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Study of fertility pattern and contraceptive practices in a rural area - A cross-sectional study

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Abstract

India is the first country to implement national family planning programme in 1952. Even today the acceptance and knowledge of contraceptive methods varies within the societies and factors responsible operate at the individual, family and community level. Thus the objective of this research was to study the fertility pattern and factors influencing the acceptance of contraception in rural area. A cross-sectional study was carried out in rural field practice area, Yadwad, in Dharwad district of India. A house to house survey was done covering a total of 430 married women in the age group of 15-49 years by personal interview and data was collected on pre-designed and pre-tested questionnaire. Statistical analysis was done using chi-square test. Majority women (64.65%) were in the age group of 15-34 years. Consummation of marriage in 15-19 years age group was 56%. Acceptance of contraception increased as age of woman increased. 94% of women adopted permanent methods of contraception with 3 or more living children. Religion and education had no influence on acceptance of contraception. In the present study the couple protection rate was 60.70%. Factors influencing fertility and contraceptive practices should be properly assessed and addressed. Newly married couples should be motivated for accepting spacing methods.

Keywords: Fertility, Contraception, CPR, Rural area

Introduction

Fertility pattern influences the demographic profile and development status of the community. By fertility is meant the actual bearing of children (Park, 2005). Human fertility is determined by age at marriage, customs, habits, education, socio-economic status all of which affect fertility and demographers opine that socio-economic development decreases the family size. Fertility helps in population analysis and in making national population policies. National population policies determine the demographic behaviour of the community which has an impact on human fertility. Gender equality, empowerment of women, elimination of all kinds of violence against women and ensuring women ability to control their own fertility are the corner-stones of population and development related programmes (Glasier *et al.,* 2006).Contraceptive practices depend more on socio-economic and demographic profile of women in reproductive age group. The success of present RCH-II relies on the acceptance of contraceptive methods in reproductive age group there by giving informed choice to people to voluntarily avail reproductive health services. The United Nation's Millennium Development Goals formulated in 2001 have set a target to improve maternal health by reducing maternal mortality by 3/4th between 1990 and 2015. Universal access to reproductive health was excluded from 2000 millennium declaration. This was recognized as a mistake because sexual and reproductive health is now regarded as essential for achievement of all MDG.

Even today the acceptance of contraceptives and fertility pattern varies in the societies and the factors responsible for varied picture operate at individual, family and community level (Kansal *et al.,* 2005). Keeping the above said in mind, the present study was conducted to know the fertility pattern in the rural community, factors influencing contraceptive acceptance and relation between contraceptive practices with some of the socio-demographic variables.

Material and methods

A cross-sectional study was carried out in rural field practice area, Yadwad attached to Dept. of Community Medicine, SDM College of Medical Sciences & Hospital, Dharwad. The study was carried out from Oct. 2006 to Dec. 2006 catering a population 3202. 430 married women in the age group of 15-49 years constituted the study sample by systematic random sampling. Infertility cases at the time of survey were excluded from the study. A house to house survey was done and data was recorded using pre-designed and pretested questionnaire. Ethical clearance was obtained from Institutional Committee of the Medical College and pilot study preceded the actual survey. Acceptors of contraception were those who ever used contraception and non acceptors were those who never used contraceptives, at the time of study. Statistical analysis was done using Chi-square test.

Results

A total of 430 married women in the age group of 15-49 years were studied. Table 1 shows the age composition and contraceptive use among study subjects. Majority of the study subjects were in 15-34 years age group which is the most crucial period in the reproductive span. 261 (60.70%) of them accepted

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contraception, the acceptance was more in 25-34 years age group which accounted to 103 (74.10%), compared to only 30 women acceptors in 15-24 years. The acceptance of contraception increased as the age increased and this difference was found to be highly statistically significant.

Table 1. Age structure & contraceptive use.

Age (Years)	Acceptors No (%)	Non-acceptors No (%)	Total No (%)
15-19	8 (18.18%)	36(81.82%)	44(10.24%)
20-24	22(23.16%)	73(76.84%)	95(22.09%)
25-29	50(66.66%)	25(33.34%)	75(17.44%)
30-34	53(82.82%)	11(17.18%)	64(14.88%)
35-39	70(85.36%)	12(14.64%)	82(19.06%)
40-44	39(92.96%)	3(7.14%)	42(9.76%)
45-49	19(67.86%)	9(32.14%)	28(6.53%)
Total	261(60.70%)	169(39.30%)	430(100%)

$\chi^2 = 76.81$; $df = 1$, $P < 0.0001$

Table 2 shows methods of contraception used in comparison with number of living children. Permanent methods of contraceptives were used by 155 (94.52%) of women with 3 to 4 living children to that of 77 (44.50%) with 1 to 2 living children. When acceptors were compared with non-acceptors, the difference was highly statistically significant. Of the 430 study subjects, 247 (57.44%) of them accepted terminal methods and only 14 (3.26%) of them adopted temporary methods.

Table 2. Methods of contraceptive VS No. of living children.

No of living children	Methods of contraception			Total
	Temporary No (%)	Permanent No (%)	Non-acceptors No (%)	
0	2(2.85%)	0	68(97.15%)	70
1-2	6(3.47%)	77(44.50%)	90(52.03%)	173
3-4	1(0.60%)	155(94.52%)	8(4.88%)	164
≥ 5	5(21.73%)	15(65.22%)	3(13.05%)	23
Total	14(03.26%)	247(57.44%)	169(39.30%)	430

χ^2 *(with Yates Correction)* $= 90.73$; $df = 1$, $P < 0.0001$.

