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DETERMINANTS OF UNMET NEED FOR FAMILY PLANNING IN A DEVELOPING COUNTRY: AN OBSERVATIONAL CROSS SECTIONAL STUDY

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ABSTRACT

Background: Understanding the characteristics of women with unmet need can helpplanners strengthen the population control programs. The aim of this study was to assess the unmet need of contraception and its determinant factors.

Methods: This observational cross-sectional study was carried out in urban and rural field practice areas of a medical college hospital in India over a period of one year and included 2000 married women. Data was collected using a pre-tested questionnaire during a face-to-face interview.

Results: The overall unmet need for family planning was 7.5% (9.1% in rural area and 5.9% in urban area, P - value = 0.0002). Lowest unmet need was seen in the age group 15 – 19 years. Unmet need was higher in illiterate, unemployed women belonging to the low socio-economic group. Respondents whose husbands were illiterates or involved in menial jobs also had a higher unmet need. Unmet need was highest (11.6% rural, 10% urban) in the respondents having three or more children.

Among reasons for not using contraception, family inhibition, scare of infertility, cost constraints and unhappiness with health services were significantly associated with unmet need.

Conclusion: Education, income, occupation, knowledge about contraception, communication with partner regarding family planning, media accessibility, gender preference were identified as the contributing factors for Unmet Need.

Key Words: Unmet Need; Family Planning; Contraceptive; Population; Methods; Usage

INTRODUCTION

Global population is increasing at a rapid rate and has almost quadrupled in the last century. Every day more than 400,000 conceptions take place around the world. Almost half are deliberate, happy decisions, but half are unintended, and many of these are bitterly regretted. An estimated 120 million couples in developing countries do not want another child soon but have no access to family planning methods or have insufficient information on the topic [1]. According to the standard Demographic and Health Surveys definition, unmet need includes all those fecund

women who are married or living in union, and thus presumed to be sexually active, who either do not want any more children or wish to postpone the birth of their next child for at least two more years but are not using any method of contraception [2].

It has been estimated that meeting women's need for modern contraceptives would prevent about one quarter to one-third of all maternal deaths, saving 140,000 to 150,000 lives in a year [3]. While real progress has been made in improving access to family planning globally, unmet need of family planning continues to grow. More than 200 million women in the developing world have unmet need for family planning which accounts for approximately 17% of married women in these countries [4]. India has the most unmet need for family planning at about 31 million [5].

The causes of unmet need are complex and vary according to sociodemographic characteristics, opposition from husbands, families and communities.

Lack of information, health concerns about contraceptive and side effects, difficulty in access to methods and quality of family planning services are some of the major determinants [2,6]. In each country, understanding the size of unmet need and the characteristics of women with unmet need can help planners strengthen the population control programs. Survey data on unmet need can provide overall direction by helping to pinpoint the obstacles in society, region specific issues and weaknesses in services that need to be overcome. Hence to address these views, the present study was carried out to assess the unmet need of contraception and its determinant factors among married women of reproductive age group in urban and rural areas of Ambala district, Haryana, India.

MATERIALS AND METHODS

The observational cross-sectional study was carried out in the urban (Ambala) and the rural (Barara, Mullana & Nahoni) field practice areas of the department of Community Medicine of MM Institute of Medical Sciences & Research, Mullana, district Ambala, Haryana from January 2013 to December 2013. Urban training health center situated at Ambala serves a population of 36,000 and all the three rural centers i.e. RTHC Barara, PHC Mullana & PHC Nahoni serve a population of 1,35,000. All the married women in the reproductive age group i.e. 15 – 45 years and living in union with their husband were included in the study. Pregnant, widowed, separated and divorcee women were excluded from the study. According to National Family Health Survey – 3 (NFHS), the unmet need of contraception in India is 13% [7]. The sample was calculated by the formula $\mathbf{n = Z^{2*}P*(1-P)/e^2}$, where, z = Level of confidence at 95 %(1.96); p = Proportion of prevalence and e = Margin of error taken (absolute error of 1.5%)

The sample size came out to be 1930, which was rounded off to 2000. One thousand participants (50%) were selected from urban area and other 50% (1000) participants were selected from the rural areas. Multistage sampling did the selection in rural areas. In Stage I, coverage area of one health center was selected by simple random sampling using lottery method, which came out to be Barara. The Rural Training Health Center at Barara caters to a population of 50,010 residing in 43 villages. List of villages was procured and 10 villages were selected by lottery method. From each of these selected villages, the list of females in the reproductive age group was procured and 100 of these were selected from each village by using table of random numbers. For the urban area, the total population of females in the reproductive age group was 5575; so every 5th female was taken by systematic random sampling till completion of the required sample size.

