

# A Study to Assess the Perception, Acceptance and Satisfaction Regarding Postpartum Intra Uterine Contraceptive Device Services in a Tertiary Care Hospital in a Coastal District of Karnataka

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## Abstract

**Introduction:** Unintended pregnancy is an important public health issue in developing countries like India because of its association with adverse social and health outcomes. Family planning enables women to achieve healthy spacing between births and reduces maternal and child mortality by 10%. Intra Uterine Contraceptive Device (IUCD) is effective immediately after insertion and provides very effective, safe and long-term –yet reversible protection from pregnancy. Postpartum IUCD insertion has a higher rate of retention.

**Objective:** To assess the perception, acceptance and satisfaction regarding postpartum IUCD services among the women delivering in a tertiary care hospital in the coastal district of Karnataka.

**Materials and Methods:** An observational cross-sectional study with a consecutive sampling method was conducted in the coastal district of Karnataka for a period of 2 months with a pretested semi-structured questionnaire by interview technique. Data was compiled in Microsoft Excel, validated and analysed using statistical software: Statistical Package for the Social Sciences (SPSS) version 16.0.

**Results:** 198 women were counselled for PPIUCD insertion, only 38.39% gave consent and 26.76% actually got inserted PPIUCD. The reasons for non-acceptance were fear of complications (11.98%), no familial support (9.15%) and using other contraceptive methods (35.85%). Factors like education status, Socio-Economic Status (SES), parity and previous use were positively correlated with acceptance of PPIUCD. No immediate complications were reported.

**Conclusion:** The PPIUCD has proven to be a useful long-term contraceptive method that is safe, effective, and useful for decreasing family size and spacing out births. Even though they are well aware of PPIUCD, they are hesitant to adopt it. Effective counselling can tackle these issues by clearing all the confusion.

**Keywords:** PPIUCD, complications, unintended pregnancy, contraceptive, family planning.

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## Introduction

Unintended pregnancy is an important public health issue in developing countries like India because of its association with adverse social and health outcomes. Studies conducted in various developed and developing countries confirm the same.<sup>1</sup> In India approximately 27% of births occur in less than 24 months after a previous birth, another 34% of births occur between 24 and 35 months; 61% of births occur at intervals that are shorter than the recommended birth-to-birth interval of approximately 36 months and 65% of women in the first year postpartum have an unmet need for family planning.<sup>2</sup> Family planning enables women to achieve healthy spacing between births and reduces 25% to 40% of maternal death and child mortality by 10%.<sup>3-5</sup>

Among women during their first year postpartum in India, 91% of women want to avoid another pregnancy but only 26% are using any method of family planning. As mentioned above, 65% have an unmet need for family planning.<sup>3</sup> Intrauterine Contraceptive Devices (IUCDs) have been used by women in India for decades for spacing pregnancies and it is the most commonly used reversible method of contraception worldwide with about 127 million current users.<sup>6</sup>

The rise in institutional deliveries in recent times provides opportunities for healthcare providers to motivate postnatal mothers to adopt contraception. The postpartum period is potentially an ideal time to begin contraception as women are more strongly motivated to do so at this time, which also has the advantage of being convenient for both patients and healthcare providers.<sup>3</sup>

According to the World Health Organization Medical Eligibility Criteria, an IUCD can be inserted in the 48 hours postpartum, referred to here as a postpartum IUCD (PPIUCD), or after four weeks following a birth.<sup>7</sup> A 2010 Cochrane review concluded that PPIUCDs were a safe and effective contraceptive method.

IUCD is effective immediately after insertion and provides very effective, safe and long-term –yet

reversible protection from pregnancy. It's a cost-effective method that can be used for many years (10 years for Cu T380A and 5 years for Cu T375). It is also convenient because it doesn't require daily action or repeated clinic visits for supplies. It doesn't affect lactation and hence can be used by lactating women.<sup>8</sup>

Inserting IUCD in the postpartum period saves time for both women and providers. Postpartum IUCD insertion has a higher rate of retention and a lower rate of uterine perforation possibility because the wall of the uterus is thicker just after pregnancy hence PPIUCD is preferred over IUCD. An increase in the amount and duration of menstrual bleeding, infection, IUD string problems and partial or complete expulsion are a few known complications of the IUCD.<sup>3</sup>

Various studies which are conducted across the country show acceptance rate of PPIUCD ranges from 34 -66%. Factors like educational status, prior knowledge about PPIUCD and socio-economic status were positively correlated with acceptance of PPIUCD.<sup>9</sup>

An extensive review of the literature revealed that, though studies across the globe exist to understand the factors that motivate women to accept PPIUCD there are only a few studies done for the same in our state and none in our district to assess the region-specific factors (coastal city). This arouses the need for the present study to look into the myths and barriers to acceptance and their perceptions that prevent them from using PPIUCD among coastal populations attending tertiary care hospitals so that focused counselling can be done to overcome those barriers. There is also a need to study the complications and satisfaction following PPIUCD insertion among the accepted women if all negative feedback from these women hinders the acceptance of the same.

