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Original Research Article

Acceptance and factors linked with postpartum IUCD use in women delivering at a tertiary care hospital

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ABSTRACT

Background: Postpartum intrauterine contraceptive devices (PPIUCD) offer highly effective, reliable, non-hormonal, and immediately reversible contraception, with no adverse impact on lactation. Despite these advantages, their acceptance remains low, with factors influencing rejection not fully understood, particularly in specific regions like Vadodara. This study aimed to assess the acceptability and associated factors of immediate PPIUCD use among women in SSG hospital, Vadodara.

Methods: A cross-sectional study was conducted from 1st to 30th March 2024, involving 170 postpartum women in SSG hospital, Vadodara. Participants were selected using a systematic approach, and data were collected through structured questionnaires.

Results: Acceptance of immediate PPIUCD usage was found to be 12.7%. Reasons for non-acceptance included concerns about complications (24.8%), bad experience in the past (10%), and husband's refusal (17.7%). Women with secondary education were more likely to accept PPIUCD, as were those who attended four or more antenatal care visits.

Conclusions: Despite the benefits of immediate PPIUCD, its acceptance remains low, influenced by educational level, concerns about complications, and cultural factors such as male partner's refusal and religious beliefs. Enhancing women's education and providing effective counselling during antenatal care visits are crucial for addressing misconceptions and fears surrounding PPIUCD, thereby promoting its utilization in postpartum family planning.

Keywords: Acceptance, Intrauterine contraceptive device, Post-partum family planning

INTRODUCTION

Postpartum family planning plays a crucial role in safeguarding maternal and child health by preventing unintended pregnancies within the first 12 months after delivery. The World Health Organization (WHO) emphasizes the significance of postpartum contraception, highlighting its potential to mitigate adverse outcomes such as abortion, premature labor, postpartum hemorrhage, low birth weight, fetal loss, and maternal mortality.^{1,2} Among the array of contraceptive methods available, the postpartum intrauterine contraceptive device

(PPIUCD) stands out as a highly effective, reliable, non-hormonal, and immediately reversible option, offering advantages such as cost-effectiveness, ease of use, and compatibility with breastfeeding.¹⁻³

Despite its benefits, the acceptance and utilization of PPIUCD remain suboptimal, particularly in certain regions such as Vadodara, Gujarat. Various factors contribute to this low acceptance rate, including limited awareness, misconceptions, cultural beliefs, provider-related barriers, and individual preferences.³⁻⁵ Understanding these factors is essential for designing targeted interventions to enhance

PPIUCD uptake and improve postpartum family planning outcomes.

Studies conducted in different settings have identified education level, antenatal and postnatal care attendance, knowledge gaps, access to services, spousal involvement, and concerns about side effects as significant determinants of PPIUCD utilization.^{6,7} Additionally, religious beliefs, cultural norms, and misconceptions about PPIUCD insertion contribute to hesitancy among potential users.^{8,9}

In India, where the utilization of intrauterine contraceptive devices (IUCD) remains relatively low compared to the global average, initiatives such as the PPIUCD program aim to promote immediate postpartum contraception and address unmet needs in family planning.^{10,11} However, the success of such programs hinges on addressing multifaceted barriers and tailoring interventions to local contexts.

Therefore, this study aimed to assess the acceptability and associated factors of immediate PPIUCD use among women delivering at SSG Hospital, Vadodara.

By elucidating the determinants of PPIUCD acceptance in this specific setting, we seek to inform targeted strategies to enhance postpartum family planning services, address misconceptions, and promote informed decision-making among women.

METHODS

Study area

The study was conducted at SSG Hospital, Vadodara, a tertiary care center in the Gujarat region.

Study design

A cross-sectional study design was employed for this study.

Study population

The study population comprised postpartum women who delivered at SSG Hospital, Vadodara, during the study period of one year (march 2023 to march 2024).

Exclusion criteria

Postnatal women who did not fulfil World Health Organization medical eligibility criteria for IUCD insertion were excluded.

Sample size and sampling procedure

The sample size was calculated using a single population proportion formula. A systematic sampling approach was

used to select participants from the postpartum ward of SSG Hospital which gave a sample size of 170 postpartum women.

Data collection

Data were collected using structured questionnaires administered by trained interviewers. Information was obtained on demographic characteristics, obstetric history, knowledge, attitudes, and practices regarding PPIUCD.

Operational definition

Acceptance of IUCD

Woman's verbal consent to use IUCD within 10 minutes to 48 hours of delivery of placenta after they counselled about PPIUCD.

