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Contraceptives and Male Involvement in Karnataka State: Evidence from NFHS-5 Data

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ABSTRACT

Male involvement in family planning remains a critical but underexplored dimension of reproductive health in India. Despite national policies emphasizing shared responsibility, the uptake of male contraceptive methods continues to be minimal. Understanding regional variations and socio-demographic determinants of male participation can guide evidence-based interventions. This study examines the patterns and determinants of contraceptive use among men in Karnataka, with a particular focus on male involvement, regional disparities, and associated socio-demographic factors, using data from the National Family Health Survey (NFHS-5, 2019–21). The study included 2,860 men aged 15–54 years. Descriptive statistics and chi-square tests were employed to assess contraceptive awareness and use across socio-demographic variables such as age, residence, education, religion, caste, and wealth index. While 99% of men were aware of at least one family planning method, only 52.1% reported current use of any contraceptive method, with female sterilization dominating (42.7%). Male methods, including condoms (6.2%) and vasectomy (0.3%), remained extremely low. Contraceptive use was significantly associated with education, wealth status, and place of residence. District-level analysis revealed higher male involvement in southern districts like Udupi and Dakshina Kannada compared to northern districts such as Kalaburagi and Yadgir. Despite high awareness, male participation in contraceptive practice in Karnataka remains limited, reflecting entrenched gender norms and programmatic focus on female methods. Strengthening male-focused family planning interventions, promoting vasectomy acceptance, and addressing socio-cultural barriers are crucial for achieving equitable reproductive health outcomes in the state.

Keywords: Male involvement, family planning, contraceptive use, NFHS-5, Karnataka.

INTRODUCTION

Family planning services utilization remains a critical indicator of a nation's healthcare effectiveness, directly impacting the well-being of individuals and families. Male participation in family planning is crucial for effective reproductive health outcomes, including improved maternal and child health, and overall family well-being. It involves men actively engaging in decisions about family size and spacing and utilizing contraceptive methods, either for themselves or in support of their

partners. Despite its importance, male participation in family planning remains low in many regions, often due to social, cultural, and logistical barriers.

The success of India's family planning programme depends on the active participation of both men and women. Men's engagement is critical to overcoming social and cultural barriers, adopting contraceptive methods, and supporting women's contraceptive choices. This priority was underscored at the 1994 International Conference on Population and Development (ICPD) and reinforced in the National Population Policy 2000, aligning with global evidence that male involvement improves family planning and sexual and reproductive health outcomes[1]. Despite policy emphasis, male participation in India remains low. According to the National Family Health Survey (NFHS-5, 2019–21), the use of modern contraceptives by currently married men during their last sexual encounter increased by approximately four percentage points since 2015–16; however, 76 percent remain non-users[2]. These findings underscore the need for targeted interventions to address socio-cultural constraints and promote shared responsibility in family planning. *M*en play a decisive role in reproductive health decisions; however, family planning programmes and policies in India have often operated under the assumption that men have minimal interest in reproductive matters[3]. The National Population Policy 2000 emphasizes the need to increase male participation in Planned Parenthood and to promote the adoption of male contraceptive methods[4].

LITERATURE REVIEW

Family planning is recognized globally as a cornerstone of reproductive health and a critical determinant of socioeconomic development. While contraceptive initiatives have traditionally centered on women, there is growing recognition that men's roles as decision-makers, partners, and users of contraceptive methods are equally vital in ensuring successful family planning outcomes. Male involvement encompasses not only the direct use of male-specific methods such as condoms and vasectomy but also supportive roles in spousal communication, joint decision-making, and approval of contraceptive use.

Despite policy emphasis subsequent the 1994 International Conference on Population and Development (ICPD)[1] and India's National Population Policy -2000[4], men's participation in family planning in India remains limited. Research evidence points to a persistent gender imbalance where contraceptive responsibility is largely borne by women, while male uptake of modern methods particularly sterilization continues to be negligible. Factors such as socio-cultural norms, misconceptions about vasectomy, lack of counseling from health providers, and family opposition contribute to low involvement of men in reproductive health issues.

