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A study on Factors Influencing the choice of Permanent Method of Family Planning

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Abstract:
Context: *Permanent sterilization methods Vasectomy is safe, simple, cost effective, less complicated compared to tubectomy. Still tubectomy is preferred choice. 95.6% Sterilizations performed were tubectomies, compared to 4.4% vasectomies. What factors make women to select tubectomy though it is unsafe? This needs further evaluation. Hence present study was undertaken.*
Aims: *To assess the awareness, knowledge about Family Planning methods and to know factors influencing in Selecting sterilization method.*
Methods and Material: *Cross sectional, hospital based survey carried in Government Maternity Hospital Tirupati. 200 eligible women for sterilization were taken during pregnancy, after delivery, after tubectomy.*
Statistical analysis: *MS Excel2007, Epi Info 7 software.*
Results: *Women of 94.5% aware family planning services.58% aware vasectomy, 41% do not have knowledge about permanent sterilization. Sterilization Preference was 94% to tubectomy .reasons were ease of tubectomy, no knowledge of vasectomy, financial implications, concerning husband's health and lack of decision making power.*
Conclusions: *Prejudice regarding health matters, financial implications, lack of awareness, social, cultural, religious and traditions are factors influencing in tubectomy acceptance.*
Key-words: *Sterilization, tubetctomy preference, influencing factors.*
Key message: *Necessary health education, active men involvement, with adequate financial compensation may women's empowerment for decision making lead to selection of safer method of vasectomy.*

I. Introduction

India is second most populated developing country in the world [1] The population was 1.23 billion; it is more than sixth of world's population, will become most populous country by 2025 and surpasses China by 2050 [1].The crude birth rate is19.89%, death rate is 7.35%, population growth rate was 1.25% (2014)[2]. The availability of resources will be depleted if the population rises continuously, this leads to poverty, environmental degradation etc.[3]. Hence population control is essential by controlling the reproduction, so that the quality of life of people will be improved [3]

First time in the world health Indian Government officially declared family planning programme in 1952 as the population was grown from 361 in 1951 to 844 in 1991[4]. After implementation of family planning there was declined crude birth rate from 44 per 1000 population in 1951 to 30 in 1991[4].The population policy of Indian Government is implementing family planning and contraceptive service delivery [4]. Later Government recognized the link between population and development, so introduced small family norm and incentives to acceptors and to motivators [4]

Following Government supported mass male sterilization (vasectomy) camps in early 1970, during emergency period in late 1970, the vasectomy rates have drastically fell down and it was responsible for change of Government [4]. Later women were intense and they were linked with family planning hoping that women will spread the movement for integration of social sector services for women and child [4]. Family welfare programme was introduced instead of family planning services. In 2005 government introduced National Rural Health Mission (NRHM) for uniform implementation of services [5]

Family planning services are temporary methods for spacing between pregnancies for required time and permanent control of fertility by sterilization methods. Permanent sterilization is tubal ligation by tubectomy either mini laparotomy or laparoscopic sterilization in the women and vas difference ligation (vasectomy) in men. The safety, affordability, effectiveness, side effects, disadvantages and advantages of family planning methods will be informed to couples and selection of family planning method is entirely the right of man or woman [6]. The National Congress on Population and Development (NCPD) in 1994 at CAIRO emphasized that selection should not be against law [6]

Vasectomy is simple, safe, effective, outpatient procedure with low major complication and least to zero mortality rates. Tubectomy is effective, in patient procedure with minor to major complications like, operative injury, (bowel, bladder, omentum, vessels), anesthesia problem, sepsis, ectopic pregnancy. The mortality rate of tubectomy was 2.5 -10/1, 00,000 and vasectomy was 0.1/1, 00,000 procedures in India [7]The cumulative failure rate is tubectomy 0.28/100, with laparoscopy 0.33/100, with vasectomy 0.16/100 procedures .[7] . The complication rates with tubectomy done laparoscope is 2.1/100 and with laparotomy 6.2 /100, to vasectomy is 0.43/1000 procedures [7]. The cost effect of vasectomy is 3-4 times less to tubectomy. The recanalization cost and complications rates significantly low with vasectomy than tubectomy. Even with multiple benefits, all over the world tubectomy is preferred more than five times to the vasectomy[7].

