

## A study on Factors Influencing in Acceptance of Vasectomy

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### Abstract:

**Context:** Vasectomy is safe, simple, procedure without major complications, no deaths, fewer selected as family planning method, low prevalence rate of 3.9% in Andhra Pradesh, compared to 95.6% tubectomies with complications even deaths happened. Majority people preferred choice is tubectomy. Hence this study was taken to evaluate of factors influencing for acceptance of vasectomy is necessary

**Aims:** To assess the awareness, knowledge about permanent family planning methods and to study factors influencing in selecting vasectomy as sterilization method.

**Methods and Material:** Cross sectional, hospital based survey carried with 350 men in Government Maternity Hospital Tirupati.

**Statistical analysis:** MS Excel2007, Epi Info 7 software.

**Results:** - Men's awareness regarding family planning services was 61%, vasectomy as permanent sterilization method was 50%. The sterilization methods were for women only opined by 60% men; husband in family was decision maker for permanent contraception, 89% in the direction of tubectomy. Majority had lack of knowledge about non scalpel vasectomy as simple, easy and safety surgery than tubectomy. Low knowledge about vasectomy, loss of wages, fear of loss of masculinity, wife non willingness, health problems to major extent, complications, failure rates, fear of surgery to minor extent

**Conclusions:** - Lack of awareness, financial constraints, health matters, loss of masculinity, traditional, cultural, social factors influencing in non-acceptance of vasectomy.

**Recommendations:** - Active men involvement in family planning services, health education, monetary reimbursement, implementation of insurance policies necessitates acceptance of vasectomy

**Key-words:** Sterilization, vasectomy, awareness, knowledge

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### I. Introduction

In the world second most populated country is India with 1.23 billion, populations surpasses China by 2050<sup>1</sup>. The population growth rate is 1.13%, ranking 112th in the world in 2017<sup>2</sup>. The decadal growth from 2001 to 2011 was 11.1%<sup>3</sup>. The total fertility rate is 1.8<sup>4</sup>

Enhanced population leads to resource depletion as they are limited, hence control over population is necessary. Fertility control is the only way to control population.

Family planning Programme was initiated in Indian Government in 1952<sup>5</sup>. Later the crude birth rate was declined from 44 per 1000 population in 1951 to 30 in 1991<sup>5</sup>.

Family planning services were replaced by Family welfare Programme. In 2005 for uniform implementation of services National Rural Health Mission (NRHM) was introduced by Government<sup>6</sup>

Vasectomy is a male permanent sterilization method<sup>7</sup>. Expression of spermatozoa through ejaculation from testes is blocked by ligation of Vas deference<sup>7</sup>. Vas ligation is by a conventional vasectomy using a scalpel (surgical knife), no scalpel vasectomy (NSV)<sup>8</sup>. NSV introduced in India 1992<sup>9</sup>

Vasectomy is outpatient simple procedure, effective, and safe operation with minor complications<sup>8</sup>. The mortality rate was 0.1/1, 00,000 with vasectomy in India<sup>10</sup>

The complication rates are 0.43/1000 with vasectomy<sup>10</sup>. The cost effect is 3-4 times less with vasectomy to tubectomy<sup>10</sup>. Vasectomy has a failure rate (defined by post-procedure pregnancy) 0.15% in the first year<sup>10</sup>. Success rate after vasectomy reversal denoted as return of sperm to ejaculate in 70-90% of cases and with pregnancy rates 40-60% of couples. Recanalization rates are high with vasectomy to tubectomy is 42%-74%<sup>11</sup>

The complications rates, recanalization cost is significantly low with vasectomy than tubectomy. Even with multiple benefits, vasectomy is less preferred choice than tubectomy<sup>10</sup>.

In India vasectomy total performance was 1.0%, in rural area 1.0%, in urban 0.7%, and in Andhra Pradesh rural 3.8%, in urban 4.1% and total 3.9%.<sup>6</sup>

Vasectomy is easy, simple effective procedure with fewer complications without mortality compared to tubectomy which is complex, time taken procedure with complications even death occur<sup>12</sup>. Still vasectomy is not preferred in India and worldwide.

