



FERTILITY PATTERNS AND CONTRACEPTIVE PRACTICES AMONG MARRIED WOMEN IN RURAL AREAS OF KANYAKUMARI DISTRICT- A COMMUNITY BASED CROSS SECTIONAL STUDY

Community Medicine

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ABSTRACT

BACKGROUND: The South Indian regions have comparatively better performance in family welfare and planning activities when compared to remaining Indian regions. However, there has been a recent decline in the use of contraceptives among women in Tamil Nadu. Hence this study was designed to describe the fertility patterns and contraceptive usage among married women from rural Kanyakumari and to identify their reasons for non-usage.

METHODS: A cross sectional survey was conducted among 320 currently married women of reproductive age in seven wards of the rural centre field practice area. Women who were post menopausal or separated from their spouses were excluded from the study.

RESULTS: Majority of women had their first childbirth between 21-25 years of age, with 4% being teenage pregnancies. About 6.4% were either pregnant or lactating. Prevalence of infertility was 2.2%. Mean number of children was 1.6. More than half of the women (62%) had used permanent methods of sterilisation for contraception, with IUCD insertion being the preferred temporary contraceptive method in 1.3% women. About 36.7% women claimed they did not use any contraception. Reasons for non use included not willing, religious beliefs, planning next conception or previous infertility.

CONCLUSION: Contraceptive usage was satisfactory but still higher than the state figures for rural areas. However, there is still a preference for terminal contraception rather than spacing methods, revealing a gap in provision of temporary methods and an unmet need for birth spacing among the women.

KEYWORDS

rural, fertility patterns, contraception

INTRODUCTION:

The rapidly expanding population of India has always been a challenge to Indian policy makers, necessitating the world's first National Family Planning Programme in 1952.¹ The main focus of population stabilization has always been on fertility reduction, even though the strategies at national and state levels have changed over the decades. The South Indian regions have fared comparatively better in family welfare when compared to remaining Indian regions. There has been a significant decrease in fertility in the southern states with Kerala and Tamil Nadu achieving a Total Fertility Rate (TFR) of 2.1 in the last decades of the previous century. The decline in fertility was initially faster in rural areas than in urban areas, which practically levelled the difference in TFR between both areas.²

Previously, the fertility differentials depended on place of residence, education levels, occupation, religion, economic levels. But with increasing fertility decline, there was homogenisation of reproductive behaviour narrowing the differences due to female education across social strata and regions. Age specific fertility rates declining in the 15-19 age group could be the result of delayed marriage ages. This is compounded by a decline in fertility post 25 years of age, suggesting that the period of child bearing has shrunk considerably.³

However, in Tamil Nadu, there has been a fertility limitation even with lower female literacy levels than Kerala. This could be because of historically moderate levels of fertility and the impact of social reforms much earlier (1920s). Other factors like social capillarity and strong rural-urban linkages have also been proposed to explain the decline in fertility levels without a corresponding decline in mortality figures.² Induced abortions have been suggested as a reason for lower fertility. However, this cannot be substantiated because the sensitive nature of abortions means that women are less likely to report them for surveys. So the influential fertility variables remain marriage patterns- namely rising age of marriage, contraceptive usage and breast feeding practices.³ Moreover, female sterilisations mainly post partum sterilisation still remains the popular choice of birth control among women and their families.⁴ Another less explored variable is the rising incidence of infertility rates. Infertility has increased from 1.85% in 2003 to 10-14% of the Indian population in 2019, with higher rates in urban areas.⁵ Increasing costs and strain of treatment lead to the families finally limiting their efforts to one successful pregnancy and childbirth. The women in such families would also deem any further practice of contraception as unnecessary.

