

A STUDY ON ACCEPTANCE AND DISCONTINUATION OF INTRAUTERINE CONTRACEPTIVE DEVICE AND ITS DETERMINANTS IN A TERTIARY CARE CENTRE

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ABSTRACT: IUD is the world's most widely used method of reversible birth control. Higher discontinuation rates are documented in developing countries like India. This retrospective study was conducted in the Post-Partum unit of King George Hospital, Visakhapatnam over a period of three years from January 2012 to December 2014 to determine the socio-demographic characteristics, side effects/complications, duration of use and reasons for discontinuation of the intra uterine contraceptive device (IUD).

KEYWORDS: Intra uterine contraceptive device, Acceptance, Discontinuation, Determinants, Tertiary care center

INTRODUCTION: Family planning is a conscious effort by a couple to limit or space the number of children they want to have through the use of contraceptive methods (NDHS, 2008). In India, Family planning programme was started in the year 1952, the first country in the world to do so. Since 1977 the programme was renamed as Family welfare programme and lastly to the present Reproductive and child health (RCH) programme. This change was made particularly to emphasize adoption of family planning methods voluntarily without compulsion and to increase the acceptance of contraceptive methods by reproductive age group people.¹ In developing countries like India, despite the many advantages of IUD its utilization is low, majority of people choosing female sterilization for birth control.^{2,3}

IUD is the world's most widely used method of reversible birth control.⁴ It is currently used by nearly 163 million women worldwide accounting for 15% of women in reproductive age.⁵ About 20 in 100 women of reproductive age all over the world use IUD but in India it is only 3 in 100 women although the Indian government offers IUD services free of cost.⁶ According to NFHS-3 IUD accounts for only 1.2 to 1.6% of the total contraceptive usage in the country.⁷ Only 1.8% of women in reproductive age use IUD.⁸

The quality of Family planning services is an important determinant that affects the continuation rate of contraceptive methods. Higher discontinuation rates are documented in developing countries the reasons being, advantages are understated and side effects are exaggerated and there are numerous myths and misconceptions.⁹ Improper selection of cases, poor counseling and lack of follow up also contribute to the decreased use and increased discontinuation. Even though IUDs are highly effective, relatively safe, inexpensive and reversible, complications like abnormal uterine bleeding, pelvic inflammatory disease, displacement, expulsion, perforation, accidental and ectopic pregnancies can occur.

ORIGINAL ARTICLE

The failure rates of different models of IUDs vary between 0.2 to 0.6%. Newer IUDs like Cu-T 380A provide a longer period of protection and have a failure rate of 0.8% in the first year of its insertion.¹⁰ Indian Family planning programme has depended heavily on permanent methods of contraception, about 80% of couples effectively protected having been sterilized and the rest using spacing methods.¹¹

Only a few studies have been conducted in India so far and a thorough review of spacing methods, especially IUD is needed since the surveys show a high rate of discontinuation.¹²

MATERIAL AND METHODS: The data for the study was collected from the Insertion, Consultation, and Removal records of IUD users maintained by the Post-Partum unit of King George Hospital, Visakhapatnam over a period of three years from January 2012 to December 2014.

A total of 251 IUD insertions were registered and were analyzed with respect to selected socio demographic characteristics of the acceptors and the reasons given by those who discontinued IUD use.

RESULTS: Total number of outpatients attending FP OP during the study period were 5731 out of which 2779 women came for sterilization (48.49%), 1047 for MTP (18.26%) and 251 opted IUD insertion (4.38%). 1654 came for other reasons.

People opting for IUD is low because of the misconceptions associated with IUD usage, lack of correct and complete information among acceptors and the desire to complete the family first and then opt for permanent methods of contraception predominantly female sterilization. The socio-demographic profile of the clients is shown in table-1. Only about 14.34% were illiterate where as 32.27% had attained primary education, 37.05% had completed secondary school and 16.33% were graduates as can be appreciated in figure 1. Almost 85% of the acceptors were educated, may be because our center is in a city. Acceptance was highest among the age group of 20-24 years (154, 61.35%) followed by 25-29 years (58, 23.10%) i.e. 84% of the acceptors were in the peak child bearing age of 20-29 years as can be seen in figure 2. Only 10.75% adapted IUD below 20 years and 4.77% after 30 years. If young girls are educated and made aware of IUD, a large number of unwanted pregnancies and MTPs can be avoided which comprised about 18% in present study.