Hence present study was undertaken to assess the knowledge, awareness of family planning services and study the factors influencing in accepting vasectomy as permanent sterilization method.

## II. Aims And Objectives

1. To assess the knowledge, awareness about permanent sterilization methods
2. To study the factors influencing in selecting vasectomy as permanent method of sterilization.

Present study undertaken in the department of Obstetrics and Gynecology, Government Maternity Hospital (GMH), Tirupati is a tertiary teaching hospital. A cross sectional hospital based community study conducted from 1/9/18 to 30/11/18

## III. Subjects and methods

**3.1 Study subjects:-**350 men were selected through convenient sampling technique. Government Maternity Hospital Tirupati

**3.2. Study Method:-**Structured proforma was used for interview. Awareness, Knowledge of permanent sterilization methods, and vasectomy as permanent sterilization method, selection, wife decision, family member's cooperation and factors influencing in vasectomy selection as permanent family planning method were assessed.

**3.3. Inclusion Criteria:** - men who were willing, men in child bearing age

**3.4. Exclusion Criteria:** - men not willing, Women and family members

**3.5. Analysis:-**Data analyses with Epi Info7, MS Excel software. Results were described using percentages

## IV. Results

Present study was conducted in GMH, SVMC Tirupati from 1/9/18 to 30/11/18 .

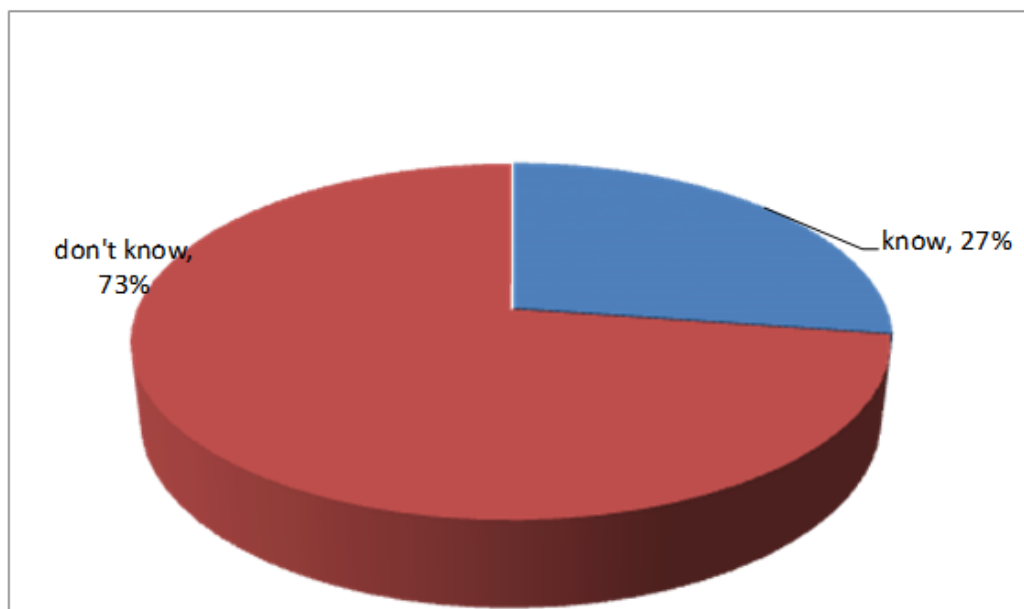
Demographic profile of subjects is represented in "Table1"

**Table:-1-** Represents demographics profile in present study

Demographic factors	Frequency (Percentage)				Total
<b>Age</b>	<b>20-40years</b>		<b>More than 40years</b>		350 (100.0%)
	290(83%)		60 (17%)		
<b>Locality</b>	<b>Rural</b>		<b>Urban</b>		350 (100.0%)
	245 (70%)		105 (30%)		
<b>Income</b>	<b>BPL</b>		<b>APL</b>		350 (100.0%)
	293 (84%)		57(16%)		
Occupation	Unskilled		skilled		350 (100.0%)
	256(73%)		94(27%)		
<b>Religion</b>	<b>Hindu</b>		<b>Muslims</b>		350 (100.0%)
	252(72%)		70(20%)		
	<b>Christians</b>		28(8%)		
<b>Education</b>	<b>Illiterate</b>		<b>Primary</b>		350 (100.0%)
	217(62%)		84(24%)		
	<b>Secondary</b>		<b>Degree</b>		
	35(10%)		14(4%)		

Present study reflects majority men were in reproductive age group 20-40 years of age; belong to rural area, with low socioeconomic status. Most of the people were Hindus, to lower level Muslims and least Christians. Large portion of people belong to below poverty line, illiterates and unskilled workers.

