

## Contraceptive Use and Unmet Need for Family Planning among Married Women in Rural India: A Community-based cross-sectional study

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### Abstract

**Background:** Family planning is a key component of reproductive health and plays a vital role in improving maternal and child health outcomes. Despite increased awareness and availability of contraceptive methods, many rural populations continue to experience an unmet need for family planning due to socioeconomic, cultural, and educational barriers.

**Objective:** To assess the prevalence of contraceptive use and determine the unmet need for family planning among the rural population.

**Methods:** A community-based cross-sectional study was conducted among married women of reproductive age (15–49 years) residing in rural areas. Data were collected using a structured questionnaire covering socio-demographic characteristics, knowledge of contraceptive methods, current contraceptive use, and reasons for non-use. Descriptive statistics and percentages were used for analysis.

**Results:** A total of 200 participants were included in the study. Among them, 58% were currently using some form of contraception, while 42% were non-users. The most commonly used method was female sterilisation (30%), followed by condoms (12%), oral contraceptive pills (8%), and intrauterine contraceptive devices (8%). The overall unmet need for family planning was 24%. Major reasons for unmet need included lack of awareness, fear of side effects, cultural beliefs, and limited access to services.

**Conclusion:** Although awareness about contraception is increasing, a considerable proportion of rural women still have an unmet need for family planning. Strengthening community education, improving accessibility of services, and involving male partners could help reduce unmet need and improve reproductive health outcomes.

**Keywords:** Family Planning, Contraceptive Use, Unmet Need, Rural Population, Reproductive Health.

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### Introduction

Family planning enables individuals and couples to determine the number and spacing of their children through the use of contraceptive methods. It is considered an essential component of reproductive health and plays a crucial role in reducing maternal mortality, unintended pregnancies, and unsafe abortions [1].

Globally, approximately 270 million women of reproductive age have an unmet need for contraception, particularly in developing countries [2]. Meeting this unmet need could prevent millions of unintended pregnancies and significantly reduce maternal deaths [3]. In India, significant progress has been made in family

planning services since the launch of the National Family Planning Programme in 1952. However, disparities still exist between urban and rural populations due to differences in literacy levels, healthcare access, and socio-cultural practices [4]. According to the National Family Health Survey (NFHS-5), the overall contraceptive prevalence rate in India is around 67%, but the unmet need for family planning remains a public health concern in many rural areas [5].

The concept of unmet need for family planning refers to women who are fertile and sexually active but are not using any contraceptive method despite not wanting more children or wishing to delay the

next pregnancy [6]. Several factors contribute to this unmet need, including lack of awareness, misconceptions about contraceptives, fear of side effects, religious beliefs, partner opposition, and limited access to healthcare facilities [7].

Understanding contraceptive practices and identifying gaps in family planning services are important for designing effective reproductive health programs. Rural populations often face unique barriers such as inadequate health infrastructure, lower educational attainment, and cultural resistance toward contraceptive use [8].

Therefore, the present study was conducted to assess the pattern of contraceptive use and the magnitude of unmet need for family planning among the rural population.

## Objectives

### Primary Objective

- To estimate the prevalence of contraceptive use among married women aged 15-49 years in rural areas.

**Secondary Objectives:** To determine the magnitude of unmet need for family planning and identify factors associated with non-use of contraception

### Materials and Methods

**Study Design:** Community-based cross-sectional study.

**Study Area:** The study was conducted in selected rural villages.

**Study Population:** Married women aged 15–49 years residing in the rural area.

### Sample Size

$$n = \frac{Z^2 \cdot p \cdot q}{d^2}$$

Assuming a contraceptive prevalence of 60% (NFHS-5), an absolute precision of 7%, and a 95% confidence interval, the calculated sample size was

188. Considering non-response, a total of 200 participants were included.

**Sampling Technique:** In the sampling technique, households were selected using systematic sampling.

### Inclusion Criteria

- Married women aged 15–49 years
- Permanent residents of the study area
- Willing to participate in the study

### Exclusion Criteria

- Pregnant women
- Women who refused consent

**Sample Size:** A total of 200 participants were included in the study using convenience sampling. The study period was from July 2025 to November 2025.

### Data Collection Tool

A pretested structured questionnaire was used to collect information regarding:

- Socio-demographic characteristics
- Awareness of contraceptive methods
- Current contraceptive use
- Reasons for non-use

**Ethical Considerations:** Informed consent was obtained from all participants. Confidentiality and anonymity of data were maintained throughout the study.