A written and informed consent was obtained from the participants before proceeding to a formal interview. Data was collected using a pretested questionnaire, which was administered by the first author during a face-to-face interview. Hindi version of the proforma was also prepared to facilitate the study especially among the rural population. The questionnaire was asked in the local language understood to them. If any of the selected female was not found during first visit, a second visit was given at some other time. Before the study was formally conducted, this questionnaire was translated into local language and was tested on 30 females in Mullana village for reliability and consistency as part of a pilot project.

The data thus collected was compiled and analyzed using SPSS version 21 for Mac (IBM Corporation, 2012). Qualitative variables were expressed as proportions in percentages. The association between variables was calculated for 95% confidence intervals by using "Chi square test". "Unpaired t – test" was used to compare the

means. A P-value < 0.05 was taken as significant. For quantitative data, mean and standard deviation was calculated. An approval for this study was obtained from the Institutional Ethical Committee.

RESULTS

The mean age of respondents in the rural population was 30.55 + 5.772 years where as in urban population it was 31.80 + 6.274 years. Five-hundred-and-fifty seven i.e. 55.7% of the respondents in the rural areas were currently using some contraceptives as compared to 643 (64.3%) urban respondents (P – value < 0.0001).

Tubectomy was the most common method of contraception being employed by the respondents in both rural (34.8%) and urban areas (26.2%) whereas the least common modality employed was vasectomy (1.8% in rural and 2% in urban areas, P – value <0.0001).

Overall the unmet need in the present study was 7.5% (Table 1) and was significantly more in rural areas (9.1%) than in urban areas (5.9%, P - value = 0.0002). Unmet need was highest (23%) in 35 – 39 years age group and lowest (3.8%) in 15 – 19 years age group in rural area (P – value = 0.001). Similarly, unmet need was highest (14.1%) in 40 – 44 years age group and lowest (3.7%) in 15 – 19 years age group in urban area (P – value = 0.027). The factors that were identified as contributory for unmet need were level of education, income, occupation, religion, knowledge about contraception, communication with partner regarding family planning and media accessibility (Table 2).

Unmet need was highest (11.6% rural, 10% urban) in the respondents having three or more children and lowest in those having two children (4.8% rural, 2.8% urban; P – value = 0.002 for rural and P – value < 0.0001). Higher unmet need was also seen in those couples having only a single child. Preference for any one of the genders was significantly associated with unmet need. In the rural area, unmet need was highest (18.3%) in the respondents who had a preference for male child and lowest (6.4%) in those who had no gender preference (P – value < 0.0001) whereas in the urban area, it was highest (20%) in those who had a preference for female child and lowest (3.9%) in those who had no gender preference (P – value < 0.0001).

Table 1: Unmet need for Family Planning

Need for Contraception	Rural	Urban	Total
No Need	391 (39.1)	339 (33.9)	730 (36.5)
Met Need	518 (51.8)	602 (60.2)	1120 (56.0)
Unmet Need	**91 (9.1)**	**59 (5.9)**	**150 (7.5)**