Family planning services awareness was present in 215(61%) men, where as 135 (39%) not aware. Awareness of vasectomy as permanent method of family planning was known in 175 ( 50%) of men but in 175(50%) they do not know about it

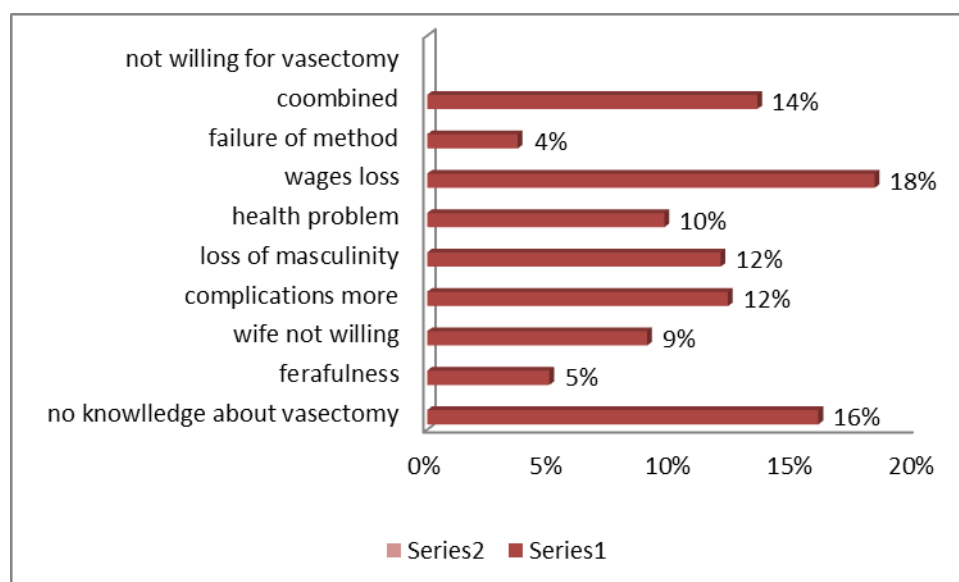


**Fig:-1** Depicts opinion of men about vasectomy was easy surgery

Information about vasectomy is a easy surgery without difficulty was not known in 254(73%) of men, 96 (27%) had the knowledge shown in “Fig-1”. Among 350 men 269(77%) does not familiar about vasectomy is less complicated surgery compared with tubectomy and 81(23%) recognized.

In 350 members 264 (75%) men does not have the knowledge of no scalpel technical surgery however 86(25%) well-known. Information about vasectomy is completed within short period of time was not known by 278(79%) of men, 72(21%) aware

