

## Psycho-sexual Effects of Tubal Ligation Among a Study Sample in Southern Rajasthan

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### Abstract

Tubal ligation has been gaining demand and popularity in rural as well as urban populace as an effective method of birth control. The females who undergo this procedure may be experiencing a decrease in quality of life as it decreases their self body image. The present study was conducted to evaluate if the effects of tubal ligation manifest in a deleterious or positive manner on the quality of life of the women. The study utilized a pool of 50 adult females who had undergone tubal ligation in the past year and had consented to be a part of the study. The study revealed that there was a significant association of tubal ligation with anxiety/depression, self body image, sexual function among other factors. A consultation prior to tubal ligation and after the procedure can help alleviate the factors that can cause a fall in quality of life in the selected subjects.

**Keywords:** Tubal Ligation, Psycho-sexual factors, Quality of Life

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### Introduction

Permanent contraceptive methods have a dual impact of the quality of life for women. Its positive aspect is the fact that long term contraceptive needs are eliminated leading to a loss of risk of unwanted pregnancies, but the negative aspect is the fact that many women have reported a fall in desire, inherent desire of regret as well as some cases of anxiety and depression. [1-3]

Among the epidemiological data available, in developing countries experiencing a boom on population, a number of targeted population control and contraceptive measures have been applied and in 44 % of those cases, tubal ligation has been used as a elective method of permanent contraception. [4]

This high number of cases warrants an assessment of the psychological and sexual impact that tubal ligation will have on the

women. Various studies have shown a high prevalence of anxiety, depression, and sexual dysfunction after Tubal ligation. These factors can be having an effect on women's quality of life (QoL). The present study aimed to test a conceptual model considering the interrelated role of anxiety, depression, body image satisfaction, sexual function, menorrhagia, and self-esteem on the QoL of a woman who has undergone tubal ligation. [5-6]

### Material and Methods:

The present study is a prospective, cross sectional questionnaire based study conducted over a period of 6 months from June to December 2020 at Pacific Institute of Medical Sciences, Udaipur with a subject pool of 50 willing participants. Institutional ethical clearance was obtained prior to initiation of the study.

All the study participants were informed of the need for the study. They were told about the voluntary nature of the participation and written informed consent was obtained before the inclusion of subjects. They were also informed of the fact that participation can be revoked by them at any stage of the study.

### The inclusion criteria was as follows:

Women above 18 years who have undergone tubal ligation in the past one year and who have consented to be a part of the study.

### Exclusion:

Postmenopausal women, systemic diseases such as diabetes, hypertension, thyroid, cardiac illnesses. Also excluded were women on any psychiatric medications, having a history of any gynaecological surgery except

caesarean section or women who were breastfeeding.

Data collection was done by means of a compiled questionnaire detailing the demographic and few anthropometric values. Short Form Health Survey (SF-12) containing 12 items was used to assess QoL. Hospital anxiety and depression scale (HADS) questionnaire was used to evaluate the severity of anxiety and depression. Female sexual function index was used to determine the sexual function of the participants. Body image concern inventory (BICI) for evaluating of the discontent and concern of the women about their appearance was used. The Rosenberg Self-Esteem Scale was used for evaluation of women's self-esteem. Lastly a pictorial blood loss assessment chart (PBLAC) was applied for assessing the menstrual blood loss in the women.

The questionnaire were compiled in a language of the patients understanding. The data collected was noted in a MS excel data sheet and subjected to statistical analysis using SPSS software (Ver 21) in consultation with institutional statistician.

### Observations

The present study had a subject pool of 50 participants that consented to be involved as subjects. The demographic and socio-economic variables of the subjects showed that mean age of the participants and their spouses was  $34.22 \pm 4.11$  years and  $36.33 \pm 6.13$  years respectively. The mean BMI of the participants was  $27.67 \pm 5.11$  Kg/m<sup>2</sup>. In terms of academic status, 34 % (n=17) subjects held a graduate degree or higher. (Table 1)

**Table 1: Demographic Parameters of Participants**

Parameters	Value
Age	$34.22 \pm 4.11$ years
Spouse Age	$36.33 \pm 6.13$ years
BMI	$27.67 \pm 5.11$ Kg/m <sup>2</sup>
Parity	$2.11 \pm 0.76$
Education (Graduate or	34 % (n=17)

Above)	
Employed	12 % (n=6)

The data analysis revealed that a association did exist in between the perceived quality of life and factors such as anxiety, depression, sexual function, body image and menorrhagia. The path analysis conducted revealed that the parameters of evaluation were indicative of the quality of life, with a goodness of fit being reported as having a p value of 0.03.

