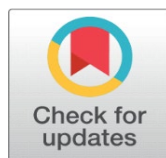


# IDENTIFICATION OF RATE OF PPIUCD, ASSESSMENT OF KNOWLEDGE, ATTITUDE AND INFORMATION RECEIVED BEFORE AND AFTER INSERTION AMONG POSTNATAL WOMEN ATTENDING SELECTED DISTRICT HOSPITAL, WEST BENGAL

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## ABSTRACT

A study was conducted on identification of rate of PPIUCD, assessment of knowledge, attitude and information received before and after insertion among postnatal women attending selected district hospital in West Bengal with the objectives of identifying the rate of PPIUCD, assess the knowledge, attitude, relationship between knowledge and attitude regarding PPIUCD and assess the information received before and after PPIUCD insertion among postnatal women. The conceptual framework was based on Rosentoch, Becker and Maiman's Health Belief Model. The tools were used to record analysis proforma, structured interview schedule, five-point structured attitude scale to collect data from the respondents. Content validity and reliability of the tools were established. A pilot study was conducted to find out the feasibility of the study. Nonprobability purposive sampling technique were adopted to collect data from the respondents. Descriptive and inferential statistics were used to analyze the data. The study findings revealed that the rate of PPIUCD was 29.68%, 51% respondents had good knowledge with 73% had neutral attitude regarding PPIUCD. There was moderate positive correlation ( $r = 0.58$ ) with 't' value 10.07 [3.132 with df (198)] at 0.001 level of significance. Majority of respondents were informed regarding PPIUCD related information. The findings have several implications on nursing practice, education, administration, and research. The study can be replicated in large population.

**Keywords:** Rate, PPIUCD, Postnatal, Knowledge, Attitude, Information

## 1. INTRODUCTION

Women have the most complex physiology, not only being capable of giving birth but are also endowed with a multi-faceted personality. They are the living embodiment of benevolence, adjustability, integrity and tolerance. Although, in our society, a majority of them remain silent and grossly under-represented in decision making, they play a great part in the progress of our country. Women's health can be improved by reducing the maternal mortality and morbidity rate, enabling

spacing in birth interval, and avoiding abortion. [Nath and Islam \(2015\)](#) According to the 2011 census, India has the second largest population in the world just behind China and is very close to acquire the top spot. It contributes 17.5% of world population with an addition of around 25 million births every year. 65% of the women population have unmet need of family planning in first postpartum period. [Chauhan et al. \(2018\)](#).

According to a report of World Bank, UNFPA, WHO in 2012, India contributes to 20% of maternal deaths in the world. Family planning can avert more than 30% of maternal death and 10 % of child mortality if couples spaced their pregnancies for at least 2 years. [Yadav et al. \(2018\)](#), [World Health Organization \(WHO\) \(2006\)](#) Contraception methods (both temporary and permanent) are effective means of preventing unwanted pregnancy. Intrauterine contraceptive device like CUT-380A provides pregnancy protection up to 10 years. The World Health Organization (WHO) revised the use of intrauterine contraceptive device (IUCD) from 6<sup>th</sup> week postpartum to within 10 minutes of placental delivery to up to 48 hours of delivery. [World Health Organization \(WHO\) \(2006\)](#), [IUCD Reference Manual for Medical Officers and Nursing Personnel \(2013\)](#) Till recently, there was no spacing methods available to women in postpartum period in public health facilities. The recent introduction of Postpartum Intra Uterine Contraceptive Device (PPIUCD) in India has revolutionized the basket of choice for the women. In India 2012-2013 the rate of PPIUCD was around 0.9% (HMIS). Low percentage of PPIUCD may be attributed to non-operationalization of the facility in 2012 – 2013. [India's 'VISION FP 2020' \(2014\)](#) Proportion of PPIUCD acceptors among institutional deliveries in 2013 are 27% in Assam, 14% in Madhya Pradesh , 12% in Punjab, 11% in Tamil Nādu , 9% in Haryana, 9% in Uttarakhand , 8% in Delhi, 6% in Orissa , 6% in Jharkhand, 5% in Gujarat , 5% in Uttar Pradesh, 15% in West Bengal, 5% in Bihar, 4% in Karnataka, 4% in Maharashtra, 4% in Meghalaya, 4% in Chhattisgarh, 2% in Rajasthan and 2% in Andhra Pradesh. [Gupta et al. \(2017\)](#) In a women's reproductive life, spacing between childbirths help to promote health and wellbeing of both the mother and the child. Spacing children for a minimum period of 3 years gives the child a healthier start, and the mother adequate time to recover from physiological and psychological stresses incurred from previous pregnancy and delivery. Studies have found that conceiving within 2 years of delivery leads to adverse events like abortion, premature labour, postpartum haemorrhage, LBW babies, fetal loss sometimes maternal death. Keeping these in mind, it is advisable to practice contraception within immediate postpartum period for the good of women's health. IUCD is the most commonly used reversible method of contraception worldwide with about 127 million current users. [Chauhan et al. \(2018\)](#) Previous studies have shown that, PPIUCD is associated with less discomfort, has fewer side effects (bleeding problem, perforation) and lower incidence of infection. It's also a relief from overcrowded outpatient facilities ensures protection against unwanted pregnancies and abortions. In addition to these, there are fewer reports of insertion complaints caused by lochia and cramping t. It is safe for the use by HIV positive women on ART. It also does not interfere with breastfeeding. [IUCD Reference Manual for Medical Officers and Nursing Personnel \(2013\)](#).