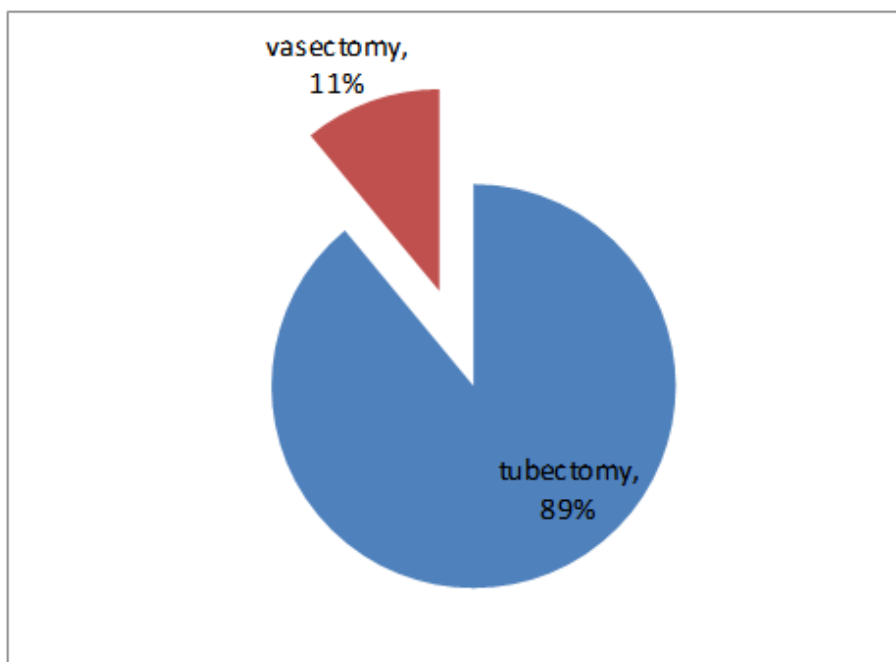
If the men under go vasectomy the problems encountered were 101(29%) loss their wages, 92(26%) opined that they has health problem, 88(28%) has a fear of loss of masculinity and 69(20%) combined. The



**Fig-2** Shows different reasons for non-acceptance of vasectomy

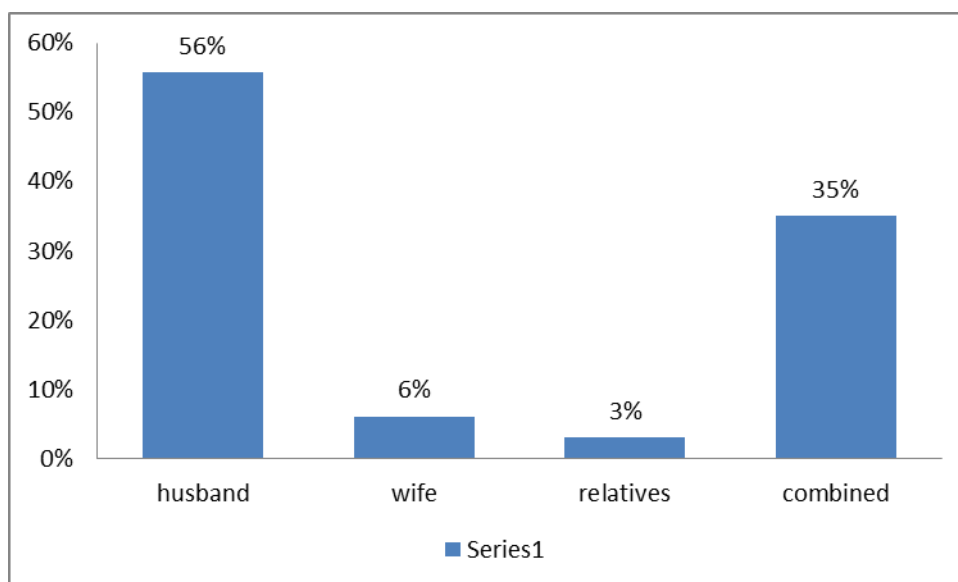
reasons for non-acceptance of vasectomy was explained in” Fig-2” as among 350men56(16%) were not willing for vasectomy as they were not having knowledge about vasectomy, 18 (5%)had fear of surgery, 32 (9%)felt their wife not willing for vasectomy, 43 (12%)opined that it had complications, 42 (12%) agree they loss their masculinity with vasectomy, 34(10%) had health problem, 64(18%) feeling of wages loss, 13(4%) fear of failure and 48(13%)combined factors play role but non acceptance of vasectomy.

Opinion of 208(60%) men's opinion was permanent sterilization methods were only for women, however 142(40%) persons denied.



**Fig:-3** shows men's choice of permanent sterilization methods

In present study "Fig:-3" represents tubectomy was first choice of sterilization by 313(89%) men's opinion, whereas 37(11 %) accepted for vasectomy. If women (wife) not fit for tubectomy 235(67%) of men opined that they will agree to undergo vasectomy, but 115(32%) disagree.



