Original Article

Sociodemographic Factors Influencing the Uptake of Modern Postpartum Family Planning among Women at Mukono General Hospital in Uganda

Harriet Murungi[1], Kevin Uchechukwu Nwanna[2*], Mojeed Gbadamosi[3]

[1]*Public Health Department, Victoria University, Kampala, Uganda*
[2]*Department of Community Health, School of Public Health, College of Medicine and Health Sciences, University of Rwanda*
[3]*Department of Primary Health Care, School of Medicine and Pharmacy, College of Medicine and Health Sciences, University of Rwanda*

*Corresponding author: Kevin Uchechukwu Nwanna. Department of Community Health, School of Public Health, College of Medicine and Health Sciences, University of Rwanda. Email: uchenwanna1@nursph.org, hemurungi@gmail.com. https://orcid.org/0000-0003-1488-4532

Abstract

Introduction

Globally, women in the first twelve months of postpartum prefer to wait 24 months to get pregnant, yet 95% of them do not use contraception. Women's use of contraceptives in developing countries is largely ignored. Hence, this study assessed the socio-demographic factors of reproductive women that influenced the uptake of modern postpartum family planning.

Methodology

This cross-sectional descriptive study design utilised a convenient sampling method with a sample size of 234 women. Data were obtained using an interviewer-administered questionnaire. Postpartum contraceptive use was the outcome variable, and univariate and multivariable analysis were done using SPSS version 27.

Results

Uptake prevalence was 60.7%. Women aged 25-29 years were the majority, and injectables were the most utilised (21.4%). Age (AOR: 1.20, C.I: 1.12-1.298, P-Value: <0.001), Marital status (AOR: 2.34, C.I: 1.28-5.07, P-Value: 0.030), and personal values (AOR: 12.26, C.I: 2.71-55.51, P-Value: 0.001), were the significant variables associated with postpartum contraceptive use.

Conclusion

Postpartum contraceptive uptake was above average, and injectables were the most utilised. Age, marital status, and personal values were the socio-demographic predictors of postpartum contraceptive utilisation. Therefore, findings encourage religious players to be involved in the promotion of postpartum contraceptive usage.

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Keywords: Postpartum, Family planning, Hospital, Socio-demographic characteristics

Introduction

Incorporating current contraception services into postpartum care enhances the use of postpartum contraceptives and is expected to decrease unwanted births and too closely spaced pregnancies.[1-2] This is because they are linked to higher rates of maternal, neonatal, and pediatric illness and mortality; in addition, unplanned and closely spaced births are a public health problem.[3-5] Data from the World Health Organisation (WHO) stipulates that a minimum of 24 months should pass after a live birth before attempting a subsequent pregnancy to lower the chance of unfavourable outcomes for the mother, fetus, and baby.[6] Despite this, 61% of postpartum women in low- and middle-income nations still lack access to contraception.[7-9]

Globally, it is a woman's right to choose whether she uses postpartum family planning (PPFP) or not. However, a minimum of 2 years of birth spacing is necessary to maintain the health of mothers and their infants both during and after breastfeeding.[10] Therefore, using modern family planning techniques early on is associated with appropriate birth spacing.[10] The use of contraception globally is influenced by several social demographic factors, including age, marital status, educational attainment, monthly income, occupation, religion, spousal influence, the mother's attitude and experience, the number of live children, and the desire for more children. Thus, inadequate information about contraception can discourage women from accessing it through the spread of anxiety, rumours, and misconceptions about PPFP procedures.

There are two categories of PPFP: traditional and modern.[11-13] The rhythm method and lactational amenorrhea, progesterone-only oral contraceptives, injectables, IUDs, condoms, and implants are among the modern methods.[13]

In sub-Saharan Africa, postpartum contraception use is still low.[14]

The level of education, perinatal family planning, counselling, menstrual cycle return, breastfeeding status, return of sexual activity, fear of side effects, and low perceived risk of becoming pregnant are the key factors driving the poor uptake of PPFP.[15] Since pregnancy and childbearing are the main causes of illness, mortality, and disability among women of reproductive age, maternal health continues to be a major global concern.[16] Over 90% of women worldwide wish to wait for two years after giving birth before getting pregnant.[17] However, nearly all (95%) women 0–12 months postpartum wish to avoid pregnancy in the next 24 months, but fewer than one-third (31%) were taking any form of contraception, according to DHS data from 21 low- and middle-income countries between 2005 and 2012. Unmet family planning needs were reported by 61% of postpartum women.[18,19]

