Assessing Contraceptive Utilization and Identifying Barriers to Use Among Married Couples in Rural Belagavi, Karnataka, India

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KEYWORDS	ABSTRACT
Contraceptive utilization, Barriers to contraceptive use, Married couples, Rural areas, Family planning, Contraceptive methods, Non-utilization of contraceptive, Fertility control	**Introduction:** Contraceptive use is essential for controlling population growth, with the couple protection rate (CPR) serving as a key indicator. In India, the CPR for couples aged 15-49 is 53.5%, a decrease from 56.3% over the last decade. Contraceptive methods, such as pills, implants, injectables, IUDs, and sterilization, vary in their effectiveness at preventing unintended pregnancies. Family planning can lower maternal mortality by reducing high-risk births and unsafe abortions, potentially saving 140,000 to 150,000 lives each year. **Material and methods:** A cross sectional study research design was adopted for this study. 80 married couples of selected rural area of Belagavi, Karnataka were included in the study. The study included married couple willing to participate in the study and excluded married couple suffering from infertility. The samples were gathered using the purposive sampling technique. The tools used were related to demographic variables and structured questionnaire on utilization and non-utilization of contraceptive methods **Results:** Most participants were young, with limited education, and lived in joint families. Contraceptive awareness primarily came from health professionals and media, but knowledge gaps remained. A majority intended to use contraception, though many faced barriers like lack of information, privacy concerns, and inconvenient healthcare access. Contraceptive use was more common among those with more children and lower incomes. Key barriers included lack of knowledge, family preferences, and side effects, which significantly impacted contraception utilization. Addressing these barriers through improved education and accessible healthcare could enhance contraceptive uptake. **Conclusion:** The study highlights major obstacles to contraceptive use, such as insufficient knowledge, family preferences, and difficulties accessing contraception. Enhancing education, expanding healthcare access, and improving communication about contraceptive choices could boost the use of family planning methods.

INTRODUCTION:

Contraceptive use is crucial for stabilizing population growth, with the couple protection rate (CPR) being the key measure. In India, the CPR for couples aged 15-49 is 53.5%, down from 56.3% over the past decade.[1] Contraceptives include various methods like pills, implants, injectables, IUDs, and sterilization, each with different effectiveness in preventing unintended pregnancies.[2] Family planning can reduce maternal mortality by preventing high-risk births and unsafe abortions, potentially saving 140,000 to 150,000 lives annually.[3,4] The National Health and Family Survey-4 (2015-16) reported 56.3% of married women using contraception, a drop from 61% in NFHS-3.[5] Data from Karnataka and nationwide trends show further declines, with the modern contraceptive prevalence rate at 40% in 2018.[6] Male sterilization rates have also declined, from 1% in NFHS-3 to 0.3% in NFHS-4, particularly in Tamil Nadu.[7] Young rural women, especially those married before 18, face lower contraceptive use and higher unplanned pregnancies.[8] A study in Udupi found that 38.7% of women used contraception, with fear of side effects, desire for a specific gender child, and husband disapproval being key barriers.[9] Globally, out of 1.9 billion women, 1.1 billion need family planning, with 874 million using modern methods, and 164 million facing unmet needs.[5] Various studies and census reports shows that the utilization of contraception is still poor in India. Hence, the present study was undertaken to understand utilization of contraception among the married couples of selected rural areas of Karnataka and to find out the barriers leading to non-utilization.

Objectives of the study:

1. To assess the utilization of contraception among married couple
2. To assess barriers for non-utilization of contraception among married couple
3. To find the association between utilization of contraception with selected demographic variables
4. To find the association between barriers for non-utilization of contraception with selected demographic variables

MATERIALS AND METHODS:

Research design: A cross sectional study research design was adopted for this study. **Research setting:** Selected rural area of Belagavi, Karnataka were included in the study. **Population:** Married couples of selected rural area were enrolled in the study. **Inclusion criteria:** Married couple willing to participate in the study. **Exclusion criteria:** Married couple suffering from infertility. **Sampling technique:** Purposive sampling technique was used to recruit the samples

The following formula was used to determine the sample size:

$$n= \frac{(Z_{(1-\alpha/2)})^2 pq}{(5 \text{ to } 20\%p)^2} \text{ X } 1.05$$

Where

- $Z_{1-\alpha/2}$= one tail standard normal variate assuming sample size at 95% confidence interval
- P= Prevalence
- Q=1-p
- Attrition= 1.05%
- Considering the above formula, the sample size is calculated **as 160**

Instruments: The tools used were related to demographic variables **and s**tructured questionnaire on utilization and non-utilization of contraceptive methods

ETHICAL CONSIDERATIONS: The investigators obtained ethical clearance from the Institutional Ethical Committee, KAHER Institute of Nursing Sciences, Belagavi.

