10.2, range 21–59). Most respondents were female (81%) and married/cohabiting (60%). The majority were Baganda (49%), with Kayunga RRH contributing the largest proportion (56%). In terms of cadres, nurses (50%) and midwives (30%) predominated, followed by clinicians (10%).

Knowledge:

Knowledge of PPF was variable. Overall, 47% demonstrated good knowledge, while 53% had poor knowledge. Most respondents recognized IUDs (83%) and hormonal IUDs (67%) as PPF methods, while fewer acknowledged male sterilization (20%) or emergency pills (23%). Regarding timing, 60% correctly defined immediate postpartum contraception as within 0–48 hours of delivery. However, awareness of risks was inconsistent, with 35% citing infection risk and 26% expulsion risk. Kangulumira HC IV staff were significantly more likely to have good knowledge (OR=14.0, p=0.039).

Attitudes:

Attitudes were largely positive: 93% expressed good attitudes, and 63% had very good attitudes. Most respondents strongly agreed that PPF is an important component of maternal healthcare (72%). However, 22% expressed reservations about offering PPF irrespective of age, religion, or marital status. Multivariate analysis showed that tribe was associated with attitudes, with those

classified as 'Other' more likely to have poor attitudes (Adj OR=7.96, p=0.033).

Practices:

Regarding practices, 73% demonstrated moderately good practices and 27% very good practices. Counselling was most frequent during prenatal (38% always, 20% often) and discharge visits (71% always). LAM (44% always) and IUDs (36% always) were the most frequently recommended methods, while sterilization was rarely offered. Medical officers had significantly better practice scores compared to nurses (Adj OR=21.1, p=0.042).

HEALTHCARE FACILITY-RELATED FACTORS

The majority of participating facilities were Health Centre IIIs (82%), while a small proportion were Health Centre IVs or hospitals. Nearly all facilities (94%) were located in rural settings.

Service delivery was predominantly provided by midwives and nurses. Midwives accounted for approximately 30% of the workforce, while nurses represented about 50%. In contrast, doctors and anesthetic providers were very limited, contributing less than 10% of the service providers.

Training opportunities were limited. Only 12% of facilities reported on-site training in postpartum family planning within the past 12 months, while 47% reported off-site training for some providers.

Availability of contraceptive commodities was inconsistent across facilities. Implants (3-year and 5-year) were the most consistently available methods, accounting for over

Health worker-related factors (KAP)

This study revealed that while healthcare workers in **Kayunga District** expressed overwhelmingly positive attitudes toward postpartum contraception, gaps in knowledge and variability in practices remain evident. Only 47% of respondents had good knowledge, consistent with findings from Eastern Uganda and Ethiopia, where nearly half of healthcare providers demonstrated suboptimal knowledge of postpartum family planning (PPFP) methods [86,87]. Similarly, studies from Tanzania and Kenya reported that although awareness of common methods like implants and injectables was high, knowledge of less-frequently used methods, such as male sterilization, emergency contraception, and LAM, remained low [88,89]. These findings collectively indicate that, despite general awareness of FP, detailed technical understanding of the full method mix remains inadequate among providers.

The limited awareness of male sterilization and emergency contraception in this study echoes global observations that these methods are often neglected in both preservice curricula and in-service training [90]. According to the World Health Organization, continuous professional education and competency-based mentorship are essential to sustaining provider capacity and confidence in offering comprehensive FP services [91]. Thus, integrating these under-emphasized methods into refresher training could enhance method diversity and improve informed choice for clients.

Overall, healthcare workers exhibited positive attitudes toward postpartum contraception, aligning with previous research in Ethiopia, Kenya, and Malawi, where providers recognized PPFP as a critical component of maternal and child health [92-94]. However, conditional acceptance based on marital status or religion observed in this study and documented in Nigeria and Ghana reflects persistent socio-cultural biases that can restrict access for adolescents and unmarried women [95,96]. Such bias-driven barriers are widely acknowledged as impediments to equitable service delivery and contribute to unmet need among vulnerable populations [97]. Addressing these biases through rights-based training and value clarification exercises has proven effective in improving provider neutrality [93].

