

Antenatal Counselling For PPIUCD Success: Role of Antenatal Counselling For PPIUCD

Sri Rownika K¹, Nidhi Sharma²

¹Post Graduate, Department of Obstetrics and Gynaecology, Saveetha Medical College and Hospital, Chennai, India

²Professor, Department of Obstetrics and Gynaecology, Saveetha Medical College and Hospital, Chennai, India

Corresponding Author: Dr. Sri Rownika K, Department of Obstetrics and Gynaecology, Saveetha Medical College and Hospital, Chennai, India., Email: i.rownikflora14@gmail.com , ORCID ID :0009 0001 2203 6755

Abstract

Background:

The postpartum intrauterine contraceptive device (PPIUCD) is a highly effective, long-acting, reversible method of contraception ideal for the immediate postpartum period. Despite its benefits, PPIUCD utilization remains low due to misinformation, fear, and lack of counselling. Antenatal counselling has emerged as a potentially transformative strategy to enhance acceptance and uptake of PPIUCD.

Aim:

To evaluate the effectiveness of structured antenatal counselling in improving the acceptance and insertion rates of PPIUCD and to assess barriers to acceptance among women who were not counselled.

Methods:

A prospective interventional study was conducted at Mettupalayam Government Hospital from July to September 2025. A total of 200 antenatal women were recruited using convenience sampling. Participants were divided into those who received structured antenatal counselling (n=128) and those who did not (n=72). Data on acceptance, insertion, and refusal were collected and compared.

Results:

Among counselled women, 93.7% accepted PPIUCD and 85.1% underwent insertion, compared to 33.3% and 19.4% respectively in the non-counselled group. Refusal was significantly higher (66.7%) in the non-counselled group compared to 6.3% in the counselled group. The most common reasons for refusal included fear of pain, myths about infertility, and family disapproval.

Conclusion:

Structured antenatal counselling significantly improves both acceptance and successful insertion of PPIUCD. Integration of PPIUCD counselling into routine antenatal care is essential for strengthening postpartum family planning and reducing unmet contraceptive needs.

Keywords: Postpartum Intrauterine Contraceptive Device (PPIUCD), Antenatal Counselling, Postpartum Family Planning, Contraceptive Acceptance, Long-Acting Reversible Contraception (LARC)

Introduction:

Effective postpartum contraception is vital in preventing unintended and closely spaced pregnancies, which contribute significantly to maternal and neonatal morbidity and mortality—particularly in low- and middle-income countries (LMICs) [1]. The postpartum intrauterine contraceptive device (PPIUCD), including immediate insertion after childbirth, stands out as a highly effective, long-acting, reversible, non-hormonal contraceptive option that does not interfere with lactation and is cost-effective [2,3]. Despite these advantages, uptake remains low across various settings, often due to lack of awareness, fear of complications, cultural beliefs, spousal influence, and insufficient counseling [4,3].

Antenatal counseling presents a promising opportunity to enhance PPIUCD acceptance. Evidence suggests that counseling integrated into antenatal care (ANC) visits improves women's knowledge and intention to use postpartum family planning (PPFP), although a single counseling session may be insufficient [5]. Interventions that span multiple antenatal contacts—including community or facility-based approaches, male partner involvement, and integration with other maternal services—have demonstrated moderate quality evidence in improving PPFP uptake in LMICs [1]. Several recent studies reinforce the effectiveness of focused antenatal counseling on PPIUCD uptake. In a randomized controlled trial, women receiving focused postpartum family planning counseling during the antenatal period had significantly higher willingness (68% vs. 58%) and actual acceptance of PPIUCD (22% vs. 9%) compared to those receiving routine counseling [6]. Another intervention study reported a 25-percentage point increase in counseling

exposure and a 4.4-percentage point increase in PPIUCD uptake following implementation of an integrated antenatal counseling program [7].

Nonetheless, barriers remain. Qualitative research from Nepal highlights systemic and provider-level obstacles, including inadequate private space for counseling, staff shortages, workload pressures, and policy and organisational limitations, all of which hinder effective integration of PPFP and PPIUCD services into routine maternity care [8].