Table 3 shows contraceptive use compared with religion among the study subjects. In the present study Hindu's accounted to 362 (84.18%) of the total 430 study subjects. The acceptance of contraception was almost same among Hindus and Muslims.

Table 3. Religion VS contraceptive use.

Religion	Acceptors No (%)	Non-acceptors No (%)	Total No (%)
Hindu	220(60.78%)	142(39.22%)	362 (84.18%)
Muslim	41(60.30%)	27(39.70%)	68(15.82%)
Total	261(60.70%)	169(39.30%)	430(100%)

Table 4 shows type of family compared with contraceptive use. 209 (48.60%) of the study subjects belonged to nuclear families and 199 (46.28%) of them belonged to joint families.149 (71.29%) of women from nuclear families and 103 (51.75%) of women from joint families practiced contraception and this difference was statistically significant.

Table 4. Type of family VS contraceptive use.

Type of family	Acceptors No (%)	Non-acceptors No (%)	Total No (%)
Nuclear	149 (71.29%)	60(28.71%)	209(48.60%)
Joint	103(51.75%)	96(48.24%)	199(46.28%)
Extended	9(40.90%)	13(59.10%)	22(5.12%)
Total	261(60.70%)	169(39.30%)	430(100%)

$\chi^2 = 16.46$; $df = 1$, $P < 0.0001$.

Table 5 shows educational status and contraceptive use among study subjects. We did not find any influence of education on contraceptive use. Though the number of literates 227 (52.80%) were more than illiterates 203 (42.20%) the acceptance of contraception was more among illiterates 139 (68.47%).

Table 5. Educational status VS contraceptive practices.

Educational status	Acceptors No. (%)	Non-acceptors No (%)	Total No (%)
Illiterate	139(68.47%)	64(31.53%)	203(42.20%)
Literate	122(53.75%)	105(46.25%)	227(52.80%)
Total	261(60.70%)	169(39.30%)	430(100%)

$\chi^2 = 9.74$; $df = 1$, $P < 0.05$.

Table 6 shows the work status and contraceptive use among study subjects. Employed were those who had monetary benefits and unemployed were those who did not have any monetary benefits. 307 (71.40%) were employed and 123 (28.60%) were unemployed. The acceptance of contraception was more among employed which accounted to 210 (68.40%), compared to unemployed 51 (41.46%) and this difference was found to be statistically significant.

Table 6. Work status VS contraceptive use.

Work status	Acceptors No (%)	Non-acceptors No (%)	Total No (%)
Employed	210(68.40%)	97(31.60%)	307(71.40%)
Unemployed	51(41.46%)	72(58.54%)	123(28.60%)
Total	261(60.70%)	169(39.30%)	430(100%)

$\chi^2 = 26.71$; $df = 1$, $P < 0.0001$.

Discussion

In the present study the acceptance of contraception increased as the age increased. Maximum acceptance was found in 25-34 years age group as the couples had completed the desired family size. Ever use of any contraceptive method increased with women's age up to 30-34 years as their fertility goals were met (NFHS II 1998-99). Couple protection rate is an indicator of the prevalence of contraceptive practice in the community. In the present study the CPR was 60.70% by all methods and only by sterilization was 57.4%. For Karnataka the CPR by all methods was 65% and by female sterilization had accounted to 62.1% in rural areas (NFHS III 2005-06). Consummation of marriage in 15-19 years age group women was 56%. In Karnataka, women aged 20-24 years were married by age of 18 years, which accounted to 49.4% in rural areas (NFHS III 2005-06). In India demographers have estimated that if age at marriage for all women was postponed from 16 years to 21 years, the number of births would decrease by 20-30%. In the present study 94% of women with 3-4 living children accepted terminal method of contraception.

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Women with 3 or more living children accepted terminal method compared to 1-2 living children (Mohanan *et al*., 2003). Women in rural areas usually begin contraceptive use only after achieving their desired family size. Also there is predominance of female sterilization in rural areas, as men often do not come forward for vasectomy, fearing about decrease of libido after the surgical procedure. Karnataka reported the percentage of female sterilization in rural areas 62.1%, as compared to 49.9% in urban areas (NFHS III 20005-06).

In the present study religion did not have any influence on contraceptive practice. Since the occupation was mainly agriculture, the life style and the needs of the population remained the same. 71.28% of women in the nuclear families practiced contraception. Also it was reported that 39.8% of women from nuclear family and 19% from joint families were acceptors of contraception (Mohanan *et al*., 2003). Women in the nuclear family are at more freedom to decide their family size than women in joint families, whose decision is influenced by other family members.

The level of mother's education is a key determinant of her child's health and contraceptive acceptance. In the present study we did not find any influence of education on contraceptive use. This is because of predominance of female sterilization after achieving the desired family size in rural areas especially among the illiterate population. The age at marriage and working status were some of the other contributing factors. In Karnataka, female sterilization accounted to 68.8% among illiterates and gradually decreased as educational level increased (NFHS III 2005-06). In the present study the acceptance of contraception was more among the working women because, attendance to antenatal clinics during pregnancy meant loss of daily wages and their desire for economic independence were responsible for acceptance.

The age at which a woman marries has a great impact on her fertility. In the present study 57.4% had accepted terminal method and only 3.26% accepted temporary methods, which means there is still a substantial scope to promote temporary methods. Studies have shown spacing has postponed births by one year in each age group thereby declining in total fertility (Park, 2005). Emphasis should be made on good counseling to women, giving correct information regarding availability, source and side effects of contraceptive methods. Thus we can bring sexual and reproductive health care and choice to those needs it most, which will be a vital contribution to make the world a fairer place (Glasier *et al.,* 2006).

Conclusion

"Every pregnancy should therefore be planned and every baby should be wanted".

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