Practices among respondents were moderately strong, with consistent counselling at antenatal and discharge contacts but lower engagement during immunization and delivery. This pattern mirrors findings from Rwanda and Kenya, where service integration gaps during child-immunization visits limited opportunities for postpartum FP uptake [98,99]. The high frequency of LAM and IUD recommendations observed in Kayunga corresponds with data from Ethiopia, where these methods were also commonly promoted due to their immediate postpartum applicability [100]. Conversely, the low provision of sterilization parallels reports from Malawi and Uganda's

20% of methods stocked. IUDs were present in 18% (Copper IUD) and 47% (Hormonal IUD) of facilities. Pills were reported in 18% of facilities, condoms in 6%, and injectables in only 6%. Permanent methods such as tubal ligation and vasectomy were rarely accessible at lower-level facilities.

Almost all facilities (94%) had designated waiting areas for family planning services, and the majority (76%) had a dedicated room or space for family planning provision.

Discussion of Results.

Prevalence of Family Planning Uptake Before 6 Months Postpartum.

Women who received family planning (FP) services before six months postpartum accounted for 16.4% of all FP users and 37.9% of all deliveries. While more than one-third of women delivering in facilities-initiated FP within six months, only one in six FP users overall were postpartum within this window. This finding is consistent with studies showing that many women initiate contraception beyond the early postpartum period or access services outside the immediate maternity setting, highlighting an unmet opportunity to expand early postpartum FP coverage [77,78]. The findings are similar to studies that we have done in the population and facilities. According to the Track20 PPFP Opportunity Brief (2022), the estimated modern contraceptive use within six months postpartum was approximately 25% [79]. A national Lot Quality Assurance Sampling (LQAS) survey reported that only 10% of mothers of children aged 12 months or less were using a modern family planning method [80].

Similarly, a population-based analysis by Rutaremwa et al. (2015) found that 28% of postpartum women were using modern contraceptives within 12 months of childbirth [81]. A facility-based study by Nakiwala et al. (2022) reported an immediate postpartum contraceptive uptake of 15.4% among women delivering in hospitals [82]. The proportion against all FP users was lower than the overall modern contraceptive prevalence rate (mCPR) among married women of reproductive age in Uganda, reported at about 35% [83], but similar to the proportion against all deliveries. Increasing the postpartum contraceptive services would have an impact on the overall modern contraceptive prevalence rates.

Facility variability was evident, with uptake proportions ranging widely across facilities. In some centers, uptake exceeded 100% relative to deliveries, reflecting that many postpartum FP clients sought services at facilities where they had not delivered. Similar patterns have been reported in other low-resource settings, where differences in health worker capacity, community demand, and referral linkages influence FP utilization [84,85]. Such differences underscore the need for harmonized strategies to strengthen postpartum FP services across facilities and ensure equitable access.

national LQAS data, which attribute this trend to limited surgical capacity, cultural perceptions, and provider discomfort with permanent methods [82,101].

The strong association between cadre and quality of practice in this study, particularly higher performance among medical officers, is comparable to findings in Tanzania and Ghana, where professional qualification strongly predicted adherence to FP counseling standards [102,103]. Since midwives and nurses constitute the majority of frontline staff in Uganda's health facilities, strengthening their competencies through mentorship, supportive supervision, and task-sharing is essential to ensure uniform service quality [85].

In studies from Ethiopia and Rwanda, where routine on-the-job coaching was linked to higher PFP uptake, the limited ongoing mentorship in Kayunga District may partly explain the observed practice gaps [104,105]. Expanding structured capacity-building programs, as recommended in Uganda's Family Planning Costed Implementation Plan (2015–2020), could help bridge these gaps and sustain quality improvement efforts [85].

