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Original Research Article

STUDY ON KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING POST PLACENTAL INTRAUTERINE CONTRACEPTIVE DEVICE AMONG WOMEN DELIVERING AT A TERTIARY CARE CENTRE

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Abstract

Background: PPIUCDs are a low-cost, successful intervention that lowers maternal, infant, and under-five mortality rates. The aim of the study was to study the socio demographic factors, antenatal history, awareness of PPIUCD and reasons for acceptance and non-acceptance among the study members affecting the acceptance of post placental intrauterine contraceptive device.

Methods: After approval from the IEC and consent from the study participants, the study was performed on 400 postpartum women aged between 19-35 years who delivered in Department of Obstetrics and Gynaecology in MYH.

Results: A total of 400 postpartum women participated in the present study out of 91.25% were aware about the PPIUCD. A statistically significant ($P<0.05$) difference was observed between participants and area of residence, educational status, socioeconomic status. Majority of participants were aged between 19-25 years, belonged to urban population and were literate. Among acceptors most of the women choose PPIUCD as it is safe and effective method with long term protection and reversible. Whereas, among non-acceptors fear of complications is most common.

Conclusions: Awareness among the participant in our study was 91.25% and the acceptance and insertion rate were same i.e., 76%. With the right counselling, postpartum mothers who gave birth in a hospital could increase their awareness of and adherence to the use of PPIUCDs.

Keywords: Post-partum intrauterine contraceptive devices (PPIUCDs), Family planning, Antenatal.

1. Introduction

Contraceptive counselling for family has become an integral part of antenatal and postpartum programs in a developing country like India. Antepartum or postpartum visits to a health

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

facility, best described as "crisis-oriented," are frequently the only opportunities for many women who live in remote areas with inadequate health facilities and scarce knowledge of different types of contraceptives.[5] The postpartum period is potentially an ideal time to begin contraception as women are more strongly motivated to do so at this time.[6] They should be counselled by cafeteria approach and for those women who want immediate, one time, reversible & easily available, free of cost in government set ups option of intrauterine contraceptive device insertion should be given.

In achieving this goal Postpartum intrauterine contraceptive device (PPIUCD) could act as a real boon as it is a safe, effective, cheap, long term and a reversible alternative. PPIUCD goes a long way in preventing unwanted pregnancies, especially in the immediate post-partum lactational period and also contributes in reducing maternal mortality due to unsafe abortions. PPIUCD as a spacing method has the advantage of reducing complications in mother and baby due to poor birth spacing. It is less uncomfortable, fewer side effects (bleeding issues, perforation), a decreased risk of infection, respite for crowded outpatient facilities, and defence against unintended pregnancy and subsequent abortion.[7] Additionally, cramping and lochia blood-related insertion concerns are covered up.[5] Women on anti-retroviral medication who are HIV positive can use it without risk. Other than this, nursing is not hampered. Additionally, breastfeeding is linked to a decreased need for IUD removal from bleeding or discomfort.[7]

In India, PPIUCDs are still developing as a viable option for contraception. Studies from India are scarce, despite the availability of follow-up information on problems related to PPIUCD insertions from international sources. Furthermore, nothing is known about the demographics of women who use PPIUCDs, the dynamics of their decision-making process, or their perspective on this method of contraception.

In advent of same, the present prospective, observational study was planned to study the socio demographic factors, antenatal history, awareness of PPIUCD and reasons for acceptance and non-acceptance among the study members affecting the acceptance of post placental intrauterine contraceptive device.

2. Material & Methods

After approval from institutional ethical committee and consent from the study participants the present study was conducted on all women aged between 19-35 years who delivered at Department of Obstetrics and Gynaecology, M.G.M. Medical College and M. Y. Hospital, Indore (M.P.), India for a period of 1 year from February 2020.Purposive sampling was done and 400 postpartum women satisfying the inclusion criteria were enrolled for the study.

