National Board of Examinations - Journal of Medical Sciences
Volume 4, Issue 2, Pages 160–168, February 2026
DOI 10.61770/NBEJMS.2026.v04.i02.005

**ORIGINAL ARTICLE**

# The Prevalence, Determinants of Contraceptive Use, and Unmet Need for Family Planning among Married Women of Reproductive Age in a Rural Tertiary Care Field Practice Area of Tamil Nadu

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Accepted: 16-January-2026 / Published Online: 3-February-2026

## Abstract

**Background:** In India, most women know about contraception, but many still do not use it. This results in a large unmet need for family planning. Knowing the local reasons helps plan better interventions. **Objectives:** 1. To assess the prevalence of contraceptive use among married women of reproductive age. 2.To identify determinants and barriers contributing to unmet contraceptive need. **Methods:** A community-based cross-sectional study was done for six months in the field practice area of a tertiary care teaching hospital in Tamil Nadu. Using systematic random sampling, 360 married women aged 15–49 years were included. Information was collected using a pretested structured proforma. **Results:** The mean age of participants was 24.34 ± 3.69 years. Most women were aware of contraception (78.1%), but only a smaller proportion were currently using it (28.3%). The main reasons for use were financial reasons (98.0%) and spacing between pregnancies (98.0%). The common barriers were feeling that contraception was “not important” (50.4%) and family influence (44.2%). Socioeconomic status was significantly related to contraceptive use (p=0.007). After adjustment, women from the upper middle class were less likely to use contraception (AOR 0.26; 95% CI: 0.08–0.81), while graduates were more likely to use contraception (AOR 3.64; 95% CI: 1.53–8.68). **Conclusion:** There is a clear difference between knowing about contraception and actually using it. Education and socioeconomic status strongly affect contraceptive use. Family-based counseling and locally suitable behavior-change interventions are needed to reduce unmet need.

**Keywords:** Contraceptive use, Unmet need, Family planning, Married women, Socioeconomic factors

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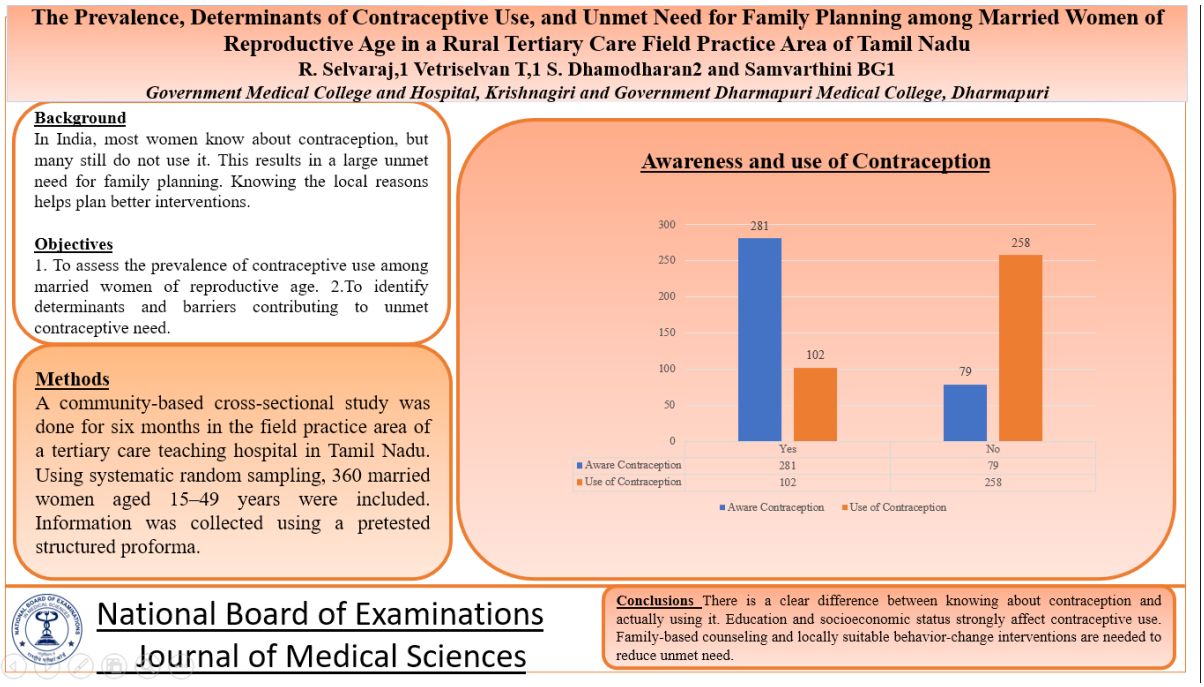
## Graphical Abstract




## Introduction

Contraception is an important part of reproductive health. It helps couples decide how many children to have and how much gap to keep between births. This helps reduce illness and deaths in mothers and children. Family planning also prevents unwanted pregnancies, unsafe abortions, and high-risk pregnancies, and supports women's education and ability to work [1,2]. Worldwide, nearly 257 million women of reproductive age still have an unmet need for contraception, even though effective methods are available [1]. Many barriers reduce contraceptive use, such as fear of side effects, social and cultural opposition, poor quality of services, and decisions being controlled by gender-related factors, especially in low- and middle-income countries [3,4].

