

# Assessment of Knowledge, Attitude and Practice of Contraception among Married Women of Reproductive Age Group in a Rural Area of Meerut, Uttar Pradesh

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## ARTICLE CYCLE

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## ABSTRACT

**Background:** Contraception is a cornerstone of reproductive health, enabling couples to achieve desired family size and prevent unintended pregnancies. Despite national progress in family planning programs, disparities between awareness and actual utilization continue to exist, particularly in rural settings. This study assessed the knowledge, attitude, and practice of contraception among married women in rural Meerut, Uttar Pradesh. **Methods:** A community-based cross-sectional study was conducted from September 2023 to September 2024 among 305 married women aged 15–49 years selected using multi-stage random sampling. Data were collected through house-to-house interviews using a pretested semi-structured questionnaire and analyzed with Epi Info version 7.2.6. **Results:** Overall, 90.2% of participants had knowledge of at least one contraceptive method. Tubal ligation and condoms were the most commonly recognized methods. Friends and relatives constituted the primary source of information. A positive attitude toward contraceptive use was observed in 70.5% of respondents. However, current contraceptive prevalence was 50.8%, indicating a substantial knowledge–practice gap. Knowledge showed a significant association with contraceptive utilization. **Conclusion:** Although awareness was high, utilization remained moderate. Strengthened counseling, improved service accessibility, and enhanced male involvement are essential to promote effective family planning adoption.

## KEYWORDS

Contraception, Knowledge, Rural Women, Reproductive Health

## INTRODUCTION

India, with approximately 17.7% of the global population, faces significant challenges due to overpopulation. This issue contributes to widespread problems such as poverty, illiteracy, malnutrition, unemployment, resource depletion, and slow economic growth. These consequences highlight the urgent need to promote both regular and emergency contraception as vital components of reproductive health. Various contraceptive methods are available to help couples plan and space their children. These include natural methods, barrier methods (such as male and female condoms), oral contraceptive pills, injectables, implants, intrauterine devices (IUDs), and permanent options like male and female sterilization.

The use of modern contraceptive methods in India has shown gradual improvement over the years. Among married women aged 15 to 49 years, usage increased from 37% in 1992–93 to 48% in 2015–16. The key objective behind promoting contraceptive use is to help couples achieve their desired family size while ensuring

adequate spacing between births. As part of the Family Planning 2020 (FP2020) initiative, the Government of India committed to raising the modern contraceptive prevalence rate (mCPR) from 47.7% to 54.3% by the year 2020.(1)

Family planning through contraception tries to achieve two main objectives, firstly, to have the desired number of children and secondary to have these children by proper spacing of pregnancy thus preventing the consequences of unwanted pregnancies like septic abortions, maternal morbidity and mortality.(2)

However, district-level evidence from rural Meerut is limited, making it necessary to assess women's awareness and perceptions of contraception to address local gaps in family planning services.

This study seeks to examine the awareness, knowledge, and perceptions regarding contraception among women of reproductive age in rural Meerut.

## Objectives

- To assess the knowledge of contraceptive methods among married women aged 15–49 years.

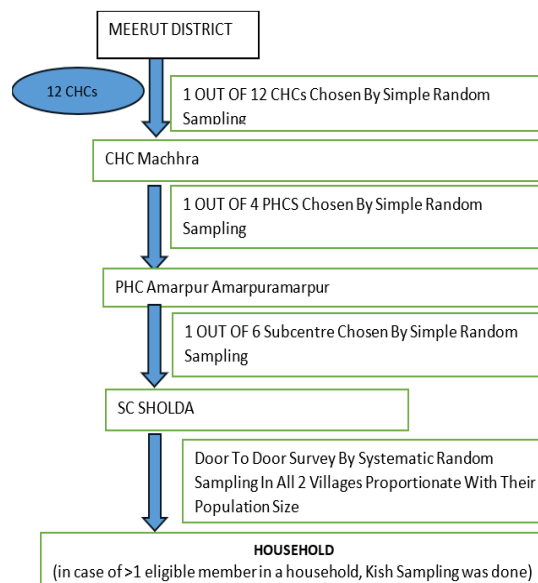
- To determine the attitude of married women towards contraceptive use.
- To identify the major sources of information about contraception among married women.
- To assess the current practice of contraceptive use among married women.

**MATERIAL & METHODS**

A community-based cross-sectional study was conducted from 1st September 2023 to 30th September 2024 in Sholda and Darion villages of Machhra block, Meerut district, Uttar Pradesh. The study included married women aged 15–49 years residing in the area for more than six months and listed in the eligible couple register. Women who were severely ill, unmarried, widowed, temporary residents, or who did not give consent were excluded.