The existing body of literature reflects a multi-dimensional perspective on male involvement in family planning across diverse contexts in India. Studies have explored determinants such as education, income status, spousal communication, cultural attitudes, and service delivery gaps. Regional analyses, particularly using National Family Health Survey (NFHS), reveal stark differences in contraceptive practices between northern and southern states, as well as within specific states such as Karnataka. Importantly, interventions that strengthen awareness, promote shared decision-making, and integrate male reproductive health into mainstream services are consistently identified as pathways for improving male participation.

The review of studies synthesizes key empirical studies and contextual analyses to highlight the scope, barriers, and opportunities for enhancing male involvement in family planning in India, with special reference to Karnataka. The discussion not only provides insights into the prevailing patterns of male contraceptive use but also underscores the broader

implications for reproductive health equity, women's empowerment, and public health policy.

Chekole MK et al *(*2019) illustrates that men are involved; women have more control over their reproductive health decisions and can pursue their educational and career aspirations. Male involvement in family planning refers to all organizational actions focused on men as a distinct group to increase the acceptability and uptake of family planning among either sex. It encompasses men being involved either in decision making, approving it, or supporting their spouse to use contraceptive[5].

Parija PP et al (2022) examines that family planning is an essential health service to promote reproductive health. This study assessed male participation in family planning among 365 married men in a rural area of Chhattisgarh, using a semi-structured questionnaire at a primary health care center. Only 48 participants (13.1 percent) reported using male-specific methods like condoms or male sterilization, and good involvement in family planning was observed in 10.9 percent. Higher participation was associated with being above the poverty line and having a graduation-level education or above. Fear of physical weakness and family opposition were the most cited reasons for avoiding male sterilization. Socio-cultural barriers remain a major obstacle to male involvement. Increasing health literacy through school curricula, awareness programs, and counseling, along with improving access to sterilization facilities, may enhance male participation and promote shared decision-making in family planning[6].

Rima Ghosh (2004) examines male involvement in family planning, focusing on factors influencing contraceptive use in two northern and two southern states of India, using data from the National Family Health Survey-II data. That multivariate logistic regression analysis reveals that spousal communication is a significant determinant of condom use is associated with a 4.5-fold increase in Kerala and a 3.5-fold increase in Punjab and Bihar. In socio-economically disadvantaged states, younger and more educated men are more likely to use condoms. No consistent pattern emerges for male sterilization across the states studied. These findings underscore the importance of enhancing spousal communication and implementing targeted interventions to improve male participation in family planning in India[7].

Kaur R, et al (2016) lights the role of men in their research study. Men play a pivotal role in family planning, yet their participation in programmes remains limited in India. This qualitative study explored perceptions and practices among 62 married men aged 24–42 years using focus group discussions and content analysis. Most participants preferred small families with one or two children, though the desire for a male child persisted. Family planning decisions were usually joint, and awareness of traditional and modern methods was common, but knowledge gaps existed—particularly regarding non-scalpel vasectomy. Mass media and peers were primary information sources, while no participant had received counseling from healthcare providers. Acceptance of natural methods and condom use was high, but misconceptions about male sterilization were widespread. Findings underscore the need for couple-focused counseling, targeted male education, and proactive involvement of health providers to improve informed contraceptive choice[8].

