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Knowledge and awareness towards intrauterine contraceptive devices among Indian women in the reproductive age group in a tertiary care teaching hospital

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ABSTRACT

Intrauterine contraceptive device (IUCD) is convenient, a one-time procedure, OP procedure, long-acting, cheap, having less side effects and reversal of fertility is soon after removal, makes it suitable temporary contraception. To improve its usage and to improve the Nation's economy by uplifting family health is by creating awareness among women. This can be achieved by counselling, health talks, educating them. These targets can be met during their visit to hospitals for general ailment or by public awareness programs. The objective of this study is to evaluate knowledge, awareness towards the IUCD among Indian women in the reproductive age group (18 to 45 years) in a tertiary care teaching hospital. A Cross-Sectional Mixed Research from January 2019 to June 2019 was done among patients in the age group of 18-45 years attending the outpatient department of a tertiary care teaching hospital. The analysed results showed only 63% of participants were aware about the need for birth spacing and limiting child birth. 47% of participants interviewed knew that the device is used to prevent pregnancy while the rest didn't even know what an IUCD is. This survey concludes poor awareness about the IUCD among women in the study group. We have to improve the awareness and usage of IUD with proper health education and counselling.

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INTRODUCTION

India is expected to have a population of 1.53 billion by the year 2050 (Khan *et al.*, 2014). Every fifth birth in the world is an Indian, and half of the Indian population is comprised of people belonging to reproductive age (Vaidyanathan *et al.*, 2014). India started its family planning program in 1952. The objective of the national program was to control the population so that economic development could keep pace with time.

Intrauterine contraceptive device (IUCD) is convenient, a one-time procedure, OP procedure, long-acting, cheap, having less side effects and reversal of fertility is soon after removal, makes it suitable temporary contraception. Rural women, most of them are unaware of this or have myths about it, which makes them the non using population. The common problem among both rural and urban women for not following this method for contraception is the lack of knowledge about its advantages and at the same time, the wrong information they possess along with fear of side effects.

To improve its usage and to improve the Nation's economy by uplifting family health is by creating awareness among women. This can be achieved by

counselling, health talks, and educating them. These targets can be met during their visit to hospitals for general ailment or by public awareness programs.

MATERIALS AND METHODS

Study design-A Cross-Sectional Mixed Research

Study settings - Saveetha Medical College & Hospital, Chennai

Study Period-January 2019 to June 2019

Study Subjects - Patients in the age group of 18-45 years attending the outpatient department of a tertiary care teaching hospital. n=100.

The objective of this study is to evaluate knowledge, awareness towards the IUCD among Indian women in the reproductive age group (18 to 45 years) in a tertiary care teaching hospital.

Inclusion criteria

Women in the reproductive age group irrespective of their marital status attending the outpatient department were included in the study.

Exclusion criteria

Women who refused to participate in the study were excluded.

This study was conducted in department of Obstetrics and Gynaecology, Saveetha Medical College & Hospital, Thandalam, Chennai, from January 2019 to June 2019. The women fitting into the inclusion criteria were interrogated on a pre-structured semi –open-ended questionnaire. The questionnaire included demographic details, obstetric carrier, use of contraception, the method used, usage of IUCD, its duration of usage and attitudes. If no history of IUCD insertion was obtained, then the causes for non-acceptance documented. History of permanent contraception was noted, if any. Ethical requirements of informed verbal consent and other confidentiality were ensured.

Participants were categorized into three groups according to their parity. The first group (group A) comprised all participants who were nulliparous. Group B included all participants who were paragraph 1 or 2, and group C all those who were paragraph 3 or more. Those women with high parity were expected to have better knowledge about the device than those with low parity. Analysis of the answered questionnaire was done.

Statistical aspects

The sample size was decided after pilot testing. Summary statistics were estimated for all participants. Descriptive results were compared using the $\chi 2$ test. The differences between groups were considered significant if the p-value was <0.05.

The permission of the ethical committee was obtained from the Institutional Ethical Committee before the study.

RESULTS AND DISCUSSION

Socio-demographic characteristics

Most participants were in their twenties, with a mean age of 29.3; 87% (n=87) were <30 years old, 4% (n=4) were teenagers, and 13% (n=13) were aged 35 years or more.

Most participants were married 96%, (n=96) with only 4% (n=4) as single.

Most participants had some form of formal education: 68% had attended school up to higher school level, 32% are graduates. At the time of the survey, 65% of participants were unemployed and 35% had a job.

