

# Denial Mode for Vasectomy among Married Men in Central India: Causes and Suggested Strategies

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## Abstract

Vasectomy is considered in India as a very safe, simple and cost effective method as compared to female sterilization. However, the prevalence of female sterilization, a highly popular and practiced method of family planning, exceeds that of vasectomy by a factor of 37 to 1 with a current rate of 4.4%. In a cross sectional study conducted at a rural health training centre field practice area of a tertiary care hospital, the study was conducted by use of a structured questionnaire, which was used for interviewing to all study subjects for assessing the level of knowledge, perception and potential demand about vasectomy among married males in India. Data analysis was done using Epi info version 3.5.1. The awareness of vasectomy was found to be 97%, but their knowledge level was low (54.0%) and 13.0% had no knowledge. The association of knowledge on vasectomy among men and level of education as well as occupation was found statistically significant. Although the majority of participants (54.0%) indicated an approval for a vasectomy, only 1% men were actually practicing it. The potential demand for vasectomy was found to be 21.0%. Information, Education and Communication campaigns followed by Behaviour Change Communication approaches will do wonders for the acceptance and use of Vasectomy by the prospective beneficiaries.

**Keywords:** Public health; Vasectomy; Men; Potential demand; Perception

## Introduction

World-wide accepted method of female sterilization needs to be compared with Vasectomy, a simple, safe and effective method of family planning. However, the use of female sterilization is much higher than vasectomy in India with its prevalence exceeding that of Vasectomy by a factor of 37 to 1 with a current rate of 4.4 % [1,2]. From the National family planning program inception in the 1950s through the mid-1970s, vasectomy played a dominant role. Vasectomy was very popular method of sterilization during 1956 and 1980 in India with 65% of cases adopting Vasectomy [3]. By the late 1970s, however, vasectomy use had begun to decline drastically. Shrinking away from the responsibility sharing of Vasectomy by men needs to be understood for changed behavior and practice. Probably, the new generation of beneficiaries have not been duly informed and appropriately counseled for adopting the Vasectomy practices. It has been seen that the well informed persons take appropriate and responsible decision for Family Planning while deciding about their family planning choices [4]. And, it's sure and well understood that the consenting persons need to be informed well in advance for making an informed decision about the surgical procedure being offered.

Thus, the consenting depends on one's understanding of the procedural requirements, limitations and alternative choices. It is, however, important for the men to make a decision based on the information obtained from different sources including peer groups, newspapers, advertisements and literature. If appropriate and correct benefits are not shared with the patient, he may decline to go in for the surgical procedure of vasectomy. The decision also depends on the various cultural practices, attitude, beliefs and practices of the society. Kishori Mahat et al. showed that the misconceptions based on cultural feelings had great role in refusal by men for adopting the option of vasectomy [5]. It has been deep seated belief that the vasectomy may result in castration. They are also fearful of the procedure and its failure. It's true that the vasectomy cases, which fail, can have severe consequences for the women, leading to charges of infidelity and potential eviction from the family [6].

However, it has been recently noticed that the non usage of condoms and vasectomy, the easy approaches to family welfare, by men is due to incorrect and deficient approaches by the health care workers, counseling services and proactive actions by the health service delivery mechanism. There is immediate and urgent need of ensuring that policy makers and providers are enriched with the recent and appropriate information with motivational skills to ensure better acceptance of these practices in the interest of general population [7,8]. It has been noticed that the people give due importance to the media propaganda, if done correctly, appropriately and with clarity of the purpose [7,9].

A WHO expert committee has defined five methods in 1975 to evaluate the success of Family Planning Programmes. One of them is the evaluation of knowledge; attitude, motivation and behavior among people [10]. India is a patriarchal society and men are the dominant decision makers. The literature about men's behavior and practices for vasectomy is sparsely available in India. Considering the importance of these factors, we studied the level of KPP (knowledge, perceptions and practices) about vasectomy among married males, so as to assist in assessing the health needs of the target population, health intervention requirements and training load of the medical officers.