But a recent decline in the use of contraceptives among women in Tamil Nadu from 61.4% during 2005-06 (NFHS-3) to 53.2% during 2015-16 (NFHS-4) is worrying, especially since this decline is 5% more than the national average. This could possibly mean that more

women have to choose between induced abortions or emergency contraceptive pills when having to deal with unprotected intercourse. This could have serious adverse effects on their reproductive health.⁶

Therefore, contraceptive usage has to be studied along with the number of children, history of childbirths and infertility and other fertility patterns in order to identify predictors of contraceptive usage and lacunae in family planning service delivery. Such disaggregated data is only available from hospital based studies and lacking from community based research from rural areas, especially in Kanyakumari district.⁷ Hence this study was designed to describe the fertility patterns and contraceptive usage among married women living in a rural area of Kanyakumari district, Tamil Nadu and to identify the reasons for non usage of contraception among them.

METHODOLOGY:

The present cross sectional survey was conducted in the field practice area of the rural health centre over a four month period from November 2019 till February 2020. Out of total 15 wards in the field practice area, seven wards were randomly selected by simple random sampling. All currently married women of reproductive age residing in these areas were included in the study after obtaining informed consent. Women who were post menopausal or separated from their spouses were excluded from the study.

Out of the 320 women, 7 women were undergoing treatment for infertility. Their details were used for analysis of baseline demographic characteristics and excluded from the main analysis of fertility patterns and contraceptive usage. The socioeconomic status of the women was determined based on the updated B G Prasad scale.⁸ Direct face to face interview was conducted among 320 women during house visits using a predesigned structured questionnaire regarding details of age of marriage, family structure, abortions in the previous year, contraceptive usage, sterilization details and reasons for avoiding contraception, etc. Data analysis was done using IBM SPSS version 16. Descriptive statistics, bivariate and regression analysis were done with significance level fixed at 5%.

RESULTS:

A total of 320 currently married women from ages 22 to 49 years were included in the study. The mean age was 36.6 years (± 7.3 years). The ages of women at the time of marriage ranged from 16 to 37 years with the mean age of marriage being 23 years of age. Most of the women belonged to Christian religion (80%) while 64 of them were Hindus (20%). About half of the women (50.3%) belonged to households with a BPL ration card while 49.7% had APL ration cards. The socio demographic characteristics of the women are as described below in Table 1.

Table 1: Baseline demographic characteristics of the study population

Characteristics	Number (N=320)	Percent
Educational status		
Illiterate	9	2.8
Primary school	51	16
High school & Diploma	145	45.4
Graduate & above	85	26.6
Professional	30	9.4
Occupational status		
Unemployed	244	76.3
Unskilled	5	1.6
Skilled	16	5
Semi professional	8	2.5
Professional	47	14.7
Socio-economic status		
Upper class	3	0.9
Upper middle class	4	1.3
Middle class	12	3.8
Lower middle class	41	12.8
Lower class	260	81.3

Fertility Patterns:

There were 299 women who had ever given birth and their ages at the time of first child birth ranged from 16 to 35 years of age. About 12 women (4%) had their first childbirth at or below 18 years of age. Similarly, two women (0.7%) had their last childbirths within 18 years of age, which implies their previous children were born at earlier ages. Around 2% women had their last childbirths after 35 years of age, indicating advanced maternal age gestations - as given below in Table 2.

Table 2: Distribution of women according to age of first child birth

Age category of 1 st Child birth	Frequency (N=299)	Percent
16-20	47	15.7
21-25	171	57.2
26-30	75	25.1
31-35	6	2
Age category of Last Child birth	Frequency	Percent
17-20	26	8.7
21-25	124	41.5
26-30	121	40.5
31-35	22	7.4
36-44	6	2

At the time of doing the study, 293 women were neither pregnant nor lactating accounting for 93.6% of study population. Around 2.9% (9) women were pregnant and 3.5% (11) were lactating at the time of data collection. Only one woman (0.3%) claimed to have had an abortion for an unplanned pregnancy within the previous year. The prevalence of infertility was 2.2%, with only 7 women undergoing investigations and treatment for infertility.

Number of children:

The number of total living children per woman ranged from 0 to 4, with the average number of children being 1.6. Most of the women (65.5%) had two children while almost 26% women had a single child only (as shown in Table 3). Around 69.6% (218) women had at least one living male child while 30.35% women (95) had female children only. There was a statistically significant difference in average number of living children per woman with age of marriage, with higher number of children being seen in women younger than 23 years at the time of marriage ($p < 0.001$).