In India 95.6% sterilization surgeries were tubectomies and in Andhra Pradesh 96.6% sterilizations are tubectomies [5]. What factors make women to select tubectomy though it is unsafe? This needs evaluation. Hence present study was undertaken to assess the knowledge, awareness, of source of knowledge, intra family dynamics among the eligible women about the family planning services to assess the factors influencing in accepting permanent sterilization.

II. Aims And Objectives

1. To study the factors influencing in selecting permanent method of sterilization.
2. To assess the knowledge, awareness, source of knowledge of family planning services

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 10/2/15 to 10/3/15

III. Subjects And Methods

3.1 Study subjects

200 women eligible for permanent sterilization were selected through convenient sampling technique- 50 women in antenatal period, 50 women in post natal period, 50 women tubectomised recently, 50 women sterilized in past.

3.2 Study Method

Structured schedule was the instrument used for interview. Awareness, Knowledge, source of knowledge of family planning services and permanent sterilization methods were assessed. Prior planning, cooperation of husband in selecting methods, influence of other family members ,and other factors influencing the selection including role of women in selecting family planning sterilization were assessed.

Inclusion Criteria: - Women Eligible for sterilization or women underwent sterilization and willing to participate.

Exclusion Criteria: - Women not eligible for sterilization and eligible but not willing to participate.
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 10/2/15 to 10/3/15. Demographic profile of subjects is represented in "Table1"

Table1 demographics profile in present study

Demographic factors	Frequency (Percentage)				Total
Age	**>35 Y**		**18-35y**		
	28 (14.0%)		172 (86.0%)		200 (100.0%)
Locality	**Rural**		**Urban**		
	139 (69.5%)		61 (30.5%)		200 (100.0%)
Income	**APL**		**BPL**		
	57(28.5%)		143 (71.5%)		200 (100.0%)
Religions	**Hindu**	**Muslims**	**Christians**		
	175 (87.5%)	22 (11%)	3 (01.5%)		200 (100.0%)
Occupations	**Unskilled**	**Technical**	**Professional**	**House wife**	
	102 (51.0%)	26(13.0%)	1 (0.5%)	71(35.5%)	200 (100.0%)
Education	**Illiterate**	**Primary**	**Secondary**	**Degree**	
	44 (22%)	96(48%)	56(28%)	4(2.0%)	200 (100.0%)

Awareness of family planning services present in 94.5% Women, where as 5.5% was not aware. The awareness was through health staff in 28.5%, relative's in26%, neighbors in 29.5%, husband in 9.5% and least with media 1.5%. Sterilization methods (tubectomy and vasectomy) were known to 58% of women but 41% does not have knowledge.

Women willing to undergo sterilization immediately after delivery were_70% because ease of surgery, tradition. Remaining 29% were willing for surgery remote from delivery because they want to regain their health. Women were able to discuss in her family about family planning before taking decision in 73%. Reasons for accepting sterilization were: enough children (46%), routine (13%), and financial problem (12.5%), by health education (1.5%). Husbands were cooperative in 69%.Tubectomy was preferred choice by 95.5%of women as permanent sterilization method.

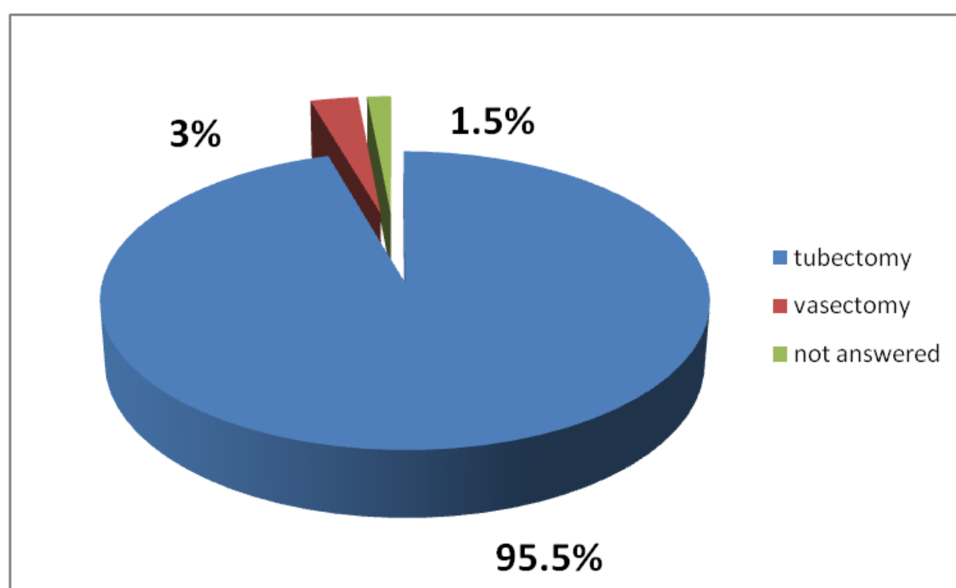

Figure 1 women's preference of permanent sterilization methods.