## 1.1. STATEMENT OF THE PROBLEM

Identification of rate of PPIUCD, assessment of knowledge, attitude and information received before and after insertion among postnatal women attending selected district hospitals, West Bengal. [Bhakta \(2019\)](#)

## 2. LITERATURE REVIEW

- Literature related to rate of PPIUCD inserted. [Chauhan et al. \(2018\)](#), [Chethan et al. \(2018\)](#), [Ramya et al. \(2017\)](#), [Nayak and Jain \(2017\)](#), [Sharma et al. \(2015\)](#).
- Literature related to knowledge of postnatal women regarding PPIUCD. [Chethan et al. \(2018\)](#), [Tripathi and Sahu \(2018\)](#), [Valliappan et al. \(2018\)](#), [Gara et al. \(2014\)](#), [Anitha et al. \(2013\)](#), [Nigam et al. \(2018\)](#).
- Literature related to attitude of postnatal women regarding PPIUCD. [Sunanda and Sudha \(2015\)](#), [Yadav and Koshalya \(2017\)](#).
- Literature related to co-relation between knowledge and attitude regarding PPIUCD among postnatal women. [Valliappan et al. \(2018\)](#), [Yadav and Koshalya \(2017\)](#), [Gupta et al. \(2017\)](#).
- Literature related to information received before and after PPIUCD insertion by postnatal women. [Chauhan et al. \(2018\)](#), [Tomar et al. \(2018\)](#), [Shekhawat and Janwadkar \(2016\)](#), [Goswami et al. \(2015\)](#).

## 3. METHODOLOGY

**Research Approach:** Non-experimental study.

**Research Design:** Descriptive survey design.

**Setting:** Tamluk district hospital, Purba Medinipur, West Bengal.

**Population:** In the present study population comprised of all postnatal women who had inserted PPIUCD.

**Sample and Sampling Technique:** In the present study sample was postnatal women who had inserted PPIUCD within 48 hours of delivery. Sample was selected by purposive sampling technique.