Knowledge

The fact that respondents know about PPIUCD as a method of birth spacing and its benefits (heard about it or not).

Attitude

The ways that respondents think and behave about PPIUCD use (positive or negative).

Data processing and analysis

Data were entered into a computer database and analyzed using statistical software. Descriptive statistics were used to summarize the characteristics of the study population. Bivariate and multivariate analyses were conducted to identify factors associated with acceptance of immediate PPIUCD usage.

RESULTS

Maternal socio-demographic characteristics

A total of 157 out of 170 women were successfully interviewed which made a response rate of 92.3%.

The median age of the enrolled women was 28 years.

The majority of the study population belonged to Hindu religion with women and their husbands with primary level of education. Majority of women were housewives.

Obstetrics characteristics of respondents

A total 37.5% of women attended four or more antenatal care visits. Majority of women (70.01%) had never used IUCD before.

Table 1: Socio-demographic characteristics.

Characteristics	Category	Number	Percentage
Age in years	<20	32	20.3
	20-30	98	62.4
	>30	27	17.1
Marital status	Married	157	100
	Single/separated	0	0
Religion	Hindu	92	58.5
	Muslim	65	41.4
Educational level of women	No formal education	51	32.4
	Primary education	78	49.6
	Secondary education	16	10.1
	College education	12	7.6
Educational level of husband	No formal education	10	6.3
	Primary education	100	63.6
	Secondary education	30	19.1
	College education	17	10.8
Occupation of women	Housewife	112	71.33
	Employed	45	28.6
Residence	Urban	82	52.2
	Rural	75	47.7

Table 2: Obstetrics history.

Characteristics	Categories	Number	Percentage
Parity	Primipara	83	52.8
	Multipara	74	47.1
Antenatal care visits	Didn't attend ANC visits	46	29.3
	1-3 visits	52	33.1
	4 and more visits	59	37.5
IUCD as contraceptives used before current birth	Yes	47	29.93
	no	110	70.01

Table 3: Knowledge of PPIUCD insertion among women who gave birth at SSG hospital Vadodara.

Variables	Category	Number	Percentage
Ever heard about IUCD as a contraceptive method	Yes	106	67.5
	No	51	32.4
IUCD is FP method that can be put into uterine cavity	Yes	66	42
	No	40	23.9

Table 4: The attitude of PPIUCD insertion among women who gave birth at SSG hospital Vadodara.

Variables	Category	Number	Percentage
Do you think insertion and removal of IUCD is highly painful?	Agree	90	57.3
	Disagree	20	12.7
	Don't know	47	29.9
Using IUCD cause irregular bleeding	Agree	115	73.25
	Disagree	22	14
	Don't know	20	12.7

Prior knowledge of PPIUCD

A total 67.5% of women had heard about IUCD as a contraceptive method.

Attitude regarding PPIUCD insertion

A total 73.25% of women agreed that using IUCD causes irregular bleeding and 57.3% agreed that ICUD is highly painful.

Factors associated with acceptance of PPIUCD usage

Ever heard IUCD can be inserted immediately after delivery, ANC visits, educational level, and age of the women showed significant association in the bivariable analysis. In the multivariable analysis, had been completing secondary education and attending 4 ANC visits were associated with the acceptance of PPIUCD insertion.

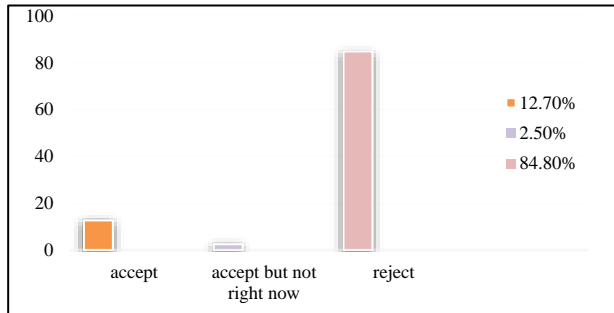


Figure 1: Acceptance of PPIUCD.

Figures 1 and 2 show that there was a very high rejection rate of PPIUCD in a tertiary care hospital with main reason being lack of knowledge about PPIUCD and beliefs and stigma surrounding it as represented by the chart. The main reason for refusal was thus fear regarding complications of PPIUCD.

Thus, the study depicts these results.

Age of the women

The table shows that acceptance of PPIUCD usage varied across different age groups. Women aged 20-30 years had the highest acceptance rate, with 11 out of 98 women accepting PPIUCD. Conversely, women aged ≤20 years had the lowest acceptance rate, with only 5 out of 32 women accepting PPIUCD.