Inclusion Criteria

- Mothers delivering at MGM Medical college, irrespective of their booking location
- All mothers willing to participate in study
- 19-35 yrs old mothers
- Mothers delivering at 34-40 weeks of gestation irrespective of baby outcome
- Singleton or multiple pregnancy

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

- Multiparous women not willing for permanent sterilization
- Delivering by Vaginal or Caesarean section
- Hb>9g%

Exclusion Criteria

- Patients not willing for IUCD insertion
- History of antepartum hemorrhage
- History of rupture of membranes >12hrs
- History of fever in the last trimester
- Postpartum hemorrhage complicating deliveries
- History of heart disease in the mother
- Patients with previous allergic reaction to IUCD
- Mothers with anemia
- Anomalous uterus as evidenced in early scans
- History of lower genital tract infections
- Manual removal of placenta
- PLHA positive mothers
- Wilsons disease
- Gestational trophoblastic disease
- Active pelvic infection- genital TB, PID.
- Pelvic malignancy

3. Method

First, open end questionnaire was given to the patients coming to antenatal clinic and IPD it was filled by patients to assess their prior knowledge about PPIUCD and their attitude towards it, then PPIUCD was inserted in the willing patients at the time of their delivery with their consent (supplied by the government) If participant is uneducated then the questionnaire was filled by the resident.

Statistical Analysis

Descriptive statistical analysis has been carried out in the present study. Results on categorical measurements are presented in Numbers (%). Pearson's chi square test of statistically significance was applied to find the significance of study parameters($p<0.005$). The online statistical software used for data analysis. Microsoft Excel has been used to generate graphs and tables.

4. Results

Majority of acceptors belonged to age group of 19-35 years i.e., (57.5%). Majority of them belonged to urban areas (60%) and were Hindus (75.25%). Acceptance was more in those who completed their primary level (49.5%) & high school level education (33.75%). Majority

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

of acceptors i.e., 60.5% belonged to lower middle Socioeconomic status. Multiparous women (P2-P4) had a higher incidence of acceptance than primipara (27%).

Age group	**No. of participants**	**Percent**
19-25years	230	57.5
26-30 years	130	32.5
31-35 years	40	10
Area of Residence	**No. of participants**	**Percent**
Urban	240	60
Rural	160	40
Religion	**No. of participants**	**Percent**
Hindu	301	75.25
Muslim	99	24.75
Educational Qualification	**No. of participants**	**Percent**
Illiterate	58	14.5
Primary Level	198	49.5
High School	135	33.75
Higher secondary or higher	9	2.25
Socioeconomic status	**No. of participants**	**Percent**
Lower	150	37.5
Lower middle	242	60.5
Upper middle	8	2
Upper	0	0
Parity	**No. of participants**	**Percent**
P1	108	27
P2-P4	273	68.25
>P4	19	4.75

Table 1: Demographic distribution of participants according to various factors

91.25% acceptors had Awareness about PPIUCD. The source of awareness for 185 (50.68%) women were health worker (including ASHA, ANM, Community medical officers, staff nurses and residents in tertiary care centre) followed by 151 (41.37%) women were aware by friends/ husband/neighbour and only 29 (7.95 %) were aware by media sources. A statistically insignificant ($P>0.05$) difference was observed between participants acc. to their religion and 92.7 % of hindu and 86.9% of muslim women were aware about PPIUCD. A statistically significant ($P<0.05$) difference was observed between participants and area of residence, educational status, socioeconomic status. Among 365 aware participants 89 are having parity of 1, 258 are having parity between P2-P4,18 participant were having parity more than P4.

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

Awareness about PPUICD	**No. of participants**	**Percent**
Yes	365	91.25
No	35	8.75
Source of Awareness	**No. of participants**	**Percent**
Health Worker	185	50.68
Media	29	7.95
Friends/Husband/ Neighbour	151	41.37
Awareness depending upon religion	**Yes**	**No**
Hindu	279	22
Muslim	86	13
Awareness depending upon residence	**Yes**	**No**
Urban	229	11
Rural	136	24
Awareness depending upon Educational Qualification	**Yes**	**No**
Illiterate	46	12
Literate	319	23
Awareness depending upon Socioeconomic status	**Yes**	**No**
Lower	131	19
Middle	234	16
Awareness depending upon Parity	**Yes**	**No**
P1	89	19
P2-P4	258	15
>P4	18	01

Table 2: Prevalence of awareness about PPUICD according to various factors

A statistically significant (P<0.05) correlation was observed between Acceptance and insertion of PPIUCD among all participants. 298 out of 365 aware participants got PPIUCD inserted. Acceptance rate was highest in women of 19-25 years of age (56.10%) followed women of 26-30 years of age (32.01%). As the age increased acceptance decreased i.e., 11.8% in beneficiaries over 30 years of age. Among 303 acceptors of PPIUCD 230 were hindu and 73 were muslim and an insignificant correlation was observed. Lastly, A statistically significant (P<0.05) difference was observed between participants and area of residence, educational status, socioeconomic status for acceptance and insertion of PPIUCD.