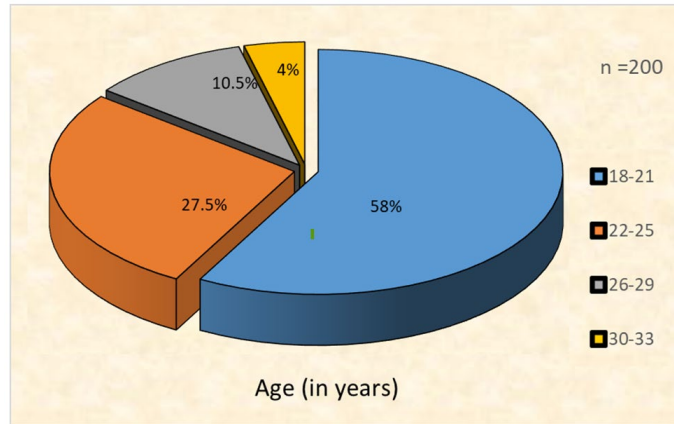
**Sample size:** The sample size was 200 for the present study.

**Table 1**

Table 1 Data Collection Tools and Techniques			
Tool No.	Tools	Variables to be measured	Techniques
I	Semi structured interview schedule	Demographic variables	Interviewing
II	Record analysis proforma	Rate of PPIUCD	Record analysis
III	Structured interview schedule	Knowledge regarding PPIUCD	Interviewing
IV	Structured attitude scale	Attitude regarding PPIUCD	Interviewing
V	Structured interview schedule	Information received before and after PPIUCD insertion	Interviewing

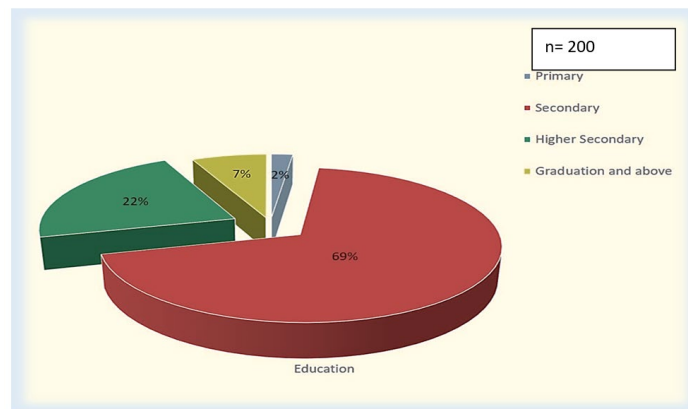
**Section I** Findings related to demographic characteristics of the postnatal women.

**Figure 1**



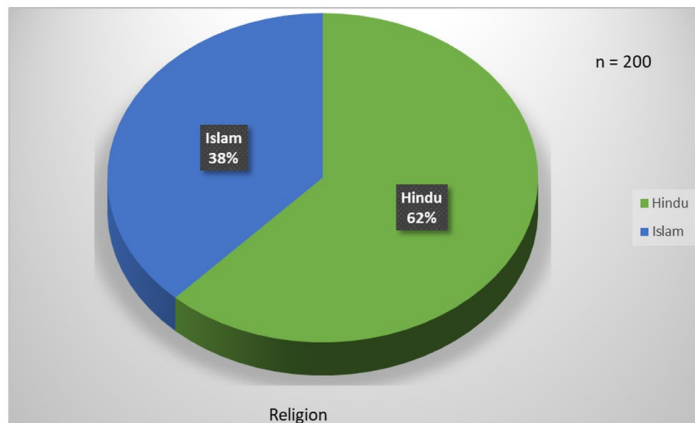
**Figure 1** Percentage Distribution of The Postnatal Women According to Their Age

**Figure 2**



**Figure 2** Percentage Distribution of the Postnatal Women According to Their Educational Status

**Figure 3**



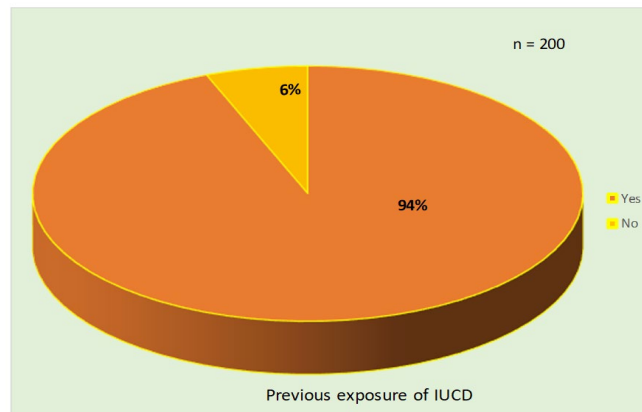
**Figure 3** Percentage Distribution of the Postnatal Women According to Their Religion

