

Acceptance of Post-Partum Family Planning among Mothers Attending for Child Immunisation Services at Tertiary Care Hospital, Kolkata

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Abstract:


Introduction: Postpartum Family Planning (PPFP) is avoidance of closely spaced and unplanned pregnancies by use of family planning services within first year following delivery. World Health Organisation (WHO) reports postpartum women to have greatest unmet need of contraception. There is further recommendation to link immunisation clinics to PPFP services. **Objectives :** 1. To assess the acceptance rate of PPFP among mothers attending immunisation clinic 2. To explore the determinants of usage, intention to use and PPFP methods used. 3. To find the reasons for non-acceptance of PPFP among the study participants. **Method :** Study participants were women attending immunisation clinic of a tertiary level teaching hospital of Kolkata for child's immunisation service. Study design was cross sectional. Systematic random sampling technique was used to recruit participants. Data was collected by interviewer administered semi-structured questionnaire. Frequencies and percentages for categorical variables while mean and standard deviation for continuous variables were calculated. Crude Odds ratio with 95% confidence interval was calculated to explore strength of association between PPFP acceptance and independent variables. **Results :** About 1 in every 3 women (37.36%) was PPFP acceptor; intra uterine device was the most commonly used method. Odds of acceptance was lower for respondents' age <25 years and primipara while it was higher for exposure to counselling, having male child, resumption of sex and past use of contraception. Fear of adverse effects was the most common reason for non-acceptance of PPFP. **Conclusion :** PPFP acceptance was low, however among acceptors long acting reversible contraceptives were more commonly accepted methods. There is scope to improve PPFP acceptance with intensified contraceptive counselling during delivery and immediate hospital stay as women were afraid of adverse effects of contraceptives.

Keywords: Counselling, Intrauterine Devices, Long-Acting Reversible Contraception, Postpartum Period

Introduction:

Postpartum Family Planning (PPFP) means avoidance of closely spaced and unplanned pregnancies by use of family planning services within first 12 months following delivery. The purpose of PPFP is to help women to decide, initiate and

continue an appropriate modern contraceptive based on her fertility desire.^[1] PPFP acceptance varies between countries; acceptance rate of PPFP in India is around 30%.^[2,3] According to the 5th round of National Family Health Survey (NFHS-5), unmet need for spacing in West Bengal is 3% but it has remained

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unchanged from the previous round. Use of effective reversible postpartum methods like Intrauterine Contraceptive Devices (IUCD) and injectable contraceptive were very low at 2.2% and 0.7% respectively.^[4] As per NFHS-4 report there was 5% induced abortion and 36% of the abortions were conducted at home. Such high rate of induced abortion indicates possible underestimation of unmet need. In the same survey median birth interval was reported to be 43 months but 6% births took place within 18 months, 17% within 24 months and 40% within 36 months of previous delivery.^[5] Birth-to-pregnancy interval of less than 12 months are more likely to end in adverse outcomes such as unsafe induced abortion, spontaneous abortion, postpartum bleeding and anemia. There is also increased risk for stillbirth, preterm birth and low birth weight. Higher likelihood of childhood chronic undernourishment, stunted growth and infant mortality is associated with closely spaced births.^[6-8] World Health Organisation (WHO) reports postpartum women to have greatest unmet need of contraception and advocates an optimum birth interval of at least 36 months.^[1] There is further recommendation to link immunisation clinics to PPFP services.^[9] Such intervention can help women to accept modern contraceptives which are safe for lactating women and also help them in timely transition from lactational amenorrhoea method (LAM) to a modern contraceptive. Hence PPFP is presently a vital element of comprehensive maternal healthcare services which will likely allow women, families and nations to realise their fertility goals.

In accordance to the above mentioned background, a cross-sectional study was planned among women attending immunisation clinic with their infants. The objectives were to assess the proportion of PPFP acceptance, methods used and intention to use, the variables associated with use of PPFP and the reasons for unwillingness to use PPFP.

Method:

The present study was of cross-sectional design conducted at Medical College Kolkata. Overall study duration was of six months; October 2019 to March 2020, with data collection period from November 2019 to January 2020. Inclusion criteria were women who had a live birth within last 6 weeks to 12 months and were attending immunisation clinic for immunisation of her child. Women unwilling to participate or unwilling to give consent were excluded. All women post data collection was provided with counselling on long acting reversible contraceptives (LARC).