Almost 3/4th (73%) had accepted IUD with one child and 22.3% after two children. Thus an impressive 95% of women with one or two children had accepted IUD thereby reflecting the desire for small family norm. Only 3.18% of women without children had accepted IUD and all those were after MTP as can be appreciated pictorially in figure 3.

Table 2 shows the duration of use of IUD by the clients. Among the 78 women discontinued, 15(5.97%) did so before 1 year. In the present study 78 women discontinued IUD out of 251 insertions accounting for a discontinuation rate of 5.97% at the end of 1 year, 33(13.4%) between 1-2 years, 18(7.17%) between 2-3 years, 26.54% at the end of 3 years and 0.79% at the end of 5 years. Majority of the clients (33, 13.4%) discontinued IUD use after 2 years thereby fulfilling its objective of spacing between children as laid down by the WHO (2 years spacing between pregnancies). These numbers are shown pictorially in figure 4.

ORIGINAL ARTICLE

Table 3 shows the reasons for IUD removal. 31.1% of the client's discontinued IUD usage. Most common cause for discontinuation in our study was desire to conceive (41.02%). 30.76% discontinued due to side effects and complications and 19.23% to undergo sterilization. 3.84% switched over to other methods and 5.12% discontinued due to opposition from family. These are shown pictorially in figure 5.

Table 4 shows the complications reported by the clients. Menstrual disturbances like menorrhagia were the commonest side effect observed in 36 women (14.34%). 13 women (5.17%) came with missing threads and an equal number with vaginal discharge. Abdominal pain accounted for 6.3% of complications. Expulsions and PID was noted in 2 cases each (0.79%). Uterine perforation occurred in 2 women (0.79%). These are shown pictorially in figure 6.

DISCUSSION: This study was carried out to understand the characteristics of the IUD acceptors and the factors associated with discontinuation in our institution. Current study shows that IUD was mainly preferred by women aged between 20-29 years (84%) which was similar to the study of N. N. Ambadekar et. al,¹³ whereas it was 24-35 years in a study conducted by Baijyanthi Baur et al. in West Bengal.¹⁴

Most of the IUD acceptors in the present study were literate (85.66%) while only 14.34% were illiterate, which was comparable to the study conducted by Chandra, Savitha in Goa where only 10% were illiterate.¹⁵ Illiteracy level is usually lower in urban areas.

No nulliparous woman accepted IUD in current study but 3.18% women without children opted IUD after MTP. IUD use was highest after first child (73.70%) and declined thereafter. Similar findings were noted by N. N. Ambadekar et al. and Duolao Wang et. al.¹⁶ whereas, study by Baijyanthi Baur et al. showed 55% acceptance after first child and 45% after second child. This may be explained by the fact that women with two or more children are more likely to be opting for permanent family planning methods like sterilization in our place.

IUD discontinuation in current study at the end of one year is 5.97% and 26.54% at the end of three years with the commonest cause for discontinuation being desire to conceive (41.02%) and due to side effects in 30.76% in contrast to the study by N. N. Ambadekar et. al. where removal for medical problems accounted for 30.3% and desire for a child in 28.8%. In a study of Sharma Megha et al., IUD discontinuation after first year of insertion was 16.79% and 28.5% had their IUD removed after a period of 2-3 years of insertion. 58% discontinued because of desire to conceive and 27.7% because of side effects.¹⁷ IUD discontinuation rate was high in Nigeria (55%)¹⁸ and Egypt (28%).¹⁹

Pregnancy occurred in 3 cases in present study accounting for a failure rate of 1.19%. Expulsion and perforation occurred in 2 cases each.

CONCLUSIONS: Indian Family Planning Programme has promoted mainly permanent methods of contraception and about 80% of couples effectively protected are sterilized and only 20% are using spacing methods. There is still a need for creating awareness among the Indian population about the long term contraceptive methods like IUD. The problem of discontinuation can be tackled through effective educational strategies on contraception; proper client selection and regular follow up. Opposition from family members as a reason for discontinuation is unique to

ORIGINAL ARTICLE

India and therefore discussion with family members may play a positive role in the decision to continue or discontinue IUD which indicates the importance of social support for the use of contraception.

Further large scale studies are required in Indian setup to analyze the field situation of IUD so as to formulate precise strategies to reduce discontinuation and improve acceptance of cu-T.