Table 2: Determinants of Unmet Need of Family Planning

Parameter	Rural		Urban	
	N (%)	Pvalue	N (%)	P value
Age (in yrs)				
15-19	1 (3.8)	0.001	1 (3.7)	0.027
20-24	10 12.8)		4 (5.3)	
25-29	27(7.4)		14 (4.1)	
30-34	32 (7.9)		19 (5.9)	
35-39	17 (23)		9 (6.6)	
40-44	4 (7.7)		12(14.1)	
Occupation				
Employed	12 (4.7)	0.004	6 (1.5)	<0.001
Housewife	79(10.6)		53 (8.7)	
Husband's Occupation				
Farmer	19(17.6)	0.025	NA	<0.001
Job	16 (9.0)		18 (3.4)	
Labourer	13 (8.1)		32(10.8)	
Shopkeeper	22 (7.7)		8 (5.4)	
Teacher	1 (4.3)		1 (5)	
Education				
Illiterate	65(13.1)	<0.001	27 (9.6)	0.003
Middle	16 (6.8)		11 (6.6)	
High school & above	10 (3.8)		21 (3.8)	
Husband's Education				
Illiterate	44(20)	<0.001	19(11.9)	<0.001
Middle	22(11)		17 (8.6)	
High school & above	25(4.3)		23 (3.6)	
Family Monthly Income (in Rs.)				
<5000	46(19.2)	<0.001	31 (9.4)	<0.001
5000-10000	45 (6.3)		21 (4.6)	
>10000	0 (0)		7 (3.3)	
Religion				
Hindu	64 (7.3)	<0.001	46 (5.3)	0.018
Muslim	26 (26)		12(12.2)	
Sikh	1 (3)		1 (3.7)	
Gender Preference				
Any of Two	48 (6.4)	<0.001	29 (3.9)	<0.001
Male	41(18.3)		26 11.3)	
Female	2 (7.4)		4 (20)	
Inter-couple communication on Family Planning				
Yes	36 (6.4)	<0.001	37 (3.3)	<0.0001
No	55(12.5)		22(11.4)	
Media Accessibility				
Yes	49 (5.6)	0.003	46 (5.1)	<0.001
No	42(34.4)		13(14.3)	
Knowledge of Contraceptives				
Yes	64 (7.7)	<0.001	40 (4.7)	<0.001
No	27(16.3)		19(13.6)	No

Table 3: Association of Unmet Need with reasons for not using contraception

Reasons for not using contraception	Rural		Urban	
	N (%)*	Unmet Need	N (%)*	Unmet Need
Family Inhibition	190 (19)	63 (33.2)**	42 (4.2)	40 (95.2)**
Scare of Infertility	73 (7.3)	34 (46.6)**	38 (3.8)	19 (50)**
Not aware about source	102 (10.2)	5 (4.9)	87 (8.7)	1 (1.1)
Less perceived risk of pregnancy	132 (13.2)	15 (11.4)	63 (6.3)	0 (0)
Cost constraints	88 (8.8)	20 (22.7)**	69 (6.9)	8 (11.6)**
Not happy with health services	95 (9.5)	13 (13.7)	184 (18.4)	28 (15.2)**

*Some respondents cited more than one reason; ** Statistically significant

Among the reasons cited for not using contraception, family inhibition (P –value < 0.0001), scare of infertility (P – value < 0.0001) and cost constraints (P –value < 0.0001) were significantly associated with unmet need in rural area. In theurban area, family inhibition (P – value < 0.0001), scare of infertility (P – value <0.0001), cost constraints (P – value = 0.037) and unhappiness with health services (P– value < 0.0001) were significantly associated with unmet need (Table 3). Less perceived risk of pregnancy and lack of awareness about the source of contraceptives were not significantly associated with unmet need.

DISCUSSION

The existence of unmet need has been used to argue for further government investment in, and a new direction for, family planning programs. The concept of unmet need could be used by program planners to develop better-focused new programs and to fine-tune existing programs to address people's specific needs. Meeting unmet need, however, is contingent on two factors. First, policy makers and program managers should know why couples do not use contraceptives even when they do not want children. Second, programs should be able to reach couples with unmet need and the reasons for it should be amenable to program effort. In this paper, we attempt to describe the various determinants of unmet need in one of the districts of India.

The present study reports an unmet need for family planning as 7.5% (9.1% in rural area and 5.9% in urban area). In a study based on 306 observations from 111 countries, Alkema et al [8] reported that global unmet need for family planning decreased from 15.4% (14.1–16.9) in 1990 to 12·3% (10.9–13.9) in 2010. In another study from urban slums of Trivandrum, Indu et al [2] reported the unmet need as 17%. Srivastava et al [4] reported the unmet need in Gwalior as 21.7%. Thus we see that there is a considerable variation in unmet need owing to socio-cultural differences; however, the data of the present study was close to the nationally conducted survey (NFHS – 3) for Haryana that reported the unmet need as 8.9% in the rural area and 6.9% in the urban area [7].