Table 3: Number of living children per women

Number of children	Frequency	Percent
0	14	4.5
1	81	25.9
2	205	65.5
3	12	3.8
4	1	0.3
Total	313	100

Contraceptive Usage:

Most of the women interviewed (63.3%) were using contraceptive

practices, either for spacing or limiting the family size. More than half of the women (62%) had used permanent methods of sterilisation for contraception. This included postpartum sterilisation in 190 women and interval sterilisation in four women. The sterilization procedure was done in Government health facilities by 57 women (29.4%) and in private hospitals by 137 women (70.6%). Intra Uterine Contraceptive Device (IUCD) insertion was the preferred temporary contraceptive method used by the women (1.3%). About 36.7% women claimed they did not follow any contraceptive practices.

Table 4: Patterns of contraceptive use among the women

Contraception used	Frequency	Percent
Temporary methods	4	1.3
Permanent methods	194	62
Non users	115	36.7
Total	313	100

The usage of contraception is highest in women with two living kids (88.3%), followed by 6.1% in women with single children, 5.6% in women with 3 children and none in women with 4 children. There is a statistically highly significant association of contraceptive usage with increasing age (Table 5).

Table 5: Distribution of contraception users as per age categories

Age category	Users N (%)	Non users N (%)	Total (%)
22 - 29	20 (30.8)	45 (69.2)	65
30 - 34	35 (62.5)	21 (37.5)	56
35 - 39	50 (78.1)	14 (21.9)	64
40 - 44	53 (79.1)	14 (20.9)	67
45 - 49	39 (63.9)	22 (36.1)	61
Total	197 (62.9)	116 (37.1)	313 (100)

$$\chi^2 = 42.7, df = 4, p < 0.001$$

Reasons for not using contraceptive methods:

About 115 women had claimed not to use any contraceptive practices. Among them, almost half of the women (48.7%) claimed to be not willing for family planning services, which is 17.9% of total study population. This shows more than one of six women studied showed unwillingness for family planning. Religious beliefs prevented eleven of the women (9.5%) from using contraception. A similar percent of women were either pregnant or lactating at the time of study and hence avoided contraception. Around 27 women (23.5%) were planning their next conception and hence avoided contraception. Three women claimed previous infertility treatment in order to conceive as a reason for not using contraception.

Factors affecting contraceptive usage:

Education beyond high school was found to be positively associated with contraceptive usage ($\chi^2 = 4.4, p < 0.05$). There was a highly significant statistical association between women being older than 30 years and contraceptive usage ($\chi^2 = 37, p < 0.01$). There was no association found between employment status and contraceptive usage. Women who belonged to APL households were more likely to use contraception than women from BPL households ($\chi^2 = 6.3, p < 0.05$). However, no association was found between contraceptive usage and SES based on per capita income. Younger age of marriage and first childbirth before 24 years were identified as factors associated with contraceptive usage on bivariate analysis. The women who got married before 23 years of age had a higher contraceptive usage than those who got married later and this difference was highly statistically significant ($p < 0.001$). A similar statistically significant higher usage was seen in women who had their first childbirth within 24 years of age ($p < 0.01$).

There was a statistically significant association between women having two or more children and contraceptive usage ($p < 0.001$). This was as expected with the completion of family and also accounts for the higher proportion of permanent contraception adopted by the study subjects. The presence of male children was also found to be associated with use of contraceptive practices with 71.1% of mothers with living male children using contraception and only 41.2% of mothers with daughters using contraception. This difference in proportions was highly statistically significant at a ($\chi^2 = 26.29, p < 0.001$). Women with at least one living male child were found to be 3.5 times more likely to adopt contraception than women with daughters alone (OR 3.5; 95% CI 2.1, 5.7). However, after binary logistic regression, having two or more living children was the only significant predictor of contraceptive usage.

DISCUSSION:

The present study revealed a satisfactory level of contraceptive usage among currently married women in rural areas of Kanyakumari district. The contraceptive usage here (63.3%) was higher than the rural contraceptive usage claimed by NFHS-4 survey at 51.6%.⁹ Women aged more than 30 years were more than four times likely to use contraceptives than women younger than 30 years as they are more likely to have completed their families.

