

# A STUDY TO ASSESS THE KNOWLEDGE AND ATTITUDE REGARDING VASECTOMY AMONG PARTNERS OF POSTNATAL MOTHERS ACCOMPANYING IN THE POSTNATAL WARD OF SELECTED HOSPITAL, CALICUT AND MALAPPURAM

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**ABSTRACT** :The present study was conducted to assess the knowledge and attitude regarding vasectomy among partners of postnatal mothers accompanying in the postnatal ward of selected hospitals, Calicut and Malappuram. A descriptive research design was adopted, and 80 participants were selected using purposive sampling technique. The theoretical framework of the study was based on the Health Belief Model. Data were collected using a socio-demographic proforma, a structured knowledge questionnaire, and an attitude assessment scale. The collected data were analyzed using descriptive and inferential statistics.

A descriptive research design was used for this study. It was conducted with 80 participants at the postnatal ward of Aster MIMS Hospital, Calicut and Malappuram. The participants were selected using purposive sampling technique. After obtaining informed consent, data were collected using questionnaire, which was distributed to all participants. The collected data were analyzed using descriptive and inferential statistics.

The findings of the study revealed that majority (63.75%) of participants had a moderate level of knowledge, while 12.5% had inadequate knowledge regarding vasectomy. This suggests that although most partners were aware of vasectomy, gaps in comprehensive understanding still exist. Findings regarding the attitude on vasectomy reveals that 43.75% of participants had a positive attitude, 35% had neutral attitude, while 21.25% had a negative attitude towards vasectomy. This suggests that although nearly half of the participants are supportive, there is still resistance and hesitation towards vasectomy. There is a very weak positive correlation ( $r=0.015$ ) between knowledge and attitude regarding vasectomy. And also there is no significant association between socio-demographic variables and the level of knowledge and attitude.

**Key words:** Assess, Knowledge, Attitude, Partners, Postnatal mothers, Vasectomy

## INTRODUCTION

Ensuring universal access to family planning has been identified as a key priority for realizing the Sustainable Development Goals (SDGs) and as one of the most cost-effective SDG targets. Although contraceptive methods and services are mostly focused on women, men are often the primary decision-makers on family planning. India

has continued its efforts to expand the range and reach of contraceptive options by rolling out newer contraceptives and delivering a full range of family planning services at all levels of health care<sup>1</sup>.

Access to reliable contraception is a pillar of modern society the burden of unintended pregnancy has fallen disproportionately on the mother throughout human history; however, recent legal developments surrounding abortion have sparked a renewed interest in male factor contraceptives beyond surgical sterilization and condoms<sup>2</sup>.

Globally, there are roughly 842 million women of reproductive age using modern contraceptive methods. As well as the intended effects, many users of contraception report experiencing unintended effects from contraception. About onethird of US contraceptive users (31%) say they are experiencing side effects from their current method, with just over half (52%) reporting the side effects to be more severe than expected<sup>3</sup>.

Vasectomy, as a widely accepted method of long-term male sterilization in both developed and developing countries, has the advantages of simplicity, safety, effectiveness, and economy. Vasectomy continues to be the only long-acting reversible contraception available for men today<sup>4</sup>. On the other hand, although vasectomy does not usually interfere with sexual function, sometimes men have misconceptions that vasectomy affects their sexual function<sup>5</sup>.

Vasectomy is procedure that male vas deferens are resected & ligated. It blocks the entry of the sperm from urethra and there by prevents the future pregnancy or it makes the male infertile<sup>7</sup>. Vasectomy is usually performed by some family medicine or general surgeons, who also perform a vasectomy. Still, in most cases, the procedure is performed by doctors specializing in the male reproductive system (urologists). Male sterilization can be done at any convenient time on a healthy individual. It is performed under local anaesthesia, which means the patient would be awake, and only the surgery area would be made numb for the patient. A vasectomy usually takes about 10–30 minutes. Most men will recover completely in less than a week. Activities may be resumed daily, the day after surgery unless the activities are unusually vigorous. After the percutaneous vasectomy, men surveyed report a full recovery within an average of 8–9 days. An incentive made available after the procedure. Five days off for those employed in the government sector. In the rare case of failure, the government grants benefits to vasectomy recipients. Although 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<sup>9</sup> India has achieved a Total Fertility Rate(TFR) of 2.0 as per NFHS-5 (2019-21). This is aligned with the National Population Policy<sup>10</sup>. Tubectomy has been able to achieve this to a good extent. However vasectomy which is a far more safer and effective method, isn't still popular amongst men, due to gender bias in our country.