RESULTS:

The result of the study has been explained under the following headings:

SECTION I: Sociodemographic Characteristics and Reproductive Health Indicators

Table 1: Sociodemographic Characteristics and Reproductive Health Indicators of Study Participants

n = 160

Variables	n (%)
Age in completed Years (Wife)	
18-23	44 (27.5)
24-29	67 (41.8)
30-35	36 (22.5)
36-41	6 (3.8)
42-47	5 (3.1)
48 and above	2 (1.3)
Educational status of Husband	
No Formal Education	13 (8.1)
Primary	67 (41.9)
Secondary	48 (30)
Pre- University	19 (11.9)
Graduation	13 (8.1)
Post- Graduation	0 (0)
Educational status of Wife	
No Formal Education	20 (12.5)
Primary	81 (50.6)
Secondary	46 (28.7)
Pre- University	2 (1.3)
Graduation	10 (6.3)
Post- Graduation	1 (0.6)
Source of information regarding contraception	
Media	58 (36.3)
Friends	5 (3.1)
Family	0 (0)
Health	97 (60.6)
Workers	0 (0)
Religion	
Hindu	96 (60)
Christian	1 (0.6)
Muslim	29 (18.1)
Others	34 (21.3)
Occupation of Husband	
Government - employee	19 (11.9)
Private- employee	107 (66.8)
Self –employee	34 (21.3)
Occupation of wife	
Government - Employee	2 (1.2)
Private- Employee	6 (3.8)
Self –Employee	11 (6.9)

Home Maker	141 (88.1)
Type of Family	
Joint family	125 (78.1)
Nuclear family	35 (21.9)
Monthly income	
<Rs5000	70 (43.8)
Rs5001- 10000	62 (38.7)
Rs10001-15,000	16 (10)
>Rs15000	12 (7.5)
Duration of Marriage	
0-2 Years	27 (16.9)
3-5years	49 (30.6)
6- 8Years	29 (18.1)
9 Years and Above	55 (34.4)
Health care facility accessibility	
Government Hospital	158 (98.7)
Private Hospitals	2 (1.3)
Number of children	
Nil	22 (13.8)
One	43 (26.8)
Two	57 (35.6)
Three Or More	38 (23.8)
Have all your pregnancies been planned	
Yes	12 (7.5)
No	127 (79.4)
Not Applicable	21 (13.1)

Table 1 shows that the majority of wives (41.8%) are aged 24-29, while most husbands have primary (41.9%) or secondary education (30%). Wives mainly have primary education (50.6%). Contraception awareness comes from health professionals (60.6%) and media (36.3%). Most participants are Hindu (60%), and the majority of husbands (66.8%) are private employees. Most wives (88.1%) are homemakers. A significant portion of families lives in joint families (78.1%). Most participants earn less than Rs. 5000 (43.8%). Health access is mostly via government hospitals (98.7%). Most women have two (35.6%) or three children (23.8%). Only 7.5% of pregnancies were planned.

**SECTION II: Contraception Utilization and Related Factors**
**Table 2: Distribution of Contraception Utilization and Related Factors Among Married Couples**

n = 160

Utilization	n (%)
Did you hear the word Family planning?	
Yes	41 (25.6)
No	119 (74.4)
Have you been told about what to do if you had problem during utilization of contraception?	
Yes	106 (66.2)
No	54 (33.8)
Reason for the choice of Family Planning Method	
No reason	81 (50.6)
Little or no side effect	8 (5)
Suitable and reliable	34 (21.3)
Affordable/ available	36 (22.5)
Other reason	1 (0.6)
Do you intend to use any Family Planning Method in Future?	
Yes	123 (76.9)
No	37 (23.1)
How often health worker visits your Home?	
Never	6 (3.8)
Once a week	13 (8.1)
Once in 2 weeks	12 (7.4)
Once in a month	114 (71.3)
Once in 2 months	15 (9.4)
Are you provided with information of Family Planning Method?	
Yes	49 (30.6)
No	111 (69.4)
Is your privacy respected by the health worker?	
Yes	25 (15.6)
No	135 (84.4)
Do you use any form of Family Planning Method?	
Yes	116 (72.5)
No	44 (27.5)
If yes which method, do you use?	
Condoms	144 (90)
Oral pills	10 (6.3)
Copper-t	3 (1.8)
Injectables	3 (1.9)
Emergency contraceptive pill	0 (0)
Male sterilization	0 (0)
Male sterilization	0 (0)

