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Factors affecting acceptance of immediate postpartum contraception at a tertiary hospital in northern Nigeria

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Abstracts

Background: Postpartum contraception is a simple measure that can potentially impact positively on quality of life of mothers and their families, and reduce overall maternal mortality and morbidity, especially in low resource settings.

Aims: To determine factors affecting acceptance of contraception in the immediate post-partum period.

Methodology: This was a cross sectional study carried out between January 2019 to December 2021. A convenient sample of women in the immediate postpartum period had exit interviews, using a semi-structured interviewer administered questionnaire and information was obtained on sociodemographic and reproductive characteristics, pregnancy and delivery history, and reasons for accepting or refusing contraception. Data analysis was done using simple descriptive and inferential statistics. A p-value of < 0.05 was considered statistically significant.

Results: A total of 455 women participated in the study. The mean age of respondents was 29.32 ± 6.31 years, and most women were parous with 1-4 children (313, 68.8%). Only 199 women (43.7%) accepted immediate postpartum contraception, mostly implants (166 women) and intra-uterine devices (18 women). Reasons for accepting contraception was to rest, heal and regain strength while reasons for refusing were husband – related factors and the perception that it was too early to initiate contraception. Several factors were significantly associated with uptake of contraception (P- value < 0.05) including age, ethnicity, duration of marriage, parity, number and sex of children alive, desire for more children, previous unplanned pregnancy, accoucheur, time and mode of delivery, outcome of index pregnancy, previous use of contraception and timing of contraceptive counselling.

Conclusion: Acceptance of immediate postpartum can be increased by educating women about their need and safety, greater male involvement and creating opportunities for multiple counselling sessions antenatally.

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Introduction

The postpartum period is an ideal time for women in our environment to interact with the health system and an opportunity to initiate several health interventions. Nigeria has a high maternal mortality ratio (MMR) of 814 per 100,000 livebirths[1]. Contraception is a proven strategy to mitigate this by preventing high-risk pregnancies.

The contraceptive prevalence rate in Nigeria is low (17%) compared to other African countries[2,3]. Improving contraceptive uptake, especially postpartum contraception (PPC) is critical to improve maternal and child health, with additional psychosocial and economic benefits for the mother, baby, siblings, family and community[4,5,6]. The World Health Organization (WHO) recommends Postpartum contraception (PPC) or Postpartum Family Planning (PPFP) as a critical component of health care that has

the potential to save millions of maternal and infant lives in low- and middle-income countries[7]. It also recommends an inter pregnancy interval of at least 24 months before couples attempt to become pregnant again[4,7].

From previous studies, ambivalence is a known barrier to contraceptive uptake as women forget, get distracted or just never make time to initiate contraception before they find themselves pregnant again[8]. Most women perceive their risk of getting pregnant to be low till after the traditional 6 weeks of the postpartum period. However, ovulation is known to occur earlier than 6 weeks postpartum in some women, with 25% of women ovulating between 25 and 39 days postpartum[9]. Combined with early resumption of sexual intercourse and low uptake of contraception, an unwanted or unplanned pregnancy in quick succession is likely[10,11]. Nearly two-thirds of women have an unmet need for family planning in their first postpartum year[5]. A previous study in our setting showed that in almost five thousand women, only 22.1% of women had initiated contraception within 6 months of their last childbirth[12].

There has been a revolutionary paradigm shift from having to wait till after the puerperium, to early provision of contraception as soon as possible after delivery[13]. The earlier contraception is initiated, the better, as up to 35% of women will default on further postpartum care and visits[14].

Based on current guidelines, a lot of contraceptive methods are easily available now, safe in the post-partum period, and do not affect breastfeeding adversely[15,16]. Some methods such as placement of implants and intrauterine devices (IUDs) require training, and there is a slightly higher risk of expulsion of IUDs in the postpartum period[15,16].Both IUDs and implants have the additional benefit of being long-acting reversible contraceptive (LARC) methods. However, oestrogen containing hormonal contraceptive methods are best avoided till after 21 days of delivery due to the higher risk of venous thromboembolism[15,16].