India started the world's first national family planning program in 1952. Over time, it has expanded through policies like the National Population Policy (2000), National Health Policy (2017), and the National Health Mission, with a focus on reproductive rights and informed choice [5,6]. Although awareness of contraception in India is almost universal (98.8%), actual use differs across regions and socioeconomic groups [7]. As per NFHS-5, contraceptive use among married women aged 15–49 years is 66.7%, and modern methods account for 56.5% of use, while the total fertility rate is 2.0 [7]. Studies from different parts of India show that education, socioeconomic status, family pressure, and preference for a male child strongly influence whether contraception is used [8–10]. However, local data from rural Tamil Nadu are still limited.

Therefore, it is important to understand the local reasons for contraceptive use and non-use so that community-based interventions can be planned effectively. This study was done to assess the prevalence, determinants, and unmet need for family planning among

married women of reproductive age in a rural field practice area of a tertiary care hospital in Tamil Nadu.

## Materials and Methods

### *Study Design and Setting*

A community-based cross-sectional study was conducted in the rural field practice areas attached to Government Medical College and Hospital, Krishnagiri (GMCK), Tamil Nadu.

### *Study Period*

Six months (April to September 2025).

### *Study Population*

Married women aged 15–49 years residing in the study area.

### *Sample Size*

Based on NFHS-5 contraceptive prevalence (70%), with 5% absolute precision and 95% confidence level, the minimum required sample size was calculated as 336. A total of 360 participants were enrolled.

### *Sampling Technique*

Systematic random sampling was employed. GMCK Rural field practice area, Shoolagiri health block was taken. Out of total 2,101 household, every 6$^{th}$ house was selected and starting house was selected randomly, From each selected household, one eligible respondent meeting the inclusion criteria was enrolled in the study. If a selected household did not have an eligible participant or consent was not obtained, the next household was approached to maintain the sample size.

### *Data Collection Tool*

A pretested structured proforma covering sociodemographic details, reproductive history, awareness and practice of contraception, influencing factors, and barriers. Questionnaire was validated using pilot study

Statistical Analysis

Data were entered in Microsoft Excel and analyzed using SPSS. All quantitative data were expressed in mean and standard deviation. All qualitative data were expressed in frequency and percentages. Associations were tested using test of significance chi-square test, independent t-test, Multi-variable analysis: logistic regression. For all practical purposes p-value $<0.05$ was considered statistically significant.

Results

The average age of the participants was $24.34 \pm 3.69$ years, and the average age at marriage was $20.50 \pm 3.16$ years. Most of the participants were women (86.4%). Many had high school or primary education, and most belonged to the lower middle socioeconomic class (Table 1). About 78.1% of participants had heard about contraception, but only 28.3% were currently using any contraceptive method (Figure 1). This shows a clear gap between knowledge and actual use, indicating a considerable unmet need.

The main reasons for using contraception were financial reasons (98.0%) and spacing between pregnancies (98.0%). Other common reasons included limiting family size (64.7%) and partner's choice (59.8%). Medical reasons such as previous pregnancy complications or chronic illness were reported only by a few participants (Table 1). The commonest reasons for not using contraception were

the respondents thinking it was "not important" (50.4%), family influence (44.2%), and preference for a particular gender of the child (30.2%). Cultural beliefs and social stigma also discouraged contraceptive use (Figure 2).

Socioeconomic status was significantly related to contraceptive use ($\chi^2 = 14.31$; $p = 0.007$) (Table 2). There was no significant difference in current age between users and non-users ($p = 0.416$). However, users had a higher age at marriage (21.02 vs 20.29 years; $p = 0.048$) and higher spouse age at marriage (26.03 vs 25.00 years; $p = 0.017$) (Table 3). In the multi-variable adjusted analysis, education and socioeconomic status showed important links with contraceptive use. Compared with the reference SES group, participants from the upper middle class were less likely to use contraception (AOR 0.26; 95% CI 0.08–0.81; p=0.02), while the upper class, middle class, and lower middle class showed no significant difference (p>0.05). Regarding education, graduates were more likely to use contraception than the reference education group (AOR 3.64; 95% CI 1.53–8.68; p=0.004), whereas high school, higher secondary, and illiterate categories were not significantly associated with contraceptive use (Table 4).