**Statistical Analysis:** Data were entered into Microsoft Excel and analysed using descriptive statistics such as frequency and percentage.

### Results

A total of 200 women of reproductive age from the rural population participated in the present study. The results describe the socio-demographic characteristics of the participants, patterns of contraceptive use, unmet need for family planning, and the factors influencing non-use of contraceptive methods.

**Table 1: Socio-demographic Characteristics of Participants**

Variable	Frequency (n=200)	Percentage (%)
Age 15–24	40	20
Age 25–34	80	40
Age 35–49	80	40
Illiterate	60	30
Primary education	70	35
Secondary education	50	25
Higher education	20	10

Most participants belonged to the 25–34 and 35–49 age groups (40% each). Nearly 30% were illiterate, while only 10% had higher education.

**Table 2: Contraceptive Use among Participants**

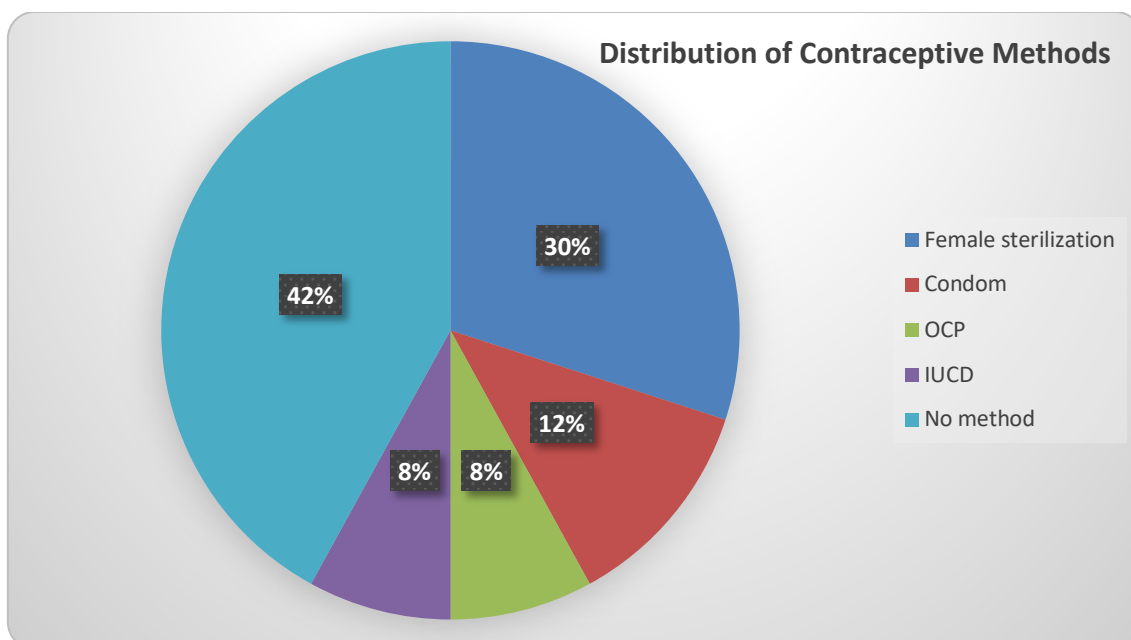
Method	Frequency	Percentage
Female sterilization	60	30
Condom	24	12
Oral contraceptive pills	16	8
IUCD	16	8
No method	84	42

Female sterilisation was the most commonly used method (30%), followed by condoms (12%).

**Table 3: Reasons for Non-Use of Contraception**

Reason	Frequency	Percentage
Lack of awareness	20	10
Fear of side effects	18	9
Cultural/religious beliefs	14	7
Husband opposition	12	6
Limited access to services	20	10

The major reasons for non-use of contraception among the participants included lack of awareness and limited access to services (10% each), followed by fear of side effects (9%), cultural or religious beliefs (7%), and opposition from husbands (6%).