Health Facility-related Factors

The majority of participating facilities were Health Centre IIIs (82%), while only a small proportion were Health Centre IVs or hospitals. Nearly all facilities (94%) were located in rural settings, highlighting the pivotal role of lower-level rural health facilities in the delivery of postpartum family planning (PFP) services. This distribution mirrors the national health system structure, where most reproductive health services are delivered at the primary-care level [106]. Improving PFP coverage in Uganda will therefore require strengthening rural primary health care facilities, as they serve the majority of the population.

Service delivery was predominantly in the hands of midwives and nurses, with few doctors and anaesthetic providers available. This reliance on mid-level providers reflects Uganda's health workforce distribution, consistent with findings from Ethiopia and Tanzania, where midwives were the principal FP providers in more than 80% of facilities [87,88]. Similar to observations by the World Health Organization, such task-sharing is a necessary adaptation in resource-limited settings to expand access to reproductive health services [107]. However, the limited skill mix implies that providers may lack technical competence for long-acting and permanent methods (LAPMs) unless they receive targeted and continuous training.

Capacity building was identified as a major gap. Only 12% of facilities reported on-site training in PFP within the past 12 months, while 47% indicated that some providers had attended off-site training. These findings align with studies from Ethiopia and Kenya, which also found inadequate in-service training and mentorship as critical barriers to quality PFP service delivery [92,93]. A study

in Rwanda demonstrated that facilities with regular supportive supervision achieved significantly higher PFP uptake than those without ongoing coaching [105]. Thus, while training opportunities exist, their sporadic nature limits sustainability and skill retention, leaving many providers without updated knowledge and confidence in immediate postpartum FP provision—especially for IUDs and female sterilization.

The availability of contraceptive commodities was inconsistent across facilities. Implants (3-year and 5-year) and IUDs were relatively more available, while pills and condoms frequently faced stock-outs. Injectables, despite being widely known and preferred by clients, were inconsistently available. Permanent methods such as tubal ligation and vasectomy were rarely accessible at lower-level facilities. This pattern demonstrates a skewed method mix, with women more likely to receive implants due to availability rather than preference. Similar findings were reported in Uganda's Family Planning Performance Report (2021), where implants accounted for more than 60% of FP methods provided in rural facilities [108]. Studies in Malawi and Nigeria also noted that method choice is often driven by supply reliability rather than client preference, highlighting gaps in ensuring informed choice [109,110].

Infrastructure for FP service delivery was largely adequate. Almost all facilities (94%) had designated waiting areas for FP services, and the majority (76%) reported having a dedicated room or space for FP provision. This is comparable to findings from Ethiopia and Ghana, where most health centers had physical space for FP but struggled with commodity stock-outs and insufficient provider capacity [103,111]. This suggests that the main barriers are not structural but functional, emphasizing the need to strengthen human resources and supply chains rather than infrastructure.

The findings on facility-related factors mirror previous studies in Uganda and sub-Saharan Africa that highlight the importance of commodity security, provider capacity, and supportive supervision in strengthening postpartum family planning services [84,85]. Availability of infrastructure alone is not sufficient; consistent supply chains and continuous training are necessary to ensure a wide method mix is offered. Studies by Cleland et al. emphasize that informed choice and method availability are central to sustaining contraceptive uptake [91,112]. Our findings reinforce this, as implants dominated the method mix mainly due to their availability, while IUDs and sterilization were rarely provided despite being effective options.

Furthermore, the reliance on midwives and nurses underscores the importance of task-sharing, which the WHO endorses as a viable strategy to expand access to reproductive health services in low-resource settings [107]. However, without ongoing mentorship and periodic refresher training, providers may lack competence or confidence in offering immediate postpartum methods such

as IUDs. Addressing these gaps is essential if Uganda is to achieve its FP2030 commitments and Sustainable Development Goals (SDGs).

Conclusion.

The prevalence of postpartum contraception remains low in Uganda, with only 16.4% of all family planning users and of women who delivered adopting contraception within six months postpartum. This indicates that although a notable proportion of postnatal women initiate contraception early, the majority of FP users are non-postpartum, reflecting substantial missed opportunities for family-planning integration within the maternal-child health continuum.