Current usage of contraception

The barrier method like condoms, with which participants were familiar about 14%, while o 16% had used the IUCD before or using now, and 7% of participants had used natural methods of contraception before. 7% have used OCP, including injections and 40% of women were already sterilized. 16% of women are not using any type of contraception methods (Table 1)

Awareness about the IUCD

The study showed a significant difference among the three parity groups in terms of knowledge about the IUCD (p>0.05 for all the questions). Only 63% of participants were aware about the need for birth spacing and limiting child birth (Table 2).

47% of participants interviewed knew that the device is used to prevent pregnancy while the rest didn't even know what an IUCD is. The majority of them knew that it is used for birth spacing. The main source of information about IUCD is mass media, followed by information provided by health care professionals. Almost all participants who knew about IUCD were already aware of other contraceptive methods as well. About 33 out of 47 knew the duration of usage of IUCD which is about 10 years. 44% of participants were aware that the IUCD insertion could cause side effects. Only 53.1% of participants knew that IUCD has some advantages over other methods. 32 out of 47 did not know the necessity to check for the thread after each menstrual cycle. The knowledge about the ideal follow up criteria and the method of IUCD insertion were rela-

Table 1: Demographic characteristics and previous experience with contraceptives

	Group A N=17	Group B N=70	Group C N= 13	Total N=100 (%)
Age in years (Mean)	28.5	28.9	30.6	29.3
Marital status	3	1	0	4 (4)
1. Unmarried	14	69	13	96 (96)
2. Married				
Education	0	2	2	4 (4)
1. Primary school	0	6	7	13 (13)
2. Middle school	12	26	3	41 (41)
3. High school	5	36	1	42 (42)
4. Graduates				
Employment	14	44	7	65 (65)
1. Unemployed	3	26	6	35 (35)
2. Employed				
Currently used contraceptives	2	5	0	7 (7)
1. OCP	0	12	4	16 (16)
2. IUCD	4	10	0	14 (14)
3. Condom	0	32	8	40 (40)
4. Sterilization	2	5	0	7 (7)
5. Natural methods	9	6	1	16 (16)
6. None				

tively poor, which were 21.2% and 25.5%, respectively. In general, the knowledge about IUCD among Indian women is significantly poor.

Source of information

The main source of information was the mass media; 40.4% (n=19).38.2% of all participants had acquired their information about the IUCD from the clinic during teaching and counselling sessions. 21.2% (n=10) from family members and friends. (Table 2)

Out of all the participants (n=100), 74 individuals were using anyone of the contraception methods. The rest (n=26) did not use any; this includes the unmarried and the nulliparous women. 16 individuals were using IUCD as the contraceptive method in this study. Copper T was the only type of IUCD been used by the women. The average of duration of usage of Copper T was 2.68 years. Women who had been using IUCD complained about several side effects; 4 complained of abdominal pain and irregular cycles.5 women had experienced an increased amount of bleeding during menses. Expulsion of the IUCD was also a side effect in 3 individuals. Other issues like counselling the patient providing with useful information about IUCD and pelvic examination which are usually done before administering IUCD, were enquired. Only 3 women out of 16 were counselled before insertion. And 2 out of 16, got their pelvis examined. Only 56.2% of women agreed that they are feeling satisfied with IUCD. Only 4 women accepted that they do check for the threads after each menstrual flow. Two were aware about the ideal follow up criteria and were regularly following it. 56.2% of women who were using IUCD, preferred it over other methods owing to its long term use.18.7% preferred it due to facts like being cost-effective and the advantage of being discontinued whenever pregnancy is needed. One woman told me that she uses IUCD due to its minimal user interference.

33 out of 47 participants expressed concern about pain during insertion and 31.9% expressed fear that having the device in the uterus would cause genital cancer and fear of womb perforation, respectively. The belief that the device would interfere with normal sexual activity was expressed by more than 8.5% of participants. Almost 38.3% (n=18) of all participants showed a lack of knowledge for the continued need for condom use to prevent sexually transmitted diseases.

The individuals belonging to the age group 19-28 years are those who need contraceptive devices the most and they are advised to follow family planning methods by the government. In this study, only 47% of females enquired were adopting family planning methods. But 56% of married Indian women are