Shruthee SG, Deepanchakravarthi V (2023) examines that male involvement in family planning remains a critical but underutilized strategy for improving reproductive health outcomes in India. Despite policy emphasis in the 1994 International Conference on Population and Development and India's National Population Policy 2000, male contraceptive uptake is persistently low—NFHS-4 (2015–16) reports national condom use at 5.6 percent and vasectomy at just 0.3 percent, with negligible rates in Tamil Nadu. This community-based cross-

sectional study (n = 180) in Chennai assessed men's attitudes, practices, and determinants of contraceptive use. Findings show that while most participants favored small families (82 percent) and endorsed spousal communication (67 percent), actual adoption of male methods was skewed toward condoms (69 percent of ever-users) with zero vasectomy uptake. Willingness to accept vasectomy was limited to 21 percent, reflecting enduring stigma and misconceptions. Higher education, greater per-capita income, and open partner communication were significantly associated with male method use ($p < 0.05$). The results highlight a disconnect between positive attitudes toward family planning and acceptance of male-specific methods. Overcoming provider bias, misinformation, and cultural barriers is essential. A targeted, couple-centered approach integrating male reproductive health into primary care could advance gender-equitable family planning in patriarchal contexts[9].

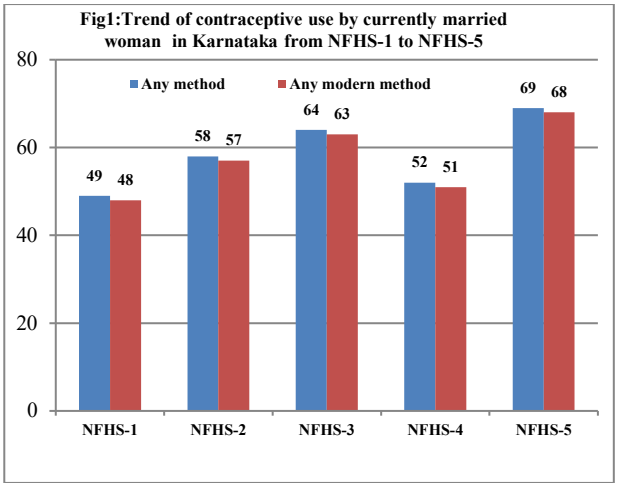
Trend of contraceptive use in India & Karnataka state

The contraceptive trend in India shows that from NFHS-1 to NFHS-5[10-13,2.] clearly indicates that the female sterilization (27.4 percent in 1 and 37.9 percent in (NFHS-5) is more in usage as compared to male methods like male sterilization, condoms. Its surprise to know that male sterilization has decreased from (3.5 percent) in NFHS-1 to (0.3 percent) NFHS-5. Hence its indicates that more IECs & awareness programmes should be focus on male sterilization also. In male methods only condoms have increased it means it's a clear indicates that the male partner is giving their consent for the spacing methods as well as protecting from sexual and reproductive infections. Very drastic changes can be observed in any modern methods from NFHS-1 (36.5 Percent) to NFHS-5 (56.5 percent) & it dominates among all methods at national level. Remaining methods like pills (5.01 percent), are also contributing in birth controlling.

Table 1: Contraceptive use reported by women aged 15-49 in India (%)

Methods in India	NFHS-1 (1992-93)	NFHS-II (1998-99)	NFHS-III (2005-06)	NFHS-IV (2015-16)	NFHS-V (2019-21)
Female Sterilization	27.4	34.2	37.3	36	37.9
Male Sterilization	3.5	1.9	1	0.3	0.3
Pills	1.2	2.1	3.1	4.1	5.01
Intrauterine Device	1.9	1.6	1.7	1.5	0.1
Injectable contraceptives	0	0	0.1	0	0.6
Condoms	2.4	3.1	5.2	5.6	9.5
Any modern Methods	36.5	42.8	48.5	47.8	56.5
Any method (Including traditional methods)	40.7	48.2	56.3	53.5	66.7

The figure-1 describes that woman contraceptive prevalence rate (CPR) among currently married women age 15-49 is 69 percent, much higher than its level in NFHS-4 (52 percent). The use of modern family planning methods (68 percent) has also increased from its level in NFHS-4 (51 percent). The use of female sterilization has increased, from 49 percent to 57 percent between NFHS-4 and NFHS-5; the share of female sterilization in overall contraceptive use has fluctuated between 79 and 94 percent in all five NFHS surveys. Contraceptive use in NFHS-5 increases sharply with age from 19 percent for women age 15-19 to 84 percent for women age 40-49.