Considering a prior probability of 30% (women who accepted PPFP), α value of 0.05, absolute error of 10% and non-response rate of 10%, the sample size was calculated to be 93.^[2,3] Systematic random sampling method was used for participant recruitment. Daily target for recruitment was five participants. Around 30 eligible beneficiaries were expected to attend immunisation clinic every day. So, sampling interval was six. A predesigned, pretested, structured schedule was used for data collection. The schedule had two parts, part I for all participants and part II was for non-acceptors which included items related to PPFP awareness, intention to use PPFP and reasons for non-acceptance. All interviews were conducted by the researchers; each interview was 20 minutes in duration. Variables captured by part I of the schedule were current use of PPFP, if used then type of method, demographic variables such as age in completed years, parity, education and type of family, other variables like time since last delivery, whether have a male child, past use of contraceptive, whether received contraceptive counselling and whether resumed sexual activity. Operational definitions were required for some variables. Education was categorised and defined as primary level or passed fifth standard, secondary level or passed tenth standard and higher secondary or passed twelfth standard. Fertility intention was categorised as do

not want to space or limit pregnancy, want to space or limit pregnancy or unsure (if not able to decide on the previous two categories). Past use of contraceptive was considered as ever use of any modern method before the present childbirth irrespective of duration or consistency. Data from completed schedules was coded and tabulated in a Microsoft Excel spreadsheet. Frequencies and percentages were calculated for categorical variables; mean and standard deviation were calculated for continuous variables. Acceptance or non-acceptance of PPFP was the dichotomous outcome variable; Crude Odds Ratio (COR) with 95% Confidence Interval (CI) was calculated to see if odds of acceptance were significantly higher for one category compared to other. The study protocol was reviewed and accepted by Institutional Ethics Committee of Medical College Kolkata.

Results:

Complete data was available for 91 participants. Mean age of the participants was 25.66 years with a standard deviation of 2.84 years. Background demographic and obstetric characteristics of the participants are detailed in Table 1. Higher proportions of women were primipara and belonged to nuclear family. Half of the participants were educated up to secondary level. The variable 'fertility intention' had three categories but there was nil response for the category 'Do not want to space /limit pregnancy', so this category is not shown in the table. Majority (60%) were unsure with their intention even though almost same proportion of participants had resumed sexual activity at the time of data collection.

Table 2 shows postpartum contraceptive acceptance rate, PPFP intention, different methods used by the respondents and time to acceptance of PPFP from delivery. The primary objective of this study was to find out the acceptance rate of postpartum contraceptives among the study participants, which was 37.36%. Intrauterine

contraceptive device (IUCD) was the most commonly used contraceptive method. Injectable Depot Medroxy Progesterone-Acetate (DMPA), oral contraceptive pills (OCP) and tubal ligation was the other reported methods of PPFP. Intention to accept PPFP among non acceptors was 56.14%. Initiation of PPFP method was early, within six weeks of delivery for half of the acceptors. Odds of PPFP acceptance was significantly lower for younger age and among primiparous women, it was significantly higher among those who had male child, received contraceptive counselling during antenatal checkups (ANC), used contraceptives before and have resumed sex. Those women who reported to be counselled on postpartum contraception during ANC, had highest odds of acceptance of PPFP, being about 14 times more likely to accept PPFP compared to the reference group. (Table 3)

Table 4 shows reasons stated by respondents for non-acceptance of postpartum contraception. Respondents were allowed to give multiple reasons. The most common reason cited for non-acceptance was 'fear of adverse effects'. High responses were also obtained for physiological and behavioural conditions related to postpartum period, like 'not having sex', 'no need for contraception during lactation, amenorrhoea' and 'need more time to decide'.

Discussion:

PPFP acceptance in this study was a modest 37.36%, it is much lower than a study conducted at Hossana town, Hadiya zone of Ethiopia, where acceptance rate was 73.90%.^[10] Such high rate was also observed in other studies done in Africa. PPFP acceptance was 80.3% in Addis Ababa (Ethiopia), 73.7% in Kafue (Zambia) and 51.1% in Western Kenya.^[11,12] Part of a multi-country study on PPFP acceptance at 6 weeks conducted at Nagpur and Belgaon in India showed PPFP acceptance rate of 65.6% and 32.7%.^[12] Contraceptive acceptance within 6 weeks of birth at Hossana town was

