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Prevalence and factors influencing the unmet need for family planning among married women in the rural Mandya, Karnataka

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Abstract---Background: Population stabilization leads to sustainable development and is achieved by family planning methods. Family planning is better accomplished by proper family welfare measures. These aspects are well encompassed with concept of unmet need for family planning. Identifying women with unmet need is essential, as they are more likely to accept a family planning methods. Objectives: 1. To estimate the prevalence of unmet need for family planning (UNFP) in the rural Mandya. 2. To determine influencing factors. Methodology: This cross sectional descriptive study was conducted among married women aged 15-49 years, from randomly obtained villages in the Rural Health Training Centre of Mandya Institute of Medical Sciences (MIMS), Mandya. House to house survey was conducted in each village and 2472 subjects were interviewed using pre-tested semi-structured questionnaire. Results: Prevalence of unmet need for family planning was 11.6%; 7.4 % for spacing and 4.2% for limiting. Factors like increase in age, lower educational status, working women, lower socio-economic-status, nuclear families, increase in duration of marriage and number of living children were associated with unmet need for family planning. The various reasons attributed were fear of complications, lack of decision making,

unawareness, ignorance, little perceived risk of pregnancy, opposition from relatives and from husband and wanting male or female child. Conclusion: Prevalence of unmet need for family planning was 11.6% and was associated with lower socio-economic-status, fear regarding side effects and lack of decision making.

Keywords---prevalence, family planning, rural, Mandya.

Introduction

Humans differ from all other living creatures by the very fact of their social behavior and the ability to intervene & modify their biological matters and surrounding environment. All the living beings need the resources for their living and there is minimum need of these resources to survive & lead a quality life. Hence per capita resources available cannot go below certain levels. The resource availability and growth needs balance against the population to keep per capita resource availability to the optimum. One of the ways to attain this is by population control.

The population control can be for spacing the births or to decide number of children. This process can be promoted at state level and community level, but only can be accomplished at family level, to be precise by the fecund couples in union. This process can be attained by using contraceptives to suit the couple. Planning by these couples at freewill is family planning. Family planning is defined as "A way of thinking and living that is adopted voluntarily, upon the basis of knowledge, attitudes and responsible decisions by individuals and couples, in order to promote the health and welfare of the family group and thus contribute effectively to the social development of a country". It is needed to stabilize the population. Population stabilization leads to path of sustainable development, which is the key to the human life and to reduce maternal mortality by preventing risks due to pregnancy. It is necessary to reduce rates of unintended pregnancies, thereby reducing the need for unsafe abortion, to reduce infant and child mortality.^{3, 4}

If sufficient access to family planning is provided, lives of 1,50,000 women could be saved each year. If the birth intervals are increased to as a minimum 2 year, it could stop deaths of one million children (under five), in addition to saving the lives of the women.⁵ A worldwide estimate shows 22 crore women like to avoid/delay pregnancy but are not using any methods of family planning. 'Women with unmet need are defined as 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 next child'.⁷

The main reasons for non utilization of family planning methods even though they want to is due to unawareness, economic difficulties, fear of complications, religious causes, deficiency of health workers, uncooperative spouse, limited supply and high price.⁸ Unmet need is a valuable indicator for national family planning programs. ⁹ The analysis of recent findings according to NFHS III has

revealed that the UNFP is 12.8%. It was 14.1% in rural India compared to urban population (9.7%).¹⁰

Identifying women who are at greatest risk of unintended pregnancy, with UNFP is very important, as they have high chance to accept family planning method than others.¹¹ Though many studies on this issue have been studied, no such study has been conducted in the rural Mandya, Karnataka. Therefore, the present study was conducted to determine the prevalence of the unmet need for family planning (UNFP) and its influencing factors among married women in the rural Mandya.

Materials and Methods

Research Design and study population

The study population included married women aged between 15 to 49 years in rural Mandya consisting 44 villages covering residents of 42,157 with 9820 households for a period of 6 months and it was descriptive study.

Sample size

The study population comprised 2,472 married woman aged between 15 to 49 years in rural field practice area of Mandya Institute of Medical Sciences,(MIMS) Mandya. The formula used for sample size calculation was $4pq/d^2$, with an allowable relative error of 10% and the prevalence p was taken as 14.1%.¹⁰ The minimum sample size required was 2,436.