The reasons Preference of tubectomy were ease of tubectomy, lack of knowledge, financial loss, etc. were represented in "Table 3"

Table 3 shows different reasons for selection of tubectomy

Reasons for tubectomy selection	
Ease of tubectomy	67(33.5%)
Lack of knowledge about vasectomy	41(20.5%)
Husband can' afford to rest after vasectomy	27(13.5%)
Financial loss	18(9%)
Belief that Women can with stand surgery better than man	2(1%)
Not answered	20(10%)
Fear of ill effects on husband's health	16(8%)
Fear of male Sexual dysfunction	3(1.5%)

Women received Information regarding Vasectomy through health staff, relatives, neighbors around 28% each, husband 9.5% and least 1.5% through media.

About 69% women opined that they were not willing to adopt vasectomy as sterilization method are shown in "Fig 2"

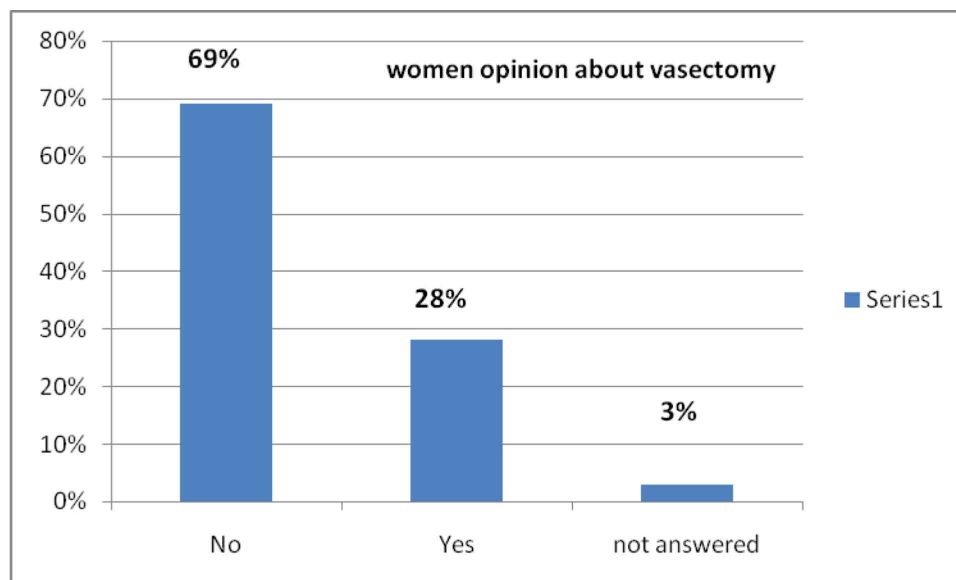

Figure 2 represents women opinion to vasectomy

The various reason for non willingness to vasectomy were shown in "Table 4"

Table 4 shows women non willingness to vasectomy

Reason s for non willing for vasectomy	
Husband can' afford to rest after vasectomy	49(24.5%)
Fear of ill effects on husband's health	31(15.5%)
non acceptance by husband	18(9.0%)
Ease of tubectomy	16 (8.0%)
Fear of failure of vasectomy	4(2.0%)
Lack of knowledge vasectomy	2(1.0%)

Women opined that 52.5% of her husbands were not willing to undergo vasectomy even if her health condition was not permitting to tubectomy.

Regarding opinion of women's role in selecting family planning methods 53.5% of women accepted that their role is minimum. Husband is the key role play in selection of permanent sterilization method.

V. Discussion

In present study most of women preferring tubectomy to vasectomy due to financial, traditional, religious, social, cultural, health factors .Fear of financial constraints likely to result from vasectomy to husband, misconceptions regarding ill effects of vasectomy made the women to select the tubectomy as their choice of sterilization.