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

Acceptance and Insertion of PPUICD		
Age group	**Yes**	**No**
19-25years	170	53
26-30 years	97	41
31-35 years	36	3
Religion	**Yes**	**No**
Hindu	230	71
Muslim	73	26
Area of Residence	**Yes**	**No**
Urban	193	47
Rural	110	50
Educational Status	**Yes**	**No**
Illiterate	40	18
Literate	263	79
Socioeconomic status	**Yes**	**No**
Lower	115	35
Lower middle	185	57
Upper middle	03	05
Parity	**Yes**	**No**
P1	65	43
P2-P4	219	54
>P4	19	00

Table 3: Acceptance and Insertion of PPUICD according to various factors

Most common reason for accepting PPIUCD among acceptors, as it is a reversible method (67%). Most common reason for not accepting PPIUCD among non-acceptors, was fear of complication (39%) followed by 25% who want to use another method.

Reason	No of Acceptors
Reversible	67
Safe and Effective	112
Allowed by partner or family member	10
Long protection	91
Previous use of IUCD	21
Non Hormonal	00
No interference with sexual life	02

Table 4: Reason for acceptance PPIUCD among acceptor

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

Reason	No of Non-Acceptors
Partner/Family refusal	14
Fear of Complication	38
Satisfied with previous method	8
Want to use another method	24
No reason	13