### **Need and significance**

Family planning has a controlling effect on the rate of population growth throughout the world in addition to preventing pregnancy-related health risks in women, reducing infant mortality, helping to prevent children's congenital diseases, and improving quality of life of the family<sup>11</sup>.

Worldwide, sterilisation is still the most common method of pregnancy prevention with 219 million people (22.9%) relying on female sterilisation and 17 million people (1.8%) relying on vasectomy for contraception in 2022<sup>12</sup>.

Responsibility for family planning in low resource settings is almost solely delegated to women, with very low male involvement<sup>13</sup>. Men with higher education and income had greater prevalence of vasectomy than those less educated, while women with lower education and income had the highest prevalence of tubal sterilization. Vasectomy has been found to be one of the most highly cost-effective methods in an analysis, that considered the costs of the procedure, of failures and of side effects<sup>14</sup>.

Globally, vasectomy is significantly underutilized. It is estimated that only about 17 million women rely on their partner's vasectomy, compared to 219 million who depend on tubectomy, highlighting a stark gender disparity. In 56 low- and middleincome countries, the prevalence of vasectomy is 0.1% or lower, reflecting minimal male participation in permanent contraception<sup>15</sup>.

In India, this gender disparity is more pronounced. As per the UNDESA 2022 report, vasectomy prevalence in 2021 was only 0.3%, while tubectomy stood at 37.9%, resulting in a female-to-male sterilization ratio of 76:1<sup>16</sup>.

In Kerala, historically known for better health indicators, vasectomy prevalence was 6.5% in the early 1990s, according to NFHS-1. However, these numbers have declined over time, and recent trends show continued female dominance in permanent contraceptive adoption<sup>18</sup>.

Globally, India took the first initiative to adopt family welfare approach through the government-supported family planning programs to control family size and the very high fertility rate. It has been over seven decades of the family planning program, but women still bear the burden of sterilization and family planning in India although various modern methods of contraception are available in the market<sup>19</sup>.

The factors influencing men's decision to undergo vasectomy, including cultural beliefs, lack of knowledge, misinformation, healthcare providers' attitudes, and socioeconomic factors. Cultural beliefs play a significant role in the acceptance of male sterilization in India. Lack of knowledge and misinformation about vasectomy can also contribute to its low acceptance rates in India. Many men may not understand the procedure or its benefits and believe that it will affect their sexual performance or masculinity. family planning programs have typically been geared towards women, neglecting the significant role males can and ought to play in making choices and using contraceptives. It has historically been the main focus of reproductive health activities, and in India, due to societal pressure and programming emphasis, family planning programs exclusively served mainly women. Although vasectomy (male sterilization) is a safe, simple, and cost-effective procedure, its acceptance as a family planning method remains very low in India<sup>20</sup>.

Despite the well-documented impact men have on women's choice of contraception, it appears that women's input into their partners' decisions about contraception has been undervalued and underutilized. Vasectomy being one of the few options available for males, is not often used as a means of family planning<sup>24</sup>.

Some study result shows poor knowledge of vasectomy among the studied population and this may be the cause of low acceptance. Conclusively, this low acceptance will persist due to misconceptions, incomplete and incorrect information about vasectomy<sup>25</sup>.