Most of the women in present study belong to below poverty line, illiterate or with primary education, unskilled workers and housewives depending on husband's earning.

Family planning services awareness was high 94.5% in present study comparable to 99% in DLHS-3 survey [5] There is a huge gap in knowledge and communication through health care personnel regarding permanent sterilization in present study, only 58% know and, 39% does not know about tubectomy and vasectomy as permanent sterilization methods. The awareness of female sterilization as per DLHS -3 was 97.4% in rural, 99.3% in urban and male sterilization was 79.5% in rural, 89.2% in urban [5].

Communication of Knowledge about family planning through person to person husbands, neighbors, relatives, was 60-70%, by health care providers (18-28%) was significantly low and through media was least 1-5%. in spreading message. ASHA, Anganvadi workers, involvement of Non Government Organizations, community leaders, social workers in spreading message of family planning services, especially about advantages of vasectomy will be useful. Creating awareness with up to date knowledge by educating programmes, advertisements through media, poster, and hand out display in clinical waiting areas and public places about family planning services by health care providers. Community involvement, mass media programmes, utilization of social media mobile vaani technology may clasp the people, may improve the circumstances [8]

Majority of women in the present study were willing to undergo sterilization with two to three children preferably male. Preference of more number of children according to DLHS survey 18% prefer 3rd or 4th; 24.2% in rural, 16% in urban, 24.4% illiterates. In India with second child, 13.6% prefer girl child, 53.3% prefer male child [5]. When compared to national statistics the present study shows preference of more number of children was low may be due to financial burden with more children, but still 0.5% go up to sixth child for male preference.

In present study women belong to Muslim community prefer to have more children, and male preference than Hindus. As per their religious reasons 1% not to prefer sterilization as it was sin. According to DLHS survey 31.1% Muslims prefer more than 4 or higher children, it was2.07% in Hindus [5]. Lower literacy rates and for want of social security women prefer more children. Tubectomy was the preferred choice of sterilization method by all Muslim women due to lower literacy, socially restricted, interaction with men was limited and housewives economically depend on men. This shows religious factor do contributes in choices of sterilization.

Women's prior planning about sterilization was 73%. Fear of financial burden due to more number of children, health related problems made them to plan but lack of knowledge was major hindrance to planning.

In a study on gender bias in fertility and family planning found that 79.7%, women had frequent discussion with their spouse for use of contraceptives [9]. For contraception usage women need frequent discussion with her partner. In a study of Nilesh Thakor on gender bias in family planning shows that there was strong association between the acceptances of contraception if husband was cooperative in discussion[9] The present study results were correlating with previous, for selection of sterilization method husband cooperation and acceptance is essential because husband plays crucial role in decision making.

Regarding timing of sterilization most women prefer immediately after delivery due to ease of surgery and traditionally prefer sterilization as recovery period for delivery and surgery merge saving time directly and money indirectly .The reasons for delay surgery was health recovery of child and women, mean while usage of temporary method is beneficial. As per scientific study immediate after delivery, surgery can be done easily; infection rate will be less when compared to delay [10]

Women's preferred choice of sterilization method was 95.5 % to tubectomy. Educational status (p=0.598), religion (p=0.9558), income (p-.108) does not have statistical significant effect while selecting the tubectomy as permanent sterilization method.

Present study shows that people believe that tubectomy is easier than vasectomy. Women were visiting hospital for delivery, they opined that they can undergo tubectomy at same time. This was practiced since long time and became a tradition.

Scientific evidence shows that tubectomy have more complications even death may happen. According to "Indian Lethal Contraceptive culture" a News paper article 13 women died in mass laparoscopic sterilization camp in Ballarpur in 2014[11]and 568 women have died between 2009-2012 as result of tubectomy[12]

Fears of Financial loss that may result due to spoiling of husband health or husband's rest after vasectomy were factors promoting tubectomy and non willingness to vasectomy. Most of the women were belong to low economic status, illiterates, with minimum education, dependents on husband. According to National Sample Survey (NSS) 60% of rural women, 16% urban women were economic contributors considerably and their economic productivity was 88% in rural 66% in urban by doing house hold, outdoor work [4]. Most of men's activity was towards income earning but doesn't participate in house hold work, care of children[4]. Men's economic contribution to family was78%, where as women's contribution was 98%, but it was not tangible [4]. So women's "work absenteeism" was not resulting directly in cash loss, so it was not counted. There was work absenteeism by husband's rest after vasectomy leads to wage loss shown as cash loss directly especially in low income families. The total family depends on husband economically if the men's health gets affected with vasectomy, women cannot take leading part immediately and then total family economically imbalanced.