**Table 2**

**Table 2 Frequency and Percentage Distribution of Postnatal Women According to Parity and Monthly Income in Rupees. n = 200**

Demographic characteristics	Frequency	Percentage (%)
<b>Parity</b>		
Primi gravida	120	60
Second gravida	63	31.5
Third gravida	12	6
Forth and more	5	2.5
<b>Monthly income</b>		
3000 – 7000	108	54
7001 – 11000	56	28
11001 – 15000	16	8
15001 – 19000	9	4.5
>190001	11	5.5

**Figure 4**



**Figure 4** Percentage Distribution of the Postnatal Women According to Their Previous Exposure to IUCD

**Table 3**

**Table 3 Frequency and Percentage Distribution of Postnatal Women According to Undergone Counselling (Yes / No) n = 200**

Demographic characteristics	Frequency	Percentage (%)
<b>Undergone Counselling</b>		
Yes	200	100
No	Nil	-

**Section II**

This section depicts the rate of PPIUCD.

**Table 4**

**Table 4 Frequency and Distribution Showing the Rate of PPIUCD As Per Delivery Status  
N = 896**

Mode of Delivery	Frequency	Percentage (%)
Normal Vaginal Delivery (n <sub>2</sub> = 438)	438	48.88
PPIUCD inserted	266	29.68
Not inserted	172	19.20
Caesarean delivery (n <sub>3</sub> = 458)	458	51.12
PPIUCD inserted	Nil	--

**Section III** Findings related to assessment of knowledge of postnatal women regarding PPIUCD.

**Table 5**

**Table 5 Frequency and Percentage Distribution of Postnatal Women Regarding Knowledge of PPIUCD  
n = 200**

Gradation	Range of score	Percentage(%)	Frequency	Percentage(%)
Very good	19 – 22	81 – 100	82	41
Good	14 – 18	61- 80	102	51
Fair	09 – 13	40 – 60	16	8
Poor	< 09	< 40	Nil	--

**Table 6**

**Table 6 Distribution of Maximum Possible Score, Range, Mean Score, Mean Percentage, Median and Standard Deviation of Knowledge Score Regarding PPIUCD Among Postnatal Women, Undergone PPIUCD.  
N = 200**

Variables	Range	Mean	Mean Percentage (%)	Median	SD
Knowledge	10-22	17.8	80.90	18	206

**Table 7**

**Table 7 Area Wise Distribution of Range, Mean Score, Mean Percentage and Rank Order of Knowledge Score of Postnatal Women, Undergone PPIUCD Insertion Regarding PPIUCD.  
N= 200**

Area	Maximum possible score	Mean score	Mean Percentage (%)	Rank order
Concept	6	3.87	64.5	4 <sup>th</sup>
Mode of action	1	0.47	47	5 <sup>th</sup>
Advantage	9	7.43	82.55	3 <sup>rd</sup>

Follow up	2	1.98	99.25	1 <sup>st</sup>
Warning sign	4	3.71	99.87	2 <sup>nd</sup>

#### Section IV

This section deals with the findings related to assessment of attitude of postnatal women regarding PPIUCD.

**Table 8**

**Table 8 Frequency Percentage Distribution of Attitude Score Regarding PPIUCD Postnatal Women Undergone PPIUCD Insertion. N =200**

Gradation	Scoring	Frequency	Percentage (%)
Favourable ≥ Mean + SD	>79	33	16.5
Neutral ≥ Mean – SD to ≥ Mean + SD	59 – 79	146	73
Unfavourable Mean – SD	<59	21	10.5

**Table 9**

**Table 9 Distribution of Range, Mean Score, Mean Percentage, Median and SD of Attitude Score Obtained by Postnatal Women Undergone PPIUCD Insertion Regarding PPIUCD. N=200**

Variables	Range	Mean score	Mean percentage (%)	Median	SD
Attitude	45 - 86	68.23	75.81	69	9

#### Section V

This section depicts the findings showing relationship between knowledge and attitude of postnatal women regarding PPIUCD.