Table 2: Knowledge about the IUCD per parity group

		Group A N=17	Group B N=70	Group C N= 13	Total N=100 (%)	P-value
Aware about birth spacing	Yes	11	44	8	63 (63)	0.983
	No	6	26	5	37 (37)	
Do you know what is an IUCD?	Yes	5	39	3	47 (47)	0.268
	No	12	31	10	53 (53)	
		Group A N=5	Group B N=39	Group C N= 3	Total N=47	
IUCD is used for		4	26	3	33(70.2)	
1. Maintaining birth space		0	12	0	12(25.5)	
2. Limiting births		0	1	0	1 (2.12)	
3. Preventing STD, HIV		0	0	0	0 (0)	
4. Enhancing sexual performance		1	0	0	1 (2.12)	
5. Treating gynaecological conditions						
Main source of information		4	13	2	19 (40.4)	0.238
1. Mass media		0	10	0	10 (21.2)	
2. Friends, relatives		1	16	1	18 (38.2)	
3. Health care personnel						
Other methods	Aware	5	39	3	47 (100)	
	Not aware	0	0	0	0 (0)	
Duration of usage	Aware	4	26	3	33 (70.2)	0.419
	Not aware	1	13	0	14(29.7)	
Side effects	Aware	3	17	1	21 (44.6)	0.722
	Not aware	2	22	2	26 (55.3)	
Advantages of IUCD	Aware	4	21	0	25 (53.1)	0.089
	Not aware	1	18	3	22(46.8)	
Necessity to feel for thread	Aware	2	13	0	15 (31.9)	0.451
	Not aware	3	26	3	32 (68)	
Ideal follow up criteria	Aware	1	9	0	10 (21.2)	0.640
	Not aware	4	30	3	37(78.7)	
Method of insertion	Aware	1	11	0	12 (25.5)	0.533
	Not aware	4	28	3	35 (74.4)	

using family planning methods, tells the National Family Health Survey.

In a study conducted by Bindoo Yadav, about the awareness of birth spacing in rural Haryana, there was a very high percentage of awareness about birth spacing (82.6). Only 40% were actually practising birth spacing. In the contrary, only 63% were aware of the need for birth spacing.

In another study by Rao and Babu (2005) among the 252 Racha Koya women, 81% had a high level of knowledge on different contraceptive methods (Rao and Babu, 2005).

In the present study, 16% used a condom for contraception. 16% had not used any contraceptive method, which is not comparable to the study by Young *et al.* (1994) in which it was 8% (Young *et al.*, 1994) indicating the low level of acceptance in Indian women.

In the present study, the main source of information was mass media (40.4%), health facility (38.2%), followed by personal relations i.e., spouse, friends and relatives (21.2%). This goes well with the study by Ghike *et al.* (2010) in which media, including TV and radio (70%), were the chief sources of information (Ghike *et al.*, 2010). In contrast studies by Pegu *et al.* (2014) the source of information was mainly obtained from health workers (58.6%) followed by media (24.1%) and social circle (15.5%) (Pegu *et al.*, 2014).

The average duration of usage of IUCD in our study is 2.68 years. This fulfils the criteria laid down by WHO, which advices minimal interval of spacing between pregnancies to be atleast 2 years.

The most common side effect produced by IUCD in women who use it for an average of 2.6 years is dysmenorrhoea (31.2%), followed by pain and irregular bleeding (25%). According to a study by Pandey and Tiwari (2015) 36.8% of clients have side effects (Pandey and Tiwari, 2015). The most common being a pain with heavy bleeding in 30.6%, pain in 23.8%. The expulsion rate was 18.7% in this study.

The participants interviewed were not aware of the insertion procedure, reversibility of fertility, minimal side effects. Educating the target population with proper information will increase the acceptance and continuation of this mode of temporary contraception.

We believe that the women would like to know about how long the IUCD works and they are happy with the long term performance. According to Credé *et al.* (2012), it was found that more than half of their participants did not know that they could use the device for 10 years. Studies conducted by Gutin *et al.* (2011) and Whitaker *et al.* (2008) reported that participants had known the fact that the IUCD could be used for a long time.

One of the ways to improvise low awareness is to create and follow a structured teaching presentation on contraception in hospitals and health care facilities. The patients should not tell to follow one type of contraception. Instead, they should be told about all available methods and asked to choose the method which would suit them the most. This is called the Cafeteria approach.

Study limitations and strengths

This study is based on a convenience sample of women from a specific area, Chennai limiting the transferability of the results. However, this study has shown us the current picture of IUCD awareness in this area and the main misconceptions among patients. The information provided by this study could be used by hospitals to improve the condition.

CONCLUSIONS

This survey documents poor awareness about the IUCD among women in the study group.

The following are the ideas which will improve the awareness of contraception,

1. Health education and counselling to target population during a visit to hospital plays a vital role in increasing awareness
2. Two-way communication is effective in counselling
3. Complete knowledge about IUCD among medical and paramedics staffs is essential
4. Family support in adopting family planning methods has to be encouraged which includes support from a male partner

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Conflict of Interest

The authors declare that they have no conflict of interest for this study.

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