This study aims to determine factors affecting acceptance of contraception in the post-partum period. This study is important because not too many studies have been done on this subject in our setting and findings may be useful to make recommendations on how to improve awareness, contraceptive counselling and policies to improve contraceptive uptake.

Methods

This was a hospital based, cross sectional study carried out at the maternity unit/labour ward of the Barau Dikko University Teaching Hospital Kaduna between January 2019 to December 2021. The hospital is a tertiary centre catering for patients in Kaduna and its environs. The average delivery rate is 250 to 300 per month. The family planning unit offers a range of methods including natural, barrier, pills, injectables, implants, intrauterine devices (IUDS) and sterilization. Labour ward staff and doctors are also trained to counsel and insert postpartum implants and IUDS for eligible patients.

Only women who booked and delivered in the hospital and agreed to participate in the study were included in the study irrespective of age, parity, or mode of delivery. Women who did not give consent or had acute complications in the immediate postpartum period were excluded. Informed oral consent was gotten before enrolment into the study. The study posed no risk to participants, and all information was kept confidential. Women who did not consent to participate in the study did not have their care compromised and were encouraged to come for their postnatal visits where further counselling wouldbe done.

Convenient sampling of consecutive consenting women was done. All women are routinely counselled and offered postpartum contraception by attending doctor/nurse-midwife (when they were admitted in the labour ward, for caesarean section or immediately after delivery and when stable). Participants had an exit interview, using a semi-structured interviewer administered questionnaire designed by the authors, and information was obtained on sociodemographic and reproductive characteristics, pregnancy and delivery history, and reasons for accepting or refusing contraception.

Postpartum family planning is generally defined as the prevention of unintended pregnancy and closely spaced pregnancies through the first 12 months after a childbirth. However, for the purpose of this study, acceptance of PPC referred to the uptake of contraception in the immediate postpartum period (within 24 hours of birth) before discharge from the labour ward as women were not followed up to determine uptake in the puerperium or later.

Data analysis was done using IBM SPPS Statistics 22 (Armonk, NY: IBM Corp). Simple descriptive statistical analysis was done using frequencies, percentages, and crosstabulation. Chi-square test and likelihood ratio was used to test for association as required. A p-value of < 0.05 was deemed to be statistically significant.

Results

A total of 455 women participated in the study. The mean age of respondents was 29.32 ± 6.31 years, median age 29 years (15-45 years). Most respondents had secondary level education or more (372, 81.7%), Muslims (338, 74.3%), Hausa (252, 55.4%), married (448, 98.5%) in monogamous settings (380, 83.5%), patients (288, 63.3%) and their husbands were employed (432, 94.9%), lived mostly in urban residences (365, 80.2%) far from the hospital (252, 55.4%).

Table 1: Baseline demographic characteristics of respondents

Characteristic	Frequency (n = 455)	Percentage (100%)
Age		
15-24	119	26.1
25 – 34	225	49.5
35 – 44	109	24.0
≥45	2	0.4
Education		
None	13	2.9
Quaranic only	19	4.2
Primary	51	11.2
Secondary	199	43.7
Tertiary	173	38.0
Religion		
Christianity	117	25.7
Islam	338	74.3
Ethnicity		
Hausa	252	55.4
Yoruba	30	6.6
Igbo	12	2.6
Other	161	35.4
Marital status		
Married	448	98.5
Single	6	1.3
Widowed	1	0.2
Divorced/separated	0	0
Type of marriage		
Monogamy	380	83.5
Polygamy	68	15.0
Missing	7	1.5
Occupation		
Employed	288	63.3
Unemployed	167	36.7
Husbands' occupation		
Employed	432	94.9
Unemployed	23	5.1
Residence		
Rural	69	15.2
Urban	365	80.2
Missing	21	4.6
Distance of residence to facility		
	196	43.1
Close	252	55.4
Far	7	1.5
Missing		

Table 2: Reproductive characteristics and previous use of contraception among respondents

