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Original article

Educational drivers of shared contraceptive decision-making: Male involvement in family planning among rural couples in Haryana, India

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Abstract

Background: Despite India's progress in family planning, male involvement remains limited in patriarchal rural settings, where gendered norms perpetuate female-centric contraception and low vasectomy uptake. This study addresses a critical research gap by examining male roles in contraceptive decision-making in rural Haryana, a region with high son preference and educational disparities. Novelty lies in quantifying shared decision-making and its sociodemographic correlates, highlighting male education's transformative potential to foster equity and inform male-focused interventions, significant for advancing reproductive health autonomy and sustainable population policies.

Methods: A community-based cross-sectional study (October 2023–March 2024) surveyed 123 randomly selected eligible couples (wives aged 15–49) in Village Pali, Faridabad district. A pre-tested semi-structured questionnaire assessed sociodemographic, knowledge, attitudes, practices, and decision-making patterns. Data were analyzed using Epi Info 7, with descriptive statistics and inferential tests (Chi-square, Mantel-Haenszel, t-tests; $p \leq 0.05$).

Results: Contraceptive usage prevalence was 73.2%, led by male condoms (44.7%) and female sterilization (25.2%), with vasectomy at 2.4%. Shared decision-making prevailed (84.6%; 95% CI: 77.4–90.1), but family members influenced 22–41.5% of choices. Husband's education significantly predicted shared decisions (p=0.004), rising from 73.5% (illiterate) to 100% (graduates); wife's education showed borderline association (p=0.05). Son preference was higher among husbands (40.7% vs. 26.8% wives).

Conclusion: This study reveals evolving shared decision-making amid persistent inequities, underscoring male education as a lever for equitable family planning. Targeted strategies engaging men could reduce gendered burdens, enhance uptake of male methods, and support women's autonomy in rural India.

Keywords: Family Planning, Haryana, Male Involvement, Modern Contraception, Rural India, Shared Decision-Making

Introduction

India, the world's most populous nation, faces persistent public health and developmental challenges due to rapid population growth. This expansion strains limited national resources, impedes socioeconomic progress, and threatens sustainable development. Recognizing this early, the Government of India launched the National Family Planning Programmed in 1952, becoming the first country to implement such a national initiative (1). Despite sustained governmental efforts and the availability of diverse contraceptive methods, the contraceptive prevalence rate among eligible couples in India remains suboptimal. National estimates indicate that approximately 47.8% of eligible

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couples use contraception, meaning more than half either do not use or inconsistently use modern methods (1).

Family planning extends beyond population control; it is a cornerstone of maternal and child health, gender equity, and overall family well-being. Research consistently shows that gender equality where men and women share equal roles in decision-making, resource control, and access to information positively influences maternal and child health outcomes (2-6). Equitable involvement leads to improved contraceptive acceptance, better birth spacing, and reduced maternal and infant mortality rates (2, 3). However, India's family planning discourse has traditionally been female-centric, often overlooking the critical role men play in reproductive decision-making (7).

In Indian society, men are typically the primary decision-makers in family matters, including reproductive and contraceptive choices. Yet, their participation in family planning programs remains limited due to social norms, misconceptions, lack of awareness, and inadequate engagement strategies in national initiatives (8). Historically, these programs have emphasized female sterilization, resulting in strikingly low male participation through methods like condom use or vasectomy (9). Recent policy efforts, such as the Reproductive and Child Health (RCH) The Programme has acknowledged this imbalance and emphasized the importance of involving men in reproductive health and family planning (1, 2).

Despite this policy emphasis, empirical data on men's role as decision makers and users of modern contraceptives in rural Haryana are scarce. Understanding men's knowledge, attitudes, perceptions, and practices regarding contraception is crucial for increasing contraceptive prevalence and ensuring shared responsibility within couples. By assessing men's roles, policymakers and health educators can design targeted interventions to encourage male participation and dispel associated myths (7, 8).

This study aimed to assess the extent of men's involvement as decision-makers and users of modern contraceptive methods among eligible couples in a rural area of Haryana and to identify sociodemographic factors associated with shared decision-making in family planning.