## Materials and Methods

After obtaining Institutional Ethics Review Board approval, this observational cross-sectional study

with a consecutive sampling method was conducted at a government tertiary care hospital attached to a medical college in a coastal district of Karnataka for a period of 2 months from 1st May 2018 to 30th June 2018 enrolling all the antenatal women who delivered and provided consent to participate in the study with a pretested semi-structured questionnaire by interview technique.

#### Inclusion criteria:

Antenatal women who got delivered in the study setting.

#### Exclusion criteria:

1. Women who underwent permanent method of sterilization following delivery
2. Women who had contraindications to PPIUCD insertion.
3. Who has not given the consent

The data regarding socio-demographic profile, perception regarding postpartum IUCD and their willingness to accept postpartum IUCD following delivery was collected using a pretested semi-structured questionnaire. The reasons for not

accepting were also documented.

They were followed up for 2 days for immediate complications. After six weeks, they were again interviewed by telephone to collect information about the client's and husband's overall satisfaction with the method, problems or complications related to the method, and retention of the PPIUCD.

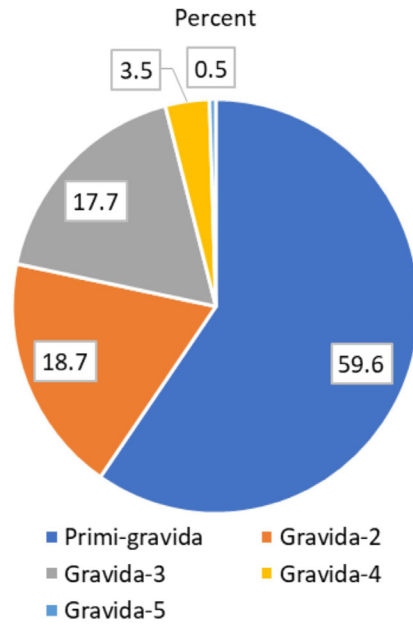
**Statistical analysis:** The data obtained was compiled in Microsoft Excel, validated and analysed using statistical software: SPSS version 16.0. The data was presented in mean, standard deviation and proportions. p-value <0.05 was considered statistically significant.

### Results

Out of 330 women who delivered during the study period, only 198 women were enrolled in the study who satisfied the inclusion and exclusion criteria and consented to the study. The majority of the study subjects were in the age group of 20-30 years 162 (81.8%). Nearly half of the patients were studied minimum till high school (Table 1).

**Table 1: Socio-demographic profile of the participants**

Parameters		Frequency	Percentage
Age group (in years)	20- 30	162	81.8
	31-40	36	18.2
Education	Illiterate	7	3.5
	Primary school	29	14.6
	Middle school	44	22.2
	High school	60	30.3
	Intermediate	24	12.1
	Graduate/Postgraduate Professional degree	34	17.2
<b>Socio-economic status</b> (Modified BG Prasad classification)	Class I	31	15.7
	Class II	49	24.7
	Class III	55	27.8
	Class IV	42	21.2
	Class V	21	10.4



**Figure 1: Distribution of study subjects according to obstetric score.**

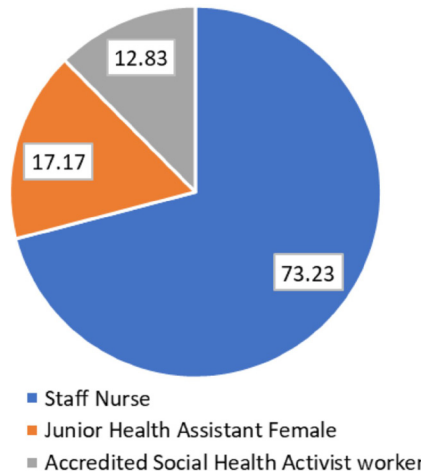
Among the 198 study subjects, 171 (86.4%) were aware of other contraceptives and only 53% of the women were following any of the contraception

methods. Approximately 90% of them followed either the physical barrier method or oral contraceptive pills.