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ORIGINAL ARTICLE

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Socio-demographic variable	N=251	%
Age(Yrs)		
<20	27	10.75
20-24	154	61.35
25-29	58	23.1
30-35	10	3.98
>36	2	0.79
No. of living children		
0	8	3.18
1	185	73.7
2	56	22.31
3	2	0.79
4	0	0
Education Level		
Illiterate	36	14.34
Primary	81	32.27
Secondary	93	37.05
Graduate	41	16.33

Table 1: Socio-demographic Characteristics

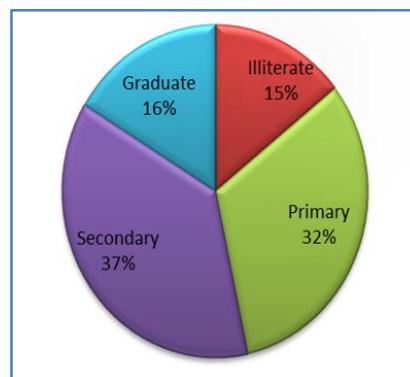


Fig. 1: Literacy Status of the clients accepting IUD

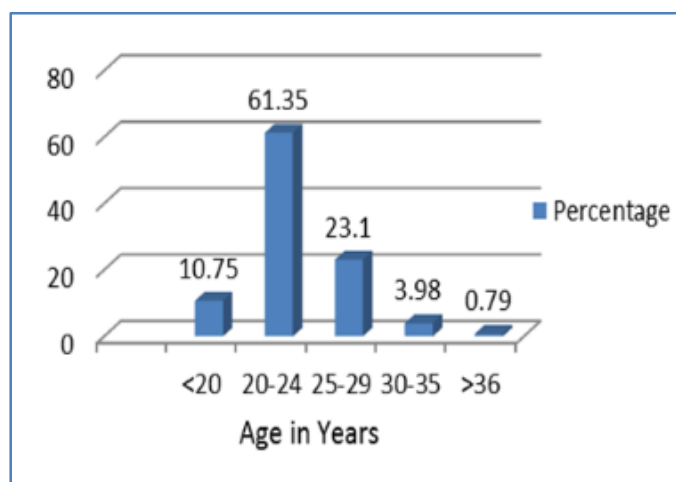


Fig. 2: Age at IUD insertion

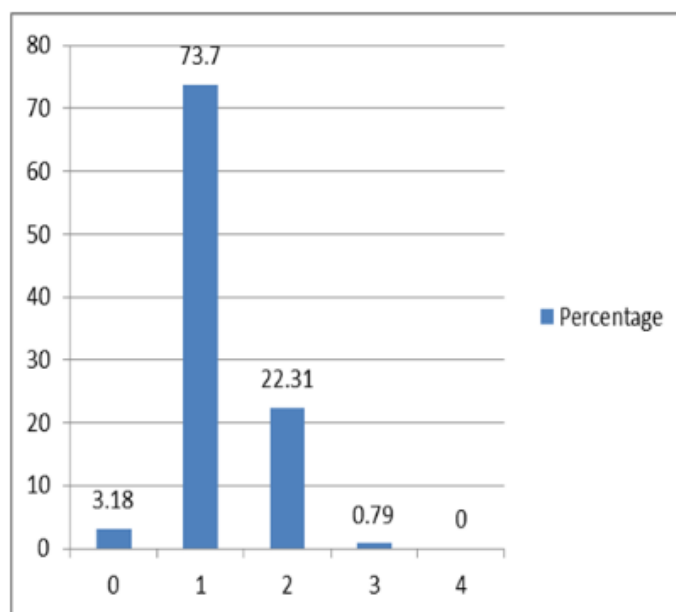


Fig. 3: Number of living children

Time in years	IUD discontinued	
	Number	Percentage
<1	15	5.97
01-Feb	33	13.4
02-Mar	18	7.17
03-Apr	7	2.78
04-May	3	1.19

