Unmet need for contraception among married women in an urban area of Puducherry, India

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Background & objectives: Unmet need for contraception remains a national problem. The study was conducted in an urban area of Puducherry, India, among the eligible couples to assess the unmet need for contraception and to determine the awareness and pattern of use of contraceptives along with the socio-demographic factors associated with the unmet needs for contraception.

Methods: This cross-sectional study included eligible couples with married women in age group of 15-45 yr as the study population (n=267). Probability proportional to size sampling followed by systematic random sampling was used. A pre-tested questionnaire was administered to collect data from the respondents. Double data entry and validation of data was done.

Results: Unmet need for contraception was 27.3 per cent (95% CI: 22.3-33); unmet need for spacing and limiting was 4.9 and 22.5 per cent, respectively. Among those with unmet need (n=73), 50 per cent reported client related factors (lack of knowledge, shyness, *etc.*); and 37 per cent reported contraception related factors (availability, accessibility, affordability, side effects) as a cause for unmet need.

Interpretation & conclusions: Our study showed a high unmet need for contraception in the study area indicating towards a necessity to address user perspective to meet the contraception needs.

Globally, the prevalence of contraceptive use has been increasing, but the unmet need for contraception still remains a problem[1]. The contraceptive and non-contraceptive benefits of mordern contraceptives outweigh the risks[2]. According to the National Family Health Survey-3 (NFHS-3)[3], the national figure for unmet need is 13 per cent. According to the District Level Household and Facility Survey-3 (DLHS-3)[4],

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unmet need of contraception in India is 21.3 per cent, with 7.9 per cent for spacing and 13.4 per cent for limiting. Unmet need for contraception in Puducherry is about 19.8 per cent, of which 6.5 per cent is for spacing and 13.3 per cent for limiting[4]. Local health planners are in a prime position to revise feasible context-specific activities to decrease the constraint and meet the needs[5].

This study was carried out among the eligible couples of Muthialpet, Puducherry, India in 2013 with the objectives to assess the unmet need for contraception and determine the awareness and pattern of use of contraceptives, as also to identify socio-demographic factors associated with unmet needs for contraception.

Material & Methods

The study setting for this cross-sectional study was a service area falling under Primary Health Centre (PHC) Muthialpet, Puducherry, India. Muthialpet is an urban area in Puducherry having a population of 45000. About half of the population lives in slums areas which are as good as the other non-slum areas of Muthialpet in aspects of hygiene, housing, sanitation, water supply, *etc*. Eligible couples with married women in the age group of 15-45 yr, residing in Muthialpet, were the study population. Study period was from January to September 2013.

Operational definitions for unmet need for spacing, limiting and unfelt need used in the study were as per DLHS-3[4]. The study protocol was approved by the institutional ethics committee and written informed consent was obtained from the participants.

Study tool: The interviewer administered questionnaire used in the study was pretested on 10-20 married women of reproductive age belonging to the study population (but not in the final sample) and with an expert. The questionnaire had two parts: Part I included respondent / husband / family particulars, marital history and contraceptives / fertility status. Modified Kuppuswamy scale, 2012[6] was used to assess socio-economic class. Part II included questions on reasons for not using contraception among those with unmet need.

Sample size was calculated for confidence interval estimation of single proportion using n master sample size calculator v.2.0 developed by the Christian Medical College (CMC), Vellore. Assuming the unmet need for Muthialpet to be 19.8 per cent (DLHS-3-Puducherry), absolute precision of 5 per cent and a 95% confidence interval, the sample size to be surveyed was 244. Sample size planned was approximately 4 per cent of the study population in Muthialpet (7200 eligible couples). The PHC area was divided into 48 *anganwadi* areas. Using probability proportional to size (PPS) method, 15 *anganwadis* were selected. From each selected *anganwadi* area, 20 households were selected using systematic random sampling. If there were more than one eligible in a household, Kish Grid was used to select one respondent.

Statistical analysis: Data collected were entered inEpiData v.3.1 software (EpiData Association, Odense, Denmark). Double data entry and validation of the data was done to correct data entry errors. EpiData Analysis v2.2.2.182 (EpiData Association, Odense, Denmark) was used for descriptive statistics. SPSS v17 (Chicago, USA) was used for analytical statistics. Binomial logistic regression was used to analyse factors associated with unmet need.

Results

Two hundred and sixty seven married women in reproductive age group were interviewed. Their mean age, age at marriage and marriage duration were 33.5 ± 6.9, 21.7 ± 3.6, 11.8 ± 7.9 yr, respectively. Around 89 per cent were educated up to high school or above; 3 per cent were illiterate or did not complete primary education. Median family income per month was ₹10000; none was from lower socio-economic class. Around 69 per cent were from nuclear families and 85 per cent were Hindu. Around 17 per cent of women gave history of medical termination of pregnancy (MTP).