So many recommends determining strategies for overcoming sociocultural barriers by raising awareness and increasing the utilization of vasectomy. Couplespecific family planning programs can make an important contribution toward improving awareness of the benefits of vasectomy<sup>26</sup>

In many communities, conversations about family planning tend to orbit around women, with their partners often remaining on the periphery of these discussions. While modern healthcare systems have made contraceptive options widely available, certain methods appear to be accepted more readily than others. Among these, vasectomy seems to remain in the shadows-its potential overlooked not for lack of medical merit, but perhaps for reasons less clinical and more cultural. In settings where men accompany their partners to postnatal care, one might expect greater shared responsibility.

## Aim of the study

To assess the knowledge and attitude regarding vasectomy among partners of postnatal mothers.

## Objectives

- To assess knowledge regarding vasectomy among partners of postnatal mothers.
- To assess the attitude regarding vasectomy among partners of postnatal mothers.
- To find out the relationship between knowledge and attitude regarding vasectomy among partners of postnatal mothers.
- To find out the association between knowledge regarding vasectomy among partners of postnatal mothers with selected socio-demographic variables.
- To find out the association between attitude regarding vasectomy among partners of postnatal mothers with selected socio-demographic variables.

## Operational definitions

**Knowledge:** In this study knowledge refers to level of understanding of partners of postnatal mother regarding vasectomy.

**Attitude:** Attitude refers the person's way of thinking or feeling about someone or something which influences their behaviour. In this study attitude refers how partners perceive and feel about vasectomy.

**Vasectomy:** Vasectomy refers to a surgical procedure for male sterilization and permanent birth control, where the vas deference is cut or blocked to prevent sperm from reaching the semen.

**Partners:** In this study Partners are the male individuals who are physically and emotionally present to support the mothers and babies after child birth.

**Postnatal mother:** Postnatal mother refers to a woman who has recently given birth. In this study mothers who must have at least one living child at present.

## Hypothesis

**H1:** There will be significant relationship between knowledge and attitude regarding vasectomy.

**H2:** There will be significant association between knowledge of partners of postnatal mothers regarding vasectomy with selected socio demographic variables.

**H3:** There will be significant association between attitude of partners of postnatal mothers regarding vasectomy with selected socio demographic variables.

## Review of literature

The review of literature related to the present study was grouped under the following headings:

1.literature related to knowledge regarding vasectomy

2. literature related to attitude regarding vasectomy
3. literature related to permanent methods of contraception

### **1.literature related to knowledge regarding vasectomy**

A descriptive cross-sectional study was conducted among married men in a rural area of Chhattisgarh, India, to assess male involvement in family planning. The study included 381 participants and aimed to evaluate the level of awareness, knowledge, and practice regarding male contraceptive methods. The study found that the majority of participants (56.4%) were between 30–39 years of age. The results showed that 98.9% of the men had heard about family planning methods, and 84% were aware of at least one male contraceptive method. However, only 13.1% were using male methods, and just 10.9% demonstrated good involvement in family planning. The primary sources of information were healthcare workers (53.6%) and media (33.3%). Despite high awareness, the study revealed poor knowledge and low participation, with barriers such as fear of physical weakness (85.8%) and family opposition (62.6%) discouraging vasectomy. These findings emphasized the need for targeted health education and better accessibility to services to improve male involvement in family planning.<sup>1</sup>

A comprehensive global review was conducted to assess attitudes, practices, and barriers related to male contraception. The study analysed data from various regions to understand the prevalence of male contraceptive use and the factors influencing it. Findings indicated that male contraceptive methods, such as condoms and vasectomy, are underutilized worldwide. Key barriers identified include lack of awareness, cultural and societal norms, misconceptions about side effects, and limited access to services. The review emphasized the need for targeted educational campaigns, improved access to male contraceptive methods, and involvement of men in family planning discussions to enhance the uptake of male contraception globally.<sup>5</sup>

