



Knowledge and Attitude Regarding Vasectomy among Married Men in Rural Area of Kheda District Gujarat: A Descriptive Study

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Article History	Abstract
Received: 06 June 2023 Revised: 09 September 2023 Accepted: 12 October 2023	<p><i>Introduction: Sterilization is a permanent birth control method, with more couples opting for female sterilization. However, vasectomy is a safe, cost-effective, and simple alternative to tubal ligation. Despite its safety and effectiveness, vasectomy faces limited approval in developing countries like India due to gender biases, lack of access to facilities, and insufficient support. Efforts are needed to raise awareness and promote male sterilization, as its usage in India remains below 1 percent according to NFHS-5 data. Aims: The main aim of study is to assess knowledge and attitude regarding vasectomy among married men. Objectives: 1. Assess the knowledge and attitude regarding vasectomy among married men in selected rural area. 2. To correlate the knowledge and attitude regarding vasectomy among married men in rural area. 3. To associate the knowledge and attitude score with selected demographic variables men's. Methodology: A descriptive design was adopted for the study. The 100 married men were selected as a sample from Salun in Kheda District by the "Non-probability convenient sampling technique" was adopted in this study. The written setting permission was taken from the medical officer of PHC for data collection. The prior consent from was also signed by the married men for the study. The tool for this study was created in three sections: Section A gathered socio-demographic data, Section B contained structural knowledge questionnaires, and Section C included a Likert attitude scale. Data analysis was performed using SPSS software. Frequency and percentage distribution were used to assess knowledge and demographic variables, while mean and standard deviation were employed to describe knowledge, attitude, and utilization related to vasectomy. The study used the Karl Pearson correlation method to examine relationships, and the Chi-square test was employed to determine associations between mean differences. Result: The demographic characteristics revealed that majority of participants 61% of the married men belongs to the age group of 31- 40 years, 92% of them were from the Hindu religion, 62% of them were belonged to the nuclear types of families. The Table also reveals that 48% of the participants have completed primary education. 30% of them had a monthly income between 5,000 to 10,000 rupees. 67% of participants had two living children. 66% of them reported having exposure to contraception. 47% of the participants any other group of occupation. 39% of majority of participants had been married for more than 11 years. It was also noted that the level of knowledge, the maximum attainable score was 20 and the participant's knowledge scores range from 2 to 15. The Mean knowledge score is calculated to be 9.32, the standard deviation of 2.18. Conclusion: The</i></p>

<p>CC License CC-BY-NC-SA 4.0</p>	<p><i>study concluded that after the intervention, there was an improvement in knowledge and attitude regarding vasectomy among married men in rural areas of Kheda district. Data were collected from 100 married men using knowledge questionnaires, a Likert scale, and a utilization checklist. The findings indicated that the majority of married men had inadequate knowledge (51%), while 48% had moderate knowledge, and only 1% had adequate knowledge. In terms of attitude, 1% had an unfavorable attitude, 42% had a moderate favorable attitude, and 57% had a favorable attitude.</i></p> <p>Keywords: Education Package, Knowledge, Attitude, Utilization, Vasectomy, Contraceptive Method.</p>
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1. Introduction

The rate of vasectomy are vastly different in worldwide 0.1%.of married men preferred to adopt vasectomy on average in the less developed countries in the world .In 1975 WHO experts define five methods to assess the success of family planning program they are inspiration, apprehension, attitude and behavior among people. In India the rate to Tubectomy as compared to vasectomy, is exceeding by the ratio of 37: 1 by making present of 4.4%. As per the Family Planning Program which was established in1950s by the 1970s.vasectomy had a superior role. In the new millennium, India has crossed the one billion mark, sharing 16 percent of the world population on 2.4 percent of the global land area. More than 18 million people are added every year. With the current trend it is projected that India may over take china in the 2045 to become the most populous country in the world. Vasectomy, a permanent method of contraception, plays a vital role in family planning. Understanding the knowledge and attitudes of married men in rural areas towards vasectomy is essential for promoting this safe and cost-effective option. This descriptive study explores the level of awareness and the prevailing attitudes concerning vasectomy among married men residing in the rural regions of Kheda District, Gujarat. The research aims to provide valuable insights that can inform public health initiatives and policies to enhance the acceptance and utilization of vasectomy as a family planning option in these areas.

