Original Article

Acceptance of Post Partum Intra Uterine Contraceptive Device Among Women Delivered in A Tertiary Care Hospital and its Influencing Factors

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ABSTRACT

Background – The postpartum intrauterine contraceptive device (PPIUCD) stands out as a secure, cost-effective, long-lasting, and reversible family planning method that can be conveniently inserted immediately after childbirth with minimal side effects. However, despite its numerous advantages, the adoption and utilization of immediate PPIUCD remain limited in developing countries, including India.

Objective – The objective of the study is to estimate the prevalence of acceptance of PPIUCD and to determine the factors associated with the use of PPIUCD among women who gave birth at Jorhat Medical College and Hospital (JMCH), Jorhat Assam.

Methodology – We conducted a cross-sectional study in the Obstetrics and Gynaecology department of JMCH from May 2021 to November 2021. Based on the inclusion and exclusion criteria, 103 admitted women were enrolled. A pretested interviewer-administered questionnaire was used to obtain relevant data from all consenting pregnant women. Data was entered and analyzed using Epi Info statistical software. P<0.05 was considered statistically significant.

Results – About less than one-fourth (22%, n=23/103) of the respondents accepted having an immediate PPIUD, while the majority (n=80/103) declined. The PPIUCD acceptance was found significantly associated with the women's occupational status, place of residence, parity, and mode of delivery.

Conclusion - PPIUCD utilization is linked to factors such as occupational status, place of residence, parity and mode of delivery. To enhance acceptance and dispel misconceptions surrounding PPIUCD, it is imperative to organize ongoing educational and awareness sessions at the community level targeting not only the pregnant women but also their spouses, in-laws fostering a comprehensive understanding and support system.

Keywords: Acceptance, PPIUCD, factor, Tertiary care hospital.

INTRODUCTION

The substantial growth of a nation's population poses a significant impediment to its overall progress. Despite India pioneering a family planning program as early as 1952, the contemporary adoption of modern contraceptive methods remains unsatisfactory, and the national population policy's target of replacement level 2.1 is yet to be realized.[1] The World Health Organization's Medical Eligibility Criteria indicate that an intrauterine contraceptive device (IUCD) can be inserted within 48 hours postpartum or after six weeks following childbirth, referred to as a postpartum contraceptive device (PPIUCD). A considerable proportion of women express a desire to postpone pregnancy within the first year after delivery but refrain from using contraception. This unmet need emerges as a significant public health concern, given that around 20% of obstetric deaths can be attributed to the lack of utilization of modern contraception.[2]

The integration of Postpartum Intrauterine Contraceptive Devices (PPIUCD) in family planning efforts can play a pivotal role in reducing maternal mortality by nearly 30% and child mortality by 10%. This significant impact is realized when couples opt to space their pregnancies with an interval of more than two years. Postpartum family planning aims to prevent unintended and closely spaced pregnancies within the initial 12 months following delivery. Among the demographic groups with the highest unmet need for family planning, postpartum women stand out prominently. The postpartum period is particularly susceptible to unplanned pregnancies, carrying potential adverse outcomes such as abortion, premature labor, postpartum hemorrhage, low birth weight, fetal loss, and maternal death.[3]

Examining data from Demographic and Health Surveys across 27 countries reveals a compelling trend: 95% of women within the 0-12 months postpartum window express a desire to avoid pregnancy in the subsequent 24 months, yet a substantial 70% of them forego contraception. The utilization of PPIUCD holds immense potential to enhance the well-being of both women and children. By preventing financial, psychological, obstetric, and other health-related complications associated with closely spaced pregnancies, Notably, immediate PPIUCD insertion eliminates the need for recurrent healthcare visits for contraceptive refills, simplifying the process for women.