A semi-structured interview schedule was used for data collection through house-to-house visits. A total of 305 women were selected using a multi-stage random sampling technique. CHC Machhra, PHC Amarapur, and SC Sholda were randomly chosen, and households in Sholda and Darion villages were selected proportionally by systematic sampling. One eligible woman per household was chosen using the Kish method.

The sample size was calculated using the formula  $n = 4pq/d^2$   
 $p = 60.8\%$  NFHS-5 (2019-2021)(3)  $d = 6\%$ , resulting in 265. After adding a 15% non-response rate, the final sample size was 305.



Data were entered in Microsoft Excel and analyzed using Epi Info™ version 7.2.6, the Chi-square test was applied to assess associations; however, only descriptive findings are presented in this paper. Ethical approval (No/SC-1/2025/2960) was obtained from the Institutional Ethics Committee of Lala Lajpat Rai Memorial Medical College, Meerut. Written informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were ensured throughout the study.

**RESULTS**

**Table 1: Socio-demographic characteristics of respondents (n=305)**

Age group(year)	Category	Frequency	Percentage (%)
	15-19	10	3.3
	20-24	52	17.0
	25-29	77	25.2
	30-34	63	20.7
	35-39	43	14.1
	40-44	28	9.2
	45-49	32	10.5
Education	Illiterate	70	23.0
	Primary	108	35.4
	High school	65	21.3
	Secondary school and above	62	20.3
Age at Marriage (year)	<21	241	79.0
	>21	64	21.0
Socio-economic class	Class I (upper class)	11	3.6
	Class II (upper middle class)	46	15.1
	Class III (middle class)	194	63.6
	Class IV (lower middle class)	51	16.7
	Class V (lower class)	3	1.0
Religion	Hindu	241	79.0
	Muslim	64	21.0
Occupation of the woman	Housewife	263	86.1
	Unskilled	20	6.6
	Semiskilled	13	4.3
	Skilled worker	9	3.0

The socio-demographic profile of the 305 respondents revealed that the majority were aged between 25–29

years, followed by 30–34 and 20–24 years, with the least representation in the 15–19 age group. Most women had

received some formal education, with 35.4% educated up to the primary level, while 23.0% were illiterate. Over three-fourths (79%) were married at or before 21 years of age, indicating early marriage practices. The majority (63.6%) belonged to the middle socio-economic class (Class III), and 79.0% of the participants were Hindu. A large proportion of women (86.1%) were housewives, with only a small number engaged in unskilled, semiskilled, or skilled occupations.

**Figure 1: Distribution of knowledge regarding family planning methods among study participants (n = 305)**

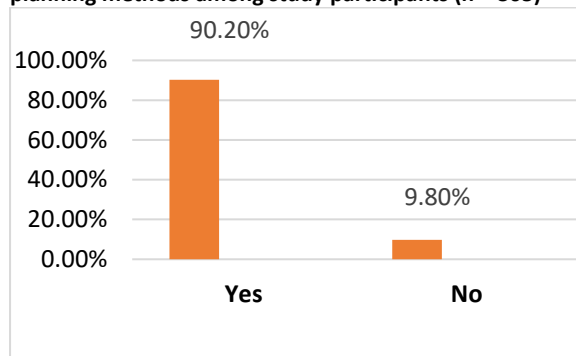


Figure 1 shows that out of 305 respondents, 275 (90.2%) had knowledge of family planning methods, while 30 (9.8%) had no knowledge. In this study, women who had heard of at least one contraceptive method were considered knowledgeable. This approach is consistent with the methodology used in the National Family Health Survey (NFHS-5, 2019–21), which assesses contraceptive knowledge based on whether a woman has heard of at least one method, thereby allowing comparison with national data.

The awareness of contraceptive methods among the participants varied across different methods. The highest awareness was observed for tubal ligation (78.40%), followed closely by condom use (77.70%) and vasectomy (76.40%). Awareness of intrauterine devices (68.20%) and injectables (68.20%) was also relatively high, along with oral contraceptive pills (67.50%). Knowledge about withdrawal method was reported by 64.60% of respondents, while 43.90% were aware of avoidance of sexual intercourse as a method of contraception. The least awareness was noted for the rhythm (safe period) method, reported by only 5.20% of participants. Overall, permanent methods such as tubal ligation and vasectomy were more widely known compared to some natural methods, particularly the rhythm method.

The distribution of sources of knowledge regarding contraception among the participants revealed that the most common source was friends and relatives, reported by 67.60% of women. This was followed by spouse as a source of information for 45.40% of respondents and health workers for 42.50%. Doctors contributed to contraceptive knowledge among 26.90% of participants. Mass media, including television and other electronic media, was reported as a source by 21.40% of women, while magazines and newspapers accounted for the least contribution at 6.50%. Overall, informal sources such as friends and relatives played a more prominent role compared to formal sources like healthcare providers and print media.