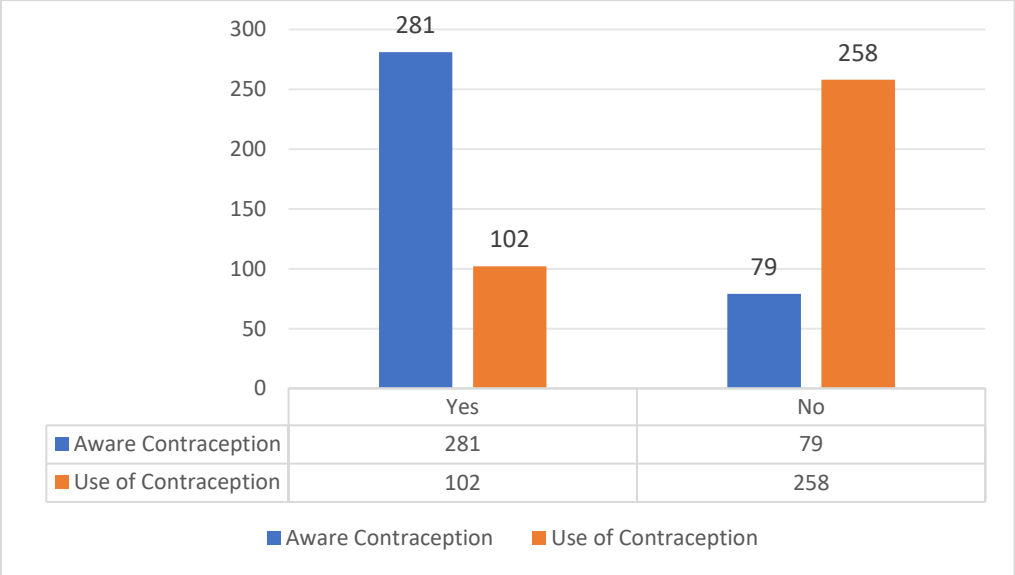



Figure 1. Awareness and use of Contraception.

Table 1. Factors influencing contraceptive use among current users (N=102)

| **Factors Influencing contraception use** | **N** | **Percent** |
|---|---|---|
| Career Growth | 37 | 36.3% |

| | | |
|---|---|---|
| Financial reasons | 100 | 98.0% |
| Limit Family size | 66 | 64.7% |
| Gap between pregnancy | 100 | 98.0% |
| Partners Choice | 61 | 59.8% |
| Complications in previous pregnancy | 6 | 5.9% |
| Chronic Medical condition | 3 | 2.9% |
| Fear of RTI/STI | 1 | 1.0% |
| Easy accessibility | 25 | 24.5% |

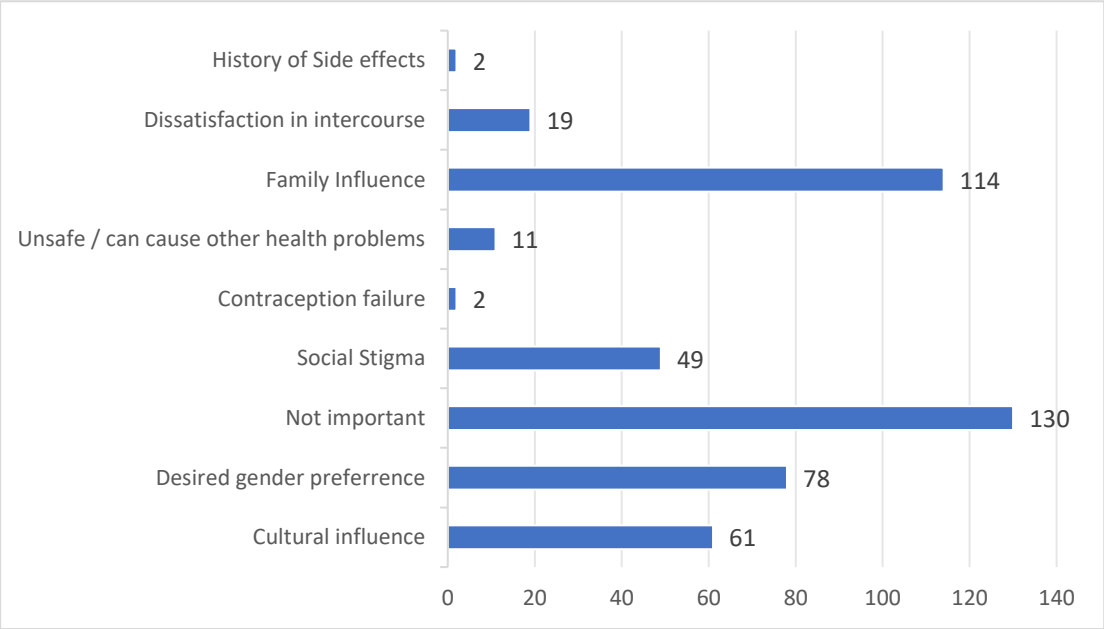



Figure 2. Barriers to contraceptive use among participants

Table 2. Association between socioeconomic status and current temporary contraceptive use (Yes/No) among married women (N=360).

