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Research article

ASSESSMENT OF AWARENESS AND BELIEFS REGARDING INTRA UTERINE DEVICE AMONGST ITS FORMER USERS ATTENDING TERTIARY CARE CENTRE IN GUJARAT

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ABSTRACT

Background: Only 1.8% of married women of reproductive age in India use IUDs despite its advantages over Hormonal pills or permanent methods. The present study was done to study the awareness of the mothers about IUD which affects its utilisation. **Method:** This was a descriptive cross sectional analytical study was carried out at obstetrics and gynecology department of PDU Government medical college and civil hospital, Rajkot, Gujarat, from January 2014 to June 2014. Post natal mothers who had delivered in the hospital, who had previously used intrauterine contraceptive device (IUCD) for a period of more than one month & who agreed to be a part of the study were included in the study. **Results:** A total of 110 women who agreed to be a part of the study, were interviewed. The mean age of study participants was 29.2 ± 3.3 years & over half of them resided in urban areas (56.36%) & were housewives (74.54%). Over 90% of the participants were aware of barrier or hormonal methods of contraception & 25 to 50 % of them had also used them in the past. Mean duration of IUD use amongst the study participants was 36.9 ± 18.9 months. While over three fourth of the participants reported to have been provided some sort of counselling before IUD insertion only 64% of them agreed that their pelvic examination was done simultaneously. Awareness about IUD was significantly higher among graduate & working women while there was no significant association of knowledge with other independent variables. **Conclusion:** There was lack of knowledge amongst participants regarding IUDs as well as many myths which needs to be addressed in order to improve its utilisation by the community.

Key words: Adverse events, Attitude, Awareness, Beliefs, Intra Uterine device, Knowledge

INTRODUCTION

According to the Population Reference Bureau¹, about 17% (100 million) of all married women in less developed countries (LDCS) would prefer to avoid a pregnancy but are not using a contraceptive method. In Africa, 22 countries have levels of unmet need of 20 percent or higher, and in Latin America and Asia, most countries have levels of unmet need of 10 percent of women or higher.^[1]

Worldwide, 61% of women aged 15–49 years who were married or in a consensual union (635 million women) used some form of contraception in 2003. In

developed countries, women relied mostly on oral contraceptives (16%), female or male sterilization (15%) and condoms (13%); only 9% of women used long-acting reversible contraceptive (LARC) methods. The respective percentages in developing countries were 6, 25, 3 and 18% (United Nations, 2003).^[2]

India's population, which crossed one billion in 2000, is projected to reach 1.53 billion by 2050, making it the most populous country in the world. Women of reproductive age group (15-49 years) make up

approximately 248 million. As per NFHS -3, the contraceptive prevalence rate in India is 56.3 %, which varies widely among different states and the unmet need for family planning is high at 13% (6% for spacing).^[3]

Although oral contraceptives can be very effective in preventing unintended pregnancies, they have been associated with poor compliance which often results in contraceptive failure. In contrast, female sterilization does not depend on users' adherence, is highly effective, but it has a permanent contraceptive effect. Notably, LARC methods combine reversibility with particularly high effectiveness, which does not rely (or relies at a small degree only) on users' compliance or correct use.^[2, 4-7]

Intrauterine contraception is the most widely used amongst the long-acting reversible contraceptives (LARC) in the world today, especially in developing countries. The majority of devices used are copper intrauterine devices (Cu-IUDs) with 1 150 million women users.^[8]

The evolution of the intrauterine device (IUD) has led to a safe and effective contraceptive choice for many women. The efficacy in pregnancy prevention far surpasses other daily and scheduled methods such as pills, patches, and contraceptive rings.^[9,10] Satisfaction rates rank high among IUD users in the United States (US) compared to other methods, and complication rates have been shown to be low.^[11]

Since the mechanism of action of IUDs is localized to the uterus and cervix, with little if any systemic effect,^[12] they are an optimal method for women with multiple medications or medical co-morbidities. In addition to its high efficacy over other contraceptives, additional advantage of its use in women with contraindications to other systemic contraceptives^[13] makes IUDs a standout among contraceptive choices. IUCD services are offered free of cost by the government in India. Yet despite this favourable profile, only 1.8% of married women of reproductive age in India use IUDs.^[3] So the present study was carried out with the objective to assess the knowledge & beliefs of post – natal mothers about IUD & their attitude towards the use of the same.

