International Journal of Advance Research in Community Health Nursing

E-ISSN: 2664-1666
P-ISSN: 2664-1658
www.communitynursing.net
IJARCHN 2022; 4(2): 38-41
Received: 16-05-2022
Accepted: 23-06-2022

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Assess the efficacy and satisfaction rate in postpartum intrauterine contraceptive device insertion in selected setting

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Abstract
Background: Postpartum intrauterine contraceptive device (PPIUCD) reduces the rate of abortions and it is a cost-effective, reversible, and convenient choice of contraception. The objective of our study was to evaluate the efficacy and satisfaction rate in women with postpartum intrauterine contraceptive device insertion. The main aim of the current study is to assess the efficacy and satisfaction rate in postpartum intrauterine contraceptive device insertion in selected setting.
Methodology: Non experimental research design was adapted. The 30 postpartum women were selected by Purposive sampling technique. Self-Structure questionaries' was used to assess the demographic variables and level of satisfaction questionaries' related to IUCD usage. The data were collected and analyzed by using descriptive and inferential statistics.
Results: The results shows that about 16(53.3%) of the high satisfaction, 9(30%) of them had average and 5(16,7%) of them had low satisfaction at postpartum copper t insertion. The result also reveals that minimum score on level of satisfaction is 7.0 and maximum score is 22.0, and mean and standard deviation on level of satisfaction is 12.1 and 4.43.
Conclusion: The usage rate is high and increased as these women were comfortable using IUCD earlier and it can be removed in the need for permanent sterilization.

Keywords: Efficacy, level of satisfaction, PPIUCD

Introduction
Postpartum intrauterine contraceptive device (PPIUCD) reduces the rate of abortions and it is a cost-effective, reversible, and convenient choice of contraception. The objective of our study was to evaluate the efficacy and satisfaction rate in women with postpartum intrauterine contraceptive device insertion [1]. The postpartum period, also known as the puerperium and the "fourth trimester," refers to the time after birth when maternal physiologic changes related to pregnancy return to the non-pregnant state WHO (2006) [2]. The postpartum period has been termed the "fourth stage of labor", and has three distinct but continuous phases. The initial or acute period involves the first 6-12 hours postpartum. This is a time of rapid change with a potential for immediate crises such as postpartum hemorrhage, uterine inversion, amniotic fluid embolism, and eclampsia. The second phase is the subacute postpartum period, which lasts 2–6 weeks. During this phase, the body is undergoing major changes in terms of hemodynamics, genitourinary recovery, metabolism, and emotional status. Nonetheless, the changes are less rapid than in the acute postpartum phase and the patient is generally capable of self-identifying problems [3].
India was the first country in the world to have launched a National Programme for Family Planning in 1952. Over the decades, the programme has undergone transformation in terms of policy and actual programme implementation and currently being repositioned to not only achieve population stabilization goals but also promote reproductive health and reduce maternal, infant & child mortality and morbidity [4].
Many elements need to be considered by women, men, or couples at any given point in their lifetimes when choosing the most appropriate contraceptive method. These elements include safety, effectiveness, availability (including accessibility and affordability), and acceptability. Voluntary informed choice of contraceptive methods is an essential guiding principle, and contraceptive counseling, when applicable, might be an important contributor to the successful use of contraceptive methods [5].

The Intrauterine Contraceptive Device (IUCD) is the second most commonly used family planning method, after voluntary female sterilization and the most commonly used reversible method. In most countries that have conducted more than one representative sample survey of contraceptive prevalence, IUCD use has remained stable or increased since the 1970s. Results of recent studies and literature have confirmed that IUCD provide very effective, safe and long-term protection against pregnancy and the health risks associated with the method are negligible too [6].

Postpartum IUCD is a safe, long-acting, reversible contraceptive strategy, which can be taken while breastfeeding and can be implanted in the immediate postpartum period (within 48 hours post-delivery). This is favourable for developing countries where women are less frequently visiting health facilities and the post-delivery period is a prime chance for them to opt for contraception with good efficacy [7].

A woman can start using Cu IUCD anytime, when it is reasonably certain that she is not pregnant. Postpartum women who breastfeed their infants can also use Cu IUCD safely, as it does not interfere with breastfeeding. Postpartum IUCD can be inserted immediately after vaginal delivery, during caesarean section and up to 48 hours after birth, before women get discharged from the health facilities [8].

The intrauterine contraceptive methods are top tier contraceptives as they are long-lasting, convenient, well-liked by users, cost-effective, unobtrusive, reversible, and have failure rates less than 1% per year for perfect and typical use, rivaling the efficacy of permanent tubal sterilization. In addition to its use for long-term contraception, it is also the most effective form of emergency contraception. Hence, the researcher is interested to conducted study on Efficacy and Satisfaction Rate in Postpartum Intrauterine Contraceptive Device Insertion.