Women, particularly in settings with cultural or geographical barriers to accessing contraceptive services, exhibit a heightened motivation to accept family planning methods during the postpartum period. Therefore, the immediate postpartum period presents a prime opportunity for PPIUCD service providers to introduce the method effectively. The initiation and provision of contraceptive methods during the immediate postpartum period act as a crucial safeguard against unintended pregnancies before women resume sexual activity or return to fecundity.[4]

Despite the evident advantages of immediate Postpartum Intrauterine Contraceptive Device (PPIUCD), its acceptance and utilization remain low in developing countries, India included. According to the National Family Health Survey (NFHS-4), female sterilization continues to dominate as the most widely adopted modern contraceptive method. Among currently married women aged 15-49 years, 36% have opted for female sterilization, followed by male condoms (5.5%), pills (4.1%), IUCD/PPIUCD (1.5%), and male sterilization (0.3%). The prevalence of female sterilization underscores a persistent preference for this method despite the potential benefits of immediate PPIUCD. This highlights the need for targeted efforts to enhance awareness and acceptance of immediate PPIUCD, considering its unique advantages in terms of effectiveness, immediacy, and non-hormonal attributes. Acknowledging the critical link between improved family planning programs and positive outcomes for maternal and child health, there is a clear imperative to address barriers and promote the wider adoption of immediate PPIUCD in the context of developing countries.[5]

While recognizing the considerable advantages of immediate Postpartum Intrauterine Contraceptive Device (PPIUCD), its acceptance and utilization remain notably low in developing nations, India being no exception. The aim and objective of the study was to estimate the prevalence of acceptance of PPIUCD and to determine the factors associated with the use of PPIUCD among women who gave birth at Jorhat Medical College and Hospital (JMCH), Jorhat Assam.

STUDY METHODS

The present study was a hospital-based cross-sectional study conducted in JMCH which is a tertiary care hospital in Assam. The study population was postnatal women who gave birth at JMCH and admitted in the postnatal & Postpartum ward of JMCH during our study period from May to November 2021.

Inclusion criteria

Admitted postnatal women who gave birth at Jorhat Medical College & Hospital and admitted to the hospital during the study period and willing to give informed consent to participate in the present study.

Exclusion criteria

Postnatal women who did not give complete information were excluded from the study.

A total 103 postnatal women who gave birth at JMCH during the study period were enrolled in our study after judicious application of inclusion and exclusion criteria.

Data collection technique

A total of 103 postnatal women who gave birth & admitted in the postnatal & postpartum ward of Obstetrics and Gynaecology Department, JMCH were selected for the study. The data of our study were collected by visiting the post-natal & postpartum ward of Obstretics & Gynaecology Department and were continued till data regarding 103 postnatal women were obtained. The eligible candidates were interviewed about their knowledge and attitude regarding use of PPIUCD Before conducting the interview, informed consent was taken from each postnatal women. The respondents were briefed about the objective, purpose and nature of the study and contents of the proforma.

Data collection tools

The method of data collection was interviewing method using pre-design & pre-tested semi- structured schedule. Interview schedule was validated by conducting a pilot study among 10% of the postnatal women admitted in JMCH.

Analysis of data

The data obtained was entered into Microsoft Excel Program and the results were analysed at the end of the study and represented through Tables, Bar diagram and Pie diagram.

Variables under study

Demographic variables – age, sex, religion, educational status, occupational status of postnatal women.

Outcome variables

Reasons given for use and not to use of PPIUCD (knowledge about the method, preference of contraceptive methods, spousal opposing, fears of complications, etc.

Ethical clearance

Ethical clearance was taken from the Institutional ethics committee (human) of Jorhat Medical College

RESULTS

Socio-demographic characteristics

In Table 1, the data reveals that among the total of 103 women who delivered and were admitted to the postnatal and postpartum ward of the Obstetrics and Gynecology Department at JMCH, 43.7% fell within the age bracket of 23-27 years, closely followed by 40% in the age group of 18-22 years. The majority of participants (91.3%) identified as Hindu. In terms of education, over half (62%) had attained a high school education or higher, while 7.7% were

classified as illiterate. Nearly three-quarters (73.7%) of the participants identified as homemakers, with only 17.7% being employed. The residence distribution indicated that a significant proportion (71%) of the women lived in rural areas.

