

Utilization of intrauterine contraceptive device in a District of West Bengal, India

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Abstract

Introduction: Lack of knowledge of contraceptive methods or source of supply, cost and poor access are the barriers that exist in developing countries and present study was conducted to assess the current intrauterine contraceptive device (IUCD) utilization by eligible couple in Howrah District of West Bengal.

Methods: A community based cross sectional study using stratified multistage random sampling technique to obtain a sample size of 1600 using couple protection rate of West Bengal as 50%. So 12 villages and 4 urban wards were selected, with 125 sampled eligible couples in each village/ward to get 2000 eligible couples.

Results: Contraceptive practice by any method was 63.3% and couple protection rate by modern method was 54.3%. IUCD use rate was 3%, oral contraceptive pill (OCP) use 25.4%, ligation 18.4%, condom 7.4%, and vasectomy 0.1%. Ever use rate of IUCD (Cu-T/Loop) was 6.3%, which increased significantly with advancement of maternal age, but was not associated with maternal literacy. Lack of motivation (43.4%), misconception (24.9%), unawareness (18.7%), unwillingness (10.9%) and religious/cultural barrier (4%) were the major reasons for underutilization of IUCD.

Conclusions: IUCD acceptance is very low and different initiatives should be taken to improve it.

Key words: Acceptance, eligible couple, intra uterine contraceptive device

Introduction

The Reproductive and Child Health (RCH) Program in India promotes responsible and planned parenthood through the government's Family Welfare Program with voluntary use and free choice of contraceptive methods.¹

Despite the many advantages of the IUCD as a method of family planning, it generally suffers from unpopularity worldwide, with the exception of few countries like China, Egypt, Mexico and Turkey. The scenario in India is the same, with less than two percent of currently married women adopting the IUCD as a method of contraception.²

As per National Family Health Survey—3, the Contraceptive Prevalence rate in India is 56.3%, which varies widely among

different states. But yet the acceptance of IUCD (Cu-T) continues to remain below 2%, out of total couple protection rate of 48.5% for the use of any modern contraceptive method (NFHS-3) in India.¹

In West Bengal knowledge of IUCD has declined also from 73% in 1998-99 NFHS-2 (1998—1999) to 68% in 2005-2006(NFHS-3). Though the Contraceptive Prevalence Rate by any method in West Bengal among currently married women aged 15-49 yrs is 71 percent and Couple Protection Rate by modern method is 50% according to NFHS- 3 of West Bengal, only 1% currently married women of reproductive age group adopted IUCD in West Bengal.³

Socio-cultural and behavioral factors influence the decision to use as well as the selection of a contraceptive method,

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continuation of use of contraceptives and reasons for discontinuation of a contraceptive. In India, a thorough review of birth spacing methods, especially the IUCD, is needed since the surveys show a high rate of discontinuation.⁴

The Government of India, as part of its commitment towards provision of quality spacing services in family planning, introduced Cu—T 380A in 2002 with an effective protection for 10 years replacing the earlier Cu-T 200B. In India only 1.8% of married women of reproductive age use IUCDs, despite the fact that the Government offers IUCD (Copper-T) services free of cost, which therefore still remains largely underutilized.¹

So the present study was conducted with the objectives of assessment of current status of IUCD (Copper-T) utilization and to determine the relevant factors for poor utilization by the currently married women of reproductive age group in a district of West Bengal in India.

Methods

This community based cross-sectional study was conducted in sampled villages and municipal wards of Howrah district of West Bengal in India during April to September 2009. The sampling technique used was a multistage stratified random sampling. One district was chosen randomly from the 19 in West Bengal state and that district was Howrah. Out of total of 14 blocks in the district, 3 were selected randomly. In each block, 2 sub centers were selected using simple random sampling method, and in each sub center 2 villages were selected randomly. In the urban agglomerates, municipalities were chosen and in each, 2 wards were selected randomly. Thus we obtained 12 villages and 4 urban wards (As Urban and Rural population are in the ratio of 1: 3, so total 16 areas selected from the district were also distributed in the same ratio, i.e. 4 urban wards and 12 villages from blocks).

Since the average Couple Protection Rate of West Bengal is 50% and maximum allowable error is 5%, minimum sample size works out to be 1600. Hence the sample size was fixed at 2000 Eligible Couples for the study. From each area, 125 eligible couples were covered to get the total sample size 2000.

The data was collected using a predesigned and pretested schedule and interviewing the female partner of all eligible couples by house-to-house visit using standard random procedures to go to the first house. Faculty members of the Community Medicine department of various Medical Colleges were involved in the survey.

The study variables used were age of respondent, age at

marriage, age at first conception, literacy level, socioeconomic condition, knowledge about contraceptives, current use of contraception, ever use of contraception, reasons for non-utilization of IUCD etc.