Despite the importance of postpartum modern contraception, findings indicate that its use differs greatly among low- and middle-income nations' geographical regions.[20] About half of all annual pregnancies in Uganda are unwanted.[21] The vast majority (68%) of these pregnancies happen among post-partum women who have not received the modern contraception they need.[22] Furthermore, Mukono General Hospital has worked to provide free routine family planning services to all women in the region, in collaboration with other implementing partners such as Population Services International (PSI), Marie Stopes, and the Ministry of Health.[23] Therefore, this research study sought to establish the socio-demographic predictors of PPFP uptake at Mukono General Hospital, Uganda.

Methodology

Research design
A cross-sectional descriptive design was used in this study to ascertain the sociodemographic predictors.

Study setting

This study was carried out at Mukono General Hospital. The hospital was selected because it is a district hospital that provides several maternity and child health services (MCH), including obstetric nursing, breastfeeding, fetal monitoring, maternal mental health, prenatal care, and baby programs. This facility provides affordable medical treatments and is easily accessible. An estimated 100 people are served daily by this hospital's maternity section on average. [33]

Study population

The study population consisted of postpartum women who sought or received postpartum treatments at Mukono General Hospital within six weeks after giving birth. Sampling strategies and procedures

A convenient sampling process was utilised due to its simplicity and the data collection period. At Mukono General Hospital, 20 women were delivered on average per day, making 600 women in total throughout the study period of one month. The researchers visited the MCH clinic and postnatal ward to gather data daily. They identified moms who were scheduled for discharge following delivery and those who sought MCH services within six weeks after giving birth.

Sample Size

Using Krejcie and Morgan in 1970 (Tables) at a 95% Confidence Level, we got a breakdown as follows;

 20 deliveries a day * 30 days = 600 is the population size.
The error margin is 5%.
Number of Samples: 234 postpartum women

Inclusion Criteria

Women who sought/received any post-partum services at the hospital within six weeks after giving birth.

Exclusion Criteria

Women who were ill at the time of data collection or had a complicated childbearing procedure.

Data collection methods

A 26-item questionnaire was developed by the researcher based on hypotheses regarding family planning use among reproductive-aged women. This questionnaire was adapted from an existing one.[34] The questionnaire was composed of questions that answered the dependent and independent variables (The questionnaire was in print form, and the researcher administered it). All questionnaires were reviewed for completeness before analysis. The recruitment period of the study participants was conducted from the 1st of April 2023 to the 5th of June 2023

We ensured the reliability of the questionnaire by utilising Cronbach's Alpha coefficient. The researcher ensured the content validity of the questionnaire by constructing items that conformed with the study's settings and objectives. Before data collection, the questionnaire was pre-tested at the Maternal and Child Health Clinic at Mbale Regional Referral Hospital to determine the suitability and relevance of the questions. Minor changes were made to age categorisation after pretesting. The pretesting site was selected due to its similarity with the research site.

Measurement of Variables
Independent Variables

The demographic factors included questions on gender, age, educational status, number of living children, income, education, employment, community safety, and social support.

Dependent Variable

The dependent variable (outcome) in this study was postpartum women's use of contraceptives.

Data Analysis

We used IBM SPSS Statistics version 27 (IBM Corp., Armonk, NY, USA) for the data analysis. The characteristics of the participants were summarised using descriptive statistics ; continuous variables were shown as

means with standard deviations or medians with interquartile ranges, depending on normality, and categorical variables as frequencies and percentages. Binary logistic regression was used for bivariate analysis to generate crude odds ratios (COR) with 95% CIs. To account for potential confounders, variables with a p-value of less than 0.2 in the unadjusted analysis were added to the multivariable logistic regression model—the final model produced adjusted odds ratios (AOR) with 95% confidence intervals. The Hosmer-Lemeshow test was used to evaluate the model's goodness-of-fit, and variance inflation factors (VIFs) were used to assess multicollinearity. A p-value of less than 0.05 was deemed statistically significant for all analyses.