Materials & Methods

A community based cross sectional study was conducted from October 2023 to March 2024 in Village Pali, located within the rural field practice area of a medical teaching institution in Faridabad district, Haryana, North India. The study protocol was reviewed and approved by the Institutional Ethics Committee (EC File No: 134 X/11/13/2023 IEC/DHR/110). Ethical principles of voluntary participation, informed consent, confidentiality, and the right to withdraw without penalty were strictly adhered to. Written informed consent was obtained from all participants after providing a Patient Information Sheet (PIS) in both Hindi and English. All data were anonymized by assigning unique identification codes, and identifying information was removed prior to analysis and reporting to ensure participant confidentiality.

The village has an estimated population of approximately 88,000 and is served by one Community Health Centre (CHC) and six sub centers that provide primary reproductive and maternal health services. The study area represents a typical rural setting in Haryana, characterized by mixed socioeconomic status, diverse occupational profiles, and strong sociocultural norms related to gender roles and family structure. These characteristics make the setting appropriate for examining contraceptive practices and male involvement in reproductive decision making in a patriarchal rural context.

The study population comprised eligible couples residing in Village Pali at the time of data collection. An "eligible couple" was defined in accordance with national family planning guidelines as a currently married couple in which the wife was aged 15–49 years. Couples were excluded if either spouse was unavailable after three successive household visits or if either partner declined to provide informed consent. Only one eligible couple per household was included to avoid intra household clustering.

The sample size was calculated using the formula for a finite population. The prevalence of male contraceptive use for postponement of the first pregnancy was assumed to be 8.8%, based on previous literature (10). With a 95% confidence level, a 5% absolute margin of error, and an estimated eligible couple population of approximately 9,500 in the study area, the minimum required sample size was calculated to be 123 couples. This sample size was considered adequate to estimate the prevalence of shared decision

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making and male contraceptive use with acceptable precision.

A simple random sampling method was employed to ensure representativeness and minimize selection bias. The Eligible Couple (EC) Register maintained by Auxiliary Nurse Midwives (ANMs) at the sub Centre level served as the sampling frame. Each eligible couple listed in the register was assigned a unique identification number. A total of 123 couples were selected using a random number table. In cases where a selected couple met exclusion criteria or could not be contacted after three visits, the next randomly generated number was used.

Data were collected using a pre tested, semi structured questionnaire developed following an extensive review of existing literature on male involvement and contraceptive decision making. The questionnaire was initially drafted in English, translated into Hindi, and subsequently back translated into English by an independent bilingual expert to ensure semantic and conceptual equivalence.

The instrument was pilot tested on 10% of the calculated sample size (12 eligible couples) in a neighboring village with similar sociodemographic characteristics. Feedback from the pilot study was used to refine question wording, sequence, and response options. Data from the pilot test were not included in the final analysis. Content validity was ensured through expert review by public health specialists and community medicine faculty, while face validity was assessed during pilot testing.

The questionnaire consisted of two main sections. The first section collected socio-demographic information, including age, educational attainment, occupation, family type (nuclear or joint), monthly household income, number of family members, duration of marriage, number of living children, and history of abortion. The second section assessed knowledge, attitude, and practice (KAP) related to family planning. It evaluated participants' awareness of modern contraceptive methods, sources of family planning information, attitudes toward contraception, reasons for adoption or non-use, the role of men in contraceptive decision-making, and the direct use of male contraceptive methods.

Modern Contraceptive Methods: Included oral contraceptive pills, male and female condoms, intrauterine devices (IUDs), postpartum intrauterine contraceptive devices (PP IUCDs), injectables, sterilization (male or female), diaphragms, spermicidal agents, and emergency contraception.

Current User: An eligible couple that had been using any modern contraceptive method continuously for at least the preceding six months.

Role of Men: Defined as active participation by men in family planning decision making, personal use of male contraceptive methods (condoms or vasectomy), and/or provision of support to their partners in adopting any modern contraceptive method.

Shared Decision Making: Defined as joint husband–wife participation in deciding to adopt a contraceptive method. Decisions made solely by the husband, solely by the wife, or by other family members were categorized as non-shared.