Table 2 depicts that only 25.6% of participants are familiar with "family planning," and 74.4% are not. 76.9% intend to use contraception, but 30.6% have not received family planning information. Condoms are the most common contraceptive (90%), followed by oral pills (6.3%). Despite health visits, privacy concerns remain, with only 15.6% feeling respected.
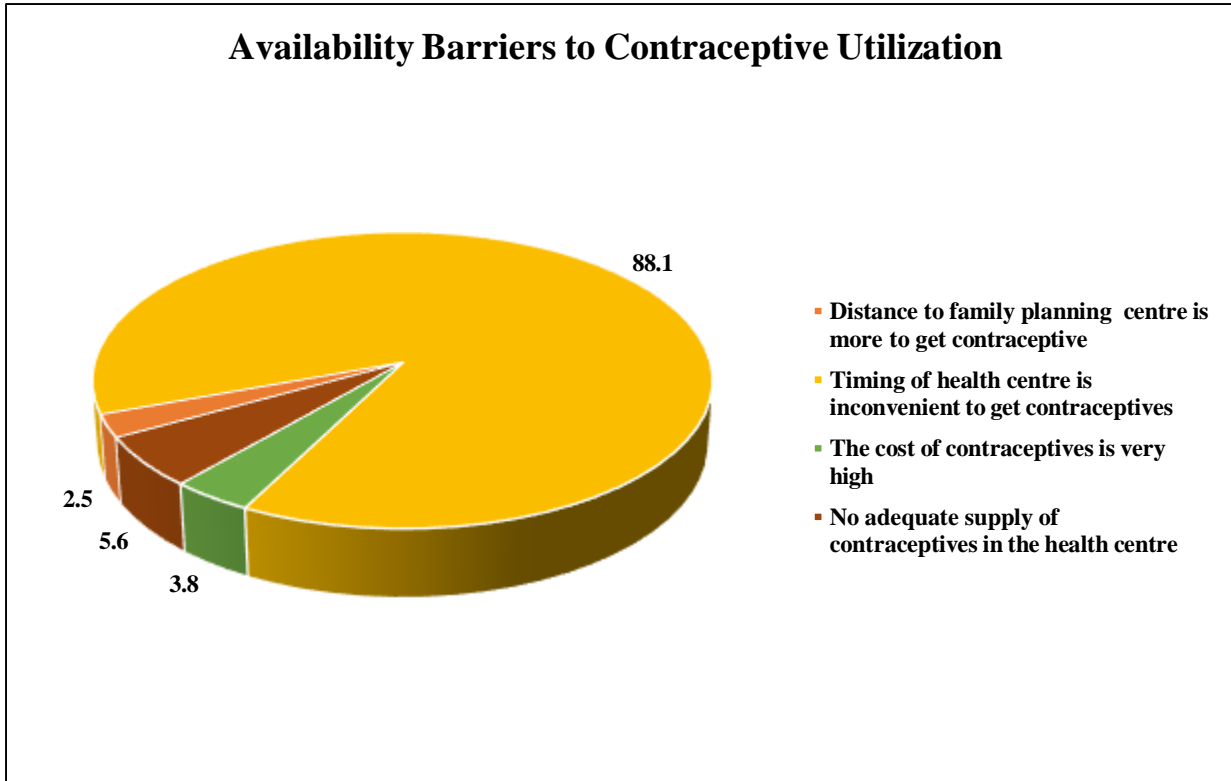
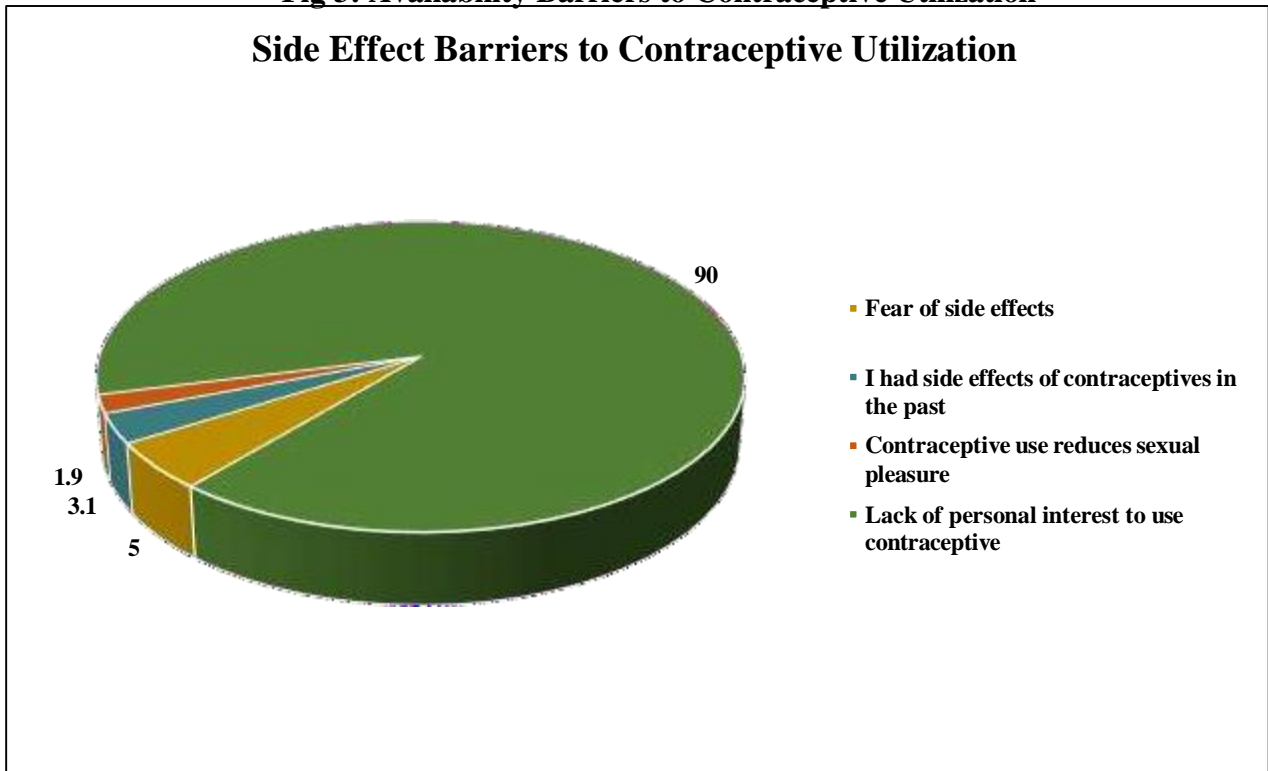**SECTION III: Barriers to Non-Utilization of Contraception**