Ethical Considerations

Ethical clearance was obtained from The Aids Support Organisation (TASO) Research and Ethical Committee, with approval number: TASO-2023-209.

Every study participant, even those who could not read or write, gave their informed consent; for those who could, a thumbprint was collected; for the young mothers below 18 years of age, informed consent was sought from their guardians/parents before enrolling them in the study. No amount of coercion, force, or persuasion was employed to recruit study subjects. Study participants were allowed to stop taking part in the study whenever they felt uncomfortable. The lead researcher kept the consent forms confidential. The researchers utilised numbers to identify the study participants; this was done to ensure complete confidentiality.

Results

Socio-demographic characteristics of the respondents

Two hundred thirty-four people participated in the study; their ages ranged from 17 to 45 years old, with a median age of 26 (IQR: 28). The majority (29.5%) were between the ages of 25 and 29, followed by those between the ages of 20 and 24 (28.2%), those under the age of 20, and those above the age of 35 (13.7%).

Table 1. Socio-demographic Characteristics of the Respondents

Variable	Frequency (n)	Percentage (%)
Age (years)[a]		
Median (IQR)	26.0 (28.0)	
Min, Max	17, 45	
<20	33	14.1
20 – 24	66	28.2
25 – 29	69	29.5
30 – 34	34	14.5
≥35	32	13.7
Education level		
No formal education	10	4.3
Primary	54	23.1
Secondary	124	53
University	46	19.7
Employment status		
Unemployed	112	47.9
Employed	122	52.1
Monthly income (UGX)		
< 50,000	8	3.4
50,000 - <100 000	36	15.4
100 000 - 200 000	56	23.9
>200 000	34	14.5
Not applicable	100	42.7
Marital status		
Single	42	17.9
Married/cohabiting	177	75.6
Separated	12	5.1
Widowed	3	1.3
Religion		
Anglican	47	20.1
Catholic	46	19.7
Islam	52	22.2
Pentecostal	19	8.1
Born again	59	25.2
Others	11	4.7
Period of birth	11	4.7
0 - <72 hours	55	23.5
72 hours - 6 weeks	179	76.5
Do your values (religion, culture, environment) allow you to use family planning?		
Yes	216	(92.3)
No	16	(6.8)
N/A	2	(0.9)

UGX, Ugandan Shillings; SD, standard deviation; [a]Age variable is not normally distributed, Shapiro-Wilk normality test $p<0.001$

The Shapiro-Wilk test revealed that the age distribution was non-normal (p < 0.001) (Table 1).

Regarding education, 19.7% of participants had a university degree, while 53% had completed high school. Just 4.3% lacked any formal schooling. 52.1% of people were employed, while 47.9% were jobless, representing a relatively equal employment distribution. There was variation in monthly income, with 14.5% earning over 200,000 UGX and 23.9% earning between 100,000 and 200,000 UGX. Remarkably, 42.7% of respondents selected "Not Applicable," indicating that they had no source of income (Table 1).

The majority (75.6%) were married or cohabiting, compared to 17.9% single and 5.1% split. Widowed people made up a small percentage (1.3%). The participants were religiously diverse; the largest denominations were Born Again (25.2%), Islam (22.2%), and Anglican (20.1%), followed by Catholics (19.7%) and Pentecostals (8.1%), with other religions (4.7%) being less common.

At the time of data collection, the majority had given birth within 72 hours to 6 weeks (76.5%). In conclusion, the majority (92.3%) stated that their values, religion, culture, and environment allowed them to utilise family planning (92.3%) (Table 1).

Among the study participants, the majority (60.7%) reported utilising family planning, as seen in Figure 1. The most widely used method was the injectable approach, accounting for 21.4% of users. (Figure 2).