Data collection was carried out through house to house visits by trained field investigators on working days. Investigators received standardized training on interview techniques, ethical conduct, and confidentiality prior to data collection to enhance reliability and minimize interviewer bias. The purpose and procedures of the study were explained to each participant in simple language, and written informed consent was obtained separately from both spouses.

Interviews were conducted in Hindi in a private and comfortable setting within the household to ensure confidentiality and encourage honest responses, particularly for sensitive questions related to reproductive behavior. If one spouse was unavailable at the time of the initial visit, the household was revisited up to two additional times to complete the interview.

Statistical Analysis

Completed questionnaires were checked daily for completeness and consistency. Data were entered into Microsoft Excel using double entry verification to minimize data entry errors and subsequently analyzed using Epi Info version 7 (Centers for Disease Control and Prevention, USA).

Descriptive statistics were used to summarize the data, including means and standard deviations for normally distributed continuous variables, medians and interquartile ranges (IQRs) for non-normally distributed variables, and frequencies and percentages for categorical variables. Inferential statistical analyses were conducted to examine associations between shared decision making and selected sociodemographic variables. The following tests were applied as appropriate: Chi square test or Fisher's exact test for associations between categorical variables, Independent t test for comparison of means of normally

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distributed continuous variables, and Mann–Whitney U test for non-normally distributed continuous variables.

A p value of ≤0.05 was considered statistically significant. Assumptions underlying each statistical test were assessed prior to analysis to ensure validity of results.

Results

A total of 123 eligible couples participated in the study, yielding a response rate of 100% among those approached. The mean age of husbands was 35.8 years (SD=8.7), while the mean age of wives was 32.4 years (SD=7.9). Educational attainment differed between spouses: 40.7% of wives were illiterate compared with 27.6% of husbands. Among husbands, the most common educational level was completion of 8th standard (35.0%), whereas among wives, illiteracy (40.7%) and education up to 5th standard (27.6%) predominated.

The majority of husbands were engaged in agriculture (56.1%), followed by government or private employment (26.0%). Most wives were homemakers (86.2%). Hindu households constituted 86.2% of the sample, and Muslim households accounted for 13.8%. Nuclear families were more common (60.2%) than joint families (39.8%).

The median monthly household income was 20,000 (IQR: 15,000–25,000). The median family size was five members (IQR: 4–6). The median number of pregnancies and living children per couple was two (IQR: 1–3). The mean age at marriage was 23.4 years (SD=4.2) for husbands and 20.3 years (SD=4.4) for wives. A history of abortion was reported by 28.5% of couples. Detailed socio demographic characteristics are presented in Table 1.

Concordance between spouses regarding the desired number of children was reported by 77.2% of husbands and 78.9% of wives. Differences were observed in attitudes toward son preference: 40.7% of husbands expressed a preference for a male child compared with 26.8% of wives. These distributions are illustrated in Figure 1.

Across all contraceptive methods, joint husband–wife decision making was the most frequently reported pattern. For condom use, 68.3% of couples reported shared decision making, followed by IUD/PP IUCD use (54.5%), female sterilization (52.8%), vasectomy (53.7%), oral pills (51.2%), and injectable (50.4%).

Decision making influenced by other family members—most commonly mothers in law—was substantial, particularly for IUD/PP IUCD use (37.4%), injectable (40.7%), female sterilization (37.4%), and male sterilization (41.5%). Husband only decision making ranged from 4.9% to 8.9% across methods, while wife only decision making remained low (0.0%–4.1%).

In scenarios involving an unintended pregnancy, 80.5% of couples reported joint decision making regarding subsequent actions. Patterns of participation in contraceptive decision making are summarized in Table 2.