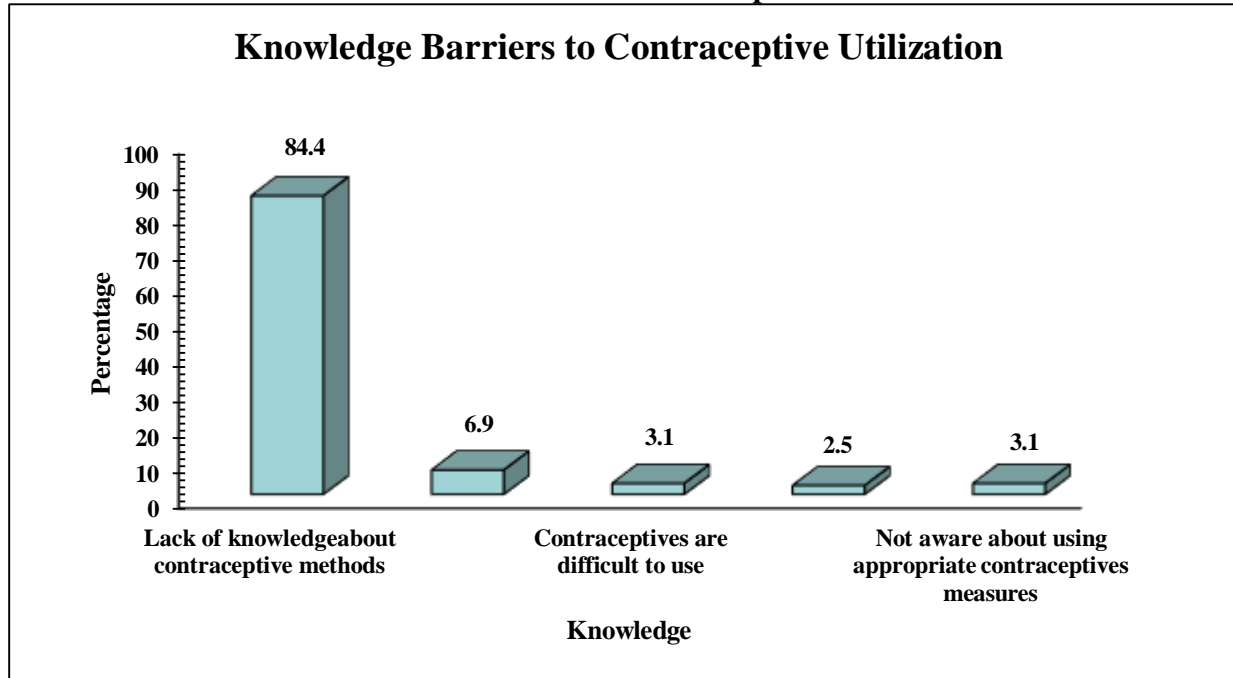
Fig 1: Knowledge Barriers to Contraceptive Utilization
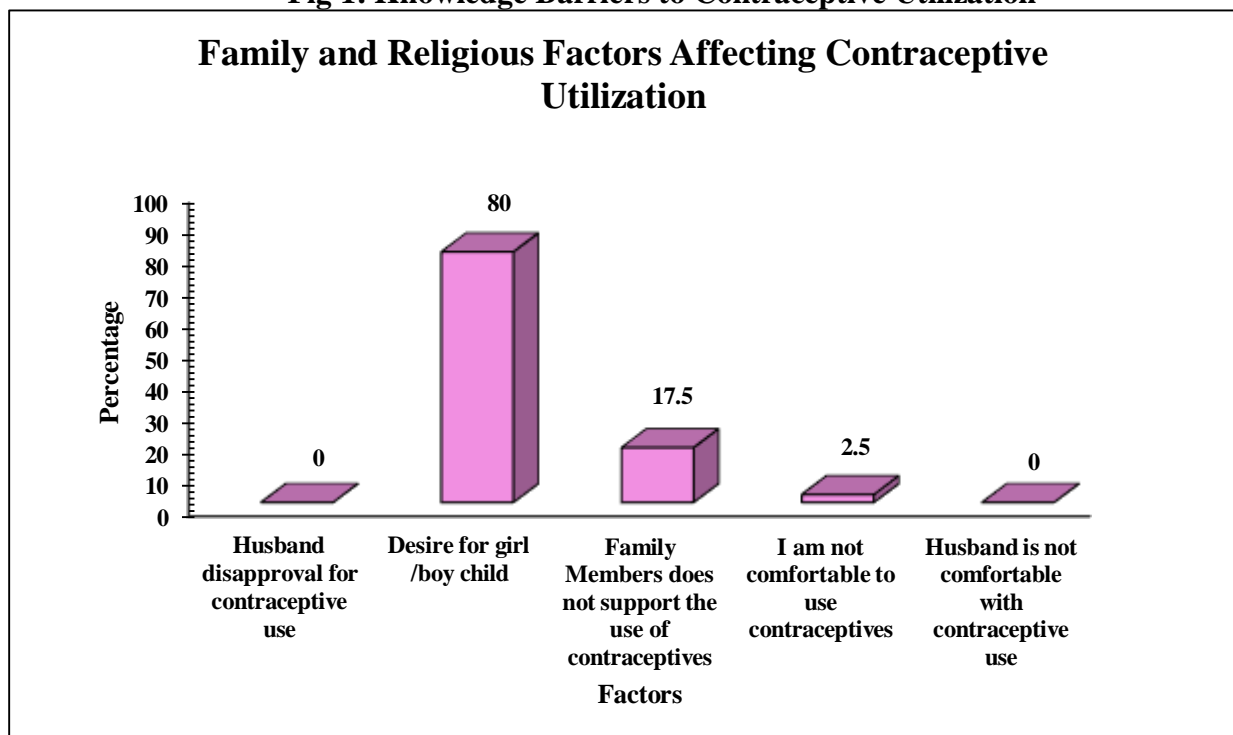
Fig 2: Family and Religious Factors Affecting Contraceptive Utilization