Table 1: Socio demographic profile of women who gave birth at JMCH, Jorhat

Socio demographic characteristics	Frequency	Percentage
Age of respondents		
18-22	41	**39.8**
23-27	45	**43.7**
28-32	11	**10.7**
>32	6	**5.8**
Religion		
Hindu	94	**91.3**
Muslim	9	**8.7**
Marital status		
Married	103	**100**
Single/separated	0	**0**
Educational status of women		
Illiterate	8	**7.7**
Primary school	7	**6.7**
Middle school	24	**23**
High school & above	64	**62**
Educational status of husband		
Illiterate	13	**12.6**
Primary school	7	**6.8**
Middle school	25	**24.2**
High school & above	58	**56.3**
Occupational status of women		
Home maker	76	**73.7**
Employed	18	**17.4**
Daily wage earner	9	**28.6**
Occupational status of husband		
Farmer	36	**35**
Employed	49	**47.5**
Daily wage earner	18	**17.5**
Residence		
Urban	30	**29**
Rural	73	**71**

Table 2: Obstetrics characteristics and source of knowledge of women who gave birth at JMCH, Jorhat

Obstetrics characteristics	Frequency	Percentage
Parity		
Primipara	57	55.3
Multipara	46	44.7
Antenatal care visits		
One	6	5.8
Two	12	11.6
Three	19	18.4
Four	66	64
Mode of delivery		
Normal	65	63
CS	38	37
Ever Heard about PPIUCD		
Yes	81	78.6
No	22	21.4
Want to use PPIUCD		
Yes	23	22
No	80	78
Reasons to use IUCD (n=23)		
Long acting	4	17.3
Child spacing	3	13
Does not interfere with breastfeeding	3	13
No or minimal side effects	6	26
Fewer routine visits	7	30
Reasons for not to use PPIUCD (n=80)		
Fear of side effects	25	31
Husband disapproval	19	23
Religious beliefs	7	8.7
No knowledge about PPIUCD	11	13.7
Don't want contraceptives	4	5
Satisfied with the previous methods	6	7.5
Preference for other methods	10	12.5
Sources of Knowledge		
Media	9	8
Antenatal clinics	50	48.5
Healt care workers	39	28
Friends	5	4.8
Preferred other methods (N=10)		
OCP	4	4
Male condoms	3	3
Injectables	1	1
Nonhormaonal OCP	2	2

In Table 2, the data indicates that a majority of women (55.3%) were primipara, while 44.7% were multipara. Additionally, the majority (64%) of women had undergone four antenatal check-ups and 63% had experienced normal vaginal delivery. Notably, a high percentage (78.6%) of women reported having prior awareness of PPIUCD.

The motivations for choosing PPIUCD were diverse with 30% citing fewer routine visits, 26% noting no or minimal side effects, 17.6% emphasizing its long-acting nature, 13% highlighting its non-interference with breastfeeding, and another 13% considering it for child spacing. Conversely, a substantial portion (80%) of women did not adopt this method citing concerns about side effects (31%), disapproval from husbands (23%), lack of knowledge about PPIUCD (13.7%), a preference for alternative methods (12.5%), and satisfaction with previous contraceptive approaches (7.5%).Noteworthy is the finding that 48.5% of women were introduced to PPIUCD during antenatal visits followed by information from healthcare workers (28%). This underscores the importance of healthcare settings in disseminating information about PPIUCD.

Table 3 reveals significant associations between the use of PPIUCD and various factors, including mode of delivery, residence, occupational status, and parity. Notably, 73% of homemakers consented to PPIUCD, contrasting with only 11% acceptance. Among primi parous women, 34% consented to PPIUCD, whereas multi-parous women exhibited a lower consent rate of 8%. Further, 63% of respondents delivering through normal vaginal delivery gave consent, while only 7.6% gave consent for PPIUCD.. The study also noted that only 17% of respondents with a high school education and above gave consent for PPIUCD use.