**Fig:- 4** Decision makers of permanent family planning methods

Present study reflected in 'Fig -4' as the permanent birth control decision opinion was taken 195(56%) by husband, wife choice was only 21(6%), relatives contribution 11 (3%), combined family 123 (35%)

In present study 269(77%) men's will take their wives opinion in selecting contraception, 81(23%) won't take women's consent. Among 350 study group according to men's opinion 105(30%) men's wives willing, 245(70%) women not willing for vasectomy to their husbands. Men's opinion that 99(28%) of their parents willing, 251(72%) not willing for vasectomy.

## **V. Discussion**

In present study was under taken in GMH Tirupati. Majority men between 20-35 years of peak reproductive capacity

Majority men belongs to low socioeconomic status, not aware of vasectomy as they were under representatives of vasectomy for instance they were the main earners, responsible heads in the family<sup>13</sup> and economic status had effect on willingness of vasectomy<sup>11</sup>

In the present study men largely belong to rural areas unskilled workers, illiterates or with primary education level. Vasectomy acceptors were higher education with urban back ground than rural illiterates<sup>13</sup>. Education levels had significant effect in acceptance of vasectomy<sup>14</sup> low level of educated people do not accept well for vasectomy than higher education levels<sup>10</sup>

More number of children was preferred by Muslims than Hindus, tubectomy was preferred choice due to social security and religious reasons. Women were dependent economically on men; the key person in decision making of contraception was husband<sup>9</sup>

Awareness regarding family planning services was 61% in men during present study was low when compared to 99% in DLHS-3 survey<sup>6</sup>. There was a huge gap of knowledge and awareness in perception of permanent sterilization methods. Knowledge of family planning services spread widely through health care providers to the people is necessary<sup>14</sup>.

The opinion of 50% of men aware of vasectomy was a permanent sterilization method, according to DLHS -3 studies, vasectomy awareness was 89.2% in urban 79.5% in rural<sup>6</sup>. Present study reveals low familiarity about vasectomy as permanent sterilization method. This situation needs to be targeted by creating wakefulness situation among men as vasectomy is safer than tubectomy.

Majority men didn't have the knowledge about no scalpel vasectomy. Awareness about saftyness of procedure, less time taking, simple one with fewer complications was not known to many people. Men had fear of vasectomy to lesser extent. Majority people in present study were rural men, illiterates or had primary education. Lack of information about vasectomy was the leading cause.

Key source of information is health care providers, health educators, voluntary non-government organizations, ASHA, Anganvadi, social workers, community leaders, will spread the knowledge of vasectomy to people especially illiterate rural men<sup>13</sup>. Continuous educational programmes to health care providers will help transfer of up to date knowledge, experiences, will in turn create awareness in community<sup>13</sup>. Vasectomy service education programs to health care providers will help in dealing effectively the negative feeling, misconceptions about vasectomy like fears of health damage, loss of masculinity, complications etc.<sup>13</sup>. Peer education, review discussions helps in educating, creating awareness about vasectomy in under stated men belong to low income, illiterate, rural community 13, 15

Person to person through partner, friends, and vasectomized individuals experiences will have the influence on decision making among vasectomy persuaiers<sup>15</sup>. Public places awareness will be created by laying hand out, posters, advertisements, utilization of multimedia, mass media, social media mobile vaani technology<sup>16</sup> will help in spreading the knowledge extensively<sup>10,13</sup>

Loss of masculinity was basis for denial of vasectomy in 28% of men in present study, this was supported by study by Grace Shiha et al stated that men had fear about loss of masculinity<sup>11</sup>. According to Gregory L et al study sexual dysfunction was not found in vasectomized individuals.<sup>17</sup> American urological guidelines also suggest sexual dysfunction does not occur after vasectomy<sup>15</sup>. This misconception taken away by educating the real fact about vasectomy will change the attitude of men<sup>15</sup>

In present study around 50% men opined that they were not willing for vasectomy due to loss of wages happened with surgical procedure, rest, and ill-health after vasectomy. Most of the people were belongs to low economic status. In most of the family's husband was the main person to look after the major concerns in family especially economic issues. If the men fell ill or take rest, the daily income will be compromised and it affects entire family.