Availability Barriers to Contraceptive Utilization

88.1

- **Distance to family planning centre is more to get contraceptive**
- **Timing of health centre is inconvenient to get contraceptives**
- **The cost of contraceptives is very high**
- **No adequate supply of contraceptives in the health centre**

2.5

5.6

3.8

Fig 3: Availability Barriers to Contraceptive Utilization

Side Effect Barriers to Contraceptive Utilization

90

- **Fear of side effects**
- **I had side effects of contraceptives in the past**
- **Contraceptive use reduces sexual pleasure**
- **Lack of personal interest to use contraceptive**

1.9

3.1

5

Fig 4: Side Effect Barriers to Contraceptive Utilization

Fig. 1 to 4 indicates that barriers of utilization of contraception include lack of knowledge (84.4%), family preferences (80%), and inconvenient health center timings (88.1%). Side effects (5%) and high costs (3.8%) are also significant barriers. Addressing these factors could improve contraceptive use.

SECTION IV: Association Between Contraception Use and Demographic Variables
Table 3: Association Between Utilization of Contraception and Selected Demographic Variables

n=160

Demographic variable	Do you use any form of Family Planning Method?		Chi-square (p-value)
	Yes	No	
	n (%)	n (%)	
Age in completed Years (Wife)			
18-23	31 (70.5)	13 (29.5)	8.471 (0.132)
24-29	47 (70.1)	20 (29.9)	
30-35	28 (77.8)	8 (22.2)	
36-41	6 (100)	0 (0)	
42-47	4 (80)	1 (20)	
48 and above	0 (0)	2 (100)	
Educational status of Husband			
No Formal Education	9 (69.2)	4 (30.8)	4.958 (0.292)
Primary	45 (67.2)	22 (32.8)	
Secondary	34 (70.8)	14 (29.2)	
Pre- University	16 (84.2)	3 (15.8)	
Graduation	12 (92.3)	1 (7.7)	
Post- Graduation	0 (0)	0 (0)	
Educational status of Wife			
No Formal Education	14 (70)	6 (30)	3.54 (0.617)
Primary	59 (72.8)	22 (27.2)	
Secondary	35 (76.1)	11 (23.9)	
Pre- University	1 (50)	1 (50)	
Graduation	7 (70)	3 (30)	
Post- Graduation	0 (0)	1 (100)	
Source of information regarding contraception			
Media	36 (62.1)	22 (37.9)	4.972 (0.083)
Friends	4 (80)	1 (20)	
Family	0 (0)	0 (0)	
Health	76 (78.4)	21 (21.6)	
Workers	0 (0)	0 (0)	
Religion			
Hindu	69 (71.9)	27 (28.1)	2.924 (0.403)
Christian	0 (0)	1 (100)	
Muslim	21 (72.4)	8 (27.6)	
Others	26 (76.5)	8 (23.5)	
Occupation of Husband			
Government - employee	10 (52.6)	9 (47.4)	5.426 (0.066)
Private- employee	78 (72.9)	29 (27.1)	
Self –employee	28 (82.4)	6 (17.6)	
Occupation of wife			

Government - Employee	1 (50)	1 (50)	
Private- Employee	5 (83.3)	1 (16.7)	1.316
Self –Employee	7 (63.6)	4 (36.4)	(0.725)
Home Maker	103 (73)	38 (27)	
Type of Family			
Joint family	93 (74.4)	32 (25.6)	1.035
Nuclear family	23 (65.7)	12 (34.3)	(0.309)
Monthly income			
<Rs5000	59 (84.3)	11 (15.7)	
Rs5001- 10000	41 (66.1)	21 (33.9)	9.989
Rs10001-15,000	10 (62.5)	6 (37.5)	(0.019) *
>Rs15000	6 (50)	6 (50)	
Duration of Marriage			
0-2 Years	18 (66.7)	9 (33.3)	
3-5years	35 (71.4)	14 (28.6)	0.769
6- 8Years	22 (75.9)	7 (24.1)	(0.857)
9 Years and Above	41 (74.5)	14 (25.5)	
Health care facility accessibility			
Government Hospital	115 (72.8)	43 (27.2)	0.514
Private Hospitals	1 (50)	1 (50)	(0.473)
Number of children			
Nil	16 (72.7)	6 (27.3)	
One	36 (83.7)	7 (16.3)	8.23 (0.041)
Two	34 (59.6)	23 (40.4)	*
Three Or More	30 (78.9)	8 (21.1)	
Have all your pregnancies been planned			
Yes	5 (41.7)	7 (58.3)	
NO	92 (72.4)	35 (27.6)	9.126
Not Applicable	19 (90.5)	2 (9.5)	(0.010) *

Table 3 reveals that age, education, and occupation did not show significant associations with contraception use. However, income (<Rs. 5000) showed a significant correlation (p = 0.019), with higher usage in lower-income families. Those with three or more children had higher usage (p = 0.041), while planned pregnancies had lower usage (p = 0.010).