ORIGINAL ARTICLE

>5	2	0.79
Total	78	31.04

Table 2: Life Table analysis

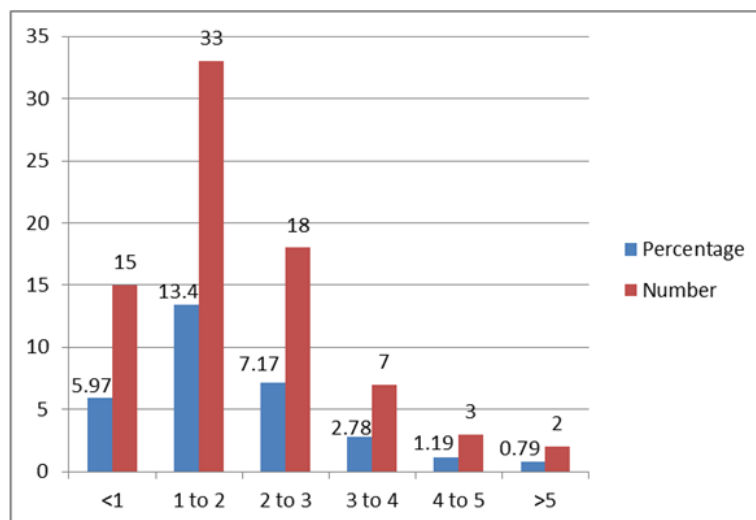


Fig. 4: Number Discontinued in Years

Desire to conceive		Side Effects		For Sterilisation		To other methods		Family opposition	
No.	%	No.	%	No.	%	No.	%	No.	%
32	41.02	24	30.76	15	19.23	3	3.84	4	5.12

Table 3: Reasons for Discontinuation

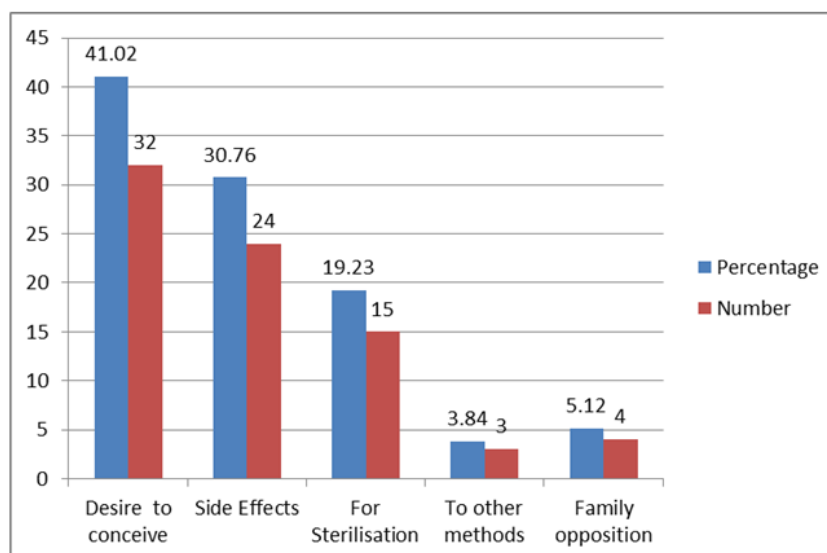


Fig. 5: Reasons for Discontinuation

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Side Effects	Number	Percentage
Menorrhagia	36	14.34
Abdominal Pain	16	6.3
Missing Threads	13	5.17
Vaginal Discharge	13	5.17
Pregnancy	3	1.19
Expulsion	2	0.79
PID	2	0.79
Perforation	2	0.79

Table 4: Side effects/Complications of IUD usage

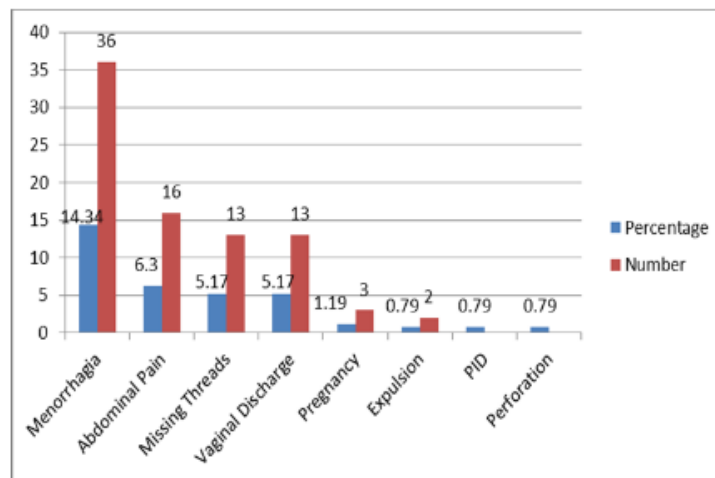


Fig. 6: Side effects/Complications of IUD usage

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