**Table 2: Distribution of study subjects based on previous knowledge, usage and counselling regarding PPIUCD.**

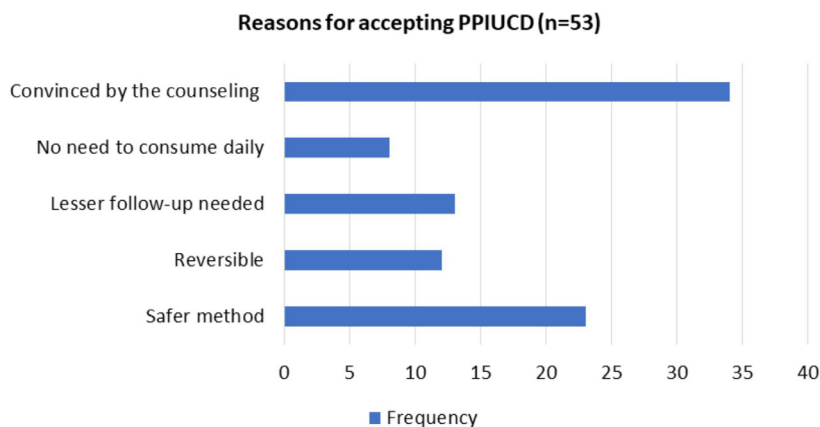
Details on PPIUCD	Yes	Percentage	No	Percentage
Previous knowledge about PPIUCD	164	82.8	34	17.2
Previous Usage of PPIUCD	15	7.6	183	92.4
Counselled for PPIUCD	198	100	0	00
Counselled during the antenatal period.	148	74.7	50	25.3

**Source of information for PPIUCD**



**Figure 2: Distribution of study subjects according to source of information for PPIUCD.**

Among 198 study subjects, 72(36.4%) accepted PPIUCD and 53(26.8%) got PPIUCD inserted.



**Figure 3: Reasons for accepting PPIUCD.\*Multiple responses.**

**Table 3: Reasons for not accepting PPIUCD (n=145).**

Reasons for non-acceptance	Frequency	Percentage
No support from the family	49	33.79
Scared of complications	43	29.66
Use of other methods of contraception.	79	54.48
Aware of Locational amenorrhea	23	15.86
It increases bleeding	28	19.31
Don't want to use any method now	17	11.72
Expulsion	22	15.17

\*Multiple responses.

**Table 4: Complications following PPIUCD insertion (n=53)**

Complications	Frequency	Percentage
Pain	11	20.75
Increased bleeding	3	11.32
Expulsion of IUCD	5	9.43
Got removed IUCD because of pain	2	3.77
Total	21	39.62

When the subjects were enquired about complications, none of them had immediate complications but 21(39.62%) had delayed complications (Table 4).

**Table 5: Distribution of study subjects based on satisfaction and follow up following PPIUCD.**

Characteristics.	Frequency	Percentage
Satisfaction following PPIUCD insertion among women.	42	79.24
Husband's Satisfaction following PPIUCD insertion.	42	79.24
Checking the tail of IUCD regularly.	45	84.90
Consulted doctor following complications.	21	39.62

42(79.24%) women and their husbands were satisfied with PPIUCD. 45 (84.90) of them were checking for IUCD tail regularly and (39.62%) consulted a doctor following complications.

**Table 6: Factors influencing PPIUCD insertion among the study subjects (n=198).**

Factors	Odds ratio	95.0% C. If or odds ratio		p-value
		Lower	Upper	
Age	0.591	0.043	8.073	0.694
Education	4.324	1.556	12.017	0.005

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Occupation	0.228	0.045	1.152	0.074
Age of the husbands	2.099	0.472	9.328	0.33
Education of the husband	0.787	0.351	1.76	0.559
Occupation of the husband	0.373	0.153	0.91	0.03
Religion	0.077	0.002	2.491	0.148
Type of family	0.503	0.12	2.102	0.346
Total monthly income	6.183	1.841	20.759	0.003
Socio-economic Status	7.7	2.02	29.346	0.003
Obstetricscore	0.032	0.003	0.359	0.049
Number of antenatal visits	1.272	0.688	2.352	0.443
Aware of PPIUCD	0.035	0.001	2.139	0.11
Source of information	1.731	0.071	42.186	0.736
Period of counselling	4.814	0.151	153.261	0.373
PPIUCD usage in past	290.941	2.376	35630	0.021
Mode of delivery	1.523	0.056	41.348	0.803
Timing of insertion	17570	41.907	7364000	0.002

To assess the overall effect of various variables on the acceptance of PPIUCD, the Multiple Logistic Regression Model was applied. A statistically significant association was observed between the education of the women, occupation of the husband, socio-economic status, obstetric score, PPIUCD usage in the past and timing of insertion with the acceptance rate of PPIUCD.

### Discussion

Research and program experience worldwide indicates that the adoption of family planning for spacing the subsequent pregnancies contributes significantly to reducing maternal morbidity and improving the health of both mother and child. The postpartum period is a very crucial time in the lifecycle of reproductive women as they have a high unmet need for family planning and limited options for family planning methods. The family planning method used during this period should be safe for both mother and breastfeeding baby, should be reversible, highly effective, should not interfere with lactation and free from systemic side effects. IUCD qualify all these criteria and also have the additional advantage of being consumed daily.

