

## Original Research Article

# Retrospective study on socio-demographic factors responsible for acceptance of IUCD among postpartum women

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### ABSTRACT

**Background:** Despite the availability of modern and scientific measures, unacceptably high numbers of maternal deaths still occur in developing countries. Spacing methods of family planning may avoid maternal and infant deaths. The Government of India launched postpartum IUCD (PPIUCD) services in the year 2000; although acceptance of Postpartum IUCD is a real concern.

**Methods:** The retrospective study was conducted in rural government hospital in Maharashtra during 2016 - 2017. We analyzed sociodemographic variables and acceptance of Postpartum IUCD among postpartum women. The sample size was 595 (N=595). The sociodemographic factors studied included age, type of delivery, sex of newborn, socioeconomic status, educational status, etc.

**Results:** The total postpartum women included in the study was 595, out of which, 202 (34%) accepted for postpartum IUCD whereas 393 (66%) rejected for the same. The most common age group was 20-25 years (65%), followed by age group 25-30 years (30%). Primipara was the common group (45%) and normal vaginal delivery was common (95%). The educational status of both, the postpartum women and their husband, showed statistically significant association with acceptance of postpartum IUCD ( $p < 0.05$ ).

**Conclusions:** The acceptance of Postpartum IUCD was low (34%). The women's and their husband's educational status is an important factor in acceptance of Postpartum IUCD ( $p < 0.05$ ). Due attention should be given to enhancing educational level of women, also effective counselling both for pregnant woman and her husband during ANC is required.

**Keywords:** Acceptance, ANC, Postpartum IUCD

### INTRODUCTION

Despite the availability of modern and scientific measures, unacceptably high numbers of maternal deaths still occur in developing countries. In year 2001, the Millennium Development Goals (MDGs) were formed which called for a three-quarters reduction between 1990 and 2015 in the maternal mortality ratio (MMR), the number of maternal deaths per 100,000 live births.<sup>1,2</sup>

Family planning can avert nearly one-third of maternal deaths and 10% of child mortality when couples space their pregnancies more than two years apart.<sup>3</sup> Pregnancies occurring within a year of the mother's previous birth are riskier for the health of both the mother and the child than those occurring later, and children born within one year of a previous birth have a higher risk of mortality than those born after longer intervals.<sup>4</sup> Closely spaced births are also associated with increased chances of chronic undernourishment, stunted growth, and infant mortality.<sup>5</sup>

Studies also found that conceiving within two years leads to adverse events like abortion, premature labour, postpartum haemorrhage, foetal loss sometimes maternal deaths. Hence advising and practicing contraception with in postpartum period good for women health.<sup>6</sup>

India is world's 2<sup>nd</sup> most populated country and also first country to introduce family planning services. Among all the countries in the developing world, India has the unique distinction of having the first National Family Planning programme since 1951. Since then, maternal mortality has decreased by two-thirds, fertility has declined by two-fifths, and life expectancy at birth has improved significantly.<sup>7</sup> In India, one-third of the maternal deaths and 10 % of child mortality can be avoided when couples space pregnancies more than 2 years apart. It is in the first year postpartum that Indian women are most susceptible to unwanted pregnancies. Postpartum family planning is the prevention of unintended and closely spaced pregnancies through the first 12 months following childbirth.<sup>8</sup>

As a spacing method of family planning, the IUCD (Intra Uterine Contraceptive Device) is a highly effective, safe, private, long acting, coitus independent, and rapidly reversible method of contraception with fewer side effects. An Intrauterine contraception is the most cost-effective method of contraception today. Many women also find the IUCD to be very convenient, because it requires little attention once it is inserted.<sup>9</sup> An intrauterine device can be used for postpartum contraception like Copper T 380 A, which is widely available in institutions and private sectors is one of the most cost-effective options available. It comes in regular and safe load varieties. Copper T 380A is highly effective for 12 years though approved for use only for 10 years. It is a non-hormonal IUCD that can be safely used by all women even during breast feeding. It requires only one-time motivation and few follow-ups.<sup>10</sup>

The Government of India launched Postpartum IUCD (PPIUCD) services in the year 2000; although acceptance of Postpartum IUCD in is a real concern.<sup>11</sup> There is a need to identify factors that affect the acceptance of PPIUCD to ensure more utilization of Postpartum IUCD services.

The aim of the present study is to assess the socio demographic profile of postpartum women and to study the factors leading to acceptance of Postpartum IUCD.

## **METHODS**

The study was a RETROSPECTIVE hospital-based study to assess the socio demographic profile of postpartum women and to study the factors leading to acceptance of postpartum IUCD. The study was conducted at the Government Rural Hospital in Maharashtra State (India). Hospital based data was used in the present study.

The total study duration was one year, from January 2016 to December 2016. The data collection was done from January 2017 till March 2017, after that the data entry and data analysis was done.

The study population included all women who delivered at maternity ward Government Rural Hospital during the study period. The acceptance of postpartum IUCD among the postpartum women was also assessed. The sociodemographic factors included age of the postpartum woman, type of delivery, sex of new born, socioeconomic status, educational status of postpartum woman, educational status of husband of postpartum woman, etc. The sociodemographic variables and its association with acceptance of postpartum IUCD among postpartum women were studied. The sample size was 595 (N=595).