Table 5: Reason for Non-acceptance PPIUCD among Non-acceptor

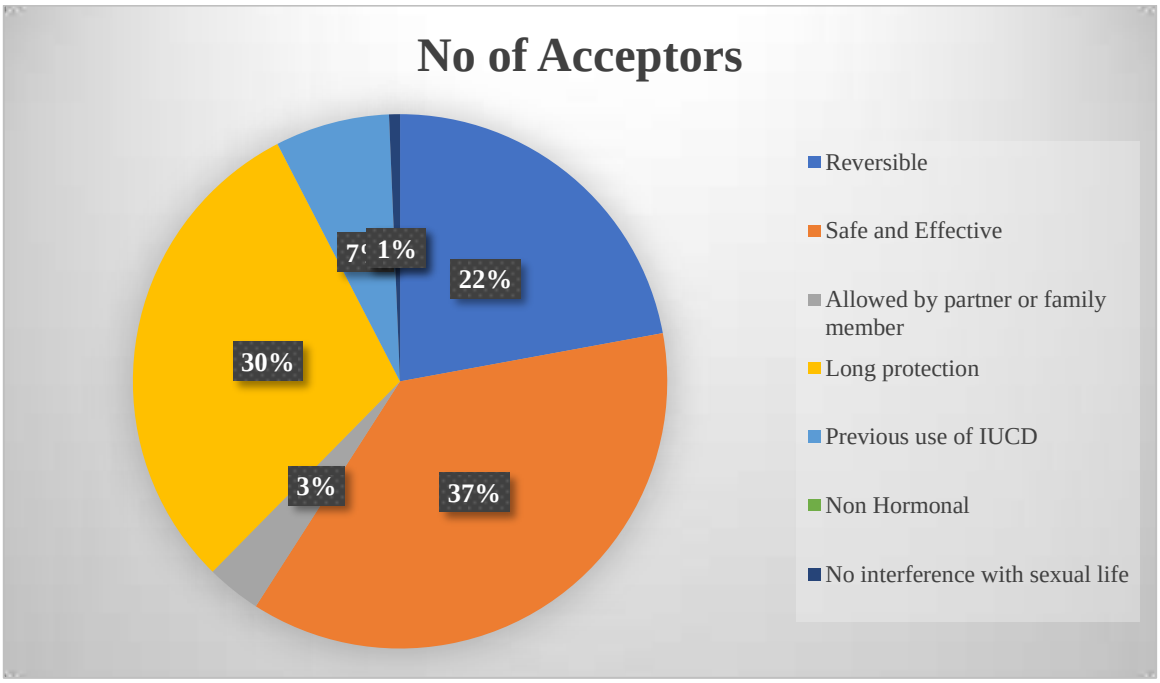

Chart 1: Pie Chart showing Reason for Acceptance of PPIUCD among Acceptors

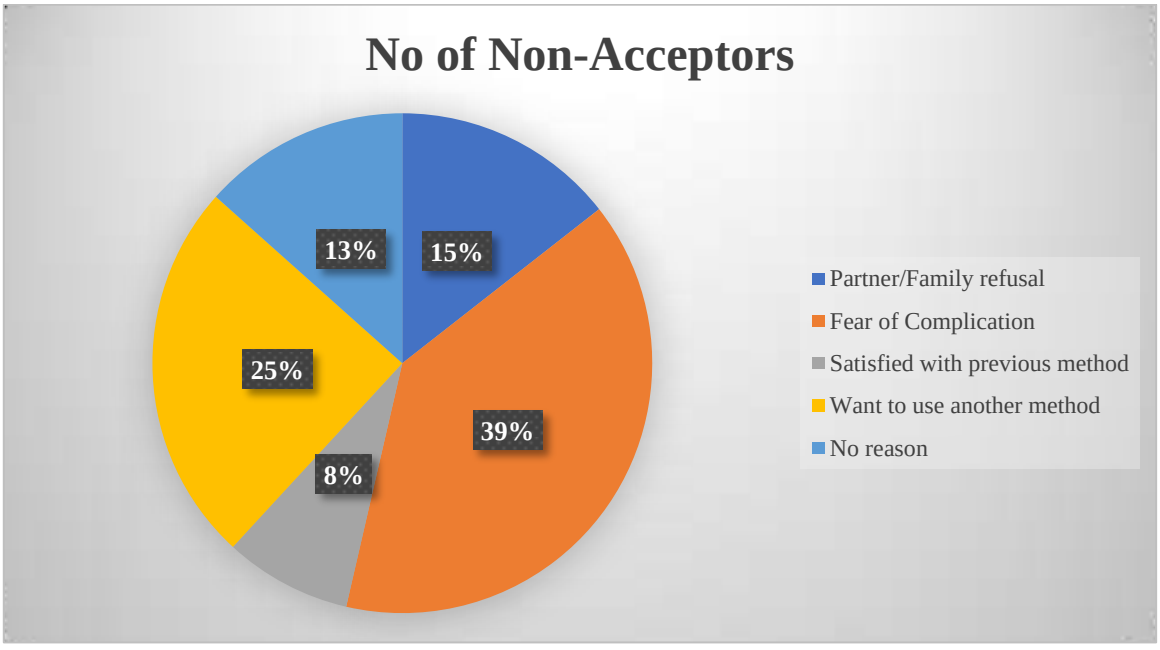

Chart 2: Pie Chart showing Reason for Non-acceptance PPIUCD among Non-acceptor

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

5. Discussion

The use of contraception is a valuable tool in the prevention of an unwanted pregnancy. Thus, leading to improvement in maternal health care by decreasing the induced abortion rates. In this study, the proportion of parturient accepting PPIUCD and their socio-demographic and obstetric characteristics was determined.

In agreement with other studies conducted by Mona Asnani et al. (2019)[8] and Saroj et al.[9], where the majority of women also belonged to the age groups of 18–25 years and 20–25 years, respectively, the majority of the women acceptors in the present study, or 57%, belonged to the age range 19–25 years. Hindus made up 75.25% of the participants, while Muslims made up 24.75 %. In comparison to Mona Asnani et al.'s study (2019)[8] where 43.17% of participants were illiterate, the majority of patients, or 85.5%, were at least primary-level educated, while 14.5% were illiterate. Above all, studies—including the current one—reiterate that educational status unquestionably has a significant impact on PPIUCD acceptance. Due to the fact that the current study was carried out in a public health facility, none of the participants had a higher socioeconomic class. Lower middle class made up 60.5% of participants, followed by lower class (37.5%) and upper middle class (2%).

In our study, 68.25% of the participants were multiparious with parity between P2-P4 followed by 27% acceptors who were primiparous. In a study by Borthakur, Shobhasmita, et al.[10] 32% of the acceptors were in the age group of 26-30 years and 39.32% among multipara. Majority studies found results concurrent to current study this is because IUCD is temporary method that is the reason for acceptance among primiparous women. Thus, during antenatal visits, women can be counselled regarding PPIUCD insertion during the immediate post placental period.

Out of 400 acceptors, 365 were aware about PPIUCD which is 91.25% of total participants and only 35 (9.75%) were not aware about PPIUCD. In a study done by AT Alukal et al.[11] the awareness regarding PPIUCD was only 11.1% whereas in another study done by Sharma A et al.,[12] the prevalence was 2.5% only. 50.68% aware participants were informed by health worker, 41.37% got information from friend/husband/ family members and only 7.95% were informed through media. This was similar to study done by Sharma A et al.[12] the 82.5 % women were aware by health worker and 17.5% were aware by media.