Realizing the above fact Loss of wages were compensated by introduced the incentives to acceptors by Government of India [4]. The Ministry of Health and Family Welfare from 2007 onwards enhanced the incentives from Rs-800/- to 1000/- to tubectomy and Rs-800/- to 1500/- for vasectomy in public sector, where as Rs 1350/- to tubectomy and Rs1300/- for vasectomy in private sector[4].. The tubectomy acceptor receives Rs600/-, for vasectomy acceptor Rs1100//-, and the motivator also receives Rs 150/- for tubectomy, and for vasectomy Rs200/- as incentives[13].

The planning commission calculated the BPL guide lines as the amount Rs368/- in rural. Rs558/- per head per month was minimum income that is essential for food necessities but does not provide basic needs like education, health etc [14] .Without fulfillment of basic needs life maintenance is difficult with food only. The incentive amount given by government was not enough as the cost of living is increasing every day. So enrichment of incentives to the acceptors according to present cost of living by the Government may augment vasectomy acceptance.

Health insurance plans by private may enhance the rate of vasectomies according to a study on characteristics of men receiving vasectomy in United States (1998-1999) [15]Public and private sector insurance facilities were not popular in India, so health insurance policies implementation and popularization will further improve vasectomy acceptance.

Women stated that52.5% of their husbands were not willing for vasectomy even if the women's health status was not permitting to undergo tubectomy. This shows that women were forced to bear accountability to control the fertility as the men were not taking responsibility even at the cost is death. Hence Government, social activists, feminists etc., have to get involved actively to protect the women and implement policies for promoting vasectomy.

Non acceptance of vasectomy was due to lack of awareness and knowledge and failure of vasectomy and feared sexual dysfunction. These factors do need addressing even though contribute to minor. Non acceptance to vasectomy may be due to misconceptions, negative beliefs regarding vasectomy. Awareness creation about safety, advantages of vasectomy over tubectomy although tried through media it was not a big success the reasons remain obscure. If safety of vasectomy message was reached through already vasectomies persons like relatives friends, and colleagues etc will increase vasectomy acceptance was proved in a study by Mark [15].

Information of knowledge communicated through inter personnel communication, peer group discussions, conducting lectures and arranging interviews with already vasectomies persons will improve the vasectomy sterilizations. Easiness, safeties' and advantages of vasectomy message has to reach as many people as possible through mass media educational programme in an easy understandable way to both men and women. Men are the decision makers in family, so active involvement of men are essential.

Women stated that 94.5% of her family members (husband. mother in law, father in law, and other family members) accepted to tubectomy due to tradition and customs. The status of women in the family was higher for the sterilized women than in the non sterilized. This cultural aspect reflected as negative effect on women and they may force to undergo tubectomy.

The key role player in preferring and selecting the FP methods was the husband in present study. The fertility regulations, family planning services and research traditionally focusing more on women and ignoring men and their services were underutilized as per a cross sectional study on gender bias in Fertility and Family Planning choices [9]. Male participation plays crucial role in household decision making especially in selecting family planning methods [9]. The present study was concurring with previous studies as husband has the key role play in FP selection. The Patan study also demonstrates the same that now the demographers and programme managers also have realized that individual involvement either men or women do not achieve the goal: instead involvement by both is necessary[9].

VI. Summary And Conclusion

Knowledge, awareness about family planning services were high but knowledge and awareness about permanent sterilization was not adequate. Communication through health personnel was not satisfactory. Husband has the key role in selecting sterilization method. Tubectomy was preferred choice than vasectomy by women .Health matters of husband, financial loss, social, cultural, religious and traditions, lack of awareness were major contributory factors, failure of vasectomy and sexual dysfunction contribute to a minor extent for preference of Tubectomy**.**

Spreading the up to date knowledge, awareness about safety, easiness, advantages of vasectomy over tubectomy through IEC by utilization of mass media, social media, inter personnel communication by health care providers, active involvement of men, and enhancing the incentives, implementing public, private insurance policies may enhance the vasectomy acceptance.

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

6.2 Recommendations: Creating awareness about vasectomy among people through IEC by health care providers, active involvement of men in family planning services.

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