### ***Inclusion criteria***

All women who delivered in Government Rural Hospital in Maharashtra State (India) during the year 2016 viz. from 1<sup>st</sup> January 2016 to 31<sup>st</sup> December 2016 are included in the present study.

### ***Exclusion criteria***

Incomplete data records were excluded from the present study.

### ***Data collection and analysis***

The relevant data of study population was taken from Hospital Records and personal identifiers were removed. The data is then entered in Microsoft Excel. The study tables were prepared and analysed. The data is then analysed using statistical software. Results are expressed in proportions, and Chi-square test was used wherever applicable. A p value of less than 0.05 was considered as statistically significant. Ethical approval for the study was not required as this was an analysis of secondary data.

## **RESULTS**

The total sample size was 595; out of which 202 accepted the postpartum IUCD (34%). The most common age group in the present study was age group below 25 years (65%), followed by age group 25-30 years (29%). Among the postpartum IUCD acceptors, the common group was the women with 1 or 2 living children (91%), as compared to the other group, viz. with 3 or more living children (9%). Both age and no. of living children had statistically significant association with acceptance of postpartum IUCD ( $p < 0.05$ ). Mode of delivery as well as Gender of new born baby showed no significant statistical association with acceptance of postpartum IUCD ( $p > 0.05$ ). As per the socioeconomic classification, the women with lower class and lower middle class showed more acceptance for postpartum IUCD ( $p < 0.05$ ) (Table 1).

The acceptance of postpartum IUCD was more common in secondary or higher secondary (or more) educated women (Table 1).

Similarly, husbands who are educated secondary or higher secondary (or more) showed more acceptance of postpartum IUCD (Table 2). The educational status of both women and their husband showed statistically significant association with acceptance of postpartum IUCD ( $p < 0.05$ ) (Table 2).

**Table 1: Sociodemographic variables and acceptance of postpartum IUCD (N=595).**

Variable	Postpartum IUCD		Total	p value
	Accepted	Declined		
<b>Age group</b>				
> 25 years	155	233	388	0.000
25-30 years	43	128	171	
< 30 years	4	32	36	
<b>No. of living children</b>				
1	117	148	265	0.00
2	67	143	210	
3	13	65	78	
>3	5	37	42	
<b>Mode of delivery</b>				
Caesarean section	7	22	29	0.252
Vaginal	195	371	566	
<b>Gender of the new born</b>				
Male	111	223	334	0.676
Female	91	170	261	
<b>Socioeconomic status</b>				
Upper class	12	53	65	0.035
Upper middle	34	75	109	
Middle Class	42	84	126	
Lower middle class	63	98	161	
Lower class	51	83	134	

**Table 2: Educational status and acceptance of postpartum IUCD (N=595).**

Variable	Postpartum IUCD		Total	p value
	Accepted	Declined		
<b>Educational status of woman</b>				
Illiterate	8	47	55	0.000
Primary	13	48	61	
Secondary	96	225	321	
HS or more	85	73	158	
<b>Educational status of husband</b>				
Illiterate	8	46	54	0.000
Primary	9	38	47	
Secondary	91	171	262	
HS or more	94	138	232	

## DISCUSSION

In the present study, the total sample size was 595; out of which 202 accepted the postpartum IUCD (34%). The women who decline the Postpartum IUCD were 393 (66%). Similar study done in Telangana State (India) showed the proportion of acceptance of postpartum IUCD was 20%.<sup>12</sup> Other studies done in India, showed varied proportion of acceptance of postpartum IUCD from 9% to 67%.<sup>11,13,14</sup> Among the women who declined for postpartum IUCD, the common reasons included lack of awareness, partner and family refusal, fear of complications, etc.<sup>9</sup> The acceptance depends upon many factors including difference in awareness, patient care facilities and quality of counselling services. Research has shown family planning counselling during antenatal care (ANC) and postnatal care (PNC) as the key predictors of postpartum modern contraceptive use.<sup>15,16</sup>

The study findings showed that Age less than 25 years is the commonest age group that accepted postpartum IUCD (65%). Similar findings are also seen in other studies.<sup>9,11</sup>

Postpartum IUCD as a spacing method for contraception is preferred by the women with at least 1 living children (58%), the proportion went down with more no. of living children. Similar findings are seen in many research studies.<sup>11</sup>

The study also found that gender of the new born did not have any effect on decision to accept PPIUCD. Number of living children is more important factor for acceptance of postpartum IUCD than gender of the new born baby. Some studies have observed similar findings.<sup>11</sup>

The present study also highlights the acceptance is more common in lower socioeconomic status (56%), a similar observation is seen in other studies also.<sup>11</sup> The women belonging to higher socioeconomic status had better awareness and access to wider choice of contraceptives, might be one of the reasons behind it.

The effect of educational status and acceptance of contraception are well documented.<sup>17,18,19,20</sup> Education helps in generating self-esteem, greater insight into their future and better response to counselling.<sup>21</sup> The education help to be aware of the contraceptive choices available and also helps in decision making and better utilization of the family planning services. The educational level of women and more importantly her husband is important as it affect making a decision for contraceptive use and also for the post decision support.