Participants' place of residence, level of education, and socioeconomic position all showed statistically significant (P0.05) differences. 95.4% of urban and 85% of rural women participants/acceptors have heard of the PPIUCD. 50.1% of aware women had completed elementary school, 35.06% had completed high school, 12.6% were illiterate, and only 2.1% had completed higher secondary education or above. Similar results were found in a study by Mona Asnani et al.[8], where only 9.1% of women participants were aware of PPIUCD and 43.71% of participants were illiterate.

Acceptance rate was highest in women who were already aware about PPIUCD i.e., 98.34 % while 1.65% were not at all aware about the PPIUCD. Statistically significant difference observed in between aware and unaware participant ($P<0.00001$). While among non-acceptor; 69.07 % were aware about PPIUCD and 30.92% were not at all. Similar findings

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

were observed in a study done by Sharma A et al.[12], where only 20.2% were aware about PPIUCD accepted it while 79.8% didn't accepted even after awareness. Among 303 acceptors of PPIUCD; 230 were hindu and 73 were muslim, and there is no statistically significant difference between the religion and acceptance of PPIUCD. Similar findings were observed in a study done by Sharma A et al.,[12] where 82.83% acceptor were hindus. Refusal of PPIUCD insertion on religious grounds was 1% in various studies. This shows that religious background and ethnicity does not affect PPIUCD coverage significantly.

A statistically significant difference between the women of urban and rural area in acceptance of PPIUCD (p-value = .010834) with 80.4% acceptance of PPIUCD among the urban and 68.75% among rural women. Similar findings were observed by Sharma A et al.[12], with 61.72% acceptors among urban area. In present study acceptance rate was highest in women of 19-25 years of age (56.10%) followed women of 26-30 years of age (32.01%). As the age increased acceptance decreased i.e., 11.8% in beneficiaries over 30 years of age. It was similar to study conducted Kanchan Rani et al.[13], Katheit G et al.[14] and Mishra et al.,[15] where acceptance was highest among the age group of 21-25 years of age. Most of the study population (85.25%) had at least a primary level of education. Acceptance of the use of PPIUCD was higher among women with primary education (87.8%), than those with high school (32.67%), than those with no formal education (13.2%). This could be reasoned out that educated women are high achievers and have greater labor market opportunities than the less educated women. This was similar to a study done in Egypt by Safwat et al.,[16] where women with no formal education had an acceptance of 9.4% while those with formal education was 19.4%.

37% acceptor found it safe and effective, 30% chose it for long protection, 22% accepted as it was reversible and 7% were already using IUCD. This was in contrast to results obtained by Sharma A et al., who stated reversibility as the major reason for acceptance (73.62%) followed by being safe and effective (69.96%) [50] The variation in our study can be reasoned that almost all participant encircled only one option. Main reason of refusal among non-acceptor is fear of complication (39%) followed by 25% who want to use another method,15% in whom refused by partner/family member and 13 % are not having exact reason while minimum 8% were satisfied with their previous method. This was in concurrence to study done by Sharma A et al.[12], Deshpande S et al.[17], Mishra S et al.[15] and Gautam et al.[18]

Based on the observations made, the following are the recommendations of the present study:

- PPIUCD is long lasting contraceptive device which provide contraception for 5 years. which is underutilized yet.
- PPIUCD counselling room should be made at all Delivery points so the couple must be counselled before delivery.
- Training for counselling must be done up to staff nurse level.
- Just like Pradhan Mantri Surakshit Matritva Abhiyan, some contraceptive counselling day must be fixed and specialist service provided on PHC and CHC also.

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

6. Conclusion

With a 91.25% awareness rate and a 76% acceptance rate, post-placental PPIUCD is an excellent method of birth control. Given that 70% of the population in our country lives in rural areas, community health officers (CHOs), staff nurses, and auxiliary nurse midwives (ANMs) can help spread knowledge of the method and improve rural residents' acceptance of it. This will help family planning programmes, help the nation's population decline, and ensure better health for mother and child. Health care professionals, such as ASHA, ANMs, staff nurses, community health officers, and residents working in tertiary care facilities, were the main sources of awareness. It is crucial that there be a separate unit for antenatal counselling of the couple regarding potential conception during lactational amenorrhoea, morbidities related to consecutive conceptions, and the simplicity of birth spacing with PPIUCD insertion in order to improve acceptance of PPIUCD. The couple must receive counselling together in order for PPIUCD counselling to be beneficial, even throughout the postpartum time.