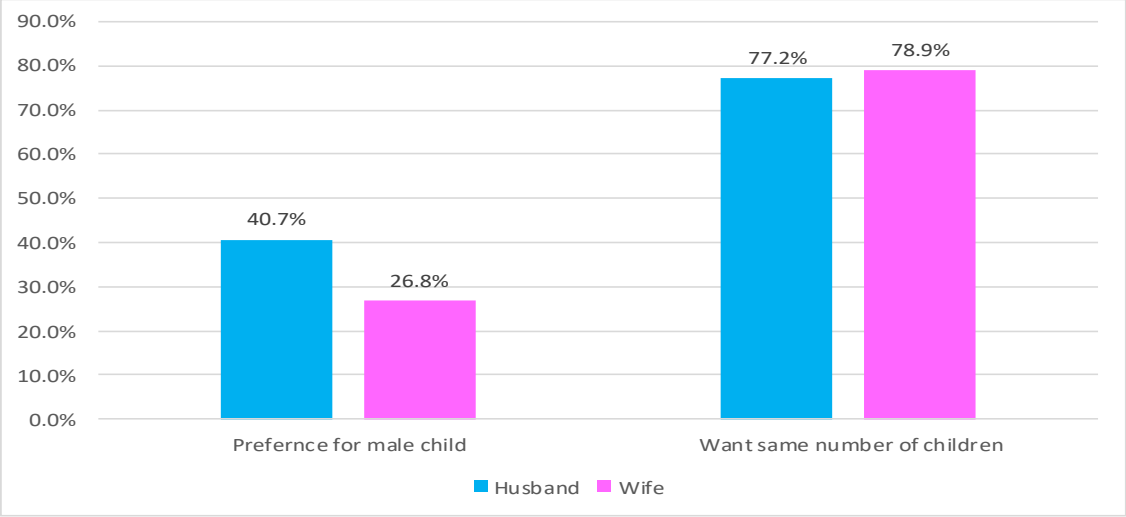

Figure 1. Attitude towards fertility preference

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Contraceptive prevalence and method mix: Overall, 73.2% (n=90) of couples reported current use of at least one contraceptive method to delay or avoid pregnancy. The male condom was the most frequently reported method (44.7%), followed by female sterilization (25.2%). Use of oral contraceptive pills (13.8%), female condoms (14.6%), and emergency contraception (13.0%) was moderate. Lower levels of use were observed for IUCDs (7.3%), injectables (5.7%), withdrawal (6.5%), and rhythm methods (3.3%). Male sterilization (vasectomy) was reported by 2.4% of couples.

Table 1. Socio-demographic characteristics of the study participants (N = 123)

Variable	Category	n (%) / Measure
Age of husband (years), Mean ± SD	—	35.8 ± 8.7
Age of wife (years), Mean ± SD	—	32.4 ± 7.9
Education of husband	Illiterate	34 (27.6)
	5th standard	14 (11.4)
	8th standard	43 (35.0)
	10th standard	10 (8.1)
	12th standard	12 (9.8)
	Graduate	10 (8.1)
Education of wife	Illiterate	50 (40.7)
	5th standard	34 (27.6)
	8th standard	17 (13.8)
	10th standard	2 (1.6)
	12th standard	13 (10.6)
	Graduate	7 (5.7)
Religion	Hindu	106 (86.2)
	Muslim	17 (13.8)
Occupation of husband	Agriculture	69 (56.1)
	Govt./Private employee	32 (26.0)
	Professional	2 (1.6)
	Shopkeeper	4 (3.3)
	Semi-skilled worker	15 (12.2)
	Unemployed	1 (0.8)
Occupation of wife	Homemaker	106 (86.2)
	Govt./Private employee	13 (10.6)
	Semi-skilled worker	3 (2.4)
	Unemployed	1 (0.8)
Family type	Nuclear	74 (60.2)
	Joint	49 (39.8)
Monthly family Income , Median (IQR)*	—	20,000 (15,000–25,000)
Family size (members), Median (IQR)	—	5 (4–6)
Pregnancies, Median (IQR)	—	2 (1–3)
Living children, Median (IQR)	—	2 (1–3)
Age at marriage (husband), Mean ± SD	—	23.4 ± 4.2
Age at marriage (wife)	—	20.3 ± 4.4
History of abortion	Yes	35 (28.5)
	No	88 (71.5)

*USD≈83 INR

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Table 2. Participation in decision-making regarding contraceptive use (N = 123)

Contraceptive Method	Husband only n (%)	Wife only n (%)	Joint decision n (%)	Other family member n (%)
Condom	11 (8.9)	1 (0.8)	84 (68.3)	27 (22.0)
IUD / PP-IUCD	7 (5.7)	3 (2.4)	67 (54.5)	46 (37.4)
Oral pills	8 (6.5)	5 (4.1)	63 (51.2)	47 (38.2)
Injectable	8 (6.5)	3 (2.4)	62 (50.4)	50 (40.7)
Female sterilization	10 (8.1)	2 (1.6)	65 (52.8)	46 (37.4)
Male sterilization	6 (4.9)	0 (0.0)	66 (53.7)	51 (41.5)
Decision if wife becomes pregnant	17 (13.8)	3 (2.4)	99 (80.5)	4 (3.3)

Note. Other family members included mother-in-law, wife's mother, or sister-in-law.