The senior Professors did supervision during the time of survey.

Collected data were then analyzed and statistical test were done with the help of Microsoft Excel and Epi-info (3.5.1) software. Test for the statistical significance was applied by using χ^2 test for analyzing the difference between the two proportions ($P < 0.05$ was considered significant).

Couples with Wives aged between 15-49 years who will be needing family planning services are referred to as eligible couple.⁵ Such women have been termed eligible women in this study.

Contraceptive Prevalence Rate: Percentage of couples who were covered by any method (modern method and traditional method) of family planning measures.⁴

Couple Protection Rate: Percentage of eligible Couples effectively protected against child birth by one or the other approved methods of family planning viz- Sterilization, IUCD, Condom, Oral pills.⁵

Results

Out of the total study population of 2000 eligible couples, only 1266 (63.3%) practiced any method (modern as well as traditional/miscellaneous method) of contraception. Couple protection rate (percentage of couples protected by modern methods) in the present study was found to be 54.3% (1086 eligible couples protected by modern methods out of 2000 E.C).

Only 3% of the respondents (currently married women of reproductive age group) adopted Cu-T as family planning measures. There was also area specific variation of Copper -T acceptance, in rural area Copper -T adopters were more (3.6%) than urban area (1.4%). The difference was statistically significant ($p < 0.05$).

Out of total eligible couples, 36.7% were not using any method of contraception. Majority (25.4%) used to take OCP followed by ligation (18.4%), then condom (7.4%), copper—T (3%), vasectomy (.1%) and others (miscellaneous/traditional methods) constitutes 9%.

Out of the total respondents, only 126 women used Copper-T in their reproductive life time (Ever used rate of Cu- T – 6.3%). Out of them, maximum (9.5%) were in the age group of 36 and above followed by 30-35 years (7.1%) and 24-29 years (5.3%) and least among 18-23 years (4.9%) (Table 1).

The Ever used rate of Copper- T increases with advancement of maternal age and the association being statistically significant ($p < 0.05$).

Table 1: Age wise Distribution of Respondents According to Ever Use of IUCD (Cu-T/Loop) (n = 2000)

Age of Respondent	Use of IUCD		Statistical test
	No.	%	
<18 (n=21)	0	0.0	$X^2 = 6.85$, $df = 3$, $p = 0.09$ Significant
18-23 (n=491)	24	4.9	
24-29 (n=632)	34	5.4	
30-35 (n=573)	41	7.2	
36 & Above (n=283)	27	9.5	
Total	126	6.3	

There was a slight variation in acceptance of Cu—T according to literacy status of the respondents. Acceptance among educated group was more than illiterate and just literate groups.

It has been observed that only 19% of the respondents knew about the advantages of Cu-T.

Amongst various reasons for non-utilization of Cu-T, the major factors were –lack of motivation (43.4%) followed by misconception (harmful for health, misbelieves, wrong information) about 25% (Fig. 1). The rest were unawareness, unwillingness, religious barrier / cultural barrier etc.

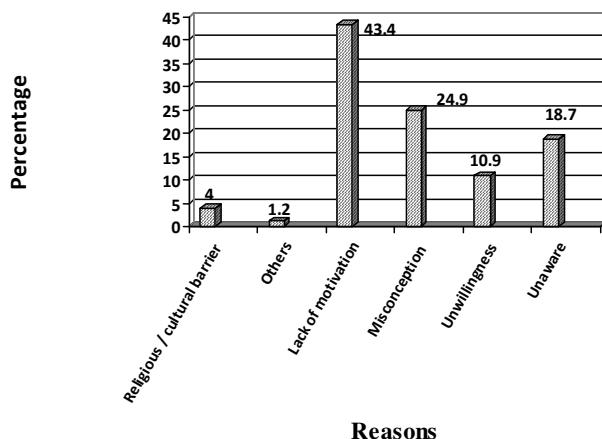


Fig. 1: Factors/ Reasons for non utilization of Cu-T by respondents of Howarah District

*Multiple responses

In rural area, no motivation (45.2%) was the major factor followed by unawareness (27.9%) then 22.8%, 10.7%, 4.8% and 1.6% was due to misconception, unwillingness, religious/cultural barriers and others respectively.

In urban area, lack of awareness (31.8%) was the major factor for non-utilization of Cu-T services followed by no motivation (30.2%) and 28%, 9.9% and .8% was due to misconception, unwillingness, and religious/cultural barriers respectively (Fig. 2).