Inclusion and exclusion criteria

Women who were married in the age group 15 to 49 years, in rural field practice area of MIMS, Mandya consented to participate in the study was the inclusion criteria for the study. Those who were not available or migrated during the visit, unmarried, separated, divorced and widowed women and women who are not permanent residents of the household were excluded from the study.

Data Collection tool

A semi structured questionnaire which was pretested was used for data collection comprising two sections.

Part – I: Selected demographic variables such as age, educational status, occupation , religion, type of family, family income, educational status and occupation of husband and age at marriage, child birth ..Etc.

Part- II: Questions on family planning methods, usage, reasons for no usage, and details regarding unmet need for family planning.

Procedure for Data Collection

Prior to initiation of the research, approval was obtained from the Institutional Scientific Committee and the Institutional Ethics Committee of MIMS. 44 villages in the rural Mandya were arranged alphabetically. For the purpose of the study,

list of villages to be visited was obtained by simple random sampling in the beginning by lottery. The first village in the list was visited and the place of public importance in that village was identified. The visit was started in the village from the first household which lied on left side of the place of public importance. The process was continued till the all the households were covered in that village. In each household, study subjects who were in inclusion criteria were interviewed using questionnaire and then moved to the next household. This process was continued till all the study subjects were interviewed. After completion of data collection in the village, the next village in the list was visited and data was collected in similar manner till the required sample size was reached. By this method 16 villages were covered. Health education regarding family planning methods was given after completion of data collection from each subject during the visit to the house.

Data analysis

Data was analyzed using SPSS (statistical package for social sciences) 15. Descriptive statistics like percentages, mean, standard deviation, inferential statistics like chi-square test were used. The statistical significance was evaluated at 95% confidence level ($p < 0.05$).

Results

Majority (21.4 %) of the study subjects in our study were in the age group of 25-29 years. Mean age of the study subjects was 33.2 ± 7.44 years. With respect to educational status of the study participants, 1/4 th of them (24.1 %) were Illiterates and only 3.5% were graduates or had higher qualification. Overall literacy rate was 75.9%. It was 79.2% among the spouses of the study subjects where 6.0 % were graduates or had higher qualification.

Majority (80.8%) was home makers and only 0.5% (13) belonged to professional work group. Among the spouses of the study subjects, majority were farmers 58.7 %, followed by unskilled workers 21.4% and only 1.5% (38) belonged to professional work group. 58.5% (1446) of study subjects belonged to nuclear family. Most of the study participants (60.9%) belonged to Socio economic class V (60.9%), followed by class IV and class III which comprised 25.4% and 7.8 % respectively (modified B.G Prasad classification). The observed mean age in years at marriage was 19.7 ± 3.01 .

Table 1: Socio demographic characteristics of study participants

Variables	Frequency (n=2472)	Percentage
Age group in completed years		
15-24	329	13.3
25-34	1035	41.8
35-44	886	35.9
45-49	222	9.0
SES Class *		

I	36	1.5
II	108	4.4
III	193	7.8
IV	629	25.4
V	1506	60.9
Educational status		
Illiterate	596	24.1
Primary	284	11.5
Secondary	941	38.1
Pre University	564	22.8
Graduate and above	87	3.5
Educational status of spouse		
Illiterate	514	20.8
Primary	377	15.2
Secondary	795	32.2
Pre University	638	25.8
Graduate and above	148	06.0
Type of family		
Nuclear	1446	58.5
Joint	939	38.0
Three Generation	87	3.5

* Socioeconomic status according to modified B G Prasad classification

76.4% of the study participants were using any one form of contraceptives. Among which 10.5% were using temporary methods and 89.5% adopted tubectomy as the permanent method of contraception. None of the spouses of the study subjects underwent vasectomy. Among 198 current contraceptive acceptors, 4.8% were using IUCD, 4.3% condom and 1.2% were using OCP.

Table 2: Distribution of Contraceptive methods among the study subjects

Method	Number	%	Method	Number	%
IUCD	91	4.8	Temporary	198	10.5
Condom	82	4.3			
OCP	22	1.2			
Others	3	0.2			
Tubectomy	1691	89.5	Permanent	1691	89.5
Vasectomy	0	0			
Total	1889	100	Total	1889	100

The prevalence of UNFP was 11.6% (286). The prevalence of unmet need for spacing was at 7.4 % (182) and unmet need for limiting was at 4.2% (104). When this prevalence in our study was compared with different age group, the percentage of subjects having UNFP was on increasing trend with age. Lowest

among 15-19 year age group and highest among women of more than 40 years. The difference observed was statistically significant.