Given the compelling benefits of PPIUCD and the positive influence of antenatal counseling, investigating how structured and focused counseling interventions can improve acceptance and uptake is essential. Such research could determine optimal counseling timing, content, and delivery mechanisms that enhance decision-making during pregnancy. Understanding and addressing service-level barriers can further facilitate effective implementation within healthcare systems.

Therefore, the rationale for this study is to evaluate whether structured antenatal counseling significantly improves PPIUCD acceptance and uptake, compared to routine counseling, and to identify key facilitators and barriers to integration within antenatal care services. The findings are expected to inform strategies that strengthen postpartum family planning interventions, ultimately reducing unintended pregnancies and improving maternal and child health outcomes.

Aim

To evaluate the effectiveness of structured antenatal counselling in improving the acceptance and uptake of postpartum intrauterine contraceptive devices (PPIUCD) among pregnant women, and to identify key facilitators and barriers to integrating PPIUCD counselling into routine antenatal care services.

Materials and Methods

Study Design and Setting: This was a prospective interventional study conducted in the Department of Obstetrics and Gynecology at Mettupalayam Government Hospital (GH). The study period spanned three months, from July 1, 2025, to September 30, 2025.

Sample Size and Participants: A total of 200 antenatal women who delivered at Mettupalayam GH during the study period were enrolled. Participants were selected using convenience sampling.

Inclusion Criteria

Participants were included in the study if they met the following criteria:

- Singleton pregnancy
- Primigravida
- Age between 18 and 40 years
- Delivery planned at the study hospital
- Willing to participate and provide informed consent
- Delivered either by normal vaginal delivery (NVD) or cesarean section

Exclusion Criteria

The following exclusion criteria were applied:

- Known uterine anomalies
- Prolonged rupture of membranes (>48 hours)
- Postpartum hemorrhage

Intervention – Counseling Process: The core intervention was structured antenatal counselling on postpartum intrauterine contraceptive device (PPIUCD) usage. The counseling process was as follows: At admission or labor, participants were asked whether they had previously received antenatal counselling regarding PPIUCD. Participants who were not counselled antenatally were given counseling at their current visit (during labor or admission for safe confinement, including elective cesarean section).

Participants who received structured antenatal counselling were previously counselled by trained counselors during one of their antenatal visits in any trimester. The structured session included: Explanation of the benefits of PPIUCD:

high effectiveness (>99%), long-term use (up to 10 years), reversibility, and compatibility with breastfeeding. Discussion of timing of insertion: post-placental (within 10 minutes of placental delivery) or intra-cesarean (during cesarean section before closure of uterine incision). Overview of procedure steps, follow-up requirements, and management of potential side effects (e.g., bleeding, expulsion). Addressing common myths and misconceptions surrounding IUCD use.

About PPIUCD and Counselling Approach: PPIUCD is defined as a copper intrauterine device (typically CuT 380A) inserted within 48 hours after delivery. It is a long-acting reversible contraceptive (LARC), immediately effective, and safe for breastfeeding women. The CuT 380A, approved by the Ministry of Health and Family Welfare, Government of India, provides contraceptive protection for up to 10 years.

Structured antenatal counselling is ideally initiated during the 1st, 2nd, or 3rd trimester and includes presentation of a basket of contraceptive choices—including POPs, Cenchroman, injectables, implants, and barrier methods. The woman's preferred choice is recorded in her antenatal card.

If missed during the antenatal period, counselling is provided at:

1. Early labor or admission for elective cesarean section, or
2. Postpartum, if the first two opportunities are not availed.

This study of 200 women demonstrates that antenatal counselling is a critically important factor in the acceptance and successful insertion of postpartum intrauterine contraceptive devices (PPIUCD). The data clearly shows significantly higher rates of acceptance and insertion among women who received counselling compared to those who did not.

Results

In the study, 200 women were observed, analyzed about the counselling of postpartum Intrauterine Contraceptive Device in the antenatal period and during labour. 93.7% of women accepted for PPIUCD when counselled about contraception in the antenatal period. 33.33% of women who were not counselled about contraception in the antenatal period accepted for PPIUCD.