Characteristic	Frequency (n = 455)	Percentage (100%)
P		
0	6	1.3
1-4	313	68.8
≥5	136	29.9
Previous miscarriage		
None	288	63.3
1-2	142x	31.2
≥ 3	25	5.5
Number of children alive		
None	16	3.5
1-4	324	71.2
≥ 5	115	25.3
Sex of children alive		
Both sexes	257	56.5
Female only	95	20.9
Male only	87	19.1
Not applicable	16	3.5
Previous unplanned pregnancy?		
No	332	73.0
Yes	123	27.0
Practices Exclusive Breastfeeding?		
No	148	32.5
Yes	239	52.5
Sometimes	3	0.7
Missing	65	14.3
How many more children do you want?		
No more	143	31.4
1	48	10.5
≥ 2	198	43.5
Uncertain	28	6.2
No response	38	8.4

Table 2 shows that most women were parous with 1-4 children (313, 68.8%) and had no history of miscarriage (288,63.3%). One hundred and twenty-three women (27%) had a previous history of unplanned pregnancies, 239 women (52.5%) practiced exclusive breastfeeding, and 143 (31.4%) wanted no more children.

Most of the respondents delivered vaginally (400, 87.9%), with the nurse as accoucheur (361, 79.4%) and no significant complications during current delivery (347, 60.4%). Two hundred

and seventy-five women (50.0%) had used contraception in the past. a lot of women received contraceptive counselling antenatally in the clinic (296, 65.1%). Only 199 women (43.7%) accepted immediate postpartum contraception, mostly implants (166 women) and intra-uterine devices (18 women) as shown in table 3.

Table 3: Current pregnancy characteristics of respondents and willingness to accept postpartum contraception.

Characteristic	Frequency	Percentage
Time of delivery (n = 455)		
Working hours	95	20.9
After working hours	170	37.3
Missing	190	41.8
Mode of delivery (n = 455)		
Vaginal delivery	400	87.9
Caesarean delivery	55	12.1
Accoucheur (n = 455)		
Birth before arrival/home delivery	7	1.5
Doctor	87	19.1
Nurse	361	79.4
Current outcome of baby (n = 455)		
Singleton live birth	430	94.5
Singleton IUFD/stillbirth/immediate NND	16	3.5
Twins both alive	7	1.5
Twins one dead	2	0.5
Does gender of baby differ from previous? (n = 455)		
Both	175	38.5
Different gender	47	10.3
Same gender	75	16.5
Missing	158	34.7
Complications in labour or at Caesarean (n = 455)		
No	347	60.4
Yes	108	39.6
Previous contraceptive use (n = 455)		
No	275	50.3
Yes	180	49.7
Type of contraception used in the past (n = 455)		
None/missing	279	61.3
Barrier	1	0.2
Contraceptive pills	33	7.3
Emergency contraception	3	0.7
Implant	44	9.7
Injectables	66	14.5
IUD	5	1.1
Multiple methods	18	4.0
Natural	6	1.2
Received contraceptive counselling when? (n = 455)		
Antenatal period	296	65.1
Intrapartum	27	5.9
Postpartum	118	25.9
Missing	14	3.1
Accepted postpartum contraception? (n = 455)		
No	256	56.3
Yes	199	43.7
Type of contraception accepted (n=199)		
BTL	1	
Contraceptive pills	7	
Implant	166	
Injectables	6	
IUD	18	
Natural	1	
Accepted contraception same as previous? (n=111)		
Same	30	
Different	46	
Mixed methods	12	

Table 3 Continue...

Table 4: Cross tabulation of factors that may affect acceptance of postpartum contraception.