Women's economic contribution at outdoor work to family are 60% rural, 16% urban women and by doing house hold work women's total economic productivity was 88% in rural 66% in urban according to National Sample Survey (NSS)<sup>6</sup>. Men's work is mostly out door, contributes 78% of family income and earning seems to receiving cash directly, whereas women work contributes 98% (out door, hard house hold work) but not distinguishable as most of work does not represents direct cash<sup>6</sup>. Work absenteeism of husband reflects directly on daily earning especially in low income group and economical imbalance happened to the family.

Government of India realized the fact of wages loss and introduced incentives for compensation to acceptors<sup>5</sup>. The incentives were enhanced to acceptors Rs-800/- to 1500/- for vasectomy in public sector, and Rs1300/- in private sector<sup>5</sup> by Ministry of Health and Family Welfare, from 2007 onwards to motivator for vasectomy Rs200/- as incentive<sup>18</sup>. Below Poverty Line (BPL) guidelines reveals according to the planning commission calculation the minimum income was Rs368/- in rural, Rs558/- in urban per head per month, is essential for food necessities but does not provide basic needs like education, health etc<sup>19</sup>. Cost of living is

increasing day by day so all the basic needs does not accustom with minimum amount. Life maintenance is difficult with food only without fulfillment of basic needs. Vasectomy incentives were not sufficient during the rest period of a person, and motivator incentives was also less. Routinely vasectomy motivation is very difficult even with good efforts because of illiteracy, low economic status with rural background. Government has to take policy to enrich incentives to acceptors consistent with present cost of living. Public and private insurance policies will help this situation, which was already implemented in developed countries like United States, where private insurances pay amount towards expenses<sup>13, 20</sup>. Implementation and popularization of insurance plans by policymakers, program planners will enhance economical dropout vasectomies.

Majority men had belief that permanent sterilization methods were only for ladies. Men had negative contraceptive beliefs with vasectomy, so denial of birth control happened. Women feel responsible than men in limiting family.<sup>15</sup> Women admitted in hospital for delivery, same time they can undergo tubectomy and convenience of family members, rest after delivery will help to look after women was mingled with post-operative care. Women feel responsible to undergo tubectomy for wind-up child birth, selects tubectomy even it is more complex than vasectomy<sup>11</sup>. This sequence happened since longtime; it became a belief, tradition as sterilization methods are for women only. This opinion in the community has to be changed by widespread publicity about the advantages of vasectomy over disadvantages of tubectomy. Less Complications, high recanalization rates, low failure rates with vasectomy compared to tubectomy knowledge has to prevalent in community by conducting educational programmes over and done through health care professional.<sup>15</sup>

In present study 89% of men's choice of sterilization was tubectomy. Majority people believed tubectomy was easier than vasectomy. In point of fact tubectomy had more complications to vasectomy even deaths happened.

Tubal ligation had immediate effect and vasectomy efficacy is not immediate<sup>11</sup>. Vasectomy is considered effective as azoospermia in single sample after three months and at least 20 ejaculations, meanwhile couple has to follow temporary contraception<sup>11</sup>. Men become azoospermic 51–98% (median 81%) with in three months<sup>11</sup>. Post vasectomy persistent motile sperms presence after six months is considered as Vasectomy failure, approximately 0.4%<sup>11</sup>. The complication rate of vasectomy is 0.43%/1000 procedures<sup>17</sup>, no major complications to lesser extent minor side effects like bleeding, infection of 1-2%, no association of coronary heart disease, stroke, testicular cancer, prostatic cancer<sup>15</sup> and mortality rate was 0.1/1, 00,000 with vasectomy<sup>17</sup>

Major complications with tubectomy by minilap or double puncture laparoscopy were due to peritoneal entry, bowel, Bladder injury, infection, hemorrhage (1%)<sup>21</sup>. Long term complications are ectopic pregnancy (12.3%)<sup>17</sup>, abnormal uterine bleeding (21 %)<sup>21</sup>, chronic pelvic pain (10%)<sup>21</sup>. The mortality rate of tubectomy was 2.5 -10/1, 00,000<sup>17</sup>, The complication rates with laparoscopic tubectomy was 2.1/100, laparotomy 6.2 /10016, procedure related problems 12 times higher than vasectomy<sup>11,21</sup>