Table 1: Participant Demographics

Characteristic	Value
Mean Age	25.8 ± 4.1 years
Antenatal Counselling	128 (64%)
No Antenatal Counselling	72 (36%)
Rural Residents	144 (72%)
Urban Residents	56 (28%)

Among those who received antenatal counselling: Among 128, 120 [93.7%] accepted for PPIUCD. Who had not received antenatal counselling: Among 72, only 24 [33.33%] accepted for PPIUCD. Of 128 who received antenatal counselling, 109 (85.1%) underwent successful PPIUCD inserted. Among 72 who had not received antenatal counselling, 14 (19.4%) got PPIUCD inserted. 19 refused PPIUCD among 128 of who received antenatal counselling [14%]. 48 refused PPIUCD among 72 who had not received antenatal counselling [66.6%]. Acceptance was 2.8x higher in the counselled group. Successful insertion was 4.4x higher in the counselled group. Refusal was 10.6x higher in the non-counselled group.

Table 2: Acceptance and Insertion Rates by Counselling Status

Outcome Metric	Received Antenatal Counselling (n=128)	No Antenatal Counselling (n=72)
Accepted PPIUCD	120 (93.7%)	24 (33.3%)
Underwent Insertion	109 (85.1%)	14 (19.4%)
Refused PPIUCD	8 (6.3%)*	48 (66.7%)

*Note: The refusal number (8) is calculated from the acceptance rate (120 accepted out of 128 counselled means 8 refused).