Characteristic	Accepting postpartum contraception		p-value
	No (%)	Yes (%)	
Age			
15-24	80 (67.2)	39 (32.8)	
25 – 34	127 (56.4)	98 (43.6)	P value-0.006
35 – 44	48 (44.0)	61 (56.0)	
≥45	1 (50.0)	1 (50.0)	
Education			
None	5 (38.5)	8 (61.5)	
Quaranic only	10 (52.6)	9 (47.4)	P value-0.600
Primary	26 (51.0)	25 (49.0)	
Secondary	114 (57.3)	85 (42.7)	
Post-secondary/Tertiary	101 (58.4)	72 (41.6)	
Religion			
Christianity	57 (48.7)	60 (51.3)	P value-0.056
Islam	199 (58.9)	139 (41.1)	
Ethnicity			
Hausa	150(59.5)	102 (40.5)	
Yoruba	22 (73.3)	8 (26.7)	P value-0.015
Igbo	8 (66.7)	4 (33.3)	
Other	76 (47.2)	85 (52.8)	
Marital status			
Married	253 (56.5)	195 (43.5)	P value-0.356
Single	2 (33.3)	4 (66.7)	
Widowed	1 (100.0)	0 (0)	
Type of marriage			
Monogamy	218 (57.4)	162 (42.6)	P value-0.515
Polygamy	35 (51.5)	33 (48.5)	
Missing	3 (42.9)	4 (57.1)	
Duration of marriage			
<1 year	23 (74.2)	8 (25.8)	
1-5 years	108 (61.7)	67 (38.3)	P value-0.005
6-10 years	53 (59.6)	36 (40.4)	
>10 years	61 (44.2)	77 (55.8)	
Missing	11 (50.0)	11 (50.0)	
Occupation			
Employed	167 (58.0)	121 (42.0)	P value-0.331
Unemployed	89 (53.3)	78 (46.7)	

Table 4 Continue...

Parity			
0	3 (50.0)	3 (50.0)	
1-4	202 (64.5)	111 (35.5)	P value-0.001
5 or more	51 (37.5)	85 (62.5)	
Previous miscarriage			
None	169 (58.7)	119 (41.3)	P value-0.271
1-2	72 (50.7)	70 (49.3)	
≥ 3	15 (60.0)	10 (40.0)	
Number of children alive			
None	10 (62.5)	6 (37.5)	P value-0.001
1-4	199 (61.4)	125 (38.6)	
≥ 5	47 (40.9)	68 (59.1)	
Sex of children alive			
Both sexes	126 (49.0)	131 (51.0)	
Female only	63 (66.3)	32 (33.7)	P value-0.005
Male only	57 65.5)	30 (34.5)	
Not applicable	10 (62.5)	6 (37.5)	
How many more children do you want?			
No more	62 (43.4)	81 (56.6)	
1	22 (45.8)	26 (54.2)	
≥ 2	126 (63.6)	72 (36.4)	P value-0.001
Uncertain	22 (78.6)	6 (21.4)	
No response	24 (63.2)	14 (36.8)	
Previous unplanned pregnancy?			
No	199 (59.9)	133 (40.1)	P value-0.009
Yes	57 (46.3)	66 (53.7)	
Practices Exclusive Breastfeeding?			
No	72 (48.6)	76 (51.4)	
Yes	146 (61.1)	93 (38.9)	P value-0.117
Sometimes	2 (66.7)	1 (33.3)	
Missing	36 (55.4)	29 (44.6)	
Time of delivery			
Working hours	41 (43.2)	54 (56.8)	P value-0.001
After working hours	113 (66.5)	57 (33.5)	
Missing	102 (53.7)	88 (46.3)	
Mode of delivery			
Vaginal delivery	242 (60.5)	158 (39.5)	P value-0.001
Caesarean delivery	14 (25.5)	41 (74.5)	