Methodology

A quantitative approach, non-experimental descriptive research design was used for the present study. The investigator obtained written permission from the Principal Saveetha College of nursing and Saveetha Medical College and Hospital, Chennai. The sample size for the study was 30 postpartum women using intrauterine contraceptive device were selected by Purposive sampling technique. The inclusion criteria includes postpartum women who are using IUCD, Postpartum women who are willing to participate in the study, postpartum women who are available during the time of data collection. The exclusion criteria includes Postpartum women are who are using other contraceptive methods, Postpartum women who are not willing to participate in the study. Everyday 5- 6 samples were selected. Demographic variables and self-structured questionaries' related to IUCD usage. The instrument envisaged for use in this study was divided into two sections. Tool -1 structured questionnaire to assess the demographic variables of women's. It consisted of age, education, occupation, socioeconomic status. Parity, mode of delivery, medical disorders during antenatal period, previous history of contraceptive use, and time of IUCD insertion.Tool-2 It is a self-structured questionnaire related to satisfaction scale of intrauterine contraceptive device insertion. The data were collected and analyzed by using descriptive and inferential statistics.

Results

Frequency and percentage distribution of demographic variables of women, that maximum of them were in the age group above 21–25 years, 36.6% were illiterate, 66.6% were Hindus, 43.3% 2000-5000, 66.7% were with one parity, 70% were caesarean section, 50% of mothers were medical disorders are pregnancy induced hypertension, 70% were using IUCD, maximum of them using contraceptive device, 50% of them had 10mins for insertion time.

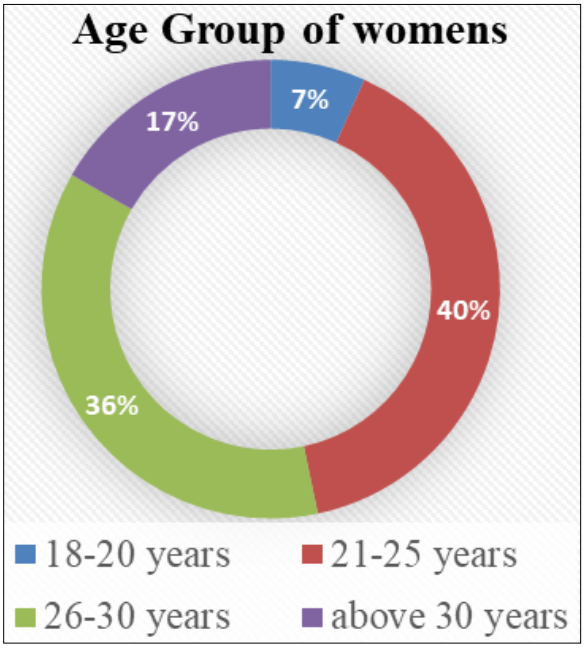

Fig 1: Pictorial representation of age

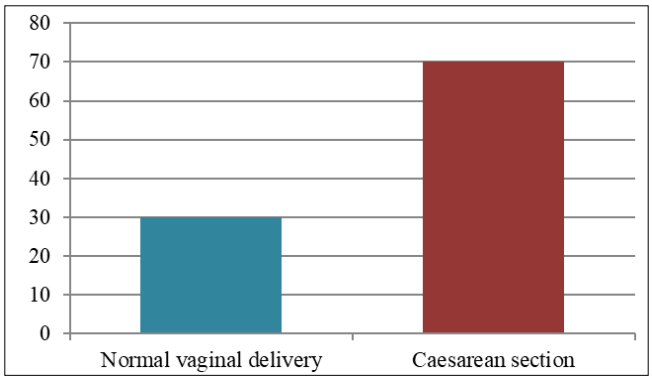

Fig 2: Percentage distribution of mode of delivery of women

Assessment of level of satisfaction at postpartum intrauterine contraceptive device insertion

Table 1: Frequency and percentage distribution of level of satisfaction

Level of satisfaction	Frequency	Percentage
High Level of satisfaction	16	53.3%
Average Level of satisfaction	9	30%
Low Level of satisfaction	5	16.7%

The table1 shows that about 16(53.3%) of the high satisfaction, 9(30%) of them had average and 5(16.7%) of them had low satisfaction at postpartum copper T insertion.

Table 3: Assessment of satisfaction score of postpartum intrauterine contraceptive insertion N = 30

Knowledge	Mean
Minimum Score	7.0
Maximum Score	22.0
Mean	12.1
Standard Deviation	4.43

The table shows that minimum score on level of satisfaction is 7.0 and maximum score is 22.0, and mean and standard deviation on level of satisfaction is 12.1 and 4.43.

Association between level of satisfaction and selected demographic variables

The demographic variable such as education, socioeconomic status, religion shows significant association with level of satisfaction at $p<0.01$.