On family planning utilization and its impact on countries population growth many studies have been conducted & many rounds of large-scale survey like DLHS & NFHS has been carried out at district & state level to understand the uses, knowledge & practices of all woman & child health issues. Hence the present study aims to understand the role of men in contraceptive use in Karnataka state by using NFHS-5 data.

METHODOLOGY

NFHS-5 provides district-level estimates for many important health indicators. The contents of NFHS-5 are similar to NFHS-4 to allow comparisons over time. However, NFHS-5 includes some new topics, such as preschool education, disability, access to a toilet facility, death registration, bathing practices during menstruation, methods and reasons for abortion. The scope of clinical, anthropometric, and biochemical testing (CAB) has also been expanded to include measurement of waist and hip circumferences and the age range for the measurement of blood pressure and blood glucose has been expanded. However, HIV testing was not included in NFHS-5. The NFHS5 sample was designed to provide national, state/union territory (UT), and district level estimates of various indicators covered in the survey. However, estimates of indicators of sexual behaviour; husband's background and woman's work; HIV/AIDS knowledge, attitudes, and behavior and domestic violence are available only at the state/union territory (UT) and national level. Furthermore, for the present study the NFHS-5 data for Karnataka state has been utilized for the analysis purpose. It is a cross-sectional secondary data analysis was conducted using NFHS-5 (2019–21) Karnataka men's dataset. Since the study is based on male involvement in family planning practices hence total only men aged between 15–54 years (n = 2,860) are included for the analysis purpose. The variables are considered as dependent variable is **c**urrent use of contraceptive methods (not using, modern, traditional, any method). Independent variables are age group, education, and number of living children, religion, caste, wealth index, residence (urban/rural), and district. A Descriptive statistics Analysis was carried out on knowledge and use patterns of contraceptives. Chi-square tests assessed associations between socio-demographic variables and contraceptive use. District- and region-level distributions were examined.

RESULTS AND DISCUSSION

The present research focus on the knowledge and use of family planning methods by the male in the state of Karnataka through the fifth round of National Family Health Survey which was carried out during 2019-21 across country. Regarding knowledge and use of family planning practices in the state of Karnataka

using NFHS-5 data is concerned that the wide gaps can be observed (table 2).

The NFHS-5 data reveals that while men in Karnataka have high knowledge of many family planning methods, this isn't translating into use, especially for methods involving male participation. The data reflects deep-rooted gender norms, lack of male-focused programs, and possible mistrust or lack of comfort with certain methods. Bridging this knowledge–practice gap will require: Stronger male-inclusive programmes, improved availability and counseling for short-term methods and cultural shifts that support shared responsibility in reproductive decisions.

The gap between knowledge and use is particularly wide for most methods, especially: Male sterilization (82.8 percent knowledge v/s 0.34 percent use), Condoms show relatively higher use (4.6 percent) compared to others, still less than the knowledge rate (96.2 percent). Withdrawal is the most used traditional method (3.27 percent) despite being less effective. Female sterilization (7.77 percent) is used far more than male sterilization (0.34 percent), even though male sterilization is simpler, safer, and less invasive. It may be because of gendered burden of national reproductive child health programmes. Implies a gender imbalance: contraception continues to be viewed largely as a woman's domain, even among informed men. In spite of higher awareness about male condoms but its use is very low as compared to female sterilization.