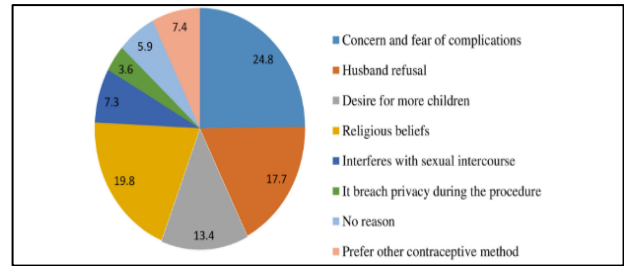


Figure 2: Reasons for refusal of PPIUCD.

Educational level of women

There was a notable trend in acceptance based on the educational level of women. Women with higher levels of education, such as those with college education, demonstrated higher acceptance rates compared to those with lower levels of education. For instance, 4 out of 12 women with secondary education accepted PPIUCD, while 3 out of 51 women with no formal education accepted it.

ANC follow-up

The frequency of antenatal care (ANC) visits also appeared to influence PPIUCD acceptance. Women who attended four or more ANC visits had the highest acceptance rate (4 out of 59), followed by those who attended 1-3 ANC visits (10 out of 52). Conversely, women who did not attend any ANC visits exhibited the lowest acceptance rate (6 out of 46).

Awareness of immediate IUCD insertion

The data indicate that awareness of immediate IUCD insertion after delivery was associated with higher acceptance of PPIUCD. Among women who were aware of this option, 14 out of 106 accepted PPIUCD, whereas only 6 out of 51 women who were not aware accepted it.

Table 5: Results.

Variables	Category	Acceptance of PPIUCD use: Accept	Acceptance of PPIUCD use: Reject
Age of the women in years	≤20	5	27
	20-30	11	87
	>30	4	23
Educational level of women	No education	3	48
	Primary	9	69
	Secondary	4	12
	College	4	8
ANC follow up	No ANC visit	6	40
	1-3 visits	10	42
	4 or more visits	4	55
Ever heard IUCD can be inserted immediately after delivery	Yes	14	92
	No	6	45

DISCUSSION

In our investigation, the overall acceptance rate of PPIUCD usage among the study population stood at 12.7%. While this aligns somewhat with findings from central India (11.9%) and a tertiary care center in Indore (10.0%), it falls below rates reported in other studies, such as those conducted at Zenana Hospital, Jaipur (21.8%), Jorhat tertiary care hospital, Assam (36.6%), Faridabad district, India (39.0%), and Cuttack Medical College, Odisha (25.32%).¹²⁻¹⁵ Conversely, it surpasses the acceptance rate documented at Jay Kay Lon Hospital, Kota (2.94%).¹⁶ This variance in acceptance rates could stem from differences in factors such as awareness levels, educational backgrounds of respondents, religious beliefs, and misconceptions surrounding PPIUCD insertion within the study settings.

Among respondents who declined immediate PPIUCD use, the primary reasons cited were concerns and fears regarding potential complications (24.8%), religious beliefs (19.8%), and spousal refusal (17.7%). This observation resonates with findings from similar studies conducted at a tertiary care hospital in Telangana. Notably, Kumari et al also reported fear of side effects and complications (32.5%) as the predominant reasons for rejecting PPIUCD usage.⁹

Acceptance of immediate PPIUCD usage was low, influenced by education level, concerns about complications, cultural factors, and spousal opposition. Enhancing education and counselling during antenatal care are crucial for promoting PPIUCD utilization.

There are some limitations. This study was conducted in health facilities and may not fully represent the entire population. Additionally, women who only heard about PPIUCD during the immediate postpartum period may have difficulty making informed decisions.

CONCLUSION

In this study, the acceptance of immediate PPIUCD usage was still low. This might be mainly attributed to the low achievement of education, perceived concern and fears of complications towards IUCD insertion. The male partner's refusal and religious beliefs also have a significant role in the usage of postpartum IUCDs. Had been completing secondary education and attending 3 antenatal care visits before the current birth were associated with acceptance of immediate PPIUCD use. Therefore, due attention should be given to enhancing educational level of women and effective IUCD counselling should be given during the antenatal care visits to correct misconceptions and fears of complication about PPIUCD insertion. In addition, continuous education and awareness creation session should be arranged to correct perceived fears of PPIUCD complications at the community level. This study was conducted in health facilities; hence the findings might not adequately reflect the entire population. For those women

who heard about PPIUCD only during the immediate postpartum period, it might be difficult to make an informed decision towards acceptance of PPIUCD usage.

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Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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