However further multicentric studies in this regard would be required as the present study conducted in a tertiary care centre where we get cases from nearby or referred cases. Further, Follow up after insertion is not done by us due to time constrain and lastly purposive sampling was done.

7. References

1. Gupta N, Sinha R, Mangal A.Knowledge, attitude and practice study on immediate postpartum intrauterine contraceptive device method of family planning. Int J Community Med Public Health2017;4:2981-4.
2. DabralS, Malik SL. Demographic Study of Gujjars of Delhi:IV. KAP of Family Planning. J Hum Ecol.2004;16(4):231-7.
3. Mao J. Knowledge, Attitude and Practice of Family Planning. A Study of Tezu Village, Manipur (India). Int J Biological Anthropol. 2006;1(1).
4. Srivastava R, Srivastava DK, Jina R, Srivastava K, Sharma N, Saha S. Contraceptive knowledge attitude and practice (KAP) survey. J ObstetGynecol India.2005;55(6):546-50.
5. Safwat AM, Momen AK, Omar MS, Hossam TS. Acceptability for the Use of Postpartum Intrauterine Contraceptive Devices:Assiut Experience. Med PrincPract.2003;12:170–5.
6. Xu JX, Reusche C, Burdan A. Immediate postplacental insertion of intrauterine device:A review of Chinese and world experiences. AdvContracept.1994;10:71–82.
7. Kappa N, Curtis KM. Review Article Intrauterine Device insertion during the postpartum period:a systemic review. Contraception.2009;80:327-36.

ISSN: 0975-3583, 0976-2833 VOL14, ISSUE11, 2023

8. Mona Asnani*, Anjoo Agarwal, Renu Singh Study of KAP regarding PPIUCD among antenatal women at a tertiary care centre in Northern India. Asnani M et al. Int J Reprod Contracept Obstet Gynecol. 2019 Mar;8(3):1111-1114.
9. Saroj K, Neha G. Acceptability for the use of postpartum intrauterine contraceptive devices, Zenana Hospital, Jaipur. Int J Sci Res. 2016;5(5):401-9.
10. Borthakur S, Sarma A, Alakananda, Bhattacharjee AK, Deka N. Acceptance of post partum intra-uterine contraceptive device (ppiucd) among women attending gauhati medical college and hospital (gmch) for delivery between January 2011 to December 2014 and their follow up. J Evol Med Dent Sci. 2015;4:2278- 4748.
11. Alukal, Anila Tresa, et al. "PPIUCD: awareness and reasons for non- acceptance." International Journal of Reproduction, Contraception, Obstetrics and Gynecology,vol.7,no.2,Feb.2018,pp.582.
12. Sharma A, Gupta V. A study of awareness and factors affecting acceptance of PPIUCD in South-East Rajasthan. Int J Community Med Public Health 2017;4:xxxxx.
13. Rani K, Pangtey NK, Khanna G, Rani M. Postpartum intrauterine contraceptive device(PPIUCD) insertion: practices and aftermath at tertiary care centre. Int J Reprod Contracept Obstet Gynecol 2018;7:4742-6.
14. Katheit G, Agarwal J. Evaluation of post placental intrauterine contraceptive device in terms of awareness, acceptance and expulsion in a tertiary care centre. Int J Reprod Contracept Obstet Gynaecol. 2013;2:539-43.
15. Mishra S. Evaluation of safety, efficacy, and expulsion of post-placental and intracesarean insertion of intrauterine contraceptive devices (PPIUCD). J Obstet Gynaecol India. 2014;64:337-43.
16. Safwat A, Mohamed Momen A, Kamel Omar M, et al. Acceptability for the use of postpartum intrauterine contraceptive devices: assiut experience. Med Princ Pract. 2003;12:170–5.
17. Deshpande S, Gadappa S, Yelikar K, Wanjare N, Andurkar S. Awareness, acceptability and clinical outcome of post-placental insertion of intrauterine contraceptive device in Marathwada region, India: Indian J Obstetr Gynecol Res. 2017;4(1):77-82.
18. Gautam R, Arya KN, Kharakwal S, Singh S, Trivedi M. Overview of immediate PPIUCD application in Bundelkhand Region. J Evol Med Dental Sci. 2014;3:9518- 26