Table 1: Distribution of respondents according to their background characteristics (n=91)

Variable	Categories	Frequency (%)
Age (in years)	<25	55(60.44)
	≥25	36(30.56)
Parity	Primipara	51(56.04)
	Multipara	40(43.96)
Education	Primary or lower	17(18.68)
	Secondary	46(50.55)
	Higher Secondary/ Graduation	28(30.77)
Type of family	Nuclear	67(73.63)
	Three generation	21(23.08)
	Joint	03 (03.29)
Has a male child	Yes	53(58.24)
	No	38(41.76)
Months since last delivery	0 to 6	64(70.33)
	7 to 12	27(29.67)
Fertility intention	Unsure	55(60.44)
	Want to space/ limit pregnancy	36(39.56)
Contraceptive counselling during ANC	Yes	42(46.15)
	No	49(53.85)
History of Past use of cotraceptive	Yes	26(28.57)
	No	65(71.43)
Resumption of sexual activity	Yes	60(65.93)
	No	31(34.07)

18.68% versus 19.12%.^[10] In the reviewed studies majority of the participants (99.7% in Chimaltenango, Guatemala to 79.07% in Hossana town, Ethiopia) wanted to limit or space their next pregnancy as opposed to 39.56% in present study.^[10,12]

Being unsure of one's fertility intention can result in unwanted pregnancies, unsafe abortions

Table 2: Distribution of respondents according to PPFP acceptance, intention and methods (n=91)

Variables	Frequency (%)
Acceptance rate of postpartum contraceptive	34 (37.36)
PPFP intention among non-users(n=57)	32 (56.14)
Methods	
IUCD	14(15.38)
DMPA	12 (13.19)
Tubal ligation	6 (6.59)
OCP	2 (2.20)
Gap between delivery & acceptance	
<6 weeks	17 (18.68)
6-14 weeks	13 (14.28)
>14weeks to 9 months	2 (2.20)
> 9 months to 12 months	2 (2.20)

and overuse of emergency contraception. Counselling helps women to take decision about their fertility intention and contraception.^[12] In the study from Hossana town 95.7% women were counselled during their perinatal and postnatal checkups about PPFP.^[10] In this study we captured data on contraceptive counselling during ANC which was 46.15%. Commonest method used in Ethiopia was DMPA (55.88%); however in the present study it was IUCD (15.38%), use of DMPA was 13.19%.^[10] Among the reversible methods for use by women, IUCD was the most commonly used method at the Indian study sites (12.6% and 14.6%) of the multi-country study and compared favourably with current study result.^[12] Use of long acting reversible contraception (LARC) like IUCD and DMPA as a method for PPFP was lower than other reversible methods in a study done at USA.^[14] Women with higher parity, resumption of sexual activity and exposure to contraceptive counselling had higher odds of PPFP acceptance in the present study which is similar to the finding from Hossana town.^[10] In current study,

Table 3: Odds of postpartum contraceptive acceptance between different subgroups of respondents (n=91)

Variable	Categories	No. of respondents	Acceptors Number (%)	COR (95% CI)
Age (in years)	<25	55	15 (27.27)	0.34* (0.14-0.81)
	≥25	36	19 (52.78)	
Parity	Primipara	51	11 (21.57)	0.2* (0.08-0.51)
	Multipara	40	23 (57.50)	
Education	Primary or lower	17	5 (29.41)	0.65 (0.21-2.03)
	Secondary& above	74	29 (39.18)	
Type of family	Nuclear	67	26 (38.81)	1.27 (0.48-3.38)
	3 generation &Joint	24	8 (33.33)	
Has male child	Yes	53	25 (47.16)	2.88* (1.14-7.23)
	No	38	9 (23.68)	
Months since last delivery	0 to 6	64	23 (35.94)	0.82 (0.32-2.05)
	7 to 12	27	11 (40.74)	
Immediate Fertility intention	Unsure	55	0 (0.00)	----
	No intention	36	34 (94.44)	
Contraceptive Counselling during ANC	Yes	42	28(66.67)	14.33* (4.93-41.71)
	No	49	6(12.24)	
History of Past use of contraceptive	Yes	26	18(69.23)	6.89* (2.52-18.84)
	No	65	16(24.62)	
Resumption of sexual activity	Yes	60	28(46.67)	3.65* (1.31-10.16)
	No	31	6(19.35)	