## Material and Methods

**Study design:** We conducted a cross sectional study in a field practice area of a tertiary care hospital at Nagpur, India from December 2010 to June 2011. Pre tested format was used among married men aged

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20-49 years old which were randomly selected. After obtaining consent, the participants were interviewed through questionnaire method. (Table 1 shows the themes of the questions asked). The questions in original have not been mentioned herein for the purpose of space saving and highlighting the key areas emphasized in the questions as mentioned in the structure of the questions based on various themes in table 1. The score is arrived at through the addition of 10 variables on a simple dichotomous scale (yes=1/no=0). No gold standard was used for scores. The standard set for the purpose of this study was decided in consultation with multi disciplinary subject experts of medical, social work and allied fields, so as to ensure methodical and accurate analysis of the results. The knowledge section of the questionnaire consisted of 10 items (with score of 0-2 was defined as none, 3-5 as low, 6-8 as adequate, and 8-10 as high). Table 2 may be referred for the characteristics of the sample selected for this study. The protocol of this study was approved by institutional ethics committee of a tertiary care hospital.

**Statistical analysis:** Data analysis was done by Epi info version 3.5.1 software. Chi-square test was used to determine the association of various risk factors with the variables. Univariate analysis for risk calculation was done by odds ratio and their 95% Confidence Intervals.

## Results

Total 200 men, participated in this study. The average age of the respondent were 32.8 years and about (70.0%) falling in the age group of 25-39 years? Majority of the respondents had completed education upto high school (43.0%), and were farmers and daily wage earners (54.0%). Around (39.0%) belong to lower middle class followed by middle class (31.0%). Majority of them were having two children (43.5%) and were staying in nuclear family (61.0%) (Table 2).

The term ‘Vasectomy’ used in this study is for the practice of getting vasectomy surgery (the cutting of vas deference) done upon the married males after completion of family size for family planning purposes. The awareness in respondents was observed by determining how many of them had heard of vasectomy (“operation in men who do not desire anymore children”). Interestingly the awareness of vasectomy was found to be (97%) all men were aware, but their knowledge level was low (54.0%) and (13.0%) had no knowledge (Table 3). When association between educational status and level of knowledge on vasectomy among men was seen it was found that the level of knowledge increased with increase in level of education (p=0.00614, chi-square for linear trend) (Table 4). Participants who were employees (govt. /private) also did better than those who were not (p=0.04, OR= 1.84, 95% CI= 0.97-3.48). Association with age, socioeconomic status, and type of family was found to be insignificant.

Structure of questionnaire by themes
Socio-demographic characteristics: Name, age, religion and type of family
Socio-economic power: Level of education and employment
Number of children, completion of family
Heard of vasectomy?
Knowledge: method, risk, benefits
Approval or disapproval of vasectomy as a method of permanent sterilization in men
Discuss with physician/health service provider
Present mode of contraception
Would you be interested in undergoing vasectomy after completion of family
Intention to undergo vasectomy after having the desired number of children
Source of information: How and where did you get information?

**Table 1:** Structure of questionnaire listing the various themes constituting the various items

Parameters	Frequency	Percentage
<b>Age (years)</b>		
20-24	13	6.5
25-29	49	24.5
30-34	44	22.0
35-39	48	24.0
40-44	31	15.5
45-49	15	7.5
<b>Educational Status</b>		
Illiterate	9	4.5
Primary/ Mid school	48	24.0
High school	86	43.0
Intermediate	32	16.0
Graduate/ Post graduate	25	12.5
<b>Occupation</b>		
Employees(govt./private)	67	33.5
Business	25	12.5
Labor/farmer/daily wages/unemployed	108	54.0
<b>Socio-economic classification</b>		
Lower class	36	18.0
Lower middle class	78	39.0
Middle class	62	31.0
Upper middle class	16	8.0
Upper class	8	4.0
<b>Type of family</b>		
Nuclear	122	61.0
Third generation/ Joint	78	39.0
<b>No of children</b>		
None	26	13.0
1	50	25.0
2	87	43.5
2 and more	36	18.5

**Table 2:** Sample Characteristics.

The main source of information about vasectomy was predominantly a friend or relative (50%), followed by the mass media (28.5%) like newspaper, television, radio etc. Health care professionals (19.0%) and other sources (2.5%) ranked the lowest. We tested whether the source of information was associated with the level of knowledge and found a strong association for respondent receiving information from the mass media (p=0.016, OR=2.13, 95% CI=1.09-4.17) or a health care professional (p=0.02, OR=2.22, 95% CI=1.02-4.85) was more likely to have high or adequate levels of knowledge.