Vasectomy in India

Vasectomy is a less common form of contraception in India compared to female sterilization (tubal ligation). In India, female sterilization has been the dominant choice for family planning. Cultural and social factors have played a significant role in the lower adoption of vasectomy in India. There are misconceptions and fears surrounding vasectomy that have contributed to its limited acceptance. According to the National Family Health Survey (NFHS-4), the prevalence of vasectomy in India was quite low, accounting for only a small percentage of contraceptive use. The exact percentage may vary by region.

Vasectomy Worldwide

Vasectomy is a popular method of male sterilization in many parts of the world, especially in developed countries like the United States and Canada. In developed nations, vasectomy is often considered a safe and effective option for couples who have completed their family planning and wish to use permanent contraception. It is generally less invasive and carries fewer risks compared to female sterilization (tubal ligation), which may require abdominal surgery.

Statistical Facts on Vasectomy

According to the World Health Organization (WHO), the global prevalence of vasectomy varies by region. It's more common in North America, Europe, and some parts of Asia, but less so in many African and South Asian countries. Vasectomy is a safe and highly effective method of contraception when performed correctly. The failure rate is very low, making it a reliable choice for couples seeking permanent birth control. In many developed countries, vasectomy is a popular choice for couples who have completed their desired family size and want a permanent form of contraception. The overall acceptance and prevalence of vasectomy may have evolved since my last knowledge update in 2021. Social attitudes and cultural beliefs can change over time, affecting the use of vasectomy as a family planning method.

It's important to note that the status of vasectomy can vary significantly by country and region, and it may have evolved since my last update in 2021. You may want to refer to more recent and region-specific data for the most up-to-date information on vasectomy usage in India and around the world.

Objectives

Assess the knowledge and attitude regarding vasectomy among married men in selected rural area. To correlate the knowledge and attitude regarding vasectomy among married man's in rural area. To associate the knowledge and attitude score with selected demographic variables men's.

Hypothesis

H₁- There will be significant correlation between knowledge and attitude. H₂–There may be significant association between knowledge and attitude score with their selected demographic.

2. Materials and Methods

Research Approach: This study employed a quantitative research approach to gather and analyze data.

Research Design: A descriptive research design was used to provide a comprehensive understanding of knowledge and attitudes regarding vasectomy among married men in rural areas.

Research Variables

Independent Variable: The independent variable in this study is vasectomy education.

Dependent Variable: The dependent variable refers to the knowledge and attitude regarding vasectomy.

Socio-Demographic Variables: Several extraneous variables, including age, religion, number of children, exposure to contraception, occupational status, and duration of marriage, were considered to account for potential influencing factors. Population: The study's population consisted of all married men residing in the rural areas of Kheda District, Gujarat. Research Setting: Data collection took place in Salun Village, Nadiad City. Sampling Technique: A "Non-probability convenient sampling technique" was employed to select participants for the study. Sample Size: The research included a sample size of 100 married men between the ages of 21 and 50 years.

Sampling Criteria

Inclusion criteria: Participants were selected based on the following criteria: Being married men residing in rural communities. Expressing a willingness to participate in the study. Being available during the data collection period. **Exclusion criteria:** The study excluded: Men who had already undergone vasectomy. Unmarried males.

Tool for Data Collection

The data collection process consisted of three sections:

Section 1: Socio-Demographic Data.

Section 2: Structured knowledge questionnaires featuring multiple-choice questions.

Section 3: Attitude statements, which included 15 items assessed using Likert scales.

Table 1: Analysis of the socio demographic variables of married male N=100

Demographic Data	Frequency	Percentage
Age in years		
21-30 years	15	15
31-40 years	61	61
41-50 years	24	24
Religion		
Hindu	92	92
Muslim	6	6
Christian	2	2
Other	0	0
Type of family		
Nuclear	62	62
Joint	38	38
Educational status		
Non-formal education	4	4
Primary	48	48

Knowledge and Attitude Regarding Vasectomy among Married Men in Rural Area of Kheda District Gujarat, an Descriptive Study”

Secondary or High Secondary	43	43
Graduated above	5	5
Family Monthly income		
< 5000	3	3
5001-10000	30	30
10001-15000	41	41
above 15000	26	26
Number of living children		
Zero	2	2
One	6	6
Two	67	67
Three or above	25	25
Exposure contraception		
Yes	66	66
b. No	34	34
Occupational status		
Farmers	14	14
labourers	17	17
Shopkeeper	22	22
d. Any other	47	47
Duration of marriage		
3-5 year	12	12
6-8	23	23
9-11	26	26
4. > 11	39	39