**Table 10**

**Table 10 Correlation Co-Efficient and Their Significance Existing Between Knowledge and Attitude Regarding PPIUCD. n =200**

Variables	'r' value	't' value
Knowledge		
vs	0.58	10.07***
Attitude		

't' (df- 198) = 3.132 p < 0.001\*\*\*

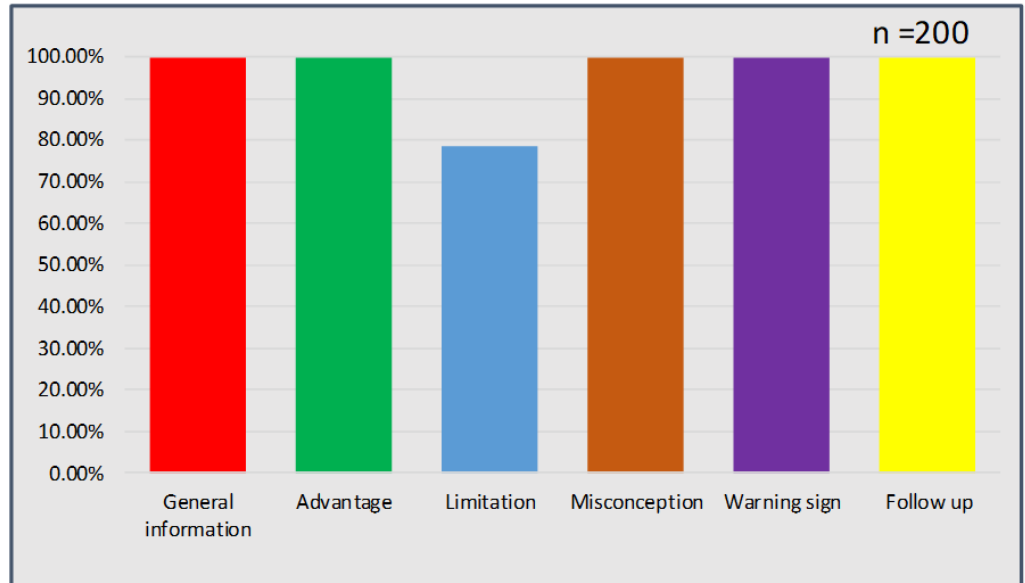
The data presented in the Table 10 depicts 'r' value which was computed between knowledge and attitude regarding PPIUCD among postnatal women. The computed 'r' value was 0.58 which indicates a moderately positive correlation between the above-mentioned variables. The 't' value computed in the given data (10.07) was statistically significant at 0.001 level of significance, this shows that the obtained relationship is a true relationship and not by chance. From the above

results it can be concluded that with increase in knowledge, attitude also increased among postnatal women. So, it can be concluded that postnatal women who had good knowledge regarding PPIUCD had also good attitude towards PPIUCD.

**Section VI**

This section deals with the findings related to assessment of information received before and after PPIUCD insertion among postnatal women.

**Figure 5**



**Figure 5** Bar Diagram Showing Percentage Distribution of Information Assessment Score of Postnatal Women Regarding PPIUCD