### **2. literature related to attitude regarding vasectomy**

A qualitative study was conducted in the United Kingdom to explore individual experiences and the impact of side effects among contraceptive users. The research involved in-depth interviews with participants who had used various contraceptive methods. The study found that side effects significantly influenced users' daily lives, emotional well-being, and relationships. Many participants reported feelings of frustration and a lack of support from healthcare providers when addressing these side effects. The findings highlighted the importance of personalized contraceptive counselling and the need for healthcare professionals to acknowledge and address the side effects experienced by users.<sup>2</sup>

A comprehensive review was conducted to examine the trends and updates in female permanent contraception, focusing on demographic characteristics of users, prevalence, surgical techniques, and barriers to obtaining the procedure. The study emphasized the patient's perspective as a key element in choosing permanent contraception. It incorporated sections on salpingectomy, hysteroscopy, unmet need, impact of policies at religiously affiliated institutions, and reproductive coercion. The review highlighted the importance of understanding these factors to improve access and decision-making regarding permanent contraception.<sup>3</sup>

A research study was conducted to explore men's experiences and expectations regarding pain and sexual dysfunction after vasectomy, as shared on the anonymous Reddit forum "r/Vasectomy," to improve healthcare provider-patient communication and enhance patient experience. Over 12 months, threads containing the terms "pain," "volume," "erect," and "ED" were collected and analysed. The analysis of 87 threads with 1052 responses revealed that men used the platform to cope with pre-operative anxieties, seek validation, and share experiences. This study highlights discrepancies between patient expectations and medical guidance provided by

urologists, suggesting a need for more tailored pre-operative counselling. By understanding these concerns, healthcare providers can improve patient education and outcomes related to vasectomy procedures, ultimately enhancing the overall patient experience.<sup>4</sup>

### **3.literature related to permanent methods of contraception**

A narrative review was conducted to explore emerging concepts in male contraception, focusing on both hormonal and non-hormonal methods. The review highlighted the limited contraceptive options currently available for men, primarily condoms and vasectomy, and emphasized the need for novel approaches. Hormonal methods under investigation include testosterone-based regimens and combinations with progestins, aiming to suppress spermatogenesis effectively. On-hormonal strategies discussed involve targeting sperm production, function, or transport without altering hormonal levels. The review underscored the importance of continued research and clinical trials to develop safe, effective, and reversible male contraceptive methods, which could significantly impact global family planning efforts.<sup>24</sup>

A comprehensive review was conducted to evaluate the complications and safety concerns associated with vasectomy as a method of male contraception. The study highlighted that vasectomy is a simple, safe, effective, and economical procedure widely used for long-term male contraception. Short-term complications identified include hematoma formation, infection, sterilization failure, sperm granulomas, and postoperative pain such as nodal, scrotal, and ejaculation pain. Long-term complications discussed encompass chronic pain syndrome. The review also addressed ongoing debates regarding the potential association of vasectomy with increased risks of autoimmune diseases, cardiovascular diseases, testicular cancer, or prostate cancer, noting that these associations remain controversial and unconfirmed. The findings underscore the importance of thorough preoperative counselling and informed consent to ensure patients are aware of potential risks and complications associated with the procedure.<sup>25</sup>

## **RESEARCH METHODOLOGY**

### **Research approach:**

The research approach refers to the overall plan or strategy used to conduct the research. It can be quantitative or qualitative in nature. The research approach selected for this study was quantitative non experimental approach.

### **Research design:**

The research design selected for this study was descriptive research design. The descriptive research design is a type of research design used to describe the characteristics of population, phenomenon or situation.

### **Variables:**

A variable is a concept or abstract idea that can be described in-measurable terms. Variables under the study are socio demographic variables, Knowledge and attitude. Socio demographic variables: Age, educational status, religion, occupation, type of family, area of living and monthly income.

## Setting of study

The study was conducted in Obstetrics and Gynaecology department at Aster MIMS Hospital, Calicut and Malappuram.

Aster MIMS Hospital is a NABH Accredited super specialty hospital in Govindapuram, Calicut. The department of Obstetrics and Gynaecology at Aster MIMS deals with pregnancy, childbirth and treatment of diseases that affects the female reproductive system. And well equipped with the latest medical equipment, modern technology & infrastructure.