*Significant

18.68% versus 19.12%.^[10] In the reviewed studies majority of the participants (99.7% in Chimaltenango, Guatemala to 79.07% in Hossana town, Ethiopia) wanted to limit or space their next pregnancy as opposed to 39.56% in present study.^[10,12]

Being unsure of one's fertility intention can result in unwanted pregnancies, unsafe abortions and overuse of emergency contraception. Counselling helps women to take decision about their fertility intention and contraception.^[12] In the study from Hossana town 95.7% women were counselled

during their perinatal and postnatal checkups about PPF.^[10] In this study we captured data on contraceptive counselling during ANC which was 46.15%. Commonest method used in Ethiopia was DMPA (55.88%); however in the present study it was IUCD (15.38%), use of DMPA was 13.19%.^[10] Among the reversible methods for use by women, IUCD was the most commonly used method at the Indian study sites (12.6% and 14.6%) of the multi-country study and compared favourably with current study result.^[12] Use of long acting reversible contraception (LARC) like IUCD and DMPA as a method for PPF

Table 4: Reasons stated by respondents for non-acceptance of postpartum contraception (n=57) #

Reasons stated	Frequency (%)
Fear of adverse effects	31(54.39)
Not having sex	27(47.37)
Not necessary for lactating women	25 (43.86)
Need more time to decide	23(40.35)
Not necessary for amenorrhoeic women	21(36.84)
Interferes with sex life	17(29.82)
Fear of infertility	16(28.07)
Using natural method	15(26.32)
Lacking knowledge on all available methods	12(21.05)
Husband using condom	8(14.04)

Among all non-acceptors, multiple responses

was lower than other reversible methods in a study done at USA.^[14] Women with higher parity, resumption of sexual activity and exposure to contraceptive counselling had higher odds of PPFP acceptance in the present study which is similar to the finding from Hossana town.^[10] In current study, past users of contraception were more likely to accept PPFP. One study conducted at Kenya on acceptance of post-partum implants, reported higher acceptance among women who previously used same method.^[13]

Women's education shows variable relation with acceptance of contraception. In present study education had no relation with acceptance of PPFP. In the USA study acceptance of LARC was lowest for the group with highest education.^[14] Preference for a male child is a unique feature of the patriarchal South East Asian societies, where fertility intentions often closely align with male child intention. In present study this variable was significantly associated with PPFP acceptance. A large trial from Nepal shows similar high acceptance to postpartum IUCD (PPIUCD) among women with male child. The same

study also reports benefit of counselling on acceptance rate of PPIUCD.^[15] One more multi-country study on PPIUCD which included study sites from both India and Nepal, reported 86% counselling rate and 34% acceptance rate from India. This study found significantly higher acceptance rate when women were counselled multiple times, especially by a counsellor.^[2]

It is evident from the above discussion, PPFP acceptance varies between countries and regions within a country as a result of socio-cultural, demographic and obstetric factors. However a common finding from all studies is that quality contraceptive counselling empowers women to take decision and accept PPFP. Counselling can also help women to accept LARCs as a spacing method and thus reduce number of clinic visits and related expenditure. The full range of contraceptive choice in postpartum period should be available to all women. Besides quality contraceptive counselling, ensuring regular contraceptive supply is also essential to achieve higher coverage. In current study less than half of the respondents reported to have received contraceptive counselling. Most stated reasons by respondents in present study for non acceptance of contraception were myths related to contraception which could have been effectively managed with proper counselling.

Strength of this study is the selected setting of immunisation clinic with opportunity to know the PPFP practice as opposed to postpartum wards or well baby clinics where many women can only reveal their PPFP intention. Further this study explores the practice related to entire choice of PPFP available in Indian public sector rather than the narrow focus on a single method.

Limitations of the study : Small sample size and inclusion of only a single study site is a limitation of the study. However as contraceptive decision is heavily influenced by individual and local factors even small sample studies can provide useful insights.

Conclusion:

It can be concluded from the study, that PFP acceptance was low among the study population. This finding is likely due to lack of contraceptive readiness rather than contraceptive inhibition as half of the non-acceptors expressed intention to accept PFP. Perceived negative myths and lower coverage of contraceptive counselling further contributed.

Recommendation:

This study finding indicates there is possible scope to improve PFP acceptance with intensified contraceptive counselling especially with focus on the LARC methods. It is recommended that counsellors should be posted at immunisation clinics to facilitate this process. Quality evaluation of contraceptive counselling can be an area of further research.