Accoucheur			
Birth before arrival/home delivery	4 (57.1)	3 (42.9)	P value-0.001
Doctor	30 (34.5)	57 (65.5)	
Nurse	222 (61.5)	139 (38.5)	
Current birth outcome			
Singleton livebirth	238 (55.3)	192 (44.7)	
Singleton stillbirth	12 (75.0)	4 (25.0)	P value-0.034
Twins both alive	6 (85.7)	1 (14.3)	
Twins one dead	0 (0)	2 (100.0)	
Does gender of baby differ from previous?			
Both gender present previously	96 (54.9)	79 (45.1)	
Different gender	35 (74.5)	12 (25.5)	P value-0.001
Same gender	52 (69.3)	23 (30.7)	
Missing	73 (46.2)	85 (53.8)	
Previous contraceptive use			
No	167 (60.7)	108 (39.3)	P value-0.018
Yes	89 (49.4)	91 (50.6)	
Received contraceptive counselling from when?			
Antenatal period	180 (60.8)	116 (39.2)	P value-0.001
Intrapartum	10 (37.0)	17 (63.0)	
Postpartum	54 (45.8)	64 (54.2)	
Missing	12 (85.7)	2 (14.3)	

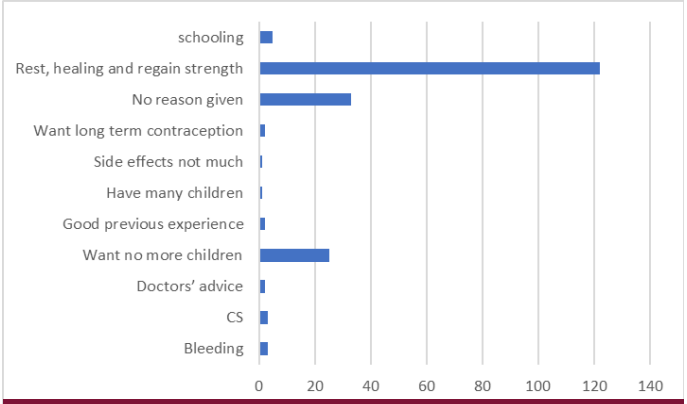

Fig 1: Reasons given for accepting postpartum contraception.

Note: Values are number of responses received. Participants were allowed to give more than one response.

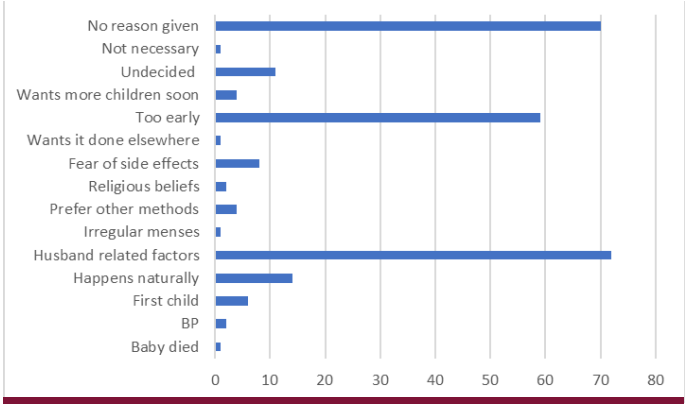

Fig 2: Reasons given for NOT accepting postpartum contraception.

Note: Values are number of responses received. Participants were allowed to give more than one response.

Figure 1 and 2 show reasons why women accepted or refused postpartum contraception. While some women gave no reason, and others gave multiple reasons, the top reason for accepting contraception was to rest, healing and regain strength. On the other hand, the top reasons for refusing postpartum contraception were husband – related factors and the perception that it was too early to initiate contraception.

Table 4 shows that several factors were significantly associated

with uptake of contraception (P- value < 0.05) and these were age, ethnicity, duration of marriage, parity, number and sex of children alive, desire for more children, previous unplanned pregnancy, accoucheur, time and mode of delivery, outcome of index pregnancy, previous use of contraception and when women received contraceptive counselling.

Discussion

An opportunity for counselling and health interventions presents itself anytime a woman is seen in the hospital as many of them may never return. With the clear advantages of postpartum contraception of improving maternal, perinatal and child morbidity/mortality, this opportunity should not be missed. Our study looked at possible factors affecting acceptance of postpartum contraception.