Table 3: Prevalence of unmet need for family planning among study subjects (n=2472)

UNFP	Number	%
Contraceptive Users	1889	76.4
No unmet need or infecund	297	12.0
Unmet needs	286	11.6
Total	2472	100.0

Statistically significant higher proportion of UNFP was seen among lower educational group as compared to higher education groups. Though there was no observed trend, significant higher UNFP was observed among the study subjects whose spouses were Illiterates.

Table 4: Factors affecting unmet need for family planning(UNFP)

	UNFP (%) n=286	No UNFP (%) n=241	Total (%) N=527	Chi-square and P Value
Educational status of subjects				0.035 χ^2 - 10.321
Illiterate	46 (71.9)	18 (28.1)	64	
Primary	22 (55.0)	18 (45.0)	40	
Secondary	85 (50.0)	85 (50.0)	170	
Pre university	110 (53.9)	94 (46.1)	204	
Graduate and above	23 (46.9)	26 (53.1)	49	
Educational status of spouse				0.002 χ^2 - 17.519
Illiterate	48 (75.0)	16 (25.0)	64	
Primary	25 (47.2)	28 (52.8)	53	
Secondary	96 (55.5)	77 (44.5)	173	
Pre university	88 (46.6)	101 (53.4)	189	
Graduate and above	29 (60.4)	19 (39.6)	48	
Occupation of the eligible women				0.033 χ^2 - 4.558
Home makers	235 (52.3)	214 (47.7)	449	
Working women	51 (65.4)	27 (34.6)	78	
Occupation of the spouses of eligible women				0.339 χ^2 - 0.914
Farmers	172 (56.0)	135 (44.0)	307	
Others	114 (51.8)	106 (48.2)	220	
Duration of marriage				<0.0001 χ^2 - 51.928
< 5 Years	122 (40.7)	178 (59.3)	300	
≥ 5 Years	164 (72.2)	63 (27.8)	227	

Socioeconomic status				0.023 $\chi^2 - 11.333$
I	3 (27.3)	8 (72.7)	11	
II	16 (50.0)	16 (50.0)	32	
III	20 (41.7)	28 (58.3)	48	
IV	77 (50.3)	76 (49.7)	153	
V	170 (60.1)	113 (39.9)	283	
Type of family				<0.0001 $\chi^2 - 24.623$
Nuclear	130 (68.4)	60 (31.6)	190	
Joint	144 (45.7)	171 (54.3)	315	
Three generation	12 (54.5)	10 (45.5)	22	
Number of children				<0.0001 $\chi^2 - 116.147$
0	30 (19.6)	123 (80.4)	153	
1	181 (63.5)	104 (36.5)	285	
2	64 (84.2)	12 (15.8)	76	
>2	11 (84.6)	2 (15.4)	13	
Knowledge regarding family planning methods				0.356 $\chi^2 - 0.852$
Know	220 (55.4)	177 (44.6)	397	
Don't Know	66 (50.8)	64 (49.2)	130	
Knowledge regarding place of availability of family planning methods				0.007 $\chi^2 - 7.234$
Know	99 (40.4)	146 (59.6)	245	
Don't know	147 (52.1)	135 (47.9)	282	
Opinion regarding family planning methods				<0.001 $\chi^2 - 12.340$
Positive	103 (66.0)	53 (34.0)	156	
Negative	183 (49.3)	188 (50.7)	371	

The fraction of study subjects with UNFP was significantly more in working women (65.4%) compared to home makers (52.3%). Women belonged to poor families were observed to have higher UNFP with 60.1% and 50.3% in Class – V and Class – IV socio economic status respectively. The prevalence of UNFP was significantly more (68.4%) among study subjects belonging to nuclear families as compared to other types of families and was significantly more (72.2%) among the eligible women who were married for five years and above. There was increasing trend in UNFP with increasing number of children to the women.

The UNFP was more (52.1%) among eligible women who were not aware of place of availability of family planning methods and the observed difference was statistically significant. Among the study subjects who had UNFP, majority (67.5%) had fear of side effects. Many of them (44.4%) were unable to decide regarding usage and the method of family planning to be adapted.