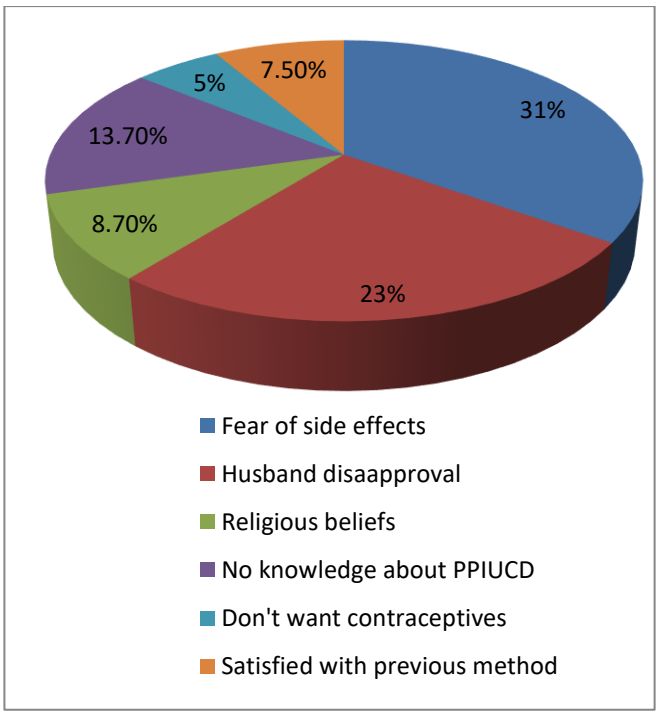

Figure 1: Distribution of respondents according to their reasons given for not to use PPIUCD

Table 3: Factors associated with the use of PPIUCD among women who gave birth at JMCH

Variables	Use of PPIUCD		P value
Age of the Women	**Yes (23)**	**No (80)**	
18-22	**7**	**34**	**.71**
23-27	**11**	**34**	
28-32	**3**	**8**	
>32	**2**	**4**	
Educational Status of Women			
Illiterate	**2**	**6**	
Primary school	**2**	**5**	**.41**
Middle school	**8**	**16**	
High school &above	**11**	**53**	
Occupational status of women			
Home maker	**8**	**68**	
Employed	**12**	**6**	**<0.0001***
Daily wage earner	**3**	**6**	
Residence			
Rural	**11**	**19**	
Urban	**12**	**61**	**.02***
Antenatal care visits			
One	**2**	**4**	
Two	**3**	**9**	
Three	**4**	**15**	**.90**
Four	**14**	**52**	
Parity			
Primi	**19**	**38**	**<.002***
Multi	**4**	**42**	
Mode of Delivery			
Normal	**5**	**60**	**<0.0001***
CS	**18**	**20**	

DISCUSSION

The study results indicated that the utilization and acceptance of PPIUCD were significantly associated with factors such as normal birth, spousal approval, residence, mode of delivery, parity, birth interval, and level of education. The overall prevalence rate of PPIUCD use in our study was 22.3%, a figure that is somewhat comparable to research conducted at Zenana Hospital, Jaipur, but lower than a study conducted at Cuttack Medical College, Odisha.[6-9] Conversely, it was higher than findings from Jay Kay Lon Hospital, Kota, [10] which reported a prevalence rate of 2.94%. These variations may be attributed to differences in awareness levels, educational backgrounds, religious beliefs, and misconceptions regarding PPIUCD insertion within the respective study settings.

Within our study, the most commonly cited reasons for rejecting PPIUCD use included concerns about side effects (31%), spousal disapproval (27%), and lack of knowledge about PPIUCD (13.7%). These findings align with a similar study conducted by Mohamed SA et al, where reasons for refusal included plans for future pregnancies, preference for alternative contraceptive methods, and complications from previous use. Another study by Gonie A[2] et al found rejections were primarily due to fear of complications (24.8%) and spousal pressure (17.7%), although the prevalence was lower than in the current study. This suggests a prevailing perception in the study settings regarding apprehensions related to side effects, spousal approval, and the importance of sufficient knowledge regarding PPIUCD use.

The study identified a statistically significant association between the acceptance of PPIUCD and the mode of delivery, parity, and place of residence, suggesting that awareness and education levels could contribute to these findings. Although not statistically significant in the current study, a noteworthy observation was a higher acceptance rate among women who had three or more antenatal visits. This trend aligns with a study by Kumaro Saroj and Goyal Neha,[6] where antenatal care played a significant role in PPIUCD acceptance. Similarly, Shashi Kant[11] et al reported that women who attended antenatal visits were more likely to embrace PPIUCD. This association may be attributed to the counselling provided by healthcare workers during antenatal visits, helping address misconceptions and concerns related to PPIUCD use.

CONCLUSION

PPIUCD utilization is linked to factors such as occupational status, place of residence, parity and mode of delivery. To enhance acceptance and dispel misconceptions surrounding PPIUCD, it is imperative to organize ongoing educational and awareness sessions at the community level targeting not only the pregnant women but also their spouses, in-laws fostering a comprehensive understanding and support system.

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