With regard to health worker-related factors, the study revealed that while most providers expressed positive attitudes toward postpartum family planning, gaps in knowledge and variability in practices remain evident.

Only a few health workers demonstrated good knowledge, with limited understanding of less commonly provided methods such as male sterilization, emergency contraception, and IUDs.

In addition, provider bias influenced contraceptive counselling, with conditional acceptance based on marital status or religion restricting access for adolescents and unmarried women. These findings point to the need for continuous professional development, mentorship, and value-clarification training to ensure equitable, rights-based service delivery.

At the facility level, most centers had adequate infrastructure for family planning service delivery, including designated spaces and waiting areas. However, the availability of commodities was inconsistent, with implants and IUDs more accessible than injectables, pills, or condoms. Permanent methods such as sterilization were rarely available at lower-level facilities.

Training gaps, inadequate supportive supervision, and erratic supply chains were the most prominent constraints to service quality. The predominance of implants among provided methods suggests that method choice is often shaped by supply reliability rather than client preference. Addressing these system gaps is essential to ensure informed choice, continuity of care, and improved postpartum FP coverage.

Collectively, these findings demonstrate that low postpartum contraceptive uptake is primarily driven by knowledge and training deficiencies, inconsistent supply systems, and weak supervision frameworks, rather than by lack of physical infrastructure. Tackling these constraints will be key to achieving Uganda's FP2030 commitments, reducing unmet need, and improving maternal and newborn health outcomes.

Limitations.

Incomplete or inaccurate responses due to a lack of clarity in the questionnaire.

Difficulty accessing healthcare workers due to workload or remote locations.

Healthcare workers may have provided socially desirable responses rather than honest answers during interviews.

Recommendations.

Efforts to improve postpartum contraception should begin by enhancing early uptake through strengthened integration of family-planning counselling and service provision at all contact points along the maternal-child health pathway, including antenatal care, delivery, postnatal, and immunization visits.

Capacity building for health workers should be prioritized through structured mentorship, refresher training, and continuous professional education. These programs should emphasize the full range of postpartum contraceptive options, including IUDs, LAM, and sterilization, and address biases that limit service provision to certain client groups. Integrating PFP modules into internship and residency curricula will help standardize provider competence across cadres.

At the facility level, improving the consistency of contraceptive commodity supply and expanding method mix availability are critical. Strengthening supervision, routine monitoring, and feedback systems will enhance provider accountability and service quality. Facility managers should ensure regular review of PFP indicators, with particular attention to early postpartum uptake rates and method distribution patterns.

Finally, sustained implementation of the Family Planning Costed Implementation Plan (2015–2020) and subsequent national strategies should be reinforced, alongside further operational research on postpartum FP service delivery, to guide evidence-based planning and policy adjustments.

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List of Abbreviations/Acronyms

ACOG	American College of Obstetricians and Gynecologists
IUD	Intra-Uterine Device
KAP	Knowledge, Attitudes/Beliefs, and Practices
LARC	Long-Acting Reversible Contraceptives
PPFP	Postpartum family planning
NCST	National Council for Science and Technology
COC	Combined Oral Contraceptive Pills
SDA	Seventh-day Adventist
WHO	World Health Organisation
CME	Continuous Medical Education
MUREC	Mildmay Uganda Research Ethics Committee

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There is no conflict of interest.

Availability of data.

Data used in this study are available upon request from the corresponding author.

Author's contribution.

Dr Joannah Nalwoga (JN) and Dr Joel Lwasa (JL) conceptualized the research idea and wrote the proposal and manuscript.

Sr Mary Grace Nagitta (MGN) and Mariam Nakafeero (MN) participated in data analysis and manuscript reviews. Dr Sanyu Tsubira (ST), Dr Sophia Nakitto (SN), Dr Henry Sembatya (HS), and Chris Akandwanaho (CA) participated in data collection and cleaning.

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