Table 3: Association between level of satisfaction and selected demographic variables

Demographic Variables	High		Average		Low		Chi-Square Test
	No.	%	No.	%	No.	%	
Education							χ^2=1.10 d.f=2 p = 0.5769 S*
Illiterate	12	40.0	5	16.7	3	10	
Primary school	4	13.3	4	13.3	2	6.7	
Higher secondary school	-	-	-	-	-	-	
Graduate	-	-	-	-	-	-	
Religion							χ^2=6.40544 d.f=6 p= 0.3793 s*
Hindu	9	30.0	2	6.7	2	6.7	
Christian	2	6.7	2	6.7	1	3.3	
Muslim	2	6.7	5	16.7	2	6.7	
Socioeconomic status							χ^2=4.03886 d.f=6 p = 0.6714 *S
Below 2000	8	26.7	3	10	2	6.7	
2000-5000	2	6.7	1	3.3	2	6.7	
5000-10000	5	16.7	3	10	-	-	
Above 10,000	1	3.3	2	6.7	1	3.3	

*$p<0.01$ S – significant, N.S-Non significant

The demographic variable such as education, socioeconomic status, religion shows significant association with level of satisfaction at $p<0.01$.

Discussion

The result despites that maximum of them were in the age group above 21 – 25 years, 36.6% were illiterate,66.6% were Hindus, 43.3% 2000-5000,66.7% were with one parity, 70% were caesarean section,50% of mothers were medical disorders are pregnancy induced hypertension,70% were using IUCD, maximum of them using contraceptive device, 50% of them had 10mins for insertion time. The present study is being supported by According to Pulwasha M (2019) [1] had conducted the study to evaluate the efficacy and satisfaction rate in women with postpartum intrauterine contraceptive device insertion. The mean gestation age at the time of delivery was 38.5 weeks with a standard deviation (SD) of 1.45. All the women were followed for short-term and long-term complications and satisfaction rates. Out of 372, 51.07% of women (n = 190) had a spontaneous vaginal delivery, and 48.9% of women (n = 182) had a cesarean section but there was no significant long-term satisfaction outcome difference in both the groups. The highest success rate of the postpartum long-acting intrauterine contraceptive device was noted in patients who were counseled thoroughly in the antenatal and intrapartum period 61.5% as compared to those patients who were counseled either antenatally 42.2%, intrapartum 35.4%, or immediate postpartum 22.4% alone.

The current study results shows that about 16(53.3%) of the high satisfaction, 9(30%) of them had average and 5(16, 7%) of them had low satisfaction at postpartum copper t insertion. The result also reveals that minimum score on level of satisfaction is 7.0 and maximum score is 22.0, and mean and standard deviation on level of satisfaction is 12.1 and 4.43.

This study is being supported by Radha Agarwal Shubhra Sing, *et al*., (2020) conducted study on determine the outcome, satisfaction rate and continuation rate of PPIUCD. Cu T 380A was inserted within 10 minutes of placental delivery in accepters who fulfilled the Medical Eligibility Criteria and had no contraindications for PPIUCD. They were then followed up for 3 months. A Cohort of 260 vaginal and caesarean deliveries with PPIUCD in situ was studied over seven months period and follow-up results were compared between Vaginal and Caesarean groups. Result: Overall expulsion rate was 8.47%, removal rate was 14.83% and continuation rate was 76.7%. There was no significant difference in removal rate of two groups. Spontaneous expulsion occurred in 8.47% cases and were significantly higher in vaginal insertion group (p value 0.0017). Overall complication rate was low. No case of perforation or accidental pregnancy was reported. And the conclusion is PPIUCD is a safe, highly effective, long acting, cost effective method of postpartum contraception, which can be used during institutional delivery visit and eliminates the need for a return visit to start contraception. PPIUCD is a strong weapon in the family planning armory and should be encouraged in both vaginal and caesarean deliveries.

The demographic variable such as education, socioeconomic status, religion shows significant association with level of satisfaction at $p<0.01$. The present study is supported by Ajith Kumar Nayak *et al*., (2017) [2] conducted study on Experience on Awareness, Acceptability, Safety, Efficacy, Complications and Expulsion of Postpartum Intrauterine Contraceptive Device Insertion. This is a retrospective analytical study conducted in S.C.B Medical College and Hospital, Cuttack, Odisha, over a period of 4 years. Willing 6104 clients were inserted PPIUCD who delivered either

vaginally or by cesarean section. Post insertion follows up done. Various relevant parameters are critically analyzed Results: Awareness about PPIUCD was significantly low compared to interval IUCD (11.37% vs. 69.53%). Acceptance rate was low (25.32%). Acceptance was higher in the age group of 26-30 years (35.3%), para-2 (42.84%) and those undergoing cesarean section (69%). 32.2% of acceptors came for follow-up. The main complaints at follow-up were missing thread and bleeding. Expulsion rate was low (2.91%). Continuation rate was 85.3%. No case of perforation, failure or any other major complication reported. The main causes of removal were bleeding and pressure from family.

Hence the current study results shows that level of satisfaction among women's were high. The acceptance of PPIUCD can be increased with repeated counseling beginning at the early antenatal period, public awareness, and offering incentives to acceptor, motivator and course provider.

Conclusion

This study indicates that PPIUCD as a postpartum family planning method was highly effective, demonstrably safe, having no serious complication reported after insertion or during follow-up and had lower rate of expulsion in spite of low acceptance. The method may be particularly beneficial in our setting where women do not come for postnatal contraception counseling and usage.

Acknowledgment

Authors would like to appreciate all the study participants for their co-operation to complete the study successfully.

Conflict of Interest

Authors declare no conflict of interest

Funding Support

None

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