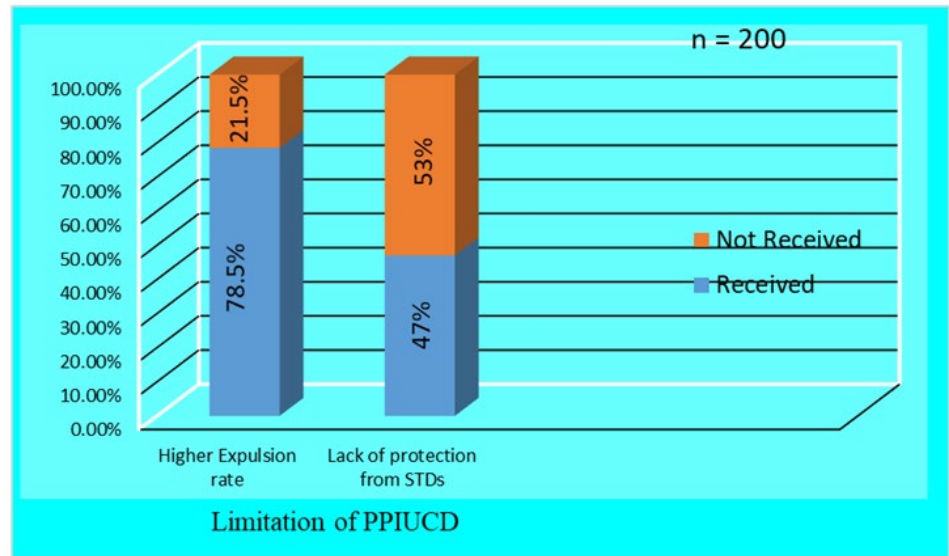
**Table 11**

**Table 11** Frequency Percentage Distribution of Information Related to Advantage of PPIUCD. n = 200

Information	Received Percentage (%)	Frequency	Not received Percentage (%)	Frequency
<b>Advantages</b>				
Speed of action	143	71.5	57	28.5
Convenient	200	100	Nil	-
Effect on breast feeding	200	100	Nil	-
Risk of perforation	200	100	Nil	-



**Figure 6**



**Figure 6** Bar Diagram Showing Percentage Distribution of Information Related to Limitation Of PPIUCD

**Table 12**

**Table 12** Frequency Percentage Distribution of Information Related to Misconception of PPIUCD N = 200

Information	Received Frequency	Received Frequency Percentage (%)	Not received Frequency	Not received Frequency Percentage (%)
<b>Misconceptions</b>				
Travel through heart	200	100	Nil	--
Discomfort during sex	200	100	Nil	--
Causes cancer	200	100	Nil	--
Causes infertility	169	84.5	31	15.5

**Table 13**

**Table 13** Frequency Percentage Distribution of Information Related to Warning Sign After PPIUCD Insertion n = 200

Information	Received Frequency	Received Frequency Percentage (%)	Not received Frequency	Not received Frequency Percentage (%)
<b>Warning sign</b>				
Foul vaginal discharge	200	100	Nil	--
Fever with chills	200	100	Nil	--
Pregnancy	200	100	Nil	--
Expulsion of PPIUCD	164	82	36	18

**Table 14**

<b>Table 14 Frequency Percentage Distribution of Information Related to Follow up After PPIUCD Insertion</b>				
<b>N = 200</b>				
<b>Information</b>	<b>Received Frequency Percentage (%)</b>		<b>Not received Frequency Percentage (%)</b>	
Follow up				
Time of follow up	200	100	Nil	--
PPIUCD	141	70.5	59	29.5

#### 4. DISCUSSION

Researcher found that the rate of PPIUCD were very less related to total delivery. Knowledge regarding PPIUCD were assessable, and maximum scored good, there were mild deviation of knowledge score and no poor knowledge found. The maximum attitude of the postnatal women regarding PPIUCD were also neutral, which indicates still awareness is required for increasing positive attitude. There were positive co-relation seen between knowledge and attitude, which proves that with increased knowledge, attitude also increased among respondents. With regards to the information received by the postnatal mother before and after PPIUCD, majority respondents were informed regarding advantages, misconception, warning signs, follow-up advice and only a minor section were not aware regarding limitations of PPIUCD.

**The major findings of the study were as follows.**

##### 1) Findings related to demographic characteristics.

- Majority of the respondents (58%) were belong from the age group of 18-21.
- Maximum respondents (69%) belonged to secondary level of education.
- Most of respondents (62%) belonged from Hindu religion.
- Among all respondents (60%) were primipara mother.
- Majority of the respondents (54%) had their monthly income in between 3000– 7000.
- Maximum respondents (94%) did not use PPIUCD previously.
- In regard to the findings, (100%) postnatal women undergone PPIUCD.
- counselling.