**Table 2: Attitude towards contraceptive use among non-users**

Attitude Category	Frequency	Percentage (%)
Positive	215	70.5
Negative	90	29.5
Total	305	100

Table No. 2 depicts the attitude toward contraceptive use among the 305 participants. Out of these, 215 women (70.5%) exhibited a positive attitude toward the use of contraceptives, whereas 90 women (29.5%) had a negative attitude. In the present study, attitude toward contraceptive use was assessed based on future intention to use contraception, following the approach used in the National Family Health Survey (NFHS). NFHS considers women’s intention to use contraception as an indicator of acceptance and positive attitude toward family planning methods. Accordingly, women who expressed willingness to use contraception in the future were categorized as having a positive attitude, while those who did not express such intention were considered to have a negative attitude.

Out of the total 305 participants, 155 women (50.8%) were currently using some form of contraception, while 150 women (49.2%) were not using any contraceptive method at the time of the study. Condoms (41.9%) were the most commonly used contraceptive method, followed by tubal ligation (36.1%). Oral contraceptive pills and withdrawal were used by 5.8% each. Injectable contraceptives (3.2%), intrauterine devices (1.9%), vasectomy (1.9%), rhythm method (1.9%), and avoidance of sexual intercourse (1.3%) were minimally practiced. Overall, condoms and tubal ligation were the predominant methods used.

**Table 3: Showing current contraceptive usage and knowledge status**

Knowledge	Contraceptive user n (%)	Contraceptive non user n (%)	Total N (%)
Present	147 (53.4)	128 (46.5)	275 (90.2)
Absent	8 (26.7)	22 (73.3)	30 (9.8)
Total	155 (50.8)	150 (49.2)	305 (100)

$\chi^2 = 7.767, Df = 1, P = 0.0053$  significant at  $p < 0.05$

Table 4 shows a significant association between knowledge of contraception and its use. A higher proportion of contraceptive use was observed among women who were knowledgeable about contraception compared to those who lacked awareness, and this association was found to be statistically significant ( $p < 0.05$ ).

**DISCUSSION**

The present study demonstrates that although a large majority of women (90.2%) were aware of family planning methods, only about half (50.8%) were currently

using contraception. Permanent methods such as tubal ligation and barrier methods like condoms were more commonly known and practiced, whereas natural methods, particularly the rhythm method, had low awareness and minimal utilization. Friends and relatives emerged as the predominant source of information, highlighting the strong influence of informal networks over formal healthcare channels. A substantial proportion of women (70.5%) exhibited a positive attitude toward contraceptive use based on future intention, reflecting overall acceptance of family planning. Importantly, a statistically significant association was observed between knowledge and current contraceptive use, indicating that women who were aware of contraceptive methods were more likely to use them. These findings emphasize that while awareness levels are high, efforts should focus on translating knowledge and positive attitudes into consistent and effective contraceptive practice through strengthened counseling and reliable information dissemination by healthcare providers.

### CONCLUSION

The present study demonstrates that although a large majority of women (90.2%) were aware of family planning methods, only about half (50.8%) were currently using contraception. Permanent methods such as tubal ligation and barrier methods like condoms were more commonly known and practiced, whereas natural methods, particularly the rhythm method, had low awareness and minimal utilization. Friends and relatives emerged as the predominant source of information, highlighting the strong influence of informal networks over formal healthcare channels. A substantial proportion of women (70.5%) exhibited a positive attitude toward contraceptive use based on future intention, reflecting overall acceptance of family planning. Importantly, a statistically significant association was observed between knowledge and current contraceptive use, indicating that women who were aware of contraceptive methods were more likely to use them. These findings emphasize that while awareness levels are high, efforts should focus on translating knowledge and positive attitudes into consistent and effective contraceptive practice through strengthened counseling and reliable information dissemination by healthcare providers.

### RECOMMENDATION

Strengthen IEC and counseling activities through frontline health workers, promote male involvement in family planning, and improve accessibility of contraceptive services to enhance utilization in rural areas.

### LIMITATION OF THE STUDY

The study was limited to two villages of rural Meerut, which may restrict generalizability. Being a cross-sectional study, causal relationships cannot be established, and responses were self-reported, which may introduce recall or social desirability bias.

### RELEVANCE OF THE STUDY

This study provides important evidence from a rural setting of Meerut, where limited data on contraceptive knowledge, attitude, and practices is available. It highlights the existing gap between high awareness and moderate utilization of contraceptive methods. The findings emphasize the influence of informal sources of information and underline the need for strengthening formal healthcare communication and counseling services.

### AUTHORS CONTRIBUTION

All authors have contributed equally.

### FINANCIAL SUPPORT AND SPONSORSHIP

Nil

### CONFLICT OF INTEREST

There are no conflicts of interest.

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### DECLARATION OF GENERATIVE AI AND AI ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

The authors haven't used any generative AI/AI assisted technologies in the writing process.

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