Discussion

The prevalence of unmet need for family planning was observed to be 11.6% (286) in the current study. The prevalence of unmet need for spacing was 7.4 % (182) and for limiting was 4.2% (104). NFHS-III reported it as 12.8% in overall India with 14.1% and 9.7% in rural and urban areas respectively.¹⁰ When compared with the present study; it was more in rural areas in NFHS-III. This decrease in prevalence in our study setting could be attributed to the period of study and can be also be due to improved health services over past.

UNFP in the studies conducted at Kishanganj district of Bihar (2012), Paschim Midnapore district of West Bengal (2009), Urban slums of Lucknow (2010), Urban slums of Agashivnagar of Karad Maharashtra (2009), Rajasthan (2012), Urban part of Tamil Nadu (2009), Muthialpet of Pudicherry (2012) and Davangere of Karnataka (2012) were 23.9%, 13.6%, 53.1%, 45.1%, 15.8%, 39.0%, 27.3% and 16.0% respectively. Compared to the above mentioned studies, the prevalence was low in the present study. These variations in prevalence could be because of variation in study area and study period, variation in socio demographic characteristics of study subjects. The UNFP was more in the urban slums of Lucknow and Maharastra possibly due to the low awareness secondary to low educational status and economic status.^{12,13,14,15,16,17,18,19,20}

In the study by Sengupta R et al (2002-2004), UNFP prevalence was found to be from 23.0% in Orissa to 38.5% in Jharkhand. It was more here may be due to time period and deficient health care services at these states.¹⁹ The prevalence of UNFP was 22% in Ferdousi SK et al (2009) study done in Dhaka, Bangladesh.²¹ The increasing trend in UNFP with age in the current study could be attributed to various reasons like higher age groups have little perceived risk of pregnancy and were less concerned, more complacent and ignorant towards family planning.

In the current study, there was decreasing trend in the unmet need for family planning with increase in the literacy status. Similar pattern was found in the studies by Halder A et al and Rahman S et al.^{12,22} The unmet need for family planning was significantly associated with educational status in various studies which ranged from 16.7% to 66.5% in Illiterates.^{12,14,16,17,18,19} This can be explained as higher education status enables the women to make better informed choices than the other group. The proportion of eligible women with UNFP were more (65.4%) in working women group and (52.3%) in home makers. Similar observations were found in the study done by Rahman S et al with more UNFP in part time workers (25%) and daily wage workers (20%).²² The unmet need was higher in working women in the present study because most of them were doing unskilled or daily wage type of work, and were more concerned about their economic issues and household maintenance and with less time to seek health care.

In our study, women from lower socio-economic status were observed to have higher UNFP with 60.1% and 50.3% in Class-V and Class- IV SES respectively and it was improving with the improvement in family socio economic status. Similar observations were found in the research by Lata K and Halder where it was 31.1% and 13.7% respectively among lower socio-economic status group and

was statistically significant.^{12,14} The higher SES subjects have better transport, mobility, financial ease, associated better education, were better informed and have more freedom in practicing family planning.

UNFP was more (72.2%) among the eligible female whose married life was above five years in the current study. This could be due to increase in the age of the study subjects with increase in the duration of married life and higher age groups had little perceived risk of pregnancy, hence more complacency towards family planning which was associated with other social issues.

There was increasing trend in UNFP with increasing number of children the study participants had. This can attributed to lack of decision making and preparedness following the first child birth and social constraints such as in-laws and relatives interference in making decisions regarding family planning. Rahman S et al and Pal A et al reported highest UNFP in the study subjects with 1-2 children at 25.4% and 80.5 % respectively.^{22,16}

In the present study, the contraceptive users were 76.4%, and nonusers were 23.6%. Among current contraceptive acceptors, 10.5% were using temporary methods. Similar observations were reported in the research reported by Singh N et al (2009) and Ferdousi SK et al (2009) with contraceptive prevalence at 75.3% and 72.1% respectively.^{23,21}

Conclusion

Prevalence of unmet need for family planning was found to be 11.6% with unmet need for spacing at 7.4 % and unmet need for limiting at 4.2%. Various associated factors are increase in age, lower educational status, working women, number of children, nuclear families, increase in duration of married life and lower socio economic status. The various reasons attributed were fear of side effects, lack of decision making, Unawareness, ignorance, little perceived risk of pregnancy, opposition from relatives and from husband and wanting male or lower socio economic status female child.

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