Table 3. Contraceptive method mix among couples using contraception (N = 123)

Method	n	%
Male condom	55	44.7
Withdrawal	8	6.5
Female condom	18	14.6
Oral pills	17	13.8
Rhythm method	4	3.3
IUCD	9	7.3
Female sterilization	31	25.2
Male sterilization (vasectomy)	3	2.4
Injectable	7	5.7
Emergency contraception	16	13.0

Multiple responses were permitted; percentages exceed 100%.

Shared decision making regarding contraceptive use was reported by 84.6% of couples (95% CI: 77.4%–90.1%), while 15.4% (95% CI: 9.9%–22.6%) reported non shared decision making.

A statistically significant association was observed between shared decision making and the husband's level of education (Mantel–Haenszel linear trend χ^2, p=0.004). Shared decision making increased with higher educational attainment, ranging from 73.5% among illiterate husbands to 100% among graduates.

Wife's education demonstrated a borderline significant association with shared decision making (p=0.05), with lower prevalence among illiterate wives (74.0%) compared with wives who had completed higher levels of education.

No statistically significant associations were identified between shared decision making and husband's occupation, wife's occupation, family type, history of abortion, age of husband or wife, age at marriage, monthly family income, number of pregnancies, or number of living children. Detailed bivariate associations, including effect estimates and confidence intervals, are presented in Table 4.

Discussion

This community-based cross-sectional study provides critical insights into the complex dynamics of male contraceptive decision-making in rural Haryana, India. The findings reveal a landscape where emerging patterns of joint decision-making coexist with deeply entrenched patriarchal norms and structural gender inequalities, creating a nuanced picture of reproductive health behavior in this context.

In the present study, the mean age of both husbands and wives was consistent with findings from rural populations in Haryana and Uttar Pradesh reported by Singh and Sharma et al. These studies similarly observed that couples in rural settings tend to marry at younger ages and initiate childbearing shortly after marriage (11-12).

A substantial proportion of wives (40.7%) were illiterate, compared with 27.6% of husbands. This educational disparity reflects a persistent gender gap documented in rural India and may have important implications for women's autonomy and their active participation in reproductive decision-making (13-14).

The majority of husbands were engaged in agricultural work, whereas most women were homemakers, reflecting the predominant occupational pattern observed in rural North India (15).

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Table 4. Factors associated with shared contraceptive decision-making (N = 123)