## CONCLUSION

The acceptance postpartum IUCD was low (34%). The reason may be the low educational status and lack of knowledge leading to perceived concern and fears of complications towards IUCD insertion. The women's and

their husband's educational status is an important factor in acceptance of postpartum IUCD ( $p < 0.05$ ). Due attention should be given to enhancing educational level of women, also effective counselling both for pregnant woman and her husband during ANC is necessary.

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## REFERENCES

- Mahler H. The safe motherhood initiative: a call to action. *Lancet*. 1987;329(8534):668-70.
- United Nations (UN) Secretary-General. Road Map Towards the Implementation of the United Nations Millennium Declaration: Report of the Secretary-General. New York: UN; 2001:21A/56/326.
- Cleland J, Bernstein S, Ezeh A, Faundes A, Glasier A, Innis J: Family planning: the unfinished agenda. *Lancet*. 2006;368:1810-27.
- DaVanzo J, Hale L, Razzaque A, Rahman M. Effects of interpregnancy interval and outcome of the preceding pregnancy on pregnancy outcomes in Matlab, Bangladesh. *BJOG*. 2007;114:1079-87.
- Rutstein SO. Effects of preceding birth intervals on neonatal, infant and under-five years mortality and nutritional status in developing countries: evidence from the demographic and health surveys. *Int J Gynaecol Obstet*. 2005;89 Suppl 1:S7-S24.
- Kanhere A, Pateriya P, Jain M. Acceptability and feasibility of immediate post-partum IUCD insertion in a tertiary care centre in Central India. *Int J Reprod Contracep Obst Gynecol*. 2015;4(1):1.
- Balsarkar GD, Nayak A. Postpartum IUCD: Rediscovering a Languishing Innovation. *The J Obst Gynecol India*. 2015 Jul 1;65(4):218-20.
- Kumar S, Sethi R, Balasubramaniam S, Charurat E, Lalchandani K, Semba R, et al. Women's experience with postpartum intrauterine contraceptive device use in India. *Reproductive Health*. 2014 Dec;11(1):32.
- Mishra S. Evaluation of safety, efficacy, and expulsion of post-placental and intra-cesarean insertion of intrauterine contraceptive devices (PPIUCD). *J Obst Gynecol India*. 2014;64(5):337-43
- Grimes DA, Lopez LM, Schulz KF, Van Vliet HA, Stanwood NL. Immediate post-partum insertion of intrauterine devices. *Cochrane Database of Systematic Reviews*. 2010(5).
- Kant S, Archana S, Singh AK, Ahamed F, Haldar P. Acceptance rate, probability of follow-up, and expulsion of postpartum intrauterine contraceptive device offered at two primary health centers, North India. *J Family Medicine Primary Care*. 2016 Oct;5(4):770.
- Jairaj S, Dayyala S. A cross sectional study on acceptability and safety of IUCD among postpartum mothers at tertiary care hospital, Telangana. *JCDR*. 2016 Jan;10(1):LC01.
- Vidyarama R, Nagamani T, Prasad K. PPIUCD as a long acting reversible contraceptive (Larc)-an experience at a tertiary care centre. *Int J Sci Res*. 2015;4(5):5-7.
- Goswami G, Yadav K, Patel A. A prospective study to evaluate safety, efficacy and expulsion rate of post placental insertion of intra uterine device. *J Evolution Med Dent Sci*. 2015 Jul 13;4(56):9770-74.
- Zapata LB, Murtaza S, Whiteman MK, Jamieson DJ, Robbins CL, Marchbanks PA, et al. Contraceptive counseling and postpartum contraceptive use. *Am J Obstet Gynecol*. 2015;212:171.e1-e8.
- Bwazi C, Maluwa A, Chimwaza A, Pindani M. Utilization of postpartum family planning services between six and twelve months of delivery at Ntchisi District Hospital, Malawi. *Health*. 2014;6:1724-37.
- Mohamed SA, Kamel MA, Shaaban OM, Salem HT. Acceptability for the use of postpartum intrauterine contraceptive devices: Assiut experience. *Med Principles Practice*. 2003;12(3):170-5.
- Thomas D, Maluccio J. Fertility, contraceptive choice, and public policy in Zimbabwe. *World Bank Econ Rev*. 1996;10(1):189-222.
- Kumar S, Sethi R, Balasubramaniam S, Charurat E, Lalchandani K, Semba R, et al. Women's experience with postpartum intrauterine contraceptive device use in India. *Reprod Health*. 2014;11:32.
- Mahmood SE, Srivastava A, Shrotriya VP, Shaifali I, Mishra P. Postpartum contraceptive use in rural Bareilly. *Indian J Community Health*. 2011;23:56-57.
- Wasim T, Shaukat S, Javed L, Mukhtar S. Outcome of immediate postpartum insertion of intrauterine contraceptive device: Experience at tertiary care hospital. *JPMA. The J Pakistan Med Association*. 2018 Apr 1;68(4):519-25.

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