Figure 1: Impact of Antenatal Counselling on PPIUCD Acceptance and Insertion

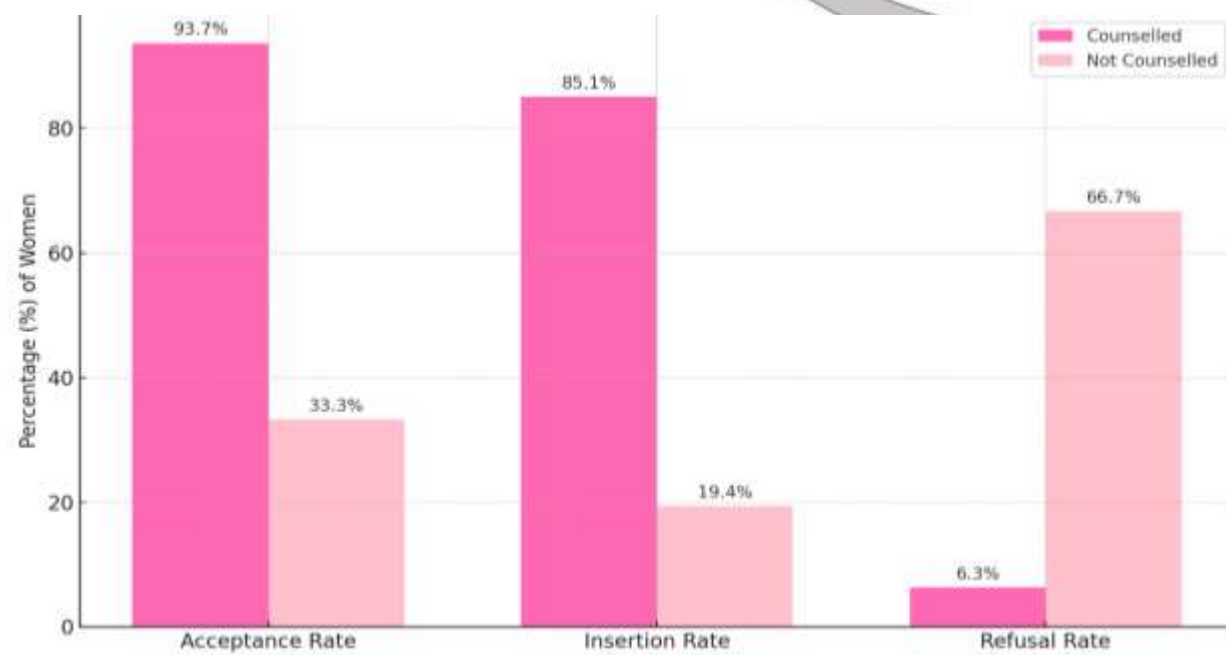


Figure 2: Outcome of PPIUCD Counselling by Group

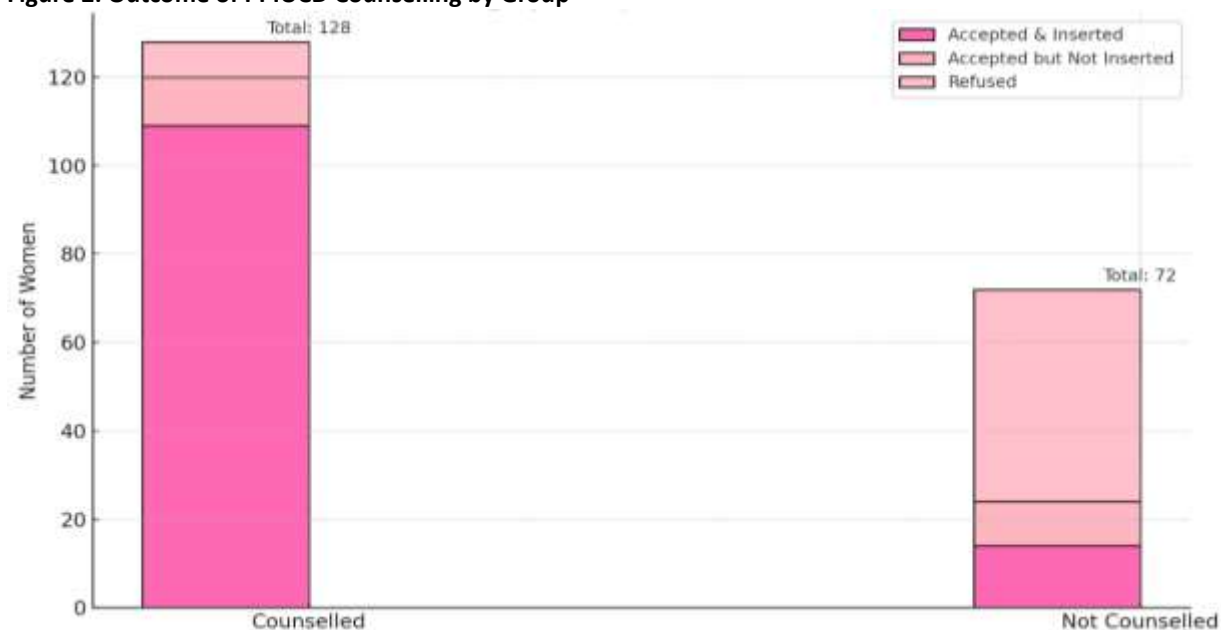


Table 3: Reasons for Refusal of PPIUCD

This table summarizes the common concerns that led women to refuse the procedure, likely stemming from a lack of information which counselling aims to address.

Reason for Refusal	Explanation
Fear of pain/discomfort	Concern about physical pain during or after insertion.
Fear of pain during intercourse	Misconception that the device will cause pain for her or her partner during sex.
Concerns about infertility	Unfounded fear that the IUD will cause long-term infertility after removal.
Partner/Family disapproval	Cultural or familial pressures against using this form of contraception.

Preference for other methods	Desire for a different contraceptive method (e.g., oral pills, sterilization, implants).
-------------------------------------	--

Discussion

Our study of 200 antenatal women at Mettupalayam GH revealed a profound impact of structured antenatal counselling on PPIUCD acceptance and insertion. Acceptance among those who received antenatal counselling was markedly high (93.7%), compared with only 33.3% in the non-counselled group—demonstrating a 2.8-fold increase in acceptance. Successful insertion rates mirrored this disparity: 85.1% in the counselled group versus 19.4% in the non-counselled group—a difference of nearly 4.4-fold. Additionally, refusal rates were substantially lower among the counselled group (6.3%) compared to 66.7% in the non-counselled group—a 10.6-fold higher refusal in the absence of counselling.

These results underscore the power of timely, structured counselling in promoting PPIUCD uptake. Our findings resonate with those of Najan et al., who found that focused antenatal counselling significantly increased both willingness and definitive PPIUCD acceptance, with acceptance rates of 22% versus 9% in routine counselling groups, and willingness rates of 68% vs. 58% [6].

Similarly, Bhagat and colleagues reported that women counselled antenatally had a PPIUCD acceptance rate of 45%, compared to 35% and 21.7% when counselled intrapartum and postpartum respectively—highlighting the antenatal window as the most effective period for counselling [9]. Iftikhar et al. further support this pattern: women counselled both antenatally and intrapartum had a success rate of 61.5%, compared to 42.2%, 35.4%, and 22.4% for solitary antenatal, intrapartum, and immediate postpartum counselling, respectively [2].