Variable	Category	Shared n (%) [95% CI]	Nonshared n (%) [95% CI]	*p*
Overall	—	104 (84.6) [77.4, 90.1]	19 (15.4) [9.9, 22.6]	—
Husband's education				0.002[a]
	Illiterate	25 (73.5) [57.2, 86.9]	9 (26.5) [14.0, 42.8]	
	5th standard	10 (71.4) [45.5, 89.5]	4 (28.6) [10.5, 54.5]	
	8th standard	41 (95.3) [85.9, 99.0]	2 (4.7) [1.0, 14.1]	
	10th standard	6 (60.0) [30.4, 84.7]	4 (40.0) [15.3, 69.6]	
	≥12th standard	22 (100) [89.3-100.0]	0 (0.0)	
Wife's education				0.055[a]
	Illiterate	37 (74.0) [60.7, 84.6]	13 (26.0) [15.4, 39.3]	
	5th standard	31 (91.2) [78.3, 97.5]	3 (8.8) [2.5, 21.7]	
	8th standard	15 (88.2) [67.3, 97.5]	2 (11.8) [2.5, 32.7]	
	≥10th standard	21 (95.5) [80.7-99.5]	01 (4.5) [0.5-19.3]	
Husband's occupation				0.479[b]
	Professional	2 (100.0)	0 (0.0)	
	Government/private employee	29 (90.6) [77.0, 97.3]	3 (9.4) [2.7, 23.0]	
	Shopkeeper	3 (60.0) [20.9-90.6]	2(40.0) [9.4-79.1]	
	Agriculture	58 (84.1) [74.1, 91.2]	11 (15.9) [8.8, 25.9]	
	Semi-skilled	12 (80.0) [55.6, 94.0]	3 (20.0) [6.0, 44.4]	
Wife's occupation				0.509[c]
	Government/private employee	12 (92.3) [69.3, 99.2]	1 (7.7) [0.8, 30.7]	
	Homemaker	90 (84.1) [76.3, 90.1]	17 (15.9) [9.9-23.7]	
	Semi-skilled	2 (66.7) [17.7, 96.1]	1 (33.3) [3.9, 82.3]	
Family type				0.308[b]
	Nuclear	65 (87.8) [79.0, 93.8]	9 (12.2) [6.2, 21.0]	
	Joint	39 (79.6) [66.8, 89.0]	10 (20.4) [11.0, 33.2]	
History of abortion				1.00[b]
	Yes	30 (85.7) [71.5, 94.3]	5 (14.3) [5.7, 28.5]	
	No	74 (84.1) [75.4, 90.6]	14 (15.9) [9.4, 24.6]	
Continuous variables				
Husband's age, M (SD)		35.92 (8.60)	35.32 (9.35)	0.781[c]
Wife's age, M (SD)		32.52 (7.92)	32.53 (8.08)	0.617[c]
Age at marriage (husband), M (SD)		23.59 (4.14)	22.42 (4.34)	0.265[c]
Age at marriage (wife), M (SD)		20.42 (4.28)	19.63 (4.96)	0.472[c]
Monthly family income, Median (IQR)		20,000 (15,000–25,000)	20,000 (15,000–24,000)	0.398[d]
Number of pregnancies, Median (IQR)		2 (1–3)	2 (1–4)	0.537[d]
Living male children, Median (IQR)		1 (0–1)	1 (0–2)	0.168[d]

Note. CI = confidence interval; SD = standard deviation; IQR = interquartile range.
[a] Mantel–Haenszel linear-by-linear association chi-square test.
[b] Pearson chi-square test.
[c] Independent samples t test.
[d] Mann–Whitney U test.

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Awareness of condoms and female sterilization was notably high in the present study. Comparable findings have been reported in rural Haryana by Yadav et al. (2019) and in Uttar Pradesh by Kumar et al. (2020) (16-17), Awareness of emergency contraception was the lowest (26%), consistent with findings from Himachal Pradesh reported by Verma et al., which similarly documented limited male awareness of this method (18). Knowledge of intrauterine devices (IUDs), injectable contraceptives, and natural methods was also comparatively low. Similar patterns have been observed in rural Madhya Pradesh and Nepal, suggesting inadequate counseling and engagement of men regarding reversible, female-controlled contraceptive methods (19).

Most couples in the study demonstrated concordance regarding their desired family size, a finding that aligns with evidence from rural Ethiopia, where spousal agreement on fertility intentions has also been reported to be high (20). Despite overall spousal agreement on family size, a considerable proportion of husbands (40.7%) expressed a preference for a male child, compared with 26.8% of wives, indicating that son preference remains more pronounced among men. Similar patterns have been documented in studies from Haryana, Rajasthan, and Punjab (21, 22). The persistence of son preference is strongly influenced by patriarchal norms, economic considerations, and expectations related to old-age security and lineage. Such cultural attitudes may have a significant impact on contraceptive use and reproductive decision-making.

Shared decision-making between spouses was reported by 74% of couples, reflecting a positive trend toward mutual discussions regarding reproductive choices. Comparable levels of joint decision-making have been observed in rural Karnataka (23). However, 13.8% of husbands reported unilaterally directing their wives to use contraception, indicative of persistent male-dominant decision-making, a pattern also documented in studies from Bihar and Uttar Pradesh (24).

