Unmet Needs of Family Planning Among Women: A Cross-Sectional Study in a Rural Area of Kanchipuram District, Tamil Nadu, South India

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Abstract

Background Global contraceptive usage was 63.3 % in 2010 which was 9 % more than that in 1990. NFHS-III

2005–2006 revealed that the contraceptive prevalence rate was 56 % while in the past decade it was 48 %. In India, female sterilization is the most commonly preferred method of contraception accounting for 76 %, while in Tamil Nadu it was 90 %. Thus, this study aims at measuring the prevalence of unmet needs of family planning and its determinants in a rural area of Kancheepuram district, Tamil Nadu.

Materials and Methods The study was carried out as a community-based cross-sectional study in Chunambed panchayat, a rural area in Kanchipuram District, Tamil Nadu, India, among 505 women of age group 15–49 years. Cluster random sampling was done to select the households to include in the study. In every household, all the available and eligible women were explained about the study and recruited after obtaining informed consent.

Statistical Analysis Chi-square test was applied for finding the difference in proportion, and p value <0.05 was considered statistically significant.

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Results The prevalence of unmet need for family planning in our study population was nearly 31 %; it was even more for younger age groups and for the women whose family size was less. 51.7 % of the participants were currently using a contraceptive measure and very few of their partners used contraception. Government health facilities were the major source of contraceptive service and majority of our participants were well aware about the various contraceptive methods.

Conclusion Unmet needs of family planning were high in our study population, and the knowledge about the contraceptive use and family planning was found to be fairly adequate.

Keywords Unmet needs · Family Planning · Contraception · Practices

Introduction

Global contraceptive usage was 63.3 % in 2010 which was 9 % more than that in 1990. Also in the last two decades, the unmet need for family planning decreased from 15.4 to 12.3 % worldwide. These changes were seen in almost all regions of the world except in regions where family planning coverage was already high. However, different regions showed different levels of changes [1]. Although India was the first nation to have an official National family planning programme in 1952, the target was on health of the women rather than population control. Then census of 1971 revealed an alarming population growth which necessitated adoption of population control strategies in India. NFHS-III 2005–2006 (National Family Health Survey) in India revealed that the contraceptive prevalence rate was 56 % while in the past decade it was 48 %. [2] Providing universal family planning services is an important strategy to reduce maternal morbidity and to control population growth. Ten percent of all pregnancies are mistimed, and 11 % of all pregnancies are unwanted in India [2]. The number of unintended pregnancies can be brought down by proper utilization of family planning services. Worldwide the unmet need for family planning decreased during the past two decades, but the number of women with unmet needs remained the same due to population growth. In India, female sterilization is the most commonly preferred method of contraception accounting for 76 % of all methods, while in Tamil Nadu it was 90 %. But the usage of temporary methods of contraception remains low, which is mostly due to social stigma and cultural misbeliefs [3–5], lack of knowledge [6, 7] and concern about side effects [4, 7–9]. Women's decision on use of contraceptive methods

is influenced by several social constraints and social circumstances including family sex composition and gender preference. Worldwide, when contraception is used properly and effectively to avoid unwanted pregnancy it can reduce maternal deaths to 25–35 % [10, 11]. Thus, this study aims at measuring the prevalence of unmet needs of family planning and its determinants in a rural area of Kancheepuram district, Tamil Nadu, South India.

Materials and Methods

A community-based cross-sectional Study was carried out in Chunambed panchayat, a rural area in Kancheepuram District, Tamil Nadu, South India. The study was conducted among 505 women between 15 and 49 years of age in the study area who gave consent to participate. Pretested structured questionnaire with the study variables as sociodemographic profile, personal details, knowledge about contraceptives, perceptions on family planning and family size was used. The minimum required sample size was calculated to be 452, based on the national prevalence of unmet needs for family planning, 13 % from NFHS-III [2], with precision taken as 10 %. Among the ten villages in Chunambed panchayat, three were selected by simple random sampling using lottery method. Cluster random sampling was done among the selected villages, and all the households in the clusters were included in the study. In every household, all the available and eligible women were explained about the study and recruited. The households that are locked and eligible household members who are not available even after two repeated visits were excluded from the study. The study participants were explained regarding the benefits and implications of study in their own language, and their voluntary informed written consent was sought before interviewing the participants. The interview was done in the participants' household in isolation with the participant by female interviewers, who were trained by the authors prior to data collection. Isolation during the interview with the participants was ensured so as to make sure the participants were able to respond freely without any inhibition. Operational Definitions: Unmet need for family planning: The percent with an unmet need for family planning is the number of women with unmet need for family planning expressed as a percentage of women of reproductive age who are married or in a union. Women with unmet need are those who are fecund and sexually active but are not using any method of contraception, and report not wanting any more children or wanting to delay the birth of their next child [12].