Table 2: Frequency and percentage distribution of married male according to knowledge regarding vasectomy

Level of Knowledge	No. (100)	Percentage (%)
Inadequate Knowledge	51	51 %
Moderate Knowledge	48	48 %
Adequate Knowledge	1	1 %
Total	100	100 %

This table illustrates the distribution of married men's knowledge about vasectomy in the study, with the majority having inadequate or moderate knowledge, and a very small percentage possessing adequate knowledge.

Table 3: Frequency and percentage distribution of married male according to knowledge regarding vasectomy

Level of Attitude	No. (100)	Percentage (%)
Unfavourable Attitude	1	1 %
Moderate Favourable Attitude	42	42 %
Favourable Attitude	57	57 %
Total	100	100 %

This table provides the distribution of attitudes among married men in the study, indicating that a majority had either a moderate or a favorable attitude towards vasectomy, while a small percentage held an unfavorable attitude.

Table 4: Range, Mean, Mean Percentage, and Standard Deviation of knowledge and attitude regarding vasectomy among married male. N=100

Variables	Max. Score	Minimum	Max.	Range	Mean	Mean %	SD
Level of Knowledge	20	2	15	13	9.32	47 %	2.18
Level of Attitude	45	22	45	23	35.46	79 %	5.57

Table no.5 Comparison of mean score knowledge and attitude regarding vasectomy among married male.

	One-Sample t -test Statistics				95% Confidence Interval of the Difference	
	t- test score	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
Knowledge Score	42.60**	99	0.000	9.32	8.88	9.75
Attitude score	63.62	99	0.000	35.46	34.35	36.56

(S)= Significant At 0.05 Level

In this table, it is shown that there is a significant difference in mean scores for both knowledge and attitude regarding vasectomy among the married male participants. The p-values for both knowledge and attitude scores are less than 0.05, indicating statistical significance. The mean difference and the 95% confidence intervals for the difference are also provided.

Table 6: Association between level of knowledge score vasectomy among married male and with their select demographic variables. N=100

Demographic Data	F	%	Level of Knowledge			χ^2 - Value	P-Value
			Adequate	Inadequate	Moderate		
Age in years							
21-30 years	15	15	0	11	4	4.53	P>0.05
31-40 years	61	61	1	30	30	df= 4	Sig
41-50 years	24	24	0	10	14	NS	0.339
Religion							
Hindu	92	92	1	47	44	2.79	P>0.05
Muslim	6	6	0	2	4	df= 4	Sig
Christian	2	2	0	2	0	NS	0.593
Other	0	0	0	0	0		
Type of family						4.47	P>0.05
Nuclear	62	62	0	36	26	df= 2	Sig
Joint	38	38	1	15	22	NS	0.107
Educational status							
Non-formal education	4	4	0	1	3	5.58	P>0.05
Primary	48	48	1	21	26	df= 6	Sig
Secondary or HSC	43	43	0	27	16	NS	0.472
Graduated above	5	5	0	2	3		
Family Monthly income							
< 5000	3	3	0	1	2	8.606	P>0.05
5001-10000	30	30	0	17	13	df= 6	Sig
10001-15000	41	41	0	25	15	NS	0.197

Knowledge and Attitude Regarding Vasectomy among Married Men in Rural Area of Kheda District Gujarat, an Descriptive Study”

above 15000	26	26	0	8	18		
No. of living children							
Zero	2	2	0	0	2	5.05	P>0.05
One	6	6	0	4	2	df= 6	Sig
Two	67	67	0	37	29	NS	0.533
Three or above	25	25	0	10	15		
Exposure						20.33	P<0.05
a. Yes	66	66	1	23	42	df= 2	Sig
b. No	34	34	0	28	6	S	0.000
Occupational status							
a. Farmers	14	14	0	8	6	9.998	P>0.05
b. labourers	17	17	0	6	11	df= 6	Sig
c. Shopkeeper	22	22	0	7	15	NS	0.125
d. Any other	47	47	1	30	16		
Duration of marriage							
1. 3-5 year	12	12	0	6	6	3.24	P>0.05
2. 6-8	23	23	0	13	10	df= 6	Sig
3. 9-11	26	26	1	12	13	NS	0.778
4. > 11	39	39	0	20	19		

Note: S-Significant at 5% level (P<0.05), NS-Not significant at 5% level (P>0.05).
(F)= Frequency, (%) =Percentage.