MATERIAL AND METHODS

Type of study: This was a descriptive cross sectional analytical

Place of research: Study was carried out at obstetrics and gynecology department of PDU Government medical college and civil hospital, Rajkot, Gujarat.

Inclusion criteria: Post natal mothers who had delivered in the hospital, who had previously used intrauterine contraceptive device (IUCD) for a period of more than one month & who agreed to be a part of the study were included in the study. The present study was conducted over a period of 6 months from January 2014 to June 2014.

Sampling Method: The subjects were selected by convenient sampling method based on availability of mothers (N=110). The consent of all the subjects was taken prior to the study. Permission from the ethical committee of the institution was sought before the starting of the study.

Method: Data on socio-demographic profile, awareness & use of different contraceptives, their preference for IUCD, their attitude & beliefs regarding IUCD was collected using a pretested, semi-structured questionnaire. Independent variables were Age, education, occupation & obstetric profile of the woman. Dependent variables were awareness & beliefs of women regarding IUCD use.

For each of the ten knowledge based questions about IUD asked to participants, each correct response was given a score of one. Their performance was classified as Good, average or poor if their score was 8-10, 5-7 & 0-4 respectively.

Statistics: Data entry and analysis was done using MS-Excel 2007. Chi-square test was used to find the association between knowledge scores & demographic variables for an alpha error of 5%.

RESULTS

Depending on the inclusion criteria & consent given by mothers, interview of a total of 110 post-natal mothers was taken. The mean age of study participants was 29.2±3.3 years & over half of them resided in urban areas (56.36%) & belonged to joint families (54.64%). Majority of the participants belonged to Hindu religion (76.36%) & were housewives by occupation (74.54%). Although none of the participants were illiterate only 20% of the participants had graduated. The mean parity of the participants was 2.4±0.6.

Over 90% of the participants were aware of barrier or hormonal methods of contraception & 25 to 50 % of

them had also used them in the past. Mean duration of IUD use amongst the study participants was 36.9±18.9 months. While over three fourth of the participants reported to have been provided some sort of counselling before IUD insertion only 64% of them agreed that their pelvic examination was done simultaneously. This highlights the laps in duty on the part of service providers & could lead to flare up of cervical infection have it been present at the time of insertion of IUD. (Table 1)

The proportion of mothers giving correct responses to each of the ten knowledge based questions about IUD is shown in table 2. Majority (93.6) of the participants were aware of at least other methods of contraception. Over three fourth of them knew the type of IUD used & its duration of effectiveness. Around one third of the mothers were aware of at least two of the adverse events as well as changes in menstrual bleeding pattern following its insertion. Nearly half of the participants did not know the importance of regularly feeling the thread of IUD or its follow up criteria following IUD insertion. Very few of the mothers knew of newer IUDs available or that IUD can also be used in a nulligravida. These findings highlight serious gaps in the knowledge of the participants about IUDs. (Table 2)

In the present study, the major reasons for preference of IUD over other methods as per the participants were minimum user interference (46%) & its long lasting contraceptive efficacy (40%). Other reasons were its ability to be discontinued at any time when needed, less cost, easily controlled by women, no consuming drugs & fewer side effects. (Table 3)

The main side effect reported by participants was abdominal pain/cramps after insertion in around 40% cases. The other were Leucorrhoea (25%), Dysmenorrhoea (21%), changes in bleeding pattern during menstruation (14%), expulsion of IUD (8%), infection (3%). About 17% of the participants reported no occurrence of any adverse events. (Table 4) The mothers who were interviewed also had many myths & beliefs about IUD as can be seen in table 5. Participants above thirty years of age had higher levels of knowledge than those under thirty. However this difference was not statistically significant. Residents from urban areas had significantly higher knowledge scores than their counterparts in rural areas. Participants belonging to Hindu religion had

higher scores which showed borderline significance as compared to other religions. This difference could be attributed to the difference in level of education of the participants belonging to other religions. The knowledge scores of participants who had used IUD for more than three years did not differ significantly than those who had used IUD for less than three years. Participants who were educated up to secondary level or higher & those who were employed had higher level of knowledge about IUD than those who were educated up to primary standards or those who were unemployed. This difference was highly significant. There was no significant association between increasing parity of participants or participants with past history of abortion & their level of knowledge about IUCD. (Table 6)