The current level of contraceptive use as reported by the men in the study was assessed for both male and female methods of contraception. About (62.5%) of the respondents reported current use of some kind of contraceptive method. When we analyzed the use of specific contraceptive methods, we found that female sterilization was the most preferred one (36.0%), followed by condom (11.0%), oral contraceptive pills (5.5%), intrauterine devices (4.5%) and miscellaneous (4.5%). While surprisingly, the permanent method of vasectomy was used by only 1.0% of men. Overall use of contraceptive methods by females was significantly higher than by males (n=400 p<0.0001, OR=4.31, 95% CI=2.65- 7.09). About 37.5% of the respondents were not using any kind of contraceptive method.

Perception of vasectomy was determined by asking the question “Do you approve or disapprove of men having this operation?” and what were the one or two most important reasons for approving and disapproving this operation. Out of 200 respondents 54.0% approved while 46.0% disapproved of vasectomy as a method of sterilization.

Level of knowledge	Frequency	(%)
High	22	11.0
Adequate	57	28.5
Low	108	54.0
None	13	6.5
Total	200	100

**Table 3:** Distribution of the level of knowledge on vasectomy in the study sample.

Educational status	Level of Knowledge		Total	Odds Ratio
	High/Adequate	Low/None		
Illiterate	3	6	9	1.00
Primary/ Middle	15	33	48	0.91
High	30	56	86	1.07
Intermediate	15	17	32	1.76
Graduate/ PG	16	9	25	3.56
Total	79	121	200	

$\chi^2 = 7.51$   $p = 0.00614$ , Chi-square for linear trend.

**Table 4:** Association between Educational status and level of knowledge.

Reasons for approval of vasectomy was mainly due to no adverse effects post-surgery (33.0%), followed by reason like it is easy(27.0%), others approved vasectomy citing that it is painless (16.5%), it is reversible 9.5% and there were few other reasons (14.0%).While for disapproval of vasectomy, majority of respondents (28.5%) think women are best suited for such operations, 24.0% think vasectomy will adversely affect their income, 19.5% think it will lead to general weakness/kamjori might result in reduced sexual performance,14.5% of respondents have fear of surgery and 13.5% disapprove vasectomy citing various other reasons.

Although the majority of participants 54.0% indicated an approval for a vasectomy, only 1% men were actually practicing it. To ascertain further, we tried to find out potential demand for vasectomy among study participants after excluding those respondents, if either of the spouse has undergone sterilization, by asking a question regarding the intention to undergo vasectomy after having the desired number of children. The potential demand for vasectomy was found to be 21.0%. When tested whether the potential demand for vasectomy was associated with the level of knowledge it was found to significant ( $n=126$ ,  $p=0.03$ ,  $OR=2.53$ ,  $95\% CI=0.96-6.77$ ). Similarly, potential demand was higher amongst those who approve vasectomy as family planning measure in men ( $n=126$ ,  $p=0.016$ ,  $OR=2.13$   $CI=1.09-4.17$ ).

## Discussion

The study of factors associated with the men's ideas and practice of having vasectomy has the potential of having multifaceted long term impact on the policy formulation, health program development and observed benefits in terms of controlling the population, poverty and disease.

In this study, the most of the respondents (97.0%) were aware about vasectomy as method of sterilization in men, though only 1% was practicing. This finding parallels the findings of Dutta et al. in Delhi, who found that 77% of men were aware about vasectomy and only 1.8% was practicing [11]. The awareness in this study among respondents was found to be higher than that mentioned in NHFS III for rural population in Maharashtra which was 79% [2]. Even when men are "aware" of vasectomy, the information they have frequently is incomplete or incorrect. A large proportion of participants described

themselves as having very little information (54.0%) about vasectomy. This is consistent with the findings of Akpamu U et al. who found that the all participants in the study claimed to be aware of family planning and have knowledge of male contraceptives. However, only 23.2% have adequate knowledge of vasectomy [12]. While there was a relatively low level of knowledge on vasectomy among men, there were significant effects of occupation and education on level of knowledge. Participants having high level of education and who are employees (govt. /private) did better than those who are not.