Figure 1. Pie chart on the utilisation of family planning
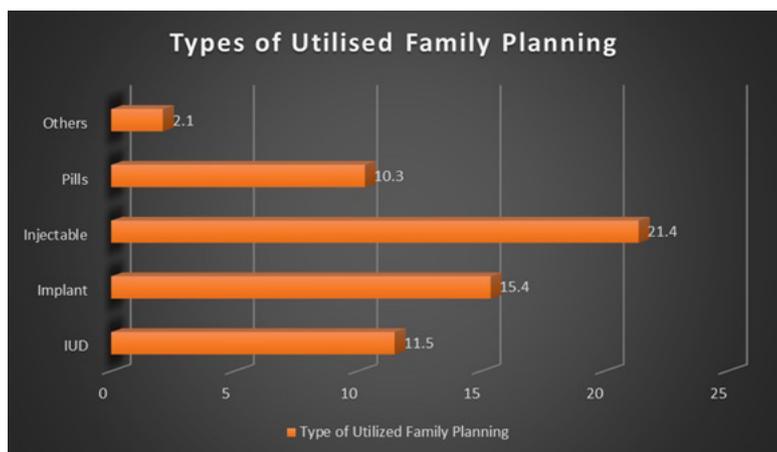
Figure 2. Bar chart on the type of utilised family planning

Factors associated with Postpartum Family Planning use.

The results of the multivariate analysis of the factors associated with postpartum family planning are shown in Table 2. Overall, age, marital status, and the acceptability of family planning within one's values were significant predictors substantially linked to the outcome in adjusted models. Other factors, such as income, employment, religion, and education, did not show statistically significant associations after adjustment. In the unadjusted analysis, increasing age was significantly associated with the outcome (COR: 1.23, 95% CI: 1.16–1.32, p<0.001).

This association remained significant after adjusting for potential confounders (AOR: 1.20, 95% CI: 1.12–1.29, p<0.001), indicating that older participants had higher odds of postpartum family planning use. Marital status was also a significant predictor. Compared to unmarried individuals, married participants had significantly higher odds in both unadjusted (COR: 3.70, 95% CI: 1.94–6.92, p<0.001) and adjusted models (AOR: 2.34, 95% CI: 1.28–5.07, p=0.030).Employment status was a significant predictor in the unadjusted analysis (COR: 3.51, 95% CI: 2.02–6.10, p<0.001). However, after adjustment, the association was not statistically significant (AOR: 2.12, 95% CI: 0.45–10.90, p=0.329). Monthly income showed a significant overall association (p<0.001) in the unadjusted model.

Compared to participants earning less than 100,000 UGX, those unemployed had significantly lower odds of the outcome (COR: 0.33, 95% CI: 0.15–0.70, p=0.004). However, after adjustment, this association was no longer statistically significant (AOR: 0.63, 95% CI: 0.14–2.74, p=0.537). Religious affiliation and education level were not significantly associated with the outcome in unadjusted or adjusted models. Notably, participants who reported that their values (including religion, culture, and environment) allowed them to use family planning had significantly higher odds of the outcome compared to those whose values did not permit it (COR: 7.67, 95% CI: 2.12–27.73, p=0.002; AOR: 12.26, 95% CI: 2.71–55.51, p=0.001). Even after controlling for possible confounders, this link remained statistically significant, as shown in Table 2.

Table 2. Factors associated with postpartum family planning use

Variable	COR	95%CI	p-value	AOR	95%CI	p-value
Age (years)[a]	1.23	1.16 – 1.32	**<0.001****	1.20	1.12 – 1.29	**<0.001****
Religion						
Christianity (Reference)			0.689	1.02	0.86-1.20	0.851
Islam	1.08	0.57 - 2.05	0.808			
Others	1.80	0.46 - 7.04	0.396			
Marital status						
Not married[b]						
Married	3.70	1.94 - 6.92	**<0.001****	2.34	1.28 - 5.07	**0.030***
Level of education						
No formal/primary						
Secondary/university	0.99	0.55 - 1.78	0.961	1.21	0.854-1.702	0.288
Monthly income (UGX)			**<0.001****			0.495
< 100,000 (Reference)						
100 000 - 200 000	0.89	0.38 - 2.09	0.78	0.60	0.21 – 1.71	0.338
>200 000	2.43	0.77 - 7.67	0.129	1.49	0.34 – 6.63	0.601
Not applicable (Unemployed)	0.33	0.15 – 0.70	**0.004***	0.63	0.14 – 2.74	0.537
Employment status						
Unemployed (Reference)						
Employed	3.51	2.02 - 6.10	**<0.001****	2.12	0.45 - 10.90	0.329
Period of birth						
0 - <72 hours (Reference)						
72 hours - 6 weeks	0.84	0.45-1.57	**0.638**	0.000	0.000-0.001	1.000
Do your values (religion, culture, and environment) allow you to use family planning?						
No (Reference)						
Yes	7.67	2.12 - 27.73	**0.002***	12.26	2.71 - 55.51	**0.001***