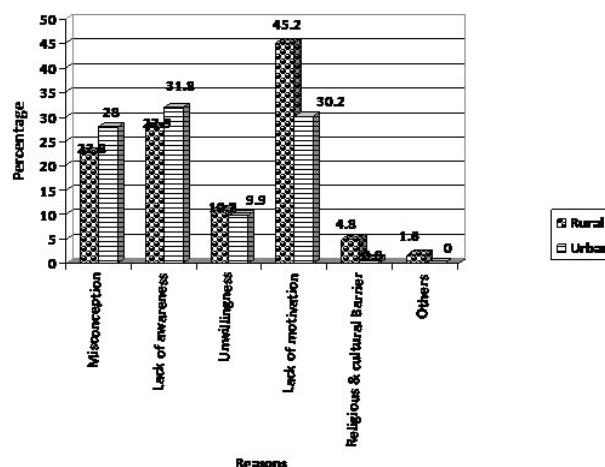


Fig. 2: Area wise major reasons for non-acceptance of Cu-T in Howarah District

* Multiple responses

Discussion

The present study was carried out among 2000 eligible couples to find the relevant factors responsible for the underutilization of IUCD by the eligible couples.

Contraceptive Prevalence Rate/Family planning practice by any method was 63.3% in the present study, which was quite less than the findings of NFHS-3 of West Bengal (2005-2006) where it was reported as 71.2%. But Couple Protection Rate by modern method was found to be 54.3% in the district of Howrah, being slightly higher than the NFHS-3 of West Bengal findings of 50%.³ Both Contraceptive Prevalence Rate (63.3%) and Couple Protection Rate (54.3%) in the present study were higher than the national figure of 56.3% and 48.5% respectively as per NFHS—3(2005-2006).¹

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In the present study overall use rate of IUCD (Copper-T) was found to be 3%. In India, only 1.8% of married women of reproductive age group used it.¹ In West Bengal it was only 1%.⁴ Contribution towards Couple Protection Rate in the present study highlighted that maximum contribution by OCP (25.4%) followed by ligation 18.4%. These findings did not corroborate with the findings of NFHS-3 (2005-2006) of National figure where in case of CPR (48.5%) maximum contribution was by ligation (37.3%) followed by condom (5.3%) and OCP (3.1%) only.¹

It has been observed from the present study that 19% of the respondents knew about advantages of Copper – T, yet ever use rate of IUCD was 6.3% and current acceptance rate of Copper-T was 3%, both practices being less than the knowledge.

The present study also indicated that ever use rate of IUCD (Cu-T/loop) increased with increase in maternal age, similar observations also found in the study by Singh R.K.N et al.⁶ Slight variation in ever used rate of IUCD in relation to literacy status was found in the present study, this observation did not corroborated with the findings of the earlier studies by Mukhopadhyay et al and Sharma et al.^{7,8} However, in the Jordanian study, IUCD acceptance was 45.5% in 16-19 years age group, 29.6% in 20-24 years age group, 51.4% in 25-29 years age group 35.6% in 30-34 years and 29.8% in 35+ year group. Total IUCD acceptance was 38.3% of the study population⁹. In the Nepali study in 2008, the current IUCD practice was only 2.5% of the eligible couples, whereas awareness ranged from 34-63%. Moreover, IUCD use was restricted only to women with parity 1 and 2.¹⁰

The relevant factors for non-utilization of IUCD (Cu-T/Loop) were elicited from the present study. Factors like – lack of motivation followed by misconception, lack of awareness, and unwillingness and religious/cultural barrier were the main reasons and it was irrespective of their place of residence. More or less similar observations were also found by the earlier studies.^{11–15}

Unawareness, misconception and unwillingness were commented as reasons by more or less of equal proportion of the respondents irrespective of rural or urban area for their non-utilization of Cu-T services free of cost supplied by the government.

But no motivation (45.2%) was the main reason in rural area and it was much greater than in urban area where it was 30.2%. Religious/cultural barrier was cited by 4.8% of the respondent in rural area for their non-utilization of Cu-T whereas in urban area it was expressed by 0.8% of the respondents only.

No motivation may be due to low literacy level, myths and misconception about the method, also lack of IEC in rural area. In urban area Unawareness & no motivation were the major reasons, it may be due to lack of organized health care provider services and limited educational materials to provide accurate information about the method to clients, also minimum involvement of mass media and there was very poor motivation of health care providers to promote the IUCD or other temporary methods due to emphasis on sterilization.

Conclusions

Though majority practiced any method of contraception, it is still very inadequate. The use of IUCD as a means of contraception is still negligible. Several factors are involved in promoting the use of IUCD like elimination of myths & misconception, enhancement of motivation; awareness generation is needed by intervention measures through IEC. A sustained & coherent 'Information Education and Communication' campaign is required involving mass media and interpersonal communication which will highlight the advantages/positive aspect of the particular method.

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