Many 67% accepted to undergo vasectomy if her wife not fit for tubectomy 33% not accepted for vasectomy. Scientific evidence reflects that vasectomy had less complication than tubectomy itself may end in death. 14 deaths in USA,<sup>17</sup> 13 women died in mass laparoscopic sterilization camp in Ballarpur 2014<sup>22</sup> and tubectomy deaths were 568 women between 2009-2012<sup>23</sup>. Women were forced to undergo sterilization at the cost of women's health or death even though men are fit for vasectomy. Hence active involvement of Government, feminists social activists etc., to educate men, create awareness relating to vasectomy services will save women in turn the family

Regarding family planning decisions 56% were taken by husband, 35% whole family, wife role had 6% only, to a least 3% by family members only. Present study reveals men involvement was foremost in the decision making of family planning methods .More recently majority decisions were by men in the family, preferring tubectomy even vasectomy is safe method<sup>11</sup>. American urological guidelines denote that men involvement is further in decision making of permanent sterilization methods<sup>15</sup> Vasectomy preference is minimal although it is much safer and simple, men's were taking decision towards tubectomy. Lack of knowledge, negative feelings; misconceptions were influencing factors for non-acceptances towards vasectomy even though they were the decision makers.<sup>13</sup>

Great number of men accepted that they will consider wife opinion before decision making for contraception. In a study by Nilesh Thakor on gender bias in fertility and family planning 79.7% has frequent discussion with spouse<sup>24</sup>. Majority of cases husband was the decision maker in selection of sterilization methods, present study also confirm it, taking wife decision seems to be respectable, at the same time women need cooperation of husband, individual decision making choice about her contraception resolution.<sup>24</sup>

Men's opinion that 70% men's wives will not agree for vasectomy, it indicates most of women preferring tubectomy due to financial loss, bearing burden, misconceptions, lack of knowledge about safety of vasectomy and risks of tubectomy. Present study reports says that husband was the decision maker, women play a very little role in making decision of sterilization, even though she had opportunity to discuss with the husband about family planning ,women was not preferring for vasectomy. Women's status in the family was enlightened with existence of children and sterilization than without. Safety, advantages of vasectomy over tubectomy

messages through inter personnel communications, interviews with vasectomized person's experiences and conducting lectures will help in augmenting vasectomy acceptance<sup>20</sup>.

According to men's opinion, 71% of their parents not willing for vasectomy. Family member's non acceptance to vasectomy was again lack of awareness, economical loss, customs and traditions<sup>24</sup>

Men were ignored in family planning services instead whole focus was towards women only. In the family husband was decision maker in selection of sterilization methods. Men play a key role in the family, hence his participation is necessary for implementation and success of family planning services<sup>24</sup>

## VI. Summary And Conclusion

Family planning services awareness, information was low. Knowledge, facts about vasectomy was inadequate. Key person was husband in selection of contraception; men's choice of permanent method of sterilization was preferably to women to undergo tubectomy. Financial loss, lack of knowledge about advantages (like safe, simple, easy, without major complications and no deaths due to vasectomy) of vasectomy, health involvement, loss of masculinity, combined were the major causes, complications, failure rates and fear of vasectomy were minor factors for non-acceptance of vasectomy.

Providing up to date knowledge to health personnel, educating men about the advantages of vasectomy over tubectomy through health professionals, peer education, interviews with vasectomized personnel experiences, person to person contact sharing of knowledge will promote acceptance of vasectomy.

Involvement of community leaders, social workers, non-Government organizations, utilization of mass media, social media communication will enhance the vasectomy acceptance. Active involvement of men in family planning services, enhancing the incentives, implementing public, private insurance policies may boost the vasectomy acceptance.

**6.1 Limitations:** limitations in present study were small sample size, short time, and women not involved.

**6.2 Recommendations:** - Men involvement in family planning services, generating awareness about saftyness of vasectomy among people through health professional, implementation of public and private insurance policies will augment vasectomy acceptance.

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