High awareness of condoms (96.2 percent) but as far as usage (4.6 percent) is concerned is very less. For oral pills (85.9 percent), likely knowledge refers to female use, yet men's role in supporting/using remains low. Emergency contraception (51.2 percent) and IUDs (38.2 percent) show some knowledge but minimal or no reported use, again possibly due to limited male involvement or misconceptions. Pills, condoms, IUDs, and injectables are less utilized may be because of lack of accessibility and misconceptions about side effects, many are preferring for permanent solutions post-childbearing, very limited use of female condoms (0.3 percent) despite almost 48 percent awareness—may reflect lack of availability or comfort. Traditional method withdrawal (3.27 percent) is used more than condoms, IUDs, or pills. Despite being less reliable, it's preferred by some couples due to no cost, no medical procedure, lack of access to modern methods and discomfort with other methods when they used. Whereas, diaphragms (14.2 percent), foam/jelly (15.5 percent), and other modern methods (10.0 percent) are scarcely known because of their non availability in public health facilities.

Table 2. Knowledge & Use of Family Planning Methods by men in Karnataka state by methods wise-NFHS-5, 2019-21

Family planning methods	**Knowledge**	**Use of family planning**
Female sterilization	95.1	7.77
Male sterilization	82.8	0.34
Pill	85.9	1.49
IUD	38.2	0.21
Investable	76.0	0.21
Condoms/Nirodh	96.2	4.6
Female condoms	47.9	0.3
Emergency contraception	51.2	*DNA*
Diaphragm	14.2	*DNA*
Foam or jelly	15.5	0.03
Standard days method	46.8	0.11
Lactational ammenorrhoea method	44.0	*DNA*
Other modern method	10.0	*DNA*
Any traditional family planning methods		
Rhythm	49.1	0.19
Withdrawal	67.7	3.27

Table 3 explains that the use of family planning in Karnataka state by the back characteristics of the sampled population. Highest any method use (25.6 percent) is among the youngest group (15–24) of population, the data revels that young men are more open to contraception, particularly modern methods (22.3 percent) of contraception. But there is slightly drop in use among 25–34 age groups of men have been observed due to their shift decision-making power to partners or family expectations after their marriage. From the above table it is clearly indicating that there is a strong positive correlation between education and contraceptive use and modern methods rise sharply with education it is likely due to better health knowledge**,** access and autonomy. It also expressed that there is a strong association between education and contraceptive use in Karnataka state.

The use of contraceptives is influenced by many background characteristics of the persons those who are adopting or using contraceptive. The below information (table 2) considered the background characteristics of men in Karnataka; age, education, number of living children, religion, caste and tribe, wealth index and place of residence were considered during analysis of contraceptive usage by men in Karnataka state. The highest nonuse of contraceptive rate is in the age group of 25-34 (84.5 percent) age group followed by older age group (35–44 age group is 82.4 percent and 45–54 age group is 83.8 percent). The lowest non-use rate is in the 15–24 group (74.4 percent), means younger men are slightly more likely to use some method of contraceptive to prevent getting pregnancy. In terms of modern method usage is concerned that the 15-24 age group has the highest uptake of modern methods (22.3 percent). Modern method usage decreases significantly in older age groups (35–44 to 15 percent & in 45–54 age group is 14.9 percent). This could reflect a combination of early-stage family planning needs and higher awareness among younger cohorts. The usage of traditional method is concerned across all ages is very minimal (4 percent). The highest is among 15–24 age groups (3.3%), which may be due to temporary or less formalized contraception before marriage or in early marriage. The youngest age group (15–24) shows has highest (25.6 percent) usage in the any kind of any methods & it is highest among all age groups. The any methods hold the sharply decline in older age groups, it may be because of the families might have attained the ideal or desired family size. And many men stop using any contraception because their partner may sterilize or they perceive no need of any kind of family planning methods. There is statistical significance (Pearson $chi^2(6) = 13.88$, $p = 0.031$) has been observed a statistically significant association between age group and contraceptive method. This means that age of the respondent is an important factor in contraceptive choice among men in Karnataka.