Aster Mims Kottakkal, located in Malappuram, Kerala, is a NABH Accredited multi-specialty hospital renowned for its comprehensive services. The hospitals department of Obstetrics and gynecology offers a wide range of services dedicated to women's health, from pre-pregnancy to menopause and beyond. These hospitals were selected due to the easy availability of sample.

## Population

The population of this study was partners of postnatal mothers.

## Sampling Criteria

### Inclusion criteria:

Partners of postnatal mothers who are,

- In the age group of 25 - 45 years
- Willing to participate in the study
- Having at least one child
- Able to read and write Malayalam

### Exclusion criteria

Partners of postnatal mothers who are,

- Not willing to participate in the study
- In this study sample selected were partners of postnatal mothers accompanying postnatal wards of Aster MIMS Hospital, Calicut and Malappuram
- Already underwent vasectomy

## Sample size

In this study 80 samples were selected by using Purposive sampling technique.

## Sampling Technique

Partners of postnatal mothers accompanying postnatal wards of Aster MIMS Hospital, Calicut and Malappuram were selected using non-probability purposive sampling technique.

## Tool

The tool used for data collection is known as research tool. The tool used for the present study were socio demographic proforma, questionnaire and attitude assessment scale.

## Development of the tool

Tools were developed using the following steps:

- Review of literature
- Suggestions and corrections from the guide and experts
- Professional exposure of the investigators
- Establishing content validity of tool
- Translating the tool to Malayalam
- Pretesting the tool

## Description of the tool

Tools used in the study include:

Tool 1: Socio-demographic proforma

This tool help the guide to collect informations from participants such age,education ,religion , occupation , type of family ,area of living and their income.

Tool 2:Knowledge questionnaire.

This tool consist of a set of questions that help the guide to assess the knowledge of participants regarding vasectomy.

Tool 3: Attitude scale

This tool contain certain statements regarding vasectomy .By selecting any opinion about the statement help in assessing the attitude of participants regarding vasectomy.

## Description of the tool:

### Tool 1: Socio-demographic proforma

- This tool was developed by the principal investigators with the help of guide to obtaining baseline data from participants.
- It includes 7 items: Age, educational status, religion, occupation, type of family, area of living and monthly income.

### Tool 2: Knowledge questionnaire

- Questionnaire was used to assess the knowledge of partners of postnatal mothers regarding vasectomy.
- This tool was developed by the principal investigators to identify the knowledge of partners of postnatal mothers regarding vasectomy. □ It includes 20 questions related to vasectomy.

## RESULT AND DISCUSSION

### Result

The present study was conducted among 80 partners of postnatal mothers in the postnatal wards of selected hospitals at Calicut and Malappuram to assess their knowledge and attitude regarding vasectomy. The findings revealed that the majority of participants (63.75%) had a moderate level of knowledge about vasectomy, while 23.75% had adequate knowledge and 12.5% had inadequate knowledge. With respect to attitude, 43.75% of the participants exhibited a positive attitude toward vasectomy, 35% had a neutral attitude, and 21.25% had a negative attitude. The Karl Pearson correlation coefficient between knowledge and attitude was found to be 0.015, indicating a very weak positive correlation between the two variables. This suggests that an increase in knowledge slightly improves the attitude toward vasectomy. The study further examined the association between knowledge and selected sociodemographic variables such as age, education, religion, occupation, family type, locality, and income, and found no significant association with any of these variables. However, analysis of attitude with the same demographic factors revealed that only family type had a statistically significant association with attitude, while all other variables showed no significant relationship. Overall, the study concluded that while most participants possessed moderate knowledge and a positive attitude toward vasectomy, misconceptions and sociocultural barriers still persist, limiting the acceptance and practice of vasectomy as a method of male sterilization.