SECTION V: Barriers to Contraception and Demographic Variables
Table 4: Association Between Barriers for Non-Utilization of Contraception and Selected Demographic Variables

n=160

Demographic variable	Barriers for non-utilization			Chi-square (p-value)
	Desire for girl /boy child	Family Members does not support the use of contraceptives	I am not comfortable to use contraceptives	
	n (%)	n (%)	n (%)	
Age in completed Years (Wife)				

18-23	37 (84.1)	6 (13.6)	1 (2.3)	
24-29	53 (79.1)	12 (17.9)	2 (3)	
30-35	25 (69.4)	10 (27.8)	1 (2.8)	6.488
36-41	6 (100)	0 (0)	0 (0)	(0.773)
42-47	5 (100)	0 (0)	0 (0)	
48 and above	2 (100)	0 (0)	0 (0)	
Educational status of Husband				
No Formal Education	13 (100)	0 (0)	0 (0)	
Primary	53 (79.1)	13 (19.4)	1 (1.5)	
Secondary	39 (81.3)	8 (16.7)	1 (2.1)	6.922
Pre- University	13 (68.4)	5 (26.3)	1 (5.3)	(0.545)
Graduation	10 (76.9)	2 (15.4)	1 (7.7)	
Post- Graduation	0 (0)	0 (0)	0 (0)	
Educational status of Wife				
No Formal Education	15 (75)	5 (25)	0 (0)	
Primary	68 (84)	12 (14.8)	1 (1.2)	
Secondary	36 (78.3)	10 (21.7)	0 (0)	37.713
Pre- University	1 (50)	1 (50)	0 (0)	(0.000) *
Graduation	7 (70)	0 (0)	3 (30)	
Post- Graduation	1 (100)	0 (0)	0 (0)	
Source of information regarding contraception				
Media	49 (84.5)	8 (13.8)	1 (1.7)	
Friends	5 (100)	0 (0)	0 (0)	
Family	0 (0)	0 (0)	0 (0)	2.833
Health	74 (76.3)	20 (20.6)	3 (3.1)	(0.586)
Workers	0 (0)	0 (0)	0 (0)	
Religion				
Hindu	78 (81.3)	16 (16.7)	2 (2.1)	
Christian	1 (100)	0 (0)	0 (0)	1.618
Muslim	21 (72.4)	7 (24.1)	1 (3.4)	(0.951)
Others	28 (82.4)	5 (14.7)	1 (2.9)	
Occupation of Husband				
Government employee	16 (84.2)	2 (10.5)	1 (5.3)	
Private- employee	85 (79.4)	20 (18.7)	2 (1.9)	1.44 (0.837)
Self –employee	27 (79.4)	6 (17.6)	1 (2.9)	
Occupation of wife				
Government Employee	2 (100)	0 (0)	0 (0)	
Private- Employee	3 (50)	3 (50)	0 (0)	5.912
Self –Employee	10 (90.9)	1 (9.1)	0 (0)	(0.433)
Home Maker	113 (80.1)	24 (17)	4 (2.8)	