The NFHS-5 data (table 2) for Karnataka shows a clear positive relationship between level of education and contraceptive use among men. The non-use of contraception is highest (88.6 percent) among men who doesn't have any kind of level of education and declines progressively with increasing education. Men with higher level of education report the lowest non-use of contraceptive rate (77.1 percent). Hence it is a fact that education is means of awareness, access, and willingness to adopt family planning methods in Karnataka state. The use of modern contraceptive increases steadily with increase in level of education. Hence this pattern suggests that education enhances knowledge of and access to reliable contraceptive methods, possibly through greater health literacy and economic capacity. Use of traditional methods is low across all groups but slightly higher among better level of educated men. This may indicate that more educated men are aware of and experiment with non-clinical spacing methods, though they

remain a small proportion overall. In terms of any method of contraceptive

The proportion of men using any contraceptive method rises sharply with the level of education. Therefore, the IECs are playing a very important role as a powerful enabling factor. This doubling of uptake from the lowest to highest education groups highlights education as a powerful enabling factor. The Pearson (chi² statistic (χ^2 = 24.81, $p < 0.001$) co-efficient confirms a highly significant association between education and contraceptive use pattern in Karnataka state.

Whereas with related to number of living children and use of contraceptive among men is concerned that men with no children have the highest proportion of non-use (86.5 percent) of any methods, very less (13.5 percent) using any kind of methods, using any method (mostly modern, 11.7 percent). Men with one child show the highest (19.6 percent) usage rates overall with using any method (modern method 16.7 percent & traditional method 2.9 percent). Men with three or more children again have a high non-use rate (85.2 percent) and very less (14.7 percent) men use any methods of contraceptives in Karnataka state. The association between religion and contraceptive use by men in Karnataka state is not statistically significant (Pearson χ^2 = 8.2163, $p = 0.084$), though notable differences exist. Hindu men are reported (17.3 percent) prevalence of any method use, compared to among Muslims (12.9 percent) and 22.7% among men from other religions. Modern method use was highest among "Others" (18.2 percent) and lowest among Muslims (9.9 percent). These variations may reflect differences in cultural norms, contraceptive awareness, and access across religious communities.

Table 3. Contraceptive usage by type of methods according to background characteristics of men in the state of Karnataka

Age group	Not using (%)	Modern (%)	Tradition (%)	Any Method (%)	Number	Pearson co-efficient
15-24	74.4	22.3	3.3	25.6	121	Pearson chi2(6) = 13.8837 Pr = 0.031
25-34	84.5	12.7	2.8	15.5	787	
35-44	82.4	15	2.6	17.6	1050	
45-54	83.8	14.9	1.3	16.2	902	
Education						
no education	88.6	10.3	1.1	11.4	466	Pearson chi2(6) = 24.8138 Pr = 0.000
primary	85.9	11.9	2.1	14	427	
secondary	82.2	15.5	2.4	17.9	1570	
higher	77.1	19.4	3.5	22.9	397	
Number of living children						
zero	86.5	11.7	1.8	13.5	724	Pearson chi2(4) = 17.2839 Pr = 0.002
one	80.4	16.7	2.9	19.6	1446	
>=3	85.2	13.3	1.4	14.7	690	
Religion						
Hindu	82.7	15.2	2.1	17.3	2512	Pearson chi2(4) = 8.2163 Pr = 0.084
Muslim	87.2	9.9	3.0	12.9	304	
Others	77.3	18.2	4.5	22.7	44	
Social group						
Schedule Caste	84.6	12.9	2.5	15.4	558	Pearson chi2(6) = 2.8278 Pr = 0.830
Schedule Tribe	84.5	14.1	1.4	15.5	277	
OBC	82.9	14.6	2.4	17	1558	
None Of Them	81.5	15.8	2.7	18.5	298	
Wealth Index						

Poorest	86.4	12.1	1.5	13.6	619	Pearson chi2(8) = 29.4192 Pr = 0.000
Poorer	86.1	12.9	1.0	13.9	668	
Middle	83.4	13.6	3.0	16.6	640	
Richer	79.4	17.3	3.2	20.5	525	
Richest	77.2	19.6	3.2	22.8	408	
Place of residence						
Urban	81.6	14	4.4	18.4	773	Pearson chi2(2) = 21.6616 Pr = 0.000
Rural	83.6	14.9	1.5	16.4	2087	
Total	83.1	14.7	2.3	17	2860	