Results also revealed that four parameters of anxiety, self esteem, sexual function and body image had a direct causal relation on QoL of the women participants. It showed that a elevated level of anxiety and dissatisfaction with body image can have a detrimental effect on the QoL. Menorrhagia had an indirect effect on QoL with a fall due to elevated anxiety and depressed sexual function.

Women with a higher score in menorrhagia and having a low sexual function were more prone to anxiety. This elevated anxiety in turn led to an fall in self-esteem through an indirect causal effect.

### Discussion:

Among the developing countries, the women's perception and position is still skewed. There have been studies that have attempted to explore the relationship between the quality of life of women after they have undergone sterilization. There have been conflicting reports on the usability of psycho-sexual parameters in assessing the quality of life. The statement of interest has been that using routine models of statistical analysis cannot effectively demonstrate the relationship between psycho-sexual parameters and Qol in an effectively manner.[7]

The reason for this is that a lot of linear association may exist between multiple variables. Owing to these opinions, the present study used a multivariate approach to understand this relationship.

The present study revealed that in predicating the quality of life among sterilized women, there is a significant role of variables such as anxiety, depression, menorrhagia, self esteem and body image. There have been some conflict of opinion in this matter among researchers. Li et al in their study mentioned that sterilizations impact positively on a women Quality of life, however in a similarly planned study Alyahya et al stated that permanent sterilization negatively impacted the same parameters. [8,9]. This is different from the results of our study wherein we deciphered that sexual function reduces anxiety and thus improved quality of life.

Sexual function is similarly a controversial matter in sterilized women. Studies have demonstrated that the majority of women did not report any change in the consistency of sexual function. Among the ones who noted changes, a majority mentioned that it was positive in nature due to lack of a risk of pregnancy. [10] There have been reported studies in which the opposite has been mentioned. In a study by Sadatmahalleh et al, it was seen that quality of life was depressed after sterilization.[11] This is in contrast with our findings.

A feature we observed on data analysis was that womens sexual function is impaired if the incidence of menorrhagia is high. This can have an effect on the level of confidence, self image as well as elevate anxiety/depression. This is also noted by mainy studies that demonstrated a direct causal relationship between the above factors and overall quality of life. (2,5)

Menorrhagia was a more common symptom in sterilized women. Our result indicated that menorrhagia indirectly affects women's QOL through anxiety. A negative impact of menorrhagia on the QOL has been previously discussed by other authors. [12,13] This was

also associated with a higher incidence of anxiety among the selected study participants.

Our results have revealed a higher level of anxiety and depression with a direct effect reduce women's QOL. Anxiety also with indirect effect thorough low self- esteem affects QOL. Sterilized women with low self-esteem had a lower level of QOL.

Another important aspect of psychology that has a effect on all personality domains is body image or consciousness. It was seen in our study that in individuals who were unhappy with their body image, the same had a direct negative impact on their quality of life. Child bearing is a fundamental part of a womans life and a change in this ability can lead to a regret or change in self body image that can have detrimental effect on the overall impression. Studies have demonstrated that loss of femininity, less sexually appealing, dissatisfaction with appearance, poorer wellness behaviour may have negative consequences on the QOL and psychosocial health. [14,15]

It is recommended that a larger sample base be considered in future studies to evaluate if the findings in the present study are applicable to a wider population or not.[16]

### Conclusion:

In cases where permanent sterilization is to be done, a prior consultation with a mental health professional could achieve a better outcome on the overall quality of life. A comprehensive discussion on the negative effects of tubal ligation and psychiatric assistance after the procedure will aid a smooth transition of the female.

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