The contraceptive prevalence rate observed in this study (73.2%) was higher than the national rural averages reported in NFHS-5 (25). This elevated prevalence may be attributed to several factors, including the study setting in a rural field practice area of a medical teaching institution, the inclusion of currently married and stable resident couples (excluding migrant or otherwise unstable households where contraceptive use may be lower), the predominance of condom use, and potential reporting bias inherent in self-reported data. The male condom was the most commonly used method (44.7%). Similar high levels of condom use have been reported by Kulkarni and Nair in Maharashtra and Punjab, likely reflecting its ease of access and minimal side effects (26).

Female sterilization remained a prevalent method of contraception, highlighting the persistent female-centered responsibility for family planning in India. This finding is consistent with NFHS-5 data and earlier studies, which similarly demonstrate the continued predominance of female sterilization in the contraceptive landscape (25, 27). The prevalence of male sterilization was very low, consistent with estimates from Haryana, Uttar Pradesh, and NFHS-5. This low uptake reflects persistent socio-cultural barriers, including fears of physical weakness, stigma, and widespread misconceptions surrounding vasectomy (28, 29).

Education was significantly associated with shared decision-making, particularly male education. Evidence from rural Rajasthan indicates that men with higher education levels are more likely to engage in reproductive discussions and actively support contraceptive use (30). Similarly, wives' education demonstrated a borderline association with shared decision-making, consistent with evidence that educated women are more empowered to negotiate contraceptive choices (31). Other demographic factors, including occupation, family type, income, and parity, were not significantly associated, aligning with findings from rural Maharashtra and Nepal, where education emerged as the strongest predictor of male involvement (32, 33).

Despite careful design and rigorous implementation, this study has several limitations that should be acknowledged. First, the cross-sectional nature of the study precludes any causal inference between educational attainment and shared contraceptive decision-making. Observed associations may reflect underlying confounding factors, such as sociocultural norms or spousal communication patterns, which were not fully captured. Second, data were collected through self-

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reported questionnaires, which may be subject to recall bias and social desirability bias, particularly given the sensitive nature of reproductive behavior and male involvement. Although private interviews and assurances of confidentiality were used to minimize bias, underreporting of non-shared decision-making or male contraceptive use cannot be entirely ruled out.

Third, the study was conducted in a single rural village in Haryana, which may limit the generalizability of findings to other rural or urban populations in India with differing sociocultural and health system contexts. Additionally, the relatively modest sample size, while adequate to estimate prevalence and associations within this population, may have limited statistical power to detect associations with less common outcomes or to explore interactions between multiple demographic variables.

Fourth, while the study focused on formal education as a driver of male involvement, other factors such as informal education, media exposure, peer influence, and community norms were not comprehensively assessed and may also contribute to decision-making dynamics. Similarly, qualitative insights into couple communication, gender roles, and barriers to male participation were beyond the scope of this study but are critical for a more nuanced understanding.

Future research should consider longitudinal or mixed-methods designs to better elucidate causal pathways and temporal changes in male involvement and shared contraceptive decision-making. Larger, multi-site studies across diverse rural and urban settings in India would improve generalizability and allow exploration of region-specific sociocultural determinants. Incorporating qualitative approaches, such as in-depth interviews or focus group discussions with couples and key community stakeholders, could provide deeper insights into gender norms, perceptions of male contraceptive use, and strategies to promote equitable decision-making. Additionally, intervention studies evaluating the impact of educational programs targeting both men and women, as well as community-based awareness campaigns, could inform evidence-based strategies to enhance male participation in family planning and optimize shared contraceptive decision-making.

Conclusion

Despite encouraging levels of shared decision-making and contraceptive use in rural Haryana, male sterilization remains low and contraceptive responsibility is still largely female-centered. Male education was a key determinant of joint decision-making, highlighting the need for targeted interventions. Strategies such as ASHA-led male counseling, couple-focused sessions, male-friendly service points, and context-specific information, education, and communication (IEC) campaigns addressing misconceptions and fears surrounding vasectomy could enhance male engagement, promote equitable contraceptive responsibility, and support women's reproductive autonomy. Integrating these approaches within existing primary healthcare and national family planning programs can strengthen culturally sensitive, inclusive, and effective reproductive health outcomes at the community level.

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Conflicts of Interest

The authors declare that they have no competing interests.

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