The strength of our counselling program appears in line with the multi-session structured counselling model described by researchers in Pakistan, where repeat antenatal counselling sessions significantly improved uptake—53.6% in the intervention group versus 36.8% in the group counselled only at or after delivery [10]. These findings align with our data, where antenatal counselling yielded nearly triple the acceptance rate.

The low acceptance rates observed without antenatal counselling are not unique. In a Nigerian cohort, only 36.8% accepted a PPIUCD after counselling; the majority (65.6%) lacked awareness initially, and refusal was often driven by fear of side effects (57.9%), religious reasons (20.7%), and preference for other methods [11]. Our refusal reasons—fear of pain or discomfort, concerns with intercourse, infertility myths, family disapproval, and preference for other methods—parallel these barriers, reinforcing the notion that counselling must proactively address these specific misconceptions.

Our study also aligns with broader findings on baseline acceptance. Historical data from Mohamed et al. reported an acceptance rate of just 28.9%, with actual insertion in only 23.7% of acceptors. These modest numbers attest to the low baseline uptake absent comprehensive counselling [12]. Kant's meta-analysis reflected a 39% acceptance overall, reinforcing that our 33.3% in the non-counselled group aligns with typical rates in un-counselled populations [13].

Feeding into these comparative findings, our study's dramatic benefits from antenatal counselling are particularly salient, given the local context of low awareness, rural resident majority (72%), and primigravida status. Prenatal counselling likely serves a dual educational and motivational role, making it especially potent in settings with limited family planning familiarity.

Importantly, our training and delivery of structured counselling—addressing benefits like >99% efficacy, immediate protection, compatibility with lactation, longevity (10 years), reversibility, and safety—mirrors strategies advocated in prior studies to dislodge myths and improve acceptance [10,14].

Nevertheless, some differences remain noteworthy. For instance, compared to Najan et al.'s modest absolute acceptance difference (22% vs. 9%), our study's gap is considerably larger. This may reflect differences in population characteristics, intensity of counselling delivery, or timing synchronization. Similarly, in Bhagat's study, antenatal counselling yielded only 45% acceptance—less than our 93.7%. This suggests that characteristics intrinsic to our cohort or counselling quality were factors: possibly greater emphasis, repetition, or spontaneous motivation during labour.

Our reflection also considers possible retention and continuation beyond insertion. While our study end-point assessed successful insertion, literature such as Iftikhar et al. and Bhagat indicate that retention over time remains high among those counselled effectively, although some experience expulsion or removal due to side effects or family pressures [2]. Future follow-up beyond hospital discharge will be essential to understand continuation and satisfaction.

This study possesses several notable strengths and implications. First, the intervention was both timely and effective—antenatal counselling, particularly when integrated with skilled PPIUCD insertion services, resulted in significantly higher acceptance and insertion rates, highlighting its critical role in postpartum family planning. Second, the counselling sessions specifically targeted common fears and misconceptions—such as pain, infertility, or family disapproval—aligning with global recommendations for personalized, informed contraceptive counselling. Finally, the structured nature of the intervention lends itself to replication and scalability in similar low-resource settings where unmet contraceptive needs remain high. However, the study is not without limitations. It did not include long-term follow-up to assess device retention, complications, or continuation rates. Additionally, the use of convenience sampling may restrict the generalizability of the findings, and the absence of randomisation introduces the possibility of selection bias, particularly in the assignment of participants to the counselled or non-counselled groups. Looking ahead, future research should include longitudinal follow-up to evaluate long-term outcomes and satisfaction. Implementing randomized controlled trials would strengthen causal inferences regarding counselling effectiveness. Moreover, qualitative evaluations of counselling content and delivery could provide deeper insights into patient perceptions, while sociodemographic analyses may identify specific subgroups requiring more tailored family planning interventions.