| **Socio Economic Status** | **Current_ Temporary** | | **Total** | **Chi Square Value** | **p value** |
|---|---|---|---|---|---|
| | **No** | **Yes** | | | |
| Upper Class | 8 | 4 | 12 | **14.31** | **0.007*** |
| | 66.7% | 33.3% | 100.0% | | |
| Upper Middle Class | 79 | 16 | 95 | | |
| | 83.2% | 16.8% | 100.0% | | |
| Middle Class | 79 | 26 | 105 | | |
| | 75.2% | 24.8% | 100.0% | | |
| Lower Middle Class | 77 | 49 | 126 | | |
| | 61.1% | 38.9% | 100.0% | | |
| Lower Class | 15 | 7 | 22 | | |
| | 68.2% | 31.8% | 100.0% | | |
| Total | 258 | 102 | 360 | | |
| | 71.7% | 28.3% | 100.0% | | |

Table 3. Comparison of mean age, age at marriage, and spouse age at marriage between contraceptive users and non-users (independent t-test).

| **Variables** | **Current_Temporary** | **N** | **Mean** | **Std. Deviation** | **t value** | **p value** |
|---|---|---|---|---|---|---|
| Age | No | 258 | 24.24 | 3.709 | -0.815 | 0.416 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Yes | 102 | 24.59 | 3.643 | | |
| **Age at marriage** | No | 258 | 20.29 | 3.288 | -1.982 | **0.048 *** |
| | Yes | 102 | 21.02 | 2.743 | | |
| **Spouse age at marriage** | No | 258 | 25 | 3.918 | -2.39 | **0.017 *** |
| | Yes | 102 | 26.03 | 2.936 | | |

Table 4. Multivariable logistic Regression for predictors of current contraception use (Adjusted OR with 95% CL)

| Predictor | Category (vs reference) | Adjusted OR (AOR) | 95% CI for AOR | p value |
|---|---|---|---|---|
| SES | SES (Upper Class) | 0.54 | 0.11 – 2.66 | 0.447 |
| | **SES (Upper Middle Class)** | 0.26 | 0.08 – 0.81 | **0.02*** |
| | SES (Middle Class) | 0.55 | 0.19 – 1.55 | 0.255 |
| | SES (Lower Middle Class) | 1.37 | 0.51 – 3.68 | 0.534 |
| Education | **Education (Graduate)** | 3.64 | 1.53 – 8.68 | **0.004*** |
| | Education (High School) | 1.54 | 0.80 – 2.95 | 0.194 |
| | Education (Higher Secondary) | 1.32 | 0.62 – 2.78 | 0.47 |
| | Education (Illiterte) | 0.59 | 0.18 – 1.98 | 0.392 |

## Discussion

The present study shows a clear gap between knowing about contraception and actually using it among married women of reproductive age. Even though awareness is high, contraceptive use is still low. This is mainly due to social and cultural beliefs, family pressure, and the feeling that contraception is not important, similar to other Indian studies [8,9,11].

Education was found to be an important factor that increased contraceptive use. This shows that women with better education are more confident and informed to make decisions about family planning [10,12]. The link between socioeconomic status and contraceptive use also suggests that family planning strategies should be planned according to local needs, instead of using the same approach for everyone.

To reduce unmet need, it is important to provide counseling that involves the family, encourage male participation, and correct myths and cultural fears about contraception [3,13]. Including these steps within existing public health programs can improve contraceptive use and help improve maternal and child health in similar rural areas.

## Strengths and Limitations

### Strengths

This study had a community-based design, which helped in understanding the real situation of contraceptive use among women in the general population rather than only among hospital attendees. In addition, the use of multivariable analysis allowed identification of independent factors influencing contraceptive use, while controlling for the effect of other variables, thereby strengthening the validity of the findings.

### Limitations

Since it was a cross-sectional study, it could only show associations and not a cause–effect relationship. Also, the information was self-reported by participants, which may have been affected by recall errors or the tendency to give socially acceptable answers Social desirability bias.

## Conclusion

Even though many women know about contraception, only a few are actually using it, leading to a large unmet need for family planning. Contraceptive use is strongly influenced by education and socioeconomic status. Improving community-based counseling, involving family members, and reducing social and cultural barriers are important steps to increase contraceptive use.

## Ethical Approval

Ethical approval was obtained from the Institutional Scientific Committee (GMCK/ISC/APPRO/04/2025/03).

## Informed Consent

Informed consent was secured from all participants, and confidentiality was maintained.

## Conflicts of interest

The authors declare that they do not have conflict of interest.

## Funding

No funding was received for conducting this study.

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