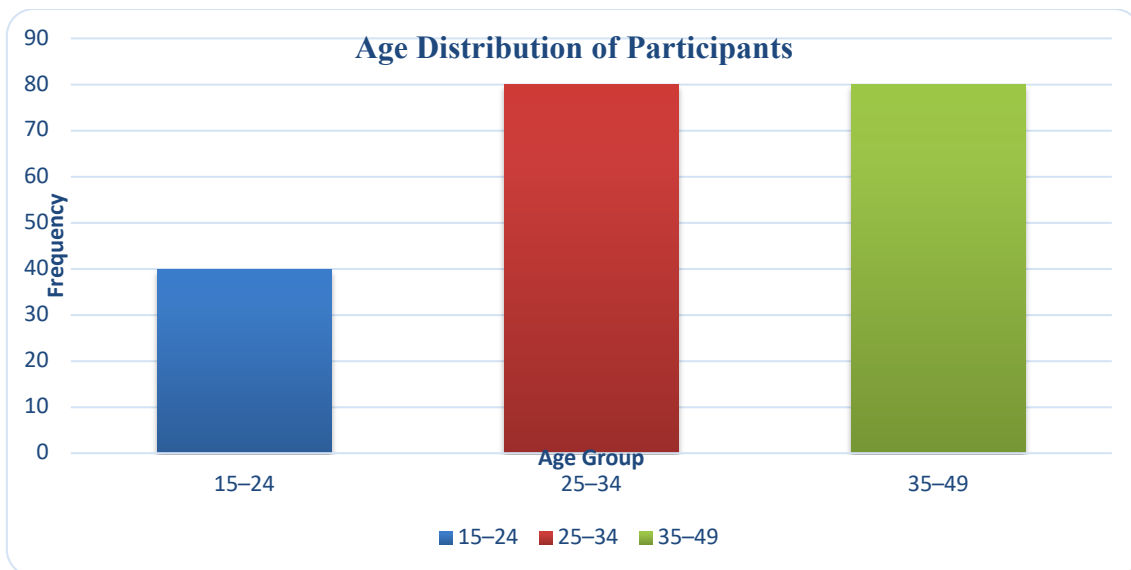


**Figure 1: Pie chart showing the distribution of contraceptive methods used among the study participants in the rural population.**

The pie chart illustrates the pattern of contraceptive use among the participants.

Female sterilisation was the most commonly adopted method, accounting for 30% of the total participants. Condom use was reported by 12% of women, while 8% used oral contraceptive pills and another 8% relied on intrauterine contraceptive

devices (IUCDs). However, a substantial proportion of participants (42%) were not using any contraceptive method. This finding indicates that although permanent methods are widely utilised, a considerable number of women still remain without any form of contraception, highlighting the presence of unmet need for family planning in the rural population.

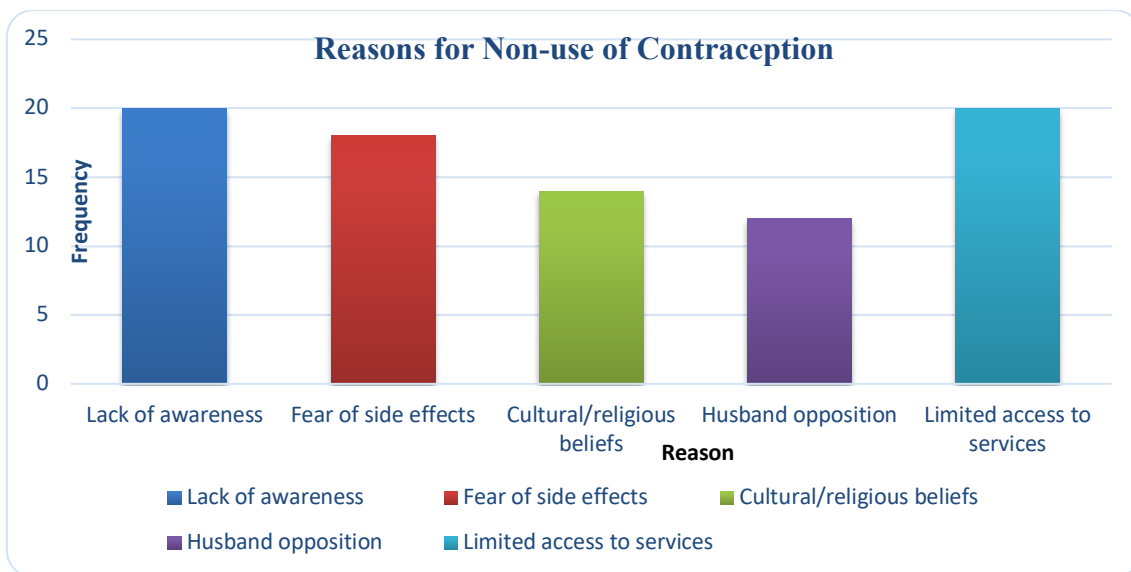


**Figure 2: Bar chart illustrating the proportion of women currently using contraception compared to those not using any contraceptive method.**

The bar chart represents the proportion of contraceptive users and non-users among the study population.