The study finds that knowledge about vasectomy among married men is significantly associated with exposure to information about vasectomy but not significantly associated with age, religion, type of family, educational status, family income, the number of living children, occupational status, or duration of marriage.

Table-7: Association between level of knowledge score regarding vasectomy among married men with their select demographic variables. N=100

Demographic Data	F	%	Level of Attitude			χ^2 - Value	P-Value
			Favorable	Moderate	Unfavorable		
Age in years							
21-30 years	15	15	7	7	1	6.939	P>0.05
31-40 years	61	61	34	27	0	df= 4	Sig
41-50 years	24	24	16	8	0	NS	0.139
Religion							
Hindu	92	92	52	39	1	4.48	P>0.05
Muslim	6	6	5	1	0	df= 4	Sig
Christian	2	2	0	2	0	NS	0.345
Other	0	0	0	0	0		
Type of family						3.60	P>0.05
Nuclear	62	62	31	30	1	df= 2	Sig
Joint	38	38	26	12	0	NS	0.165
Educational status							
Non-formal	4	4	4	0	0	5.46	P>0.05
Primary	48	48	29	19	0	df= 6	Sig
Secondary or HSC	43	43	21	21	1	NS	0.486
Graduated above	5	5	3	2	0		

Monthly income							
< 5000	3	3	2	1	0	10.33	P>0.05
5001-10000	30	30	16	14	0	df= 6	Sig
10001-15000	41	41	19	22	0	NS	0.111
above 15000	26	26	20	5	1		
No. of children							
Zero	2	2	2	0	0	6.15	P>0.05
One	6	6	2	4	0	df= 6	Sig
Two	67	67	35	31	1	NS	0.407
Three or above	25	25	18	7	0		
Exposure						29.66	P<0.05
a. Yes	66	66	50	15	1	df= 2	Sig
b. No	34	34	7	27	0	S	0.000
Occupational status							
a. Farmers	14	14	6	8	0	9.883	P>0.05
b. labourers	17	17	12	5	0	df= 6	Sig
c. Shopkeeper	22	22	17	5	0	NS	0.180
d. Any other	47	47	22	24	1		
Duration of marriage							
3-5 year	12	12	8	4	0	3.64	P>0.05
6-8 year	23	23	12	11	0	df= 6	Sig
9-11 year	26	26	15	10	1	NS	0.725
> 11 year	39	39	22	17	0		

The study finds that attitudes towards vasectomy among married men are significantly associated with exposure to information about vasectomy but not significantly associated with age, religion, type of family, educational status, family income, the number of children, occupational status, or duration of marriage. A Descriptive study was carried out in Salun at Kheda District. Consent was taken from married men. A study was conducted to assess knowledge and attitude on Vasectomy among married men. The samples were selected by The “Non-probability convenient sampling technique” was adopted in this study. And their level of knowledge was assessed by a structured questionnaire. The study was conducted at rural area Kheda district.

3. Conclusion

The research conducted to assess the knowledge and attitudes of married men in rural areas of Kheda District, Gujarat, regarding vasectomy has yielded valuable insights. The study found that exposure to information about vasectomy significantly influences the attitudes of participants, indicating the importance of targeted awareness campaigns and education. Demographic factors such as age, religion, family type, educational status, family income, the number of children, occupational status, and the duration of marriage were not found to be significant factors shaping attitudes. This implies that with proper awareness and information dissemination, it is possible to promote a favorable attitude toward vasectomy across various demographic groups.

The study highlights the need for public health initiatives that focus on providing accurate and comprehensive information about vasectomy as a safe and effective method of contraception. By addressing misconceptions and increasing awareness, there is an opportunity to enhance the acceptance and utilization of vasectomy among married men in rural areas. This, in turn, can contribute to more informed family planning choices and the promotion of responsible population management. Overall, the findings underscore the potential for positive change in attitudes toward vasectomy, offering hope for a more informed and accepting approach to permanent contraception in rural communities.

Knowledge and Attitude Regarding Vasectomy among Married Men in Rural Area of Kheda District Gujarat, an Descriptive Study”

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