Conclusion

This study compellingly demonstrates the critical role of structured antenatal counselling in enhancing PPIUCD acceptance and insertion among pregnant women. With acceptance almost three times higher and insertion over four times more likely among counselled women, antenatal counselling emerges as an essential strategy in postpartum family planning programs—especially in settings with low pre-existing awareness. These results align with, and in many cases exceed, the outcomes reported in similar studies from India and beyond, reinforcing the undervalued potential of early, targeted postpartum contraceptive education. To optimize PPIUCD utilization and improve maternal and child health outcomes, counselling should be integrated comprehensively into antenatal care, coupled with provider training, community outreach, and longitudinal support mechanisms.

References

1. Blazer C, Prata N. Postpartum family planning: current evidence on successful interventions. *Int J Gynaecol Obstet*. 2016;134(2):1–6. PMID: 27063038.
2. Iftikhar PM, Shaheen N, Arora E. Efficacy and satisfaction rate in postpartum intrauterine contraceptive device insertion: A prospective study. *Cureus*. 2019;11(9):e5646. PMID: 31700748.
3. Gonié A, Worku C, Assefa T, Wudie T, Bahrey D, Asrie F. Acceptability and factors associated with postpartum IUCD use among women who gave birth at health facilities in Ethiopia. *Contracept Reprod Med*. 2018;3:16. PMID: 30410787.
4. Kathpalia SK, Mustafa MS, Sharma M, Bansal A. Awareness about postpartum insertion of intrauterine contraceptive device and issues related to acceptance. *Int J Reprod Contracept Obstet Gynecol*. 2015;4(4):1036-40. PMID: 26793207.
5. Pfitzer A, Mwebesa W, Kizito P, Waka C, Winfrey W. Effect of multiple contacts during antenatal care on postpartum family planning uptake: a systematic review. *Lancet Glob Health*. 2024;12:e57-68. PMID: 37855167.
6. Najan A, Dixit P, Bhalerao A, et al. The Acceptance of Postpartum IUCDs among women who receive focused family planning counseling in the antenatal period compared to routine counseling: A randomized controlled trial. *Cureus*. 2023;15(6):e39620. PMID: 37456407.
7. Puri MC, Maharjan DC, Adhikari R, et al. Integrating postpartum IUD counseling and insertion into antenatal care services: an intervention study in Nepal. *BMC Health Serv Res*. 2023;23:145. PMID: 36762424.
8. Rai P, Joshi D, Puri M, et al. Barriers and enablers to integration of postpartum family planning counselling in routine maternity care in Nepal: a qualitative study. *Glob Health Action*. 2025;18(1):2274932. PMID: 38970192.
9. Bhagat N, Singla R, Rohilla M, Arora A, Suri V. Usage of postpartum intrauterine contraceptive device (postpartum-IUD) after an increase in the institutional delivery rate in India: time to re-visit the effect of timing of counselling on its acceptance. *Eur J Contracept Reprod Health Care*. 2023 Apr;28(2):132-140. doi: 10.1080/13625187.2023.2187249. Epub 2023 Mar 27. PMID: 36971318.

10. Hamid S, Ain QT, Tabbassum, Mazhar SB, Nawaz F. Antenatal Counselling: Does it Boost the Uptake of Post Placental Intrauterine Contraceptive Device?. J Soc Obstet Gynaecol Pak. 2022; 12(2):165-169.
11. Ezugwu EC, Achara JI, Ezugwu OC, Ezegwui HU. Acceptance of postpartum intrauterine contraceptive device among women attending antenatal care in a low-resource setting in Nigeria. Int J Gynaecol Obstet. 2020 Feb;148(2):181-186. doi: 10.1002/ijgo.13027. Epub 2019 Nov 26. PMID: 31705668.
12. Mohamed SA, Kamel MA, Shaaban OM, Salem HT. Acceptability for the use of postpartum intrauterine contraceptive devices: Assiut experience. Med Princ Pract. 2003 Jul-Sep;12(3):170-5. doi: 10.1159/000070754. PMID: 12766335.
13. 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 Med Prim Care. 2016 Oct-Dec;5(4):770-776. doi: 10.4103/2249-4863.201173. PMID: 28348988; PMCID: PMC5353811.
14. Gupta, S., Bansal, R., Shergill, H.K. et al. Correlates of post-partum intra-uterine copper-T devices (PPIUCD) acceptance and retention: an observational study from North India. Contracept Reprod Med 8, 25 (2023). <https://doi.org/10.1186/s40834-023-00222-2>