UGX, Uganda Shillings; AOR, adjusted odds ratio; 95%CI, 95% confidence interval; COR, crude odds ratio; [a] Age was included in the model as a continuous variable; [b]Not married includes single, separated, and widowed; *Significant at p<0.05; **Significant at p<0.001

Discussion

Socio-demographic Factors and Utilisation of Family Planning

This study found that among the socio-demographic variables analysed, an increase in age was significantly associated with the outcome, indicating that older participants had higher odds of postpartum family planning use. Compared to unmarried individuals, married participants had significantly higher odds of utilising modern PPFP. In addition, participants who reported that their values (including religion, culture, and environment) allowed them to use family planning had significantly higher odds of the outcome compared to those whose values did not permit it.

The results from this study align with studies from Botswana and Ethiopia.[25,26] The Botswana findings revealed that socio-economic characteristics such as age and marital status significantly predicted the use of family planning among older women. It further stresses that the likelihood of using family planning (FP) methods was 7.5 times higher for older adult women who wanted another child than for those who did not.

Furthermore, findings from a global systematic review revealed that the low use of contraception is associated with poverty and low educational levels.[27] This study's findings on the educational influence on PPFP contradict the results from a study in rural Kenya and Ghana.[28,24] This difference in findings can be attributed to cultural, infrastructure and environmental variances among the study sites.

Prevalence of Utilisation of Postpartum Family Planning

This study revealed that PPFP utilisation among women was higher at 60.7%. This contradicts the findings from Northwest Ethiopia, which recorded a usage of 26.3%.[29] Furthermore, findings from a systematic review in Sub-Saharan Africa revealed that PPFP utilisation remains low at 10-32%.[30-33]

In addition, almost 61% of postpartum women in LMICs were at risk of unplanned pregnancies and had an unmet need for contraception.[35] A survey in Uganda reported the utilisation of PPFP at 10%.[36] Another study in Uganda among postpartum mothers in regional referral hospitals revealed uptake at 46%.[37] These differences might be attributed to the fact that this research study was facility-based. The high prevalence of utilisation from this study can also be traced to the educational programmes on family planning during ANC and PNC conducted at the health facilities in Rwanda.

Types of utilized postpartum family planning

Our research findings revealed that the most common postpartum contraceptive method used at the health facility was injectables (21.4%), followed by implants (15.4%), IUDs (11.5%), Pills (10.3%) and others such as condoms, rhythm method and lactational amenorrhea (2.1%). This conforms with a research study at Injibara town,[38] in which findings revealed that 38.9% and 32.9% of 400 respondents utilised injectables and implants, respectively, as compared to other types.

Furthermore, from the results of a facility-based cross-sectional study, findings revealed that the most utilised PPFP was injectable (51.7%).[39] This might imply that women feel safer utilising injectables and are guaranteed not to have unintended pregnancies during their usage. It can also imply that injectables are readily available, affordable, accessible and long-term, hence women opt for them.

Limitations of the study

It was challenging to obtain the same range of people each time data was being collected because convenient and simple random sampling were used, and only those who agreed to participate in the study at the time of data collection were interviewed.Thus, we sampled more mothers in the hospitals to reach our sample size.

Furthermore, is hard to extrapolate the findings of this study to other settings like rural areas in the district because women giving birth at only one district hospital in a central urban area of the country were studied.

Furthermore, because this was a cross-sectional study, participants were limited to only postpartum women who came for the MCH service at the hospital during data collection. Thus, it did not include those who came after six weeks due to accessibility and other factors.

Conclusion

The uptake of postpartum family planning at the healthcare facility is slightly above average with injectables method being the most utilized. Sociodemographic predictors of PPFP are age, marital and personal values. Thus, more awareness creation should be made about the other types of PPFP methods, and investigate as to why mothers prefer injectables to other methods be carried out. Through public-private partnerships, PPFP can be subsidised and given to mothers before discharge from the health facility.

Conflict of Interests
The authors declare no conflicting interests.
Source of funding

Authors' contributions
Authors HM and NK participated in conceptualizing, data analysis, and drafting the manuscript. The author MG reanalyzed and reviewed the data and made the final approval before submission.

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