Table 1: Profile of IUD use amongst study subjects

Variable	Response N= 110	%
Main source of information about IUCD*		
Mass media (TV, Newspaper)	15	13.6
Friend, Relative	99	90
Health care personnel	73	66.36
Decision making for IUD use		
Couple	65	59.0
Husband	13	11.8
Herself	16	14.5
Mother-in-Law	15	13.6
Method aware other than IUCD*		
Condom	104	94.5
OCP	108	98.1
Injectable method	20	18.1
Permanent methods	52	47.2
Utilisation of other methods in past*		
OC Pills	27	24.5
Barrier method	49	44.5
Others	00	0
Counselling provided before IUD insertion	84	76.3
Pelvic examination done before IUD insertion	60	64.5
Mean duration of IUD use	36.95 ± 18.89 months	

*multiple answers

Table 2: The knowledge of participants about various aspects of IUCD

Knowledge regarding	Total N = 110	%
At least two other methods of temporary contraception	103	93.64
Type of IUCD used	83	75.45
Duration of effectiveness of IUCD	85	77.27
Side effects of IUCD (at least 2)	76	69.09
Changes in menstrual bleeding pattern	68	61.82
At least two advantages of IUD over other methods of temporary contraception	64	58.18
Necessity to feel thread	55	50.00
Ideal follow-up criteria	52	47.27
Knows about newer IUCD	25	22.73
Use of IUD for family planning of a newly married childless couple	10	9.09

Table 3: Preference for IUCD over other methods amongst the participants

Advantages of IUCD	Yes N=110*	%
Minimum user interference	51	46.36
Long lasting	44	40
Can be stopped any time when pregnancy is wanted	36	32.72
Less cost	28	25.54
Controlled by women	28	25.54
Others (less side effects, no taking regular drugs)	24	21.81

*multiple responses

Table 4: Frequency distribution of adverse events due to IUD use amongst the participants (multiple responses)

Adverse events*	Encountered by participants	%
Abdominal pain/cramp after insertion	43	39.09
Leucorrhoea	28	25.54
Dysmenorrhoea	24	21.81
Bleeding pattern changes during MC	16	14.54
Expulsion	09	8.18
Fever with infection	03	2.72
No side effect	19	17.2

*Participants may have more than one adverse event

Table 5: Beliefs regarding IUCD amongst users (multiple responses)

Belief (N=110)	Yes	%
Rest period needed after prolonged use	88	80
Perforate uterus	60	54.5
Discomfort during sex	55	50
Causes infection in uterus	36	32.7
Decrease capacity to do physical work	33	30
Causes cancer	31	28.1
Acts by causing abortion	23	20.9
Birth defect	17	15.4
Ectopic pregnancy	17	15.4
Infertility	15	13.6
Moves to heart /brain	13	11.8
Infection to foetus	05	4.5
Weight gain	07	6.3
Cause preterm labour in case of accidental pregnancy	03	2.7

*multiple responses

Table 6: Association of knowledge scores of the participants to various demographic variables

Demographic variables		Good (8-10)	Average (5-7)	Poor (1-4)	Chi-square test
Age in Years	≤30, N=77	16	37	24	Chi = 2.913, p = 0.233
	>30, N=33	11	16	6	
Residence	Rural, N=48	5	27	16	Chi = 7.491 p = 0.023
	Urban, N=62	20	28	14	
Religion	Hindu N=84	24	36	24	Chi = 5.772 p = 0.055
	Others N=26	2	17	7	
Education	Up to primary N=37	1	17	19	Chi = 21.478 p = 0.00002
	Secondary & above N=73	26	35	12	
Occupation	House-wife N=81	9	48	24	Chi = 24.135 p = 0.000005
	Employed N=29	16	7	6	
Parity	Two para N=74	20	36	18	Chi = 1.298 p = 0.522
	More than two para N=36	7	17	12	
Abortion	No abortion N= 60	12	29	19	Chi = 1.308 p = 0.519
	Past history of abortion N= 50	14	24	12	
Duration of use	≤ 3 years N = 73	17	36	20	Chi = 0.052 p = 0.974
	>3 years N = 37	8	19	10	