More than three fourths of the women in this study (81.2%) had education beyond high school. Conversely, a study by Chhabra and Grover in rural Delhi showed half of the women were illiterate with only one third having a high school education.¹⁰ But both the studies have similar findings of women with lower education more likely to adopt a contraceptive than better educated women. More than three fourths of our study population (76%) were unemployed which is higher than the figures by Pushpa et al (68%) from Karnataka.¹ Women belonging to APL households were more likely to use contraception than poorer women in our study. Pushpa et al reported higher contraceptive usage among nuclear families and no difference between women of different religions, like in our study.

About 4% of our study subjects had their first child births before 18 years of age. The mean age of first childbirth in our study was 23.8 years which is much higher than an NFHS-3 survey finding of 19.8 years in 2005-06.¹¹ The rate of abortions was also very low in our study, i.e., only one abortion. Whereas, the pregnancy wastage was higher in the Delhi study which included induced abortions as well as pregnancy wastages.¹⁰

Majority of our women (65%) had at least two children. The mean number of children per woman was 1.9 in our study which is slightly less than 2.3 in the study by Chhabra et al.¹⁰ Only a small minority (4.1%) had third and fourth order births which shows more preference towards family limiting practices in our field practice area. This is in line with the decline in fertility seen at the national level due to the suppression of higher order births by following the governmental two child norm.

More than half of our study population (62%) had adopted permanent sterilisation as they had already completed their families. This is higher than the figures of rural Tamil Nadu reported by NFHS-4 (49%). The women in our field practice area preferred private hospitals for sterilisation procedure over Government hospitals. This preference could be the reason that women of higher socioeconomic status had better contraceptive usage. The use of IUCDs among the married women (1.3%) was almost similar to the NFHS-4 figures of 1.9%.⁹

The percentage of non users in our study was 36.7%, which is lower than the Karnataka figures of 39.3% reported by Pushpa et al and the 66% from Uttar Pradesh.^{1,12} The reasons for not using contraception were mainly that they were not willing or not interested in family planning, they were trying for pregnancy or religious reasons. Though the unwillingness for contraception was from the couple's side, none of them claimed familial pressure as a reason for not choosing contraception. Sheikh et al reported similar reasons for non-use with the addition of husband not allowing despite the women wanting contraception which shows an unmet need for contraception.¹²

High school education, belonging to APL households, early marriage, early first childbirth and having at least one male child were the important factors identified in our study as affecting contraception usage. Exclusive breast feeding was also identified as a predictor for fertility in the Delhi study but this was not assessed in our study.¹⁰ Educational status of the husband and urban residence were identified as factors promoting contraceptive usage in Uttar Pradesh but this was not significant in our study.¹² The employment status of the women did not have any association with their contraceptive usage in our study but was identified as a predictor by Pushpa et al in Karnataka.¹ However, in our study after regression analysis, having two or more kids was the only significant factor affecting contraceptive usage. This is consistent with most of the women in this study opting for permanent methods of contraception as they had completed their families.

Despite the satisfactory uptake of sterilisation services, the differentials in the choice of methods reveal the decreasing popularity of temporary contraceptive choices. Married women are choosing contraception only when they have completed their families, meaning that there are fewer takers for temporary spacing methods or for male contraceptives. This places the responsibility of family planning squarely on the women's shoulders. This dependence on sterilisation as

method of fertility control has been seen across several Indian states, even in states with substantial decline in fertility.² Early marriage and permanent sterilisation may limit the reproductive span but ultimately has the long term effect of larger family size, unlike a scenario where the focus is on spacing techniques and late marriages.¹³

CONCLUSION:

The contraceptive usage among the rural women in our field practice area was satisfactory with higher proportion of women using family planning services than the state figures for rural areas. However, there is still a preference for terminal contraception rather than spacing methods, revealing a gap in provision of temporary methods and an unmet need for birth spacing among the women. Delaying the age of marriage and first childbirth, birth spacing and encouraging more male participation in family planning are some of the measures that are needed for comprehensive family welfare.

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