Statistical Analysis

Epidata version 3.1 was used for data entry and SPSS version 21 was used for statistical analysis. Chi-square test was applied for finding the difference in proportion and p value < 0.05 was considered statistically significant.

Results

Sociodemographic details of the study participants showed that nearly 25 % of our study respondents have not undergone any formal school education and nearly 43 % of them have studied up to high school and above. Majority of the study subjects were housewives (56.8 %), followed by semiskilled and unskilled workers. Most of the study respondents belonged to Hindu religion (97.4 %) and also majority of them were married (86.1 %) (Table 1).

The overall prevalence of unmet need for family planning was 31 % of which 45 % of the unmet need was for limiting and 54 % for spacing between pregnancies.

Table 1 Distribution of participants based on sociodemographic characteristics ($n = 505$)

	Frequency	Percent
<i>Distribution of participants based on educational status</i>		
Illiterate	126	25.0
Primary	69	13.7
Middle	91	18.0
High	132	26.1
Higher secondary	54	10.7
Graduate and above	33	6.5
<i>Distribution of participants based on occupation</i>		
Unskilled	78	15.4
Semiskilled	83	16.4
Skilled	23	4.6
Professional	6	1.2
Unemployed	17	3.4
House wife	287	56.8
Student	11	2.2
<i>Distribution of participants based on religion</i>		
Hindu	492	97.4
Muslim	6	1.2
Christian	7	1.4
<i>Distribution of participants based on marital status</i>		
Unmarried	41	8.1
Married	435	86.1
Separated	1	0.2
Widow	28	5.5
Total	505	100.0

Prevalence of unmet need for family planning was more among women of age group (15–25) years, when compared to women of elder age groups, and this difference was statistically significant. Similarly women had either no child or 1 child and women who are educated up to high school and above are observed to have a higher prevalence of unmet need for family planning when compared to the counterpart (Table 2).

Majority (72.9 %) of our study participants felt that (20–23) years is the ideal age for a girl to get married, Similarly majority (77.8 %) of them also perceived that ideal number of children a couple can have is two. Nearly half of the study respondents felt that giving birth to more number of children can lead to health related problem of the mother, while one-fifth of them felt that it does not cause any health problem and one-fourth did not have any idea. Nearly half of the study respondents felt that 3–4 years is the ideal spacing between two children while 40 % of them stated that 1–2 year is the ideal spacing. Positive response to inadequate spacing leading to health problems of the mother was given by 45 % of the respondents while 35 % did not have any idea. Majority (70.5 %) of our study respondents did not know that STDs (sexually transmitted diseases) can be prevented by the use of contraceptive methods, and among those who responded positively, only 51 % (50) stated that condoms can prevent STDs. Among the study participants, 61 % of them have ever used a contraceptive method and 51 % of them are currently using a contraceptive method. Majority of our study participants did not have any preference toward a child with specific gender, while nearly 30 % preferred to have a male child (Table 3).

Doctor or health worker was the source of information regarding the contraceptive measures for majority of our study participants (64 %), for the remaining the information was through media, relatives and friends. Most of study participants availed contraceptive services from Government health facilities (89 %). Almost 90 % of the partners of our study participants know about the contraceptive measure used by the participants. Decision on choice and usage of contraceptive usage was made by both self and partner by majority of our study participants (70 %) (Table 4).