The wealth index shows a strong positive gradient in usage (χ^2=29.42, p<0.001). Men in the poorest quintile have the lowest uptake (13.6 percent), while the richest record the highest (22.8 percent). Modern method use rises from 12.1 percent (poorest) to 19.6 percent (richest), place of residence also matters significantly (χ^2=21.66, p<0.001). Urban men use contraception more (18.4 percent) than rural men (16.4 percent), with a notable difference in traditional method use (urban: 4.4%, rural: 1.5 percent) Overall, the state average (83.1 percent) of men not using contraception, 14.7 percent using modern methods, and 2.3 percent using traditional methods. The data indicate that higher education, urban residence, economic prosperity, and being younger are associated with greater contraceptive use among men in Karnataka.

Table 4. Use of Family Planning Methods by men in the districts of Karnataka state

Districts	Not using	Modern	Tradition	Any method	Total
Belgaum	73.6	22.7	3.6	26.3	110
Bagalkot	88.5	11.5	0	11.5	104
Bijapur	74	21.9	4.2	26.1	96
Bidar	84.5	15.5	0	15.5	103
Raichur	98	2	0	2	102
Koppal	88.8	11.2	0	11.2	107
Gadag	93.4	4.9	1.6	6.5	122
Dharwad	80.2	17.7	2.1	19.8	96
Uttara kannada	92.1	4.5	3.4	7.9	89
Haveri	95.3	3.5	1.2	4.7	85
Bellary	88.3	10.7	1	11.7	103
Chitradurga	74	20.8	5.2	26	96
Davanagere	96.8	3.2	0	3.2	62
Shimoga	89.6	10.4	0	10.4	106
Udupi	60.2	36.6	3.2	39.8	93
Chikmagalur	89.4	7.7	2.9	10.6	104
Tumkur	65.9	28	6.1	34.1	82
Bangalore	70.1	19.5	10.4	29.9	77
Mandya	75.3	23.5	1.2	24.7	85
Hassan	75.5	23.5	1	24.5	98
Dakshina kannada	70.9	16.5	12.7	29.2	79
Kodagu	73.7	22.2	4	26.2	99
Mysore	91.4	8.6	0	8.6	93
Chamarajanagar	82.7	14.7	2.7	17.4	75
Gulbarga	92.8	7.2	0	7.2	97
Yadgir	82.9	16.2	0.9	17.1	117
kolar	77.6	22.4	0	22.4	107
Chikkaballapura	90.4	7.8	1.7	9.5	115
Bangalore rural	80.9	18.1	1.1	19.2	94
Ramanagara	90.6	6.3	3.1	9.4	64
State	83.1	14.7	2.3	17	2860

Analysis of contraceptive use by district among men in Karnataka shows wide geographical variation, with a statistically significant association between district of residence and method adoption (Pearson χ^2 = 259.9226, $p < 0.001$). At the state level, 17.0 percent of men reported using any method, but district-specific prevalence ranged from as low as 2.0 percent in Raichur to as high as 39.8 percent in Udupi. Districts such as Udupi (39.8 percent), Tumkur (34.1%), Bangalore (29.9 percent), Dakshina Kannada (29.2 percent), and Chitradurga (26.0 percent) recorded the highest usage rates, with modern methods dominating but also notable levels of traditional method use—especially in Bangalore (10.4 percent) and Dakshina Kannada (12.7 percent). In contrast, several northern and central districts, including Raichur (2.0 percent), Davanagere (3.2 percent), Haveri (4.7 percent), Gadag (6.5 percent), and Uttara Kannada (7.9 percent), reported very low prevalence, indicating stark disparities in male contraceptive adoption.