Out of the total participants, 58% were using some form of contraception, while 42% were not using any contraceptive method. The group of non-users

represents women who may have an unmet need for family planning. This distribution indicates that despite moderate utilization of contraceptive methods, a significant proportion of women in rural areas remain without adequate family planning services or support.



**Figure 3: Stacked column chart showing the relationship between educational status of women and their contraceptive use.**

The stacked column chart demonstrates the association between educational status and contraceptive use among the participants. Women with higher levels of education showed relatively greater utilization of contraceptive methods compared to those with lower educational attainment. Among illiterate women, the proportion of non-users was higher than users. In contrast, women with secondary and higher education demonstrated increased contraceptive uptake. This pattern suggests that educational status may play an

important role in influencing awareness and acceptance of family planning methods.

**Discussion**

The present study evaluated contraceptive use and the unmet need for family planning among rural women of reproductive age. The contraceptive prevalence rate observed in this study was 58%, which is comparable with findings reported in national surveys and other regional studies conducted in India [5,9]. These findings indicate

that a considerable proportion of women in rural areas are adopting contraceptive methods; however, the prevalence remains suboptimal when compared with the targets of national reproductive health programmes. Variations in contraceptive use across different regions may be influenced by differences in educational status, socioeconomic conditions, cultural practices, and accessibility of healthcare services.

In the present study, female sterilization emerged as the most commonly adopted contraceptive method, reflecting the long-standing reliance on permanent methods within India's family planning programme [10].

This pattern has historically been observed in the country due to the strong emphasis on sterilization as a primary strategy for fertility control. Similar trends have been reported in other studies conducted in rural populations, where permanent methods account for the majority of contraceptive use [11]. The predominance of sterilization may also indicate that many couples prefer limiting births after achieving their desired family size rather than using temporary spacing methods during the reproductive years.

Despite relatively high awareness of contraceptive methods among participants, 42% of women reported not using any form of contraception, highlighting a substantial unmet need for family planning. This finding is consistent with studies from other developing regions where sociocultural factors, gender dynamics, and limited access to reproductive health services continue to influence contraceptive behaviour [12]. The persistence of unmet need suggests that awareness alone may not translate into contraceptive adoption unless supportive social, economic, and healthcare environments are present.

The present study also identified fear of side effects and lack of adequate knowledge as major reasons for the non-use of contraceptive methods. Many women expressed concerns regarding possible health complications such as infertility, excessive bleeding, or long-term reproductive problems associated with contraceptive use. Similar misconceptions and fears have been documented in previous studies, where misinformation regarding contraceptive safety and perceived health risks discouraged women from adopting modern family planning methods [13]. These findings highlight the importance of accurate counselling and community-based education to address myths and misconceptions related to contraception.

Another important barrier identified in the study was opposition from husbands and limited access to healthcare facilities, both of which contributed to the unmet need for family planning. In many rural

communities, reproductive decisions are often influenced by male partners or extended family members. Lack of male involvement in family planning programmes may therefore hinder the adoption of contraceptive methods. Previous studies have emphasized that greater participation of men in reproductive health decision-making and improved availability of family planning services can significantly enhance contraceptive uptake in rural settings [14].

Overall, the findings of this study emphasize the need to strengthen family planning education programmes, improve accessibility of contraceptive services, and promote community awareness regarding the benefits of spacing and limiting births. Integrating family planning counselling into routine primary healthcare services and encouraging male participation may help reduce the unmet need for contraception and improve reproductive health outcomes among rural populations.

### Conclusion

The study demonstrates that although a moderate proportion of rural women are using contraceptive methods, a significant unmet need for family planning still exists. Female sterilization remains the most commonly used method, while the use of spacing methods such as oral contraceptives and IUCDs remains relatively low.

Lack of awareness, fear of side effects, and sociocultural barriers were identified as major factors contributing to non-use of contraception. Addressing these barriers through community-based education, counselling, and improved healthcare access could help reduce the unmet need for family planning.

Strengthening reproductive health services and promoting male participation in family planning decisions may further improve contraceptive uptake in rural populations.

### Limitations

1. The study was conducted in a limited rural population, which may affect generalizability.
2. Self-reported data may be subject to recall bias.
3. The cross-sectional design does not establish causal relationships.

**Future Implications:** Future studies with larger sample sizes and multi-regional coverage are needed to understand contraceptive behaviour among rural populations. Community-based awareness programs, improved accessibility of modern contraceptive methods, and involvement of male partners should be emphasised in future family planning initiatives.

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