Of all the women with unmet need, three-quarters belonged to the reproductively most active age group i.e. 20 – 34 years in the rural area, as against 62.7% in the urban area. The tapering off of unmet need after age 40 is probably mainly due to women's perceptions that they are no longer capable of having children. In a study reported by Devi et al [9] from Uttar Pradesh, the unmet need was highest at ages 15 – 19 years (39%) declining slowly until ages 35 – 39 years and thereafter declining more rapidly. An interesting trend noted in the present study was the high contraceptive usage and low unmet need in the 15 – 19 year age group reflecting the fact that younger couples are showing awareness and motivation about family planning and that the family planning programs are moving in the right direction.

It is evident from the present study that unmet need was concentrated in those women who were not employed. The unmet need was higher in the housewives as against workingwomen in both rural and urban areas. The reason could be that workingwomen are more aware and have some level of independence to practice contraception. Thus it is evident that if women are allowed to proceed to work, the unmet need decreases. It was also seen that women whose husbands were teachers had the lowest unmet need in both rural and urban area as against those whose husbands were working as labourers or farmers. Data by Islam et al [95] support our study.

Level of education is an important determinant of unmet need of family planning that was amply reflected in the present study. Higher unmet

need was seen in illiterate woman as compared to educated ones both in rural and urban areas. Similar pattern was seen with education of the husbands of the respondents. Kasthuri et al [88] reported a significant difference between met need and unmet need with educational status. As regards the economic status, the higher income group was having lower unmet need. Though the contraceptive usage was marginally lower in the > ₹ 10000 than the ₹ 5000 – 10000 group in rural area in the present study, the unmet need was still lower in it. This was probably due to the smaller number of respondents in that income group in the rural area.

Religion played an important role in determining the attitudes of the people in utilizing the contraceptives. This was looked upon as an attempt against the laws of nature and was seen among the Muslim women in the present study area who had a contraceptive usage of 20% and 44.5% and unmet need of 26% and 12.2% in rural and urban area respectively. According to NFHS – 3 [19], Muslim women were less likely to use contraceptives (46%) than women of other religions (58% among Hindus and 58-75% among other religious groups).

Preference for sons was seen as an important determinant of unmet need and contraceptive usage as seen in the present study. "Male child preference" is still a widely prevalent concept in the study area like elsewhere in India. A similar observation was noted in the State of Uttar Pradesh by Devi et al [53] where in women with more living sons had lesser unmet need than women with fewer sons. An interesting thing noted in the present study was the preference for female child in about 2% of respondents who correspondingly had a higher unmet need as compared to those who had no particular preference.

Print and electronic media are important sources of information that influence the thinking of masses. Access to media services was seen in 87.8% of rural and 90.9% of urban respondents in the present study. Those women who had exposure to media services in the present study had significantly lower unmet need and higher contraceptive usage both in rural and urban area as compared to those who did not. Data by Islam et al [10] support our study.

Family inhibition, cost of contraception, concern about infertility and the unhappiness with healthcare services were significantly associated with unmet need in the present study. The studies by Shrivastav et al [11] and Khokhar et al [12] report a similar trend. An important finding in the present study is the unhappiness of the urban population with health services that can be addressed to improve the contraceptive usage and decrease the unmet need further. Both Government and Private hospitals should provide appropriate information, motivation and clear doubts about the misconceptions and worries about side effects and should highlight the benefits of the various contraceptive methods at every visit to the hospital. The recommendations that follow from our study are that information

education & communication components of family planning programs should not only include the respondents but also their family members and husbands as target audiences who may be obstacles to the adoption of contraception by the woman in need. Maximizing access to the quality services and improving the quality of family planning services thus making contraceptives easier to obtain and use will help to meet the need of many women.

The strengths of this study were that the subjects were selected using random sampling technique, which helped to avoid selection bias. Both urban and rural women were included for the purpose of comparisons and to identify differences in pattern of unmet need in the two settings. Our study may be criticized on the plea that these results cannot be extrapolated to the national or global scenario, as the sample was not a nationally representative one.

CONCLUSION

In the present study, the level of unmet need was comparable to the National Statistics. This study identifies the gap between knowledge, attitude and practice of women folk regarding family planning. Education, income, occupation, knowledge about contraception, communication with partner regarding family planning, media accessibility and gender preference were identified as the contributing factors for Unmet Need. Among those respondents who were not using any method of contraception, family inhibition, cost of contraception, concern about infertility and unhappiness with healthcare services were significantly associated with Unmet Need.

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