Discussion

Our study was done in a rural area of Kancheepuram district, Tamil Nadu, the state which has got success stories in terms of Health indicators including provision of adequate family planning services and many others. Despite good coverage with contraceptive services in cities and urban region, the unmet need for family planning remains

Table 2 Association between unmet need for family planning and sociodemographic characteristics of the study participants ($n = 435$)

Unmet need for family planning	Present n (%)	Absent n (%)	Total n (%)	p value
Association between age of the participant and unmet need for family planning				
(15–25) Years	55 (47.4)	61 (52.6)	116 (100)	0.001
(26–35) Years	48 (26.8)	131 (73.2)	179 (100)	
(36–49) Years	32 (22.9)	108 (77.1)	140 (100)	
Association between age on marriage and unmet need for family planning				
(15–18) Years	31 (26.3)	87 (73.7)	118 (100)	0.422
(19–23) Years	87 (32.7)	179 (67.3)	266 (100)	
(24–30) Years	17 (33.3)	34 (66.7)	51 (100)	
Association between educational status and unmet need for family planning				
Middle School and below	69 (27.1)	186 (72.9)	255 (100)	0.033
High school and above	66 (36.7)	114 (63.3)	180 (100)	
Association between per capita income (in INR) and unmet need for family planning				
<1000	41 (34.2)	79 (65.8)	120 (100)	0.347
1000–1999	64 (32.2)	135 (67.8)	199 (100)	
>2000	30 (25.9)	86 (74.1)	116 (100)	
Association between of number of children born to the participant and unmet need for family planning				
0–1	55 (46.2)	64 (53.8)	119 (100)	0.001
2	60 (31.3)	132 (68.8)	192 (100)	
3 and more	20 (16.1)	104 (83.9)	124 (100)	
Total	135 (31)	300 (69)	435 (100)	

considerably higher in some parts of the state. As the population pattern of the country is changing, more women will be in reproductive age group in the near future. Henceforth, provision of adequate family planning service to the general population should be assured with more emphasis to the rural areas. Our study results showed that the prevalence of unmet needs of family planning in our study population is 31 % among the married women of reproductive age group. This was much higher than the prevalence of unmet needs for family planning reported by Ilene et al. [13] in six cities of Uttar Pradesh which showed varying prevalence between (12 and 20) % in different regions. Another study in North India, Haryana, done by Yadav et al. [14] showed the prevalence of unmet need for family planning as 17.5 %.

The National Family Health Survey (NFHS) data have showed the prevalence of unmet need for family planning as 13 % nationally and 9 % in Tamil Nadu, which is much lower when compared to our study results [15, 16]. On the other hand, a much varying prevalence of 51 % among women of reproductive age group was reported by Prateek et al. in a study done at Kancheepuram district, Tamil Nadu. However, the participants of the above study were those who attended the OPD of an urban health center [17]. The difference in prevalence of unmet need for family planning between our study and the national data could be possibly due to lack of persistent emphasis on family welfare services in the country. In our study, it was

observed that nearly 84 % of our participants have heard about at least one method of contraception. As per the data of NFHS-III, 61 % of women have heard or seen a message about contraception in media in the recent past, while this percentage was much higher among males (92 %) [2]. Another study done in Lucknow by Sharma et al. [18] states that more than 90 % women are aware of the male and female sterilization methods, condoms, IUCD (Intra-Uterine contraceptive devices) and traditional methods of contraception. Makade et al. [19] in a study done in a Mumbai slum reported that 87 % of the married woman are aware of oral contraceptive pills and Copper-T and 80 % of them are aware about female sterilization.

In our study, 81 % of those who have heard about contraception said that they would prefer to use female sterilization as the method of contraception and 9 % prefer to use intrauterine contraceptive devices. Our results are lower than the NFHS data which revealed the prevalence of female sterilization as 90 % during 2005–06 (NFHS-III) in Tamil Nadu [16]. And nationally female sterilization accounted for 71 % of all contraceptive use in NFHS II and 66 % in NFHS-III [2, 15]. From the studied population, the contraceptive prevalence rate was found to be 72 % that was much higher than the NFHS data which showed the contraceptive prevalence rate to be 48 and 56 % during the year 1998–1999 and 2005–2006, respectively [2, 15], while the contraceptive prevalence rate of Tamil Nadu was 61 % during the year 2005–2006 by NFHS-TN III [16]. In our