As a result of the Ministry of Health and Family Welfare, the Government of India's commitment towards 100% institutional delivery, institutional deliveries have drastically improved over the period.

This gives an excellent opportunity for the health care providers to counsel the mother for acceptance of the family planning mothers.

In the present study, the acceptance rate was 26.80% and the highest acceptance was seen in age groups ranging from 20-30 years, those with high school education, Hindus and those with middle socio-economic status. A higher acceptance rate was observed among primi-gravida. Similar findings were seen study conducted by Sharma A et al.<sup>10</sup> revealed that the highest acceptance was seen in women of age group 21-30 years (82.96%), those with secondary school of education (56.95%), Hindus (55.67%), those with middle socioeconomic status and among multipara (69.59%).

A retrospective study on the acceptability and complication of PPIUCD insertion done by Doley et al.<sup>11</sup> also found a higher acceptability rate in multipara (39.32%), whereas a study done by Jayraj et al.<sup>12</sup> found higher acceptance among primi-gravida (25.9%).

59.1% were from the nuclear family and the acceptance rate was also higher in the women from the nuclear family. This is contrary to the study done by Rati et al.<sup>13</sup>, it was seen that there was a higher incidence in joint family which is 83.7%.<sup>14</sup> One of the reasons quoted by the women for non-acceptance of PPIUCD was no support from the family members.

In our study, 43% of the women had less than 4 Antenatal visits (less than the minimum recommended visits) and 6% of them had not gone for any antenatal check-ups. It is a missed opportunity for health care workers to counsel the antenatal mother. However, all 198 mothers were counselled regarding PPIUCD after admission. Effective counselling is a tool that empowers people to seek what is best for them.

In our study, 64.15% were convinced by the counsellor to accept PPIUCD and the safer method (44.0%) and reversible method (24.53%) were the major reasons for acceptance because they needed lesser follow-up. Sharma A et al.<sup>10</sup> and Jayraj et al.<sup>12</sup> found that the reversible method as a significant reason for acceptance i.e. 73.62% and 67.12% respectively.

In our study, the most common reason for rejecting PPIUCD was the use of other contraceptive methods (54.48%) and the same finding was reported in a study done by Jayraj et al.<sup>12</sup>, 33.79% had a lack of support from the family. 29.66% were scared of complications, and 15.86% were aware of lactational amenorrhea. Partner and family refusal was found to be the significant cause in the study done by Sharma et al.<sup>10</sup> Effective counselling of the family members along with the antenatal mother and providing sufficient information regarding merits and demerits of the PPIUCD gaining the confidence of the family members, and addressing the myths about the PPIUCD among the mother go a long way in convincing the mother and the family members in accepting PPIUCD.

Among the delayed complications encountered, lower abdominal pain was the major complication (20.75%) followed by expulsion of PPIUCD (11.32%) and increased menstrual bleeding (9.43%). The missing thread was the complaint observed by Doley et al.<sup>11</sup> Pain was reported by Pradhan et al.<sup>14</sup> In our study, the most common reason for removal of IUCD was pain abdomen (3.77%). Doley et al.<sup>11</sup> reported bleeding (42.11%) as a major reason for removal.

The study by Doley et al.<sup>11</sup> and Mishra<sup>15</sup> revealed that missing thread (15.12% and 11.29%) and irregular bleeding (12.35% and 23.50%) were significant complications. Irregular menstrual bleeding (17.15%), pain abdomen (17.15%) and expulsion (14.28%) were reported as major complications by Jayraj et al.<sup>12</sup> and these were the reasons for the removal of PPIUCD.

Gupta et al.<sup>16</sup> in her study, reported about perforation and expulsion. An increase in expulsion rates occurred with delayed postpartum insertion when compared to immediate insertion. Expulsion rates were more when compared to interval IUCD insertion. Post-caesarean insertions were associated with a lower expulsion rate when compared to post-vaginal delivery insertion. During counselling, mothers should be educated and well-informed regarding possible complications of PPIUCD and the importance of further follow-up after PPIUCD insertion. Mothers should be assured about the continued care and follow-up after PPIUCD insertion.

42(79.24%) women and their spouses were satisfied with PPIUCD. 45 (84.90) of them were checking for IUCD tail regularly and (39.62%) consulted a doctor following complications.

## Conclusion

The PPIUCD has proven to be a useful long-term contraceptive method that is safe, effective, and useful for decreasing family size and spacing out births. Even though they are well aware of PPIUCD, they are hesitant to adopt it for fear of complications and no support from the family. Effective counselling can tackle these issues by clearing all the confusion. Antenatal counselling can also enhance the possibility of accepting PPIUCD implantation.

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**Ethical Committee Approval:** Taken.[ Ref. No. IEC/KRIMS/O/06/2018 dated 16<sup>th</sup> May, 2018]

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