Modern method use was highest in Udupi (36.6 percent), Tumkur (28.0 percent), Mandya and Hassan (23.5 percent each), and Belgaum (22.7 percent), while traditional method reliance was concentrated in a few districts such as Dakshina Kannada (12.7 percent), Bangalore (10.4 percent), and Tumkur (6.1 percent). Districts with low modern method uptake, such as Raichur (2.0 percent) and Davanagere (3.2 percent), also had negligible traditional method use, suggesting limited overall engagement with family planning. These patterns highlight a clear urban–coastal advantage, with coastal Karnataka and certain southern districts showing relatively high male participation, whereas many northern districts lag significantly behind. Such disparities point to the need for district-specific strategies that address local barriers, improve awareness, and enhance access to male-oriented contraceptive services.

Regional wise

District-wise analysis of male family planning method use in Karnataka reveals strong regional variations, with statistically significant differences across districts (χ^2 = 259.9226, $p < 0.001$).

North Karnataka (Belgaum, Bagalkot, Bijapur, Bidar, Raichur, Koppal, Gadag, Dharwad, Haveri, Bellary, Gulbarga, Yadgir) shows a generally high proportion of non-users, often above 80 percent. Raichur stands out with the lowest overall usage (only 2 percent using any method), indicating possible gaps in access or awareness. Belgaum (26.3 percent) and Bijapur (26.1 percent) report relatively higher contraceptive use, with modern methods dominating. Traditional method use remains low across the region, rarely exceeding 4 percent, suggesting that when contraception is used, modern options are strongly preferred.

South Interior Karnataka (Chitradurga, Davanagere, Shimoga, Tumkur, Bangalore, Mandya, Hassan, Mysore, Chamarajanagar, Kolar, Chikkaballapura, Bangalore Rural, Ramanagara) presents a more mixed picture. Tumkur (34.1 percent), Bangalore (29.9 percent), and Mandya (24.7 percent) record comparatively high usage rates, with both modern and traditional methods in use. In contrast, Davanagere (3.2 percent) and Ramanagara (9.4 percent) show very low adoption. Traditional methods have a stronger presence here compared to the north, particularly in Bangalore (10.4 percent) and Tumkur (6.1 percent), suggesting more diversity in contraceptive choices.

Coastal and Malnad Karnataka (Uttara Kannada, Udupi, Chikmagalur, Dakshina Kannada, Kodagu) displays some of the highest contraceptive prevalence in the state. Udupi leads with 39.8 percent using any method, heavily dominated by modern contraceptives (36.6 percent) but with notable traditional use as well (3.2 percent).

Dakshina Kannada (29.2 percent) has the highest share of traditional method use in the state (12.7 percent), followed by Bangalore (10.4 percent), indicating a continued cultural acceptance of such practices in these regions. Overall, coastal districts combine high awareness, strong modern method uptake, and an above-average reliance on traditional approaches.

At the state level, 83.1 percent of men report not using any contraceptive method, while only 17 percent use any form—14.7 percent modern and 2.3 percent traditional. The data suggests that while modern methods dominate among users, large gaps in adoption remain, especially in certain North Karnataka and interior southern districts. Regional cultural factors, awareness levels, and access to services likely explain much of the variation.

This study highlights a constant gap between knowledge and practice in male family planning participation in Karnataka. High condom awareness does not translate into use, reflecting socio-cultural barriers, stigma, and gender norms. Vasectomy, though safe and effective, remains underutilized due to myths about masculinity and side effects.

Socio-demographic patterns indicate that education, economic status, and urbanization facilitate adoption of family planning. Regional disparities mirror differences in literacy, health infrastructure, and socio-cultural attitudes.

Findings align with earlier studies from Tamil Nadu and Gujarat showing male engagement concentrated in better-educated, wealthier, and urban groups.

CONCLUSION

Male contraceptive use in Karnataka is low despite high awareness. Significant socio-economic and geographic disparities exist, with coastal districts performing better. Without addressing male engagement, family planning targets under SDGs will remain unmet.

Declaration by Authors

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