In our study, less than half of the women (199, 43.7%) accepted postpartum contraception. This is lower than what was found in a study in Ogbomoso, where most participants (65.0% of 444 women) indicated their willingness to use postpartum contraception[17] [Idowu et al 2015]. While in Calabar, a study reported only 3.2% of 256 women left the hospital with a contraceptive method after delivery[18], and in Irrua, contraceptive uptake among postpartum women was 17.8%19. Generally, postpartum contraceptive use is low in low and middle-income countries despite a high desire for spacing and limiting births[20]. This however varies across regions, and studies were done at different periods after childbirth; immediate, within 6 weeks and within one year of delivery [7,20.]

For women accepting contraception in our study, reasons given was mostly so they could rest, heal and regain their strength. Other reasons were similar to other studies: desire of no more children, satisfaction with previous contraceptive methods and advice by healthcare worker[21].

Reasons given by most women in our study that refused postpartum contraception were husband – related factors and the perception that it was too early to initiate contraception. This is similar to another study where husbands' rejection was one of the main reasons for non-uptake of postpartum contraception[21]. This shows the need to carry the men along when counselling for contraception. The call to involve men in contraception is not new, especially in a patriarchal society like ours, and will likely increase contraception uptake and continuation rates as the woman receives more support and understanding from her partner[22, 23,24,25]. Though contraception may not be required before 21 days in most women, the couple also need to be counselled that contraception can be initiated immediately and is safe[16]. And for those who may want IUDs, if it is not inserted within 48 hours of delivery, then the recommendation is to delay it till after 4-6 weeks to reduce the risk of expulsion[16].

Age was significantly associated with acceptance of postpartum contraception and is similar to other studies[17,19, 21,26,27]. However, in our study acceptance was more in those ≥ 35 years of age while in some other studies in was more in the younger age groups[26,27]. This may probably be due to the fact that women marry earlier and have more in this environment and may have attained their desired family size earlier. So, it is not surprising that the trend of duration of marriage, number and sex of children alive, desire for more children in this study was also significantly associated with uptake of postpartum contraception. Women with previous unplanned pregnancies were also more motivated to prevent another one.

Those that delivered during working hours were more likely to accept postpartum contraception. There are more staff available during working hours to counsel patients. Staff after working hours are likely to be overworked and have less time to counsel patients about contraception.

Those who had caesarean delivery were more likely to accept postpartum contraception. perhaps they had additional and more personalised counselling while they were being counselled for their caesarean section. Also, the doctor is more likely to have advised the need to adhere to the recommended interpregnancy intervals to prevent the need for a repeat caesarean and other complications like scar dehiscence or rupture. The woman also requires more rest and support at this time.

Acceptance of postpartum contraception was lower if index pregnancy was a stillbirth or baby died. This is similar to other studies that reported lower contraceptive uptake rates when woman had poor pregnancy and delivery outcomes like preterm deliveries, low birth weight, still birth or infant deaths[28]. In our setting, women who lose their babies during delivery have very short pregnancy intervals in a bid to replace them.

As with other studies[17] previous use of contraception was significantly associated with uptake of postpartum contraception. Of course, whether the association is positive or negative will depend on the individuals previous experience, if they reaped the benefits or experience significant side effects.

Timing of contraceptive counselling was significantly associated with acceptance. Those that received counselling only in the antenatal period had lower acceptance. Though other studies have shown that antepartum contraceptive counselling increases postpartum uptake than those that receive no counselling[18,29,30,31] it is likely that this needs to be reinforced by intrapartum and postpartum counselling. In a busy public hospital, the depth of contraceptive counselling may be inadequate to meet individual needs, and multiple contacts are probable required for proper understanding and decision making to accept contraception[28,30,32]. The use of written information that women can refer to later, and leaflets with pictorial may be useful.

Conclusion

Acceptance of postpartum contraceptives was 43.7% of the study population. Acceptance can be increased by educating

women about the need for contraception, safety in the immediate postpartum period and greater male involvement. Also, effort should be made to create avenues for multiple counselling sessions even before delivery.

Study limitation

This was a hospital-based study, and a convenient sample was used which may introduce some selection bias.

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