Declarations:

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Conflict of interest: Nil

References:

1. World Health Organisation. WHO: Programming strategies for postpartum family planning. Geneva: World Health Organization; 2013.
2. Makins A, Taghinejadi N, Sethi M, Machiyama K, Thapa K, Perera G. et al., Factors influencing the likelihood of acceptance of postpartum intrauterine devices across four countries: India, Nepal, Sri Lanka, and Tanzania. *Int J Gynecol Obstet*. 2018; 143:13–19.
3. Sebastian MP, Khan ME, Kumari K, Idnani R. Increasing postpartum contraception in rural India: evaluation of a community-based behavior change communication intervention. *Int Perspect Sex Reprod Health*. 2012; 38:68–77.
4. International Institute for Population Sciences. The fifth National Family Health Survey (NFHS-5), India, 2019-20. 2020. http://rchiips.org/nfhs/NFHS-5_FCTS/FactSheet_WB.pdf
5. International Institute for Population Sciences. The fourth National Family Health Survey (NFHS-4), West Bengal, 2015-16. 2017. <http://rchiips.org/nfhs/nfhs-4Reports/India.pdf>
6. DaVanzo J, Hale L, Razzaque A, Rahman M. Effects of interpregnancy interval and outcome of the preceding pregnancy on pregnancy outcomes in Matlab, Bangladesh. *Bangladesh J Obstet Gynecol*. 2007; 114:1079–1087.
7. Cleland J, Conde-Agudelo A, Peterson J, Ross J, Tsui A. Contraception and health. *Lancet*. 2012; 380:149–156.
8. Conde-Agudelo A, Rosas-Bermudez A, Kafury-Goeta AC. Maternal morbidity and mortality associated with inter-pregnancy interval. *BMJ*. 2000; 321:1255–1259.
9. Jackson E, Glasier A. Return of ovulation and menses in postpartum nonlactating women: a systematic review. *Obstet Gynecol*. 2011; 117:657–662.
10. Gejo NG, Anshebo AA, Dinsa LH. Postpartum modern contraceptive use and associated factors in Hossana town. *PLoS One* [Internet]. 2019 [cited 2021 Mar 14]; 14:e0217167. doi:10.1371/journal.pone.0217167. Available from : <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0217167>
11. Gebremedhin AY, Kebede Y, Gelagay AA, Habitu YA. Family planning use and its associated factors among women in the extended postpartum period in Addis Ababa, Ethiopia. *Contracept Reprod Med* [Internet]. 2018 [cited 2021 Mar 14]; 3: 5. doi:10.1186/s40834-017-0054-5. <https://contraceptionmedicine.biomedcentral.com/articles/10.1186/s40834-017-0054-5>
12. Pasha O, Goudar SS, Patel A. Postpartum contraceptive use and unmet need for family planning in five low-income countries. *Reprod Health* [Internet]. 2015 [cited 2021 Mar 18]; Suppl 2: S11. doi:10.1186/1742-4755-12-S2-S11. Available from: <https://reproductive-health-journal.biomedcentral.com/articles/10.1186/1742-4755-12-S2-S11>
13. Mogeni R, Mokua JA, Mwaliko E, Tonui P. Predictors of contraceptive implant uptake in the immediate postpartum period: a cross-sectional study. *Eur J Contracept Reprod Health Care*. 2019; 24:438–443.
14. Oduyebo T, Zapata LB, Boutot ME. Factors associated with postpartum use of long-acting reversible contraception. *Am J Obstet Gynecol* [Internet]. 2019 [cited 2021 Mar 21]; 22:43.e1-43.e11. doi:10.1016/j.ajog.2019.03.005. Available from: [https://www.ajog.org/article/S0002-9378\(19\)30480-6/fulltext](https://www.ajog.org/article/S0002-9378(19)30480-6/fulltext)
15. Pradhan E, Canning D, Shah IH. Integrating postpartum contraceptive counseling and IUD insertion services into maternity care in Nepal: results from stepped-wedge randomized controlled trial. *Reprod Health* [Internet]. 2019 [cited 2021 Mar 21]; 16:1. doi:10.1186/s12978-019-0738-1. Available from: <https://reproductive-health-journal.biomedcentral.com/articles/10.1186/s12978-019-0738-1>