### Discussion

#### 1. Findings regarding the level of knowledge on vasectomy among partners of postnatal mothers

The present study revealed that the majority (63.75%) of participants had a moderate level of knowledge, 23.75% had adequate knowledge, while 12.5% had inadequate knowledge regarding vasectomy. These findings suggest that although most partners were aware of vasectomy, gaps in comprehensive understanding still exist.

The results are consistent with a descriptive study conducted in Kheda District, Gujarat, where 51% of married men had inadequate knowledge, 48% had moderate knowledge, and only 1% had adequate knowledge. Similarly, a study conducted in East Khasi Hills District, Meghalaya, revealed that 90.37% of participants had inadequate knowledge, further emphasizing that misconceptions and poor awareness remain common.

In contrast, an Ethiopian study (Arba Minch town, 2021) reported that 60.6% of participants had good knowledge of vasectomy. The difference in findings could be attributed to variations in cultural acceptance, educational background, and access to information.

#### 2. Findings regarding the attitude on vasectomy among partners of postnatal mothers

In the present study, 43.75% of participants had a positive attitude, 35% had a neutral attitude, while 21.25% had a negative attitude towards vasectomy. This indicates that although nearly half of the participants are supportive, there is still resistance and hesitation toward male sterilization.

A study conducted in Navi Mumbai slums found that although 70.2% of men were aware of vasectomy, nearly half (47.1%) expressed a negative attitude toward the procedure. Similarly, in Turkey, 43% of men considered vasectomy a sin, highlighting the role of cultural and religious influences. Conversely, a study in Ekpoma, Nigeria, showed that 62.7% of participants had a positive attitude toward vasectomy, suggesting that with proper education and counselling, attitudes can be improved.

### 3. Relationship between knowledge and attitude

The present study findings showed that there is a very weak positive correlation ( $r=0.015$ ) between knowledge and attitude regarding vasectomy. This aligns with the findings from Babcock University, Nigeria, where a significant association between knowledge and attitude was reported. It implies that higher awareness contributes to favourable perceptions, which in turn may encourage acceptance of vasectomy as a method of family planning.

### 4. Association of knowledge and attitude with socio-demographic variables

The present study found no significant association between socio-demographic variables (such as age, education, occupation, income, family type, and residence) and the level of knowledge and attitude. These results are in contrast with findings from Ethiopia and Nigeria, where education, number of children, and income were significantly associated with vasectomy knowledge. The lack of association in the present study may be due to the relatively small sample size ( $n=80$ ) and the homogeneity of participants in terms of religion and socio-economic background.

### Limitations of the study

- The study was confined to two selected hospital settings in Calicut and Malappuram districts. This restricted geographical area does not reflect the diverse socio-cultural dynamics and beliefs prevalent in other parts of Kerala or India. Therefore, the findings may not be generalized to the wider population.
- The study included only 80 participants. Although sufficient for a small-scale descriptive study, this sample size may not be large enough to identify subtle trends or to conduct subgroup analyses based on variables such as education, income, or occupation. Larger samples would provide more robust statistical significance and improve the reliability of the findings.

### Scope for Future Studies

Future research could be conducted at the community level with a larger and more diverse population, including men from various districts, rural and urban settings, and different socio-economic backgrounds. This would enhance the generalizability of the results and reflect the broader societal understanding of vasectomy.

Including men who have undergone vasectomy in future studies can provide a better understanding of the post-procedural psychological, emotional, and social experiences. Their insights could help dispel myths, encourage open discussion, and reduce stigma around the procedure.

Conducting longitudinal research that tracks participants over an extended period would allow researchers to assess changes in knowledge and attitude, especially before and after targeted educational or counselling interventions.

### Conclusion

The study concluded that majority of participants had a moderate level of knowledge (63.75%) about vasectomy. Almost half of the participants (43.75%) demonstrated a positive attitude towards vasectomy. There was a positive correlation between knowledge and attitude, indicating that better awareness can improve perception. No significant association was found between socio-demographic characteristics and knowledge or attitude. These findings highlight that while awareness exists, misconceptions and sociocultural barriers continue to limit acceptance of vasectomy.

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