Of the 267 women of reproductive age group, 157 (58.8%, 95% CI: 52.8-64.5) eligible couples were using contraceptives. Unmet need for contraception was 27.3 per cent (95% CI: 22.3-33); unmet needs for spacing and limiting were 4.9 per cent (95% CI: 2.9-8.2) and 22.5 per cent (95% CI: 17.5-27.5), respectively. Among those who had ever used contraception, unmet need for contraception was 12 per cent, which contributed to 50.6 per cent of all the unmet need.

Awareness levels were >60 per cent for all temporary contraceptives except emergency contraceptive pills (18.7%), injectable contraceptives (16.5%) and centchroman (3%); it was >75 per cent for tubectomy and vasectomy (Table I).

Regression analysis (binomial logistic regression: forward LR method) did not reveal any significant

Table I. Pattern of use and awareness of contraceptives among eligible couples in Muthialpet, Puducherry (n=267)

Contraceptive type	Awareness (Yes)		Ever use (Yes)		Current use	
	N (%)	95% CI for percentage	N (%)	95% CI for percentage	N (%)	95% CI for percentage
Hormonal OCP	202 (75.7)	70.2-80.4	23 (8.6)	5.8-12.6	2 (0.7)	0.2-2.7
CuT	215 (80.5)	75.4-84.8	65 (24.3)	19.6-29.8	13 (4.9)	2.9-8.2
Emergency contraceptive pills	50 (18.7)	14.5-23.8	1 (0.4)	0.1-2.1	0 (0)	00-00
Condoms	167 (62.5)	56.6-68.1	61 (22.8)	18.2-28.2	28 (10.5)	7.4-14.8
Centchroman	8 (3)	1.5-5.8	0 (0)	00-00	0 (0)	00-00
Tubectomy	256 (95.9)	92.8-97.7	113 (42.3)	36.5-48.3	same as ever use	
Vasectomy	202 (75.7)	70.2-80.4	0 (0)	00-00	same as ever use	
Injectable contraceptives	44 (16.5)	12.5-21.4	1 (0.4)	0.1-2.1	0 (0)	00-00
OCP, oral contraceptive pills; CuT, copper T						

Table II. User perspective pertaining to not using contraceptive among those having unmet need in Muthialpet, Puducherry (n=73)

Factors	N (%)	95% CI for percentage
Provider related (facility, staff)	15 (20.5)	12.9-31.2
Client related (personality, knowledge, health concerns, fertility related)	36 (49.3)	38.2-60.5
Contraceptive related (availability, accessibility, affordability, side effects)	27 (37)	26.8-48.5
Environment related (Family, cultural, religious)	6 (8.2)	3.8-16.8

difference in distribution of socio-demographic factors among users of contraception and those with unmet need for contraception.

Among those with unmet need (n=73), approximately 50 per cent reported client related factors (lack of knowledge, shyness, *etc*.) as a cause for unmet need; and 37 per cent reported contraception related factors: availability, accessibility, affordability, side effects (Table II).

Discussion

There was a high unmet need for contraception in Muthialpet region of Puducherry which was higher compared to the figures given by DLHS-3[4] for Puducherry, *i.e.* 19.8 per cent; and figures for India given by NFHS-3[3], *i.e.* 13 per cent. Similar studies conducted elsewhere have given the following figures for unmet need: 44 per cent in a tribal area of Maharashtra[7], 41.6 per cent in Haryana[8], 25.4 per cent in a resettlement colony of New Delhi[9], 21.7 per cent in Gwalior[10], 22.4 per cent in Bangladesh[11], 16.3 per cent in Jordan[12], 17.4 per cent in Iran[13], and 20 per cent in Ethiopia[14].

Awareness level and use pattern were similar to the national figures: tubectomy and condoms were the most common contraceptives currently used[4]. Sample size calculation was not carried out for the association of socio-demographic factors with contraceptive use. Inadequate sample size for carrying out this analysis could be the reason for insignificant results. Other studies have identified that gender preference[15,16], lower level of education[7-9,12,17-19], women's occupation as homemaker[17], number of children ever born[7,9,12,15,18] and age[7,10,12] were the factors associated with unmet need.

High awareness levels and high unmet need indicate that there are certain user perspectives among non-users which have not been addressed. Previous studies have identified certain factors as a reason for not using contraceptive such as irregular menstruation with oral pills and weakness[15], family and husband opposition[8,12], and lack of information[8].

The questionnaire used in this study to collect data was tested for reliability and validity. Double data entry and validation of data was done to remove any

data entry errors. The limitation of this study was that the sample size was not calculated for the regression analysis. Also information from the male partners was not collected.

In conclusion, our study indicated a high unmet need for contraception in the area with a scope to decrease constraints and address user perspective to meet the contraception needs.

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