##### 2) Findings related to rate of PPIUCD.

- The rate of PPIUCD were inserted 266 (29.68 %) among total delivery (896).
- Total PPIUCD were inserted 266 (60.74%), among the total normal vaginal delivery (438) women and none of the postnatal women had inserted intra caesarean PPIUCD.

##### 3) Findings related to knowledge of postnatal women regarding PPIUCD.

- 51% respondents had good knowledge regarding PPIUCD.
- No poor knowledge found regarding PPIUCD among respondents.

- Maximum knowledge found in the area of follow up (99.25%), warning sign (92.87%), advantage (82.55%), concept (64.5%), mode of action of PPIUCD (47%) consecutively.

**4) Findings related to attitude of postnatal women regarding PPIUCD.**

- Majority (73 %) respondents had neutral attitude regarding PPIUCD.
- Only 16.5% respondents had favourable attitude regarding PPIUCD.

**5) Findings related to relationship between knowledge and attitude of postnatal women regarding PPIUCD.**

- There were a moderate positive correlation ( $r = 0.58$ ) exist between knowledge and attitude among respondents.
- It also seen that the calculated 't'(10.7) value was statistically significant , 't'(df - 198) = 3.132 at 0.001 level of significance. So, it can be concluded that there if knowledge is increased attitude supposed to be increased.

**6) Findings related to information received before and after PPIUCD insertion among postnatal women.**

- 100% respondents had received general information, advantage, misconception, warning sign and post insertion follow up visit required and 78.5% had received information regarding limitation of PPIUCD before and after its insertion.
- 100% respondents were informed about the area of general information all respondents had received (100%) information related to birth spacing, pregnancy protection, removal procedure and (69%) received information related to immediate return of fertility.
- In the context of advantage of PPIUCD 100% respondents had received information that PPIUCD is most convenient, no effects on breast feeding, no risk of perforation and (71.5%) were informed that PPIUCD has rapid action to prevent pregnancy as soon as it is inserted.
- In the area of limitation of PPIUCD (78.5%) respondents had received information that PPIUCD had higher expulsion rate and only (47%) was informed that PPIUCD lacks protection from HIV/STDs.
- In the area of misconception related to PPIUCD (100%) were informed that it did not travel through heart, causes of discomfort during sex, causes cancer and (84.5%) were informed that PPIUCD did not causes infertility.
- 100% respondents were informed regarding warning sign after PPIUCD insertion that were foul vaginal discharge, fever with chills, pregnancy and 82% were informed that PPIUCD may fallen out.
- 100% respondents were informed regarding follow up visit after PPIUCD insertion and 70.5% were informed that PPIUCD string may not always feel by the hand always.

## 5. CONCLUSIONS

From the findings of the present study the researcher had come to the conclusion that the rate of PPIUCD was very less (although it was maximum for caesarean mothers who had undergone ligation- a topic not under the researcher's present study objectives), the knowledge level was good, the attitude was neutral. Also, a positive co-relation was found to exist between the knowledge and attitude and the respondents who got maximum information regarding PPIUCD.

## 6. LIMITATIONS

The limitation of the study were:

- The study was confined to a small size (200), so the scope of generalization of the findings were limited.
- The study was limited to the subjectivity of self-reports by the respondents.
- The study was limited to a particular period (1 month only).

## 7. RECOMMENDATIONS

On the basis of the findings following recommendations were offered for future research.

- An experimental study can be conducted on effectiveness of structured teaching programme.
- A replication of the study can be proposed on larger sample for generalization of finding.
- A comparative study can be conducted on knowledge and attitude about PPIUCD between urban and rural postnatal women.
- Study can be conducted to assess the learning needs of the subjects and prepare teaching programme.
- A descriptive survey design can be conducted to determine the contributing factors in discontinuation of PPIUCD.
- An evaluative study can be conducted to investigate the effect of counselling on continuation of PPIUCD.

## CONFLICT OF INTERESTS

None.

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