Type of Family				
Joint family	103 (82.4)	20 (16)	2 (1.6)	2.998 (0.223)
Nuclear family	25 (71.4)	8 (22.9)	2 (5.7)	
Monthly income				
<Rs5000	53 (75.7)	16 (22.9)	1 (1.4)	6.999 (0.321)
Rs5001- 10000	54 (87.1)	7 (11.3)	1 (1.6)	
Rs10001-15,000	13 (81.3)	2 (12.5)	1 (6.3)	
>Rs15000	8 (66.7)	3 (25)	1 (8.3)	
Duration of Marriage				
0-2 Years	25 (92.6)	2 (7.4)	0 (0)	8.421 (0.506)
3-5years	35 (71.4)	11 (22.4)	3 (6.1)	
6- 8Years	24 (82.8)	4 (13.8)	1 (3.4)	
9 Years and Above	44 (80)	11 (20)	0 (0)	
Health care facility accessibility				
Government Hospital	126 (79.7)	28 (17.7)	4 (2.5)	0.506 (0.776)
Private Hospitals	2 (100)	0 (0)	0 (0)	
Number of children				
Nil	20 (90.9)	2 (9.1)	0 (0)	4.825 (0.566)
One	33 (76.7)	8 (18.6)	2 (4.7)	
Two	46 (80.7)	9 (15.8)	2 (3.5)	
Three Or More	29 (76.3)	9 (23.7)	0 (0)	
Have all your pregnancies been planned				
Yes	10 (83.3)	1 (8.3)	1 (8.3)	3.137 (0.535)
NO	100 (78.7)	24 (18.9)	3 (2.4)	
Not Applicable	18 (85.7)	3 (14.3)	0 (0)	

Table 4 shows that wives' education level was a significant predictor of contraceptive non-utilization (p = 0.000). Family disapproval and gender preference were more common in lower-educated groups. Income and pregnancy planning also played roles, but no significant associations were found with family structure or religion.

DISCUSSION:

The study examines factors influencing contraceptive use, revealing that most wives are aged 24-29 years (41.8%), with many having primary education (50.6%). Husbands often have primary (41.9%) or secondary education (30%). Health professionals are the primary source of contraceptive information for most participants (60.6%), followed by media (36.3%). The majority of participants are Hindu (60%), and most husbands work in the private sector (66.8%), while wives are mostly homemakers (88.1%). The family structure is largely joint families (78.1%), and most households earn less than Rs. 5000 (43.8%). The average marriage duration is over nine years (34.4%), with a strong preference for government healthcare services (98.7%).

Reproductive health data indicates that 35.6% of participants have two children, 23.8% have three or more, and 79.4% report unplanned pregnancies. When compared with other studies, such as

Sherpa SZ[10]'s research, similar trends emerge, such as the importance of health professionals in providing contraceptive information (98.5%). However, there is a significant gap in contraceptive awareness, with 74.4% of participants not knowing about "family planning." Despite this, many (76.9%) express an intention to use contraception, although actual usage is lower at 72.5%, with condoms being the most popular method (90%).

Key barriers to contraceptive use identified include lack of knowledge (84.4%), religious/family disapproval (80%), and inconvenient access (88.1%), with fewer citing side effects, cost, or difficulty in use as concerns. These barriers align with other studies, such as those by Sukumar M.B.A. & John S.M.[11], where fear of side effects and desire for a child are common reasons for non-use. Interestingly, contraceptive use is higher among wives aged 36-41 (100%) and those with a graduate education (92.3%), with health worker involvement being a significant factor (78.4%).

Additionally, the study shows that lower income (under Rs. 5000) correlates with higher contraceptive use (84.3%), and women with three or more children tend to use contraception more frequently. Conversely, pregnancy planning and a desire for more children lead to lower contraceptive use (41.7%). Despite a high awareness of family planning (85.4%), there are gaps in knowledge about the methods, with those with higher education, family support, and access to healthcare being more likely to use contraception.

Mogan KA[1]'s study also supports these findings, noting that couples with two or more children, particularly male children, are more likely to use contraception. Non-utilization is higher among younger women, those with primary or secondary education, and those facing family opposition. Women with unplanned pregnancies or no children are also less likely to use contraception, mirroring findings from Sowmya[9] et.al, where side effects and gender preference are significant barriers.

Other studies also identify barriers like pro-natal social norms, myths, family resistance, and inconvenient health center timings. However, factors such as cost and supply do not significantly influence usage, though improving access could help. Notably, the lack of interest in using contraception is a major barrier, despite high awareness (87.8%). Fear of side effects and insufficient health worker visits further hinder contraceptive use, suggesting that more education and counseling could mitigate these challenges.

The study emphasizes the need for strong awareness campaigns, as supported by other researchers like Ghule M. et.al[12] and Gore S. & Katkuri S.[4], to address barriers like family disapproval, gender preferences, and knowledge gaps. Strengthening family support, providing more information through health workers, and addressing socio-cultural and economic factors are crucial to improving contraceptive use.

CONCLUSION: The study reveals significant barriers to contraception use, including a lack of knowledge, family preferences, and accessibility issues. Education, improved healthcare access, and better communication on contraceptive options could increase family planning utilization.

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