Table 3 Perceptions and knowledge of the study participants with respect to family planning ($n = 505$)

	Frequency	Percent
<i>Perception about ideal age of marriage for a girl (in years)</i>		
16–19	57	11.3
20–23	368	72.9
24–28	80	15.8
<i>Perception about ideal number of children a couple can have</i>		
1	24	4.8
2	393	77.8
3	88	17.4
<i>Perception about giving birth to more number of children leading to health problems of the mother</i>		
Yes	274	54.3
No	104	20.6
Don't know	127	25.1
<i>Perception about ideal spacing between 2 children (in years)</i>		
1–2	215	42.6
3–4	249	49.3
5–6	35	6.9
Don't Know	6	1.2
<i>Perception about inadequate spacing between two children causing health problems of the mother</i>		
Yes	229	45.4
No	98	19.4
Don't Know	178	35.2
<i>Knowledge about prevention of sexually transmitted diseases (STDs) by the use of contraceptive methods</i>		
Yes	97	19.2
No	52	10.3
Don't Know	356	70.5
<i>Distribution of participants based on gender preference</i>		
Male	142	29.5
Female	79	14.3
No Preference	284	56.2
<i>Distribution of participants based on history of unwanted pregnancy</i>		
Yes	18	3.6
No	487	96.4

study, among the participants who have used contraception, 80 % have obtained it from government facilities while in India and Tamil Nadu the government services have covered 84 % and 77 % of contraceptive users, respectively [2, 15, 16].

Regarding the family structure and composition, nearly 77 % have responded that ideal number of children a couple can have is 2 and 49 % have responded that ideal spacing between two children is 3–4 years and 42 % as 1–2 years. Male child preference was seen among 29 % of our participants, while 56 % have no preference. According to NFHS, many Indian families showed strong preference toward male children [2]. Nearly 19 % of our study

Table 4 Distribution of study participants based on contraceptive usage ($n = 309$)

	Frequency	Percent
<i>Distribution of participants based on contraceptive usage*</i>		
Ever used	309	61.2
Never used	196	38.8
<i>Distribution of participants based on current contraceptive usage*</i>		
Yes	261	51.7
No	244	48.3
<i>Source of information about contraceptive methods</i>		
Doctor/health worker	200	64.7
Media/relatives/friends	109	35.3
<i>Facility from where contraceptive service was availed</i>		
Government health facility	276	89.3
Private health facility	33	10.7
<i>Partner's knowledge about the women's contraceptive use</i>		
Yes	281	90.9
No	28	9.1
<i>Decision about selection and usage of contraceptive method</i>		
Self	24	7.8
Husband	13	4.2
Both self and partner	218	70.6
Suggested by relatives/friends	44	14.2
Suggested by doctor/health worker	10	3.2

* $N = 505$

subjects responded that contraceptive methods can prevent sexually transmitted diseases, of those who have heard of a contraceptive method. And almost half of them have said that the condoms can prevent STDs. From our study, it was found that doctors/health workers are the most common means of gaining knowledge while media have also played a role in improving the knowledge regarding contraceptive services. In majority of our study population, the decision on contraception was made mutually by both husband and wife. These results were consistent with that of the NFHS-III data [2]. Strength of the present study could be that the study explored various perceptions of women with regard to contraceptive usage with the help of trained female interviewers. Unmet needs of family planning leads to unwanted pregnancies which pose potential risks to the mother, family and the society. Some of the important consequences of unwanted pregnancies include unsafe abortions, children's health and well-being and may also contribute to rapid population growth especially in developing countries like India. Assessment of unmet needs has endured as an important analytical tool and serves as a benchmark in policy making.

Unmet needs of family planning were high in our study population, and the knowledge about the contraceptive use and family planning was found to be fairly adequate.

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Compliance with Ethical Standards

Conflict of interest None.

Ethical Standards The study was carried out as a part of medical students training and consisted of only an interview, and Institutional ethical committee clearance was not obtained.

Informed Consent Written Informed consent was obtained from all individual participants included in the study.

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