The information that they did acquire was sourced mainly from family and friends (50%) with little input from health care providers and media. It is therefore evident that not only are the men deprived of information, but also the information that they do access is not from a reliable, evidence-based source. Health professionals need to ensure that the information given to men is accurate and imparted at a level that is appropriate to the men concerned. This will empower men to participate in decision-making and enable them to participate meaningfully in the family planning options. The results of the "Get a Permanent Smile" campaign demonstrate that NSV is a viable contraceptive choice for Ghanaian men when a targeted media campaign is coupled with interventions to provide quality client-centered vasectomy services [9]. Similarly 'Vasectomy Promotion project' at Dar Es Salaam showed that some men could be persuaded to go for vasectomy if service providers established the service and made concerted efforts to educate people about its nature and purpose and inform them about its availability [7].

Perception of vasectomy may have a significant role in willingness to undergo such a procedure. About 54.0% of respondents in this study approved vasectomy as men having this operation as a family planning method. In a study by Akpamu et al. on acceptance of vasectomy as a male method of contraceptive, (1.6%) of the respondents agrees and another (5.2%) agrees conditionally [12]. No adverse effects post-surgery, simple, painless were among the most powerful drivers for positive perception in this study.

Disapproval is also a measure of misconceptions related to vasectomy. On probing the reasons for disapproval revealed few concerns which were frequently mentioned by respondents like they think women are best suited for such operations as women do not do hard work, they live in home and hence can take rest and tubectomy is easier than vasectomy and does not require much rest, vasectomy will adversely affect their income, it will lead to general weakness/kamjori might result in reduced sexual performance, fear of surgery. More or less similar findings were reported in other studies where it was also found that these perceptions were the most important factors in determining men's decision to have a vasectomy [6,11,13,14].

In India it has now become a custom that only women undergo sterilization. Mostly women are motivated by health workers/doctors to undergo tubectomy, usually when the wife is admitted in the hospital for delivery, thinking it is waste of time motivating their husbands to undergo vasectomy. In this study, although the majority of participants 54.0% indicated an approval for a vasectomy, only 1% men were actually practicing it, which is less than national statistics of 4.4%.

To ascertain further, we tried to find out potential demand for vasectomy among study participants which was found to be 21.0%. Adequate knowledge and positive perception among men were associated with potential demand for vasectomy. A study conducted in Nepal had similar findings. Only 39.0% had the intention to accept vasectomy after having the desired number of children [5].

The result of this study indicates that the potential demand

for vasectomy may be greater than might be expected from a rural population where the prevalence is quite low. Admittedly, the expression of interest in vasectomy cannot be equated with participant actually undergoing the operation. As in all surveys, there is the possibility of interviewer bias whereby respondents try to provide responses which they believe will please the interviewer. It can only be determined by follow-up studies. Nonetheless, these findings emphasize that, communication interventions are needed by health professionals not only to improve attitudes toward and increase demand for vasectomy, but also to support the translation of this demand into actually persuading men to undergo the procedure.

Given that majority of men perceive vasectomy positively, the rate of those answering that they would personally have vasectomy after having the desired number of children (potential demand) is notably lower (21%). There is thus need to have a relook on the men's decision making process over time as evidenced herein, so as to understand the psychology of an individual while considering sex, age, socio-cultural, geographic and occupational variations in particular. The results of this study shall surely pave way for understanding the psychology of individuals for planning effective and efficient interventions related to family planning through men's active involvement in developing nations.

### Limitations of the Study

The current study should be interpreted in light of some limitations. This is basically because the study area is just one of the field practice area of a tertiary care hospital and hence the results from this study cannot be generalized to the entire population. However, when the difficulties related to traditional taboos for men's talking about family planning are considered, the present study provides valuable information on factors influencing the acceptance of vasectomy among married males in Nagpur.

### Conclusion

The study reveals that awareness increases the approval of men for vasectomy. However, there is much need to alleviate the unfounded fear of large proportion of male population about the safety, efficacy and usefulness of vasectomy and related issues viz. sexual drive and performance, income and fear of surgery. It's the need of the hour to ensure early and efficient behavior change communication approach through concerted use of wide media publicity approach, interpersonal

communication and group counseling sessions designed specifically for information exchange, discussion and dissemination of quality administrative, programmatic and technical inputs.

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