Table 7: Attitude of subjects regarding IUCD

Attitude of subjects about IUCD use	Yes (N= 110)	%
Feels satisfied with IUCD use	84	76.36
Will encourage a friend to use IUCD	101	91.81
Willing to use it again if needed	54	49.09
Willing to check the thread of inserted IUD regularly after every menstruation	69	62.72

DISCUSSION

The major source of information about IUCD was a friend or a relative in 90% of the participants with secondary role of health care personnel & minimal information through mass media. (Table 1) This highlights the failure of mass media in creating awareness about IUDs. Reddy et al in 2003^[14] stated that the major source of knowledge among men about Family Planning methods was magazines (64%) followed by personal relations i.e. spouse, friends and relatives (62%), mass media (54%) and health personnel (34%). The role of health care providers in providing contraception knowledge should be prioritised as it's a two way communication process & will provide correct & complete information as compared to friends or mass media.

Although in 60% of cases the decision for IUD use was by the couple themselves, in about 25% of the cases the decision for IUD use was dominated by husband or mother-in-law hampering the decision making ability of the women. (Table 1) Prachi R et al in 2008^[15] mentioned that in 41.6% of the women the choice of contraceptive methods used was decided by their husband which is higher than that in present study. The difference was due to difference in the literacy rate of women & settings in which the study was done.

In a comparative study on attitude of contraceptive methods users by Ehsanpour et al (2010), desirable attitude amongst users towards IUD in comparison with other methods was due to high efficacy, ease of use, lack of interference with sexual relationship and no need for daily remembrance.^[16] This finding was very similar to the present study. (Table 7)

Patients must also be counselled regarding expected adverse events after IUD insertion & tips to manage

them. Thorough counselling about **expected changes in bleeding patterns** before IUD insertion correlates with satisfaction rates and continuation rates.^[17,18] It must be stressed upon that the occurrence of side effects experienced by the mothers **will decrease over a period of few months.**^[18] This will ensure greater compliance among the mothers towards use of IUD.(Table 4)

In the present study, 80% of the participants mentioned that a break from continuous usage of IUD is needed, while there is no such literature supporting this view point, discontinuation of IUD would also increase the risk of unintended pregnancy. Table 5 highlights many myths & beliefs about IUD amongst its former users. Around half of the mothers believed that IUD will perforate the uterus & over one third of them believed that it would lead to infection.

Infection following IUCD insertion is less than 1%. This minimal risk is highest during the first 20 days after IUCD insertion, especially if aseptic precautions have not been taken, rather than due to IUCD itself.^[3] World Health Organization found that the risk of development of pelvic inflammatory disease (PID) in women with IUD is same as or less than the risk of PID in women without IUDs.^[19, 20, 21]

The attitude of a woman about the use of IUD is based on her existing knowledge, her beliefs about IUD & counselling provided by the service provider. Although over three fourth of the participants were satisfied about IUD use still there remained a quarter of them who for various reasons were not satisfied with IUD. Only half of the participants were willing to use IUD again for contraception which is a matter of concern. As many as 40% of the participants were not motivated to check the thread of IUD after menstruation. These findings pose a serious threat to the continuation of use of IUD in future. The concerns of these women need to be immediately attended to prevent discontinuation of IUD use in them. (Table 7)

CONCLUSION

The mothers in the present study were unaware about the basic knowledge regarding IUD. Age of the participants, Religion, parity status, history of abortion or duration of use of IUDs did not significantly affect the knowledge scores of the participants regarding IUD. However there was

strong association between education & working status of participants to their awareness about IUD.

The findings of the present study showed that many former users of IUDs still have false beliefs, concerns & unfavourable attitudes about IUDs. This may result in discontinuing their IUD use as well as propagate false beliefs amongst their peer groups. IUDs are safe and effective in women of any reproductive age. They offer superior contraceptive efficacy, plus non-contraceptive benefits that can improve quality of life in many women. Patient lack of knowledge about IUDs coupled with practitioner apathy for sufficient counselling, all continue to be barriers to IUD use.

Recommendation: The dispersion of accurate information addressing their beliefs & concerns is crucial to the continued use and growing acceptance of this beneficial method.

Conflict of Interest: Nil

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