

Comparative study of state trait anxiety in women, pre and post hysterectomy in general hospital setting

Manju Aswath¹, Radhika Madhusoodan^{2*}

¹Associate Professor, ²Assistant Professor, Department of Psychiatry, Kempegowda Institute of Medical Sciences, Bengaluru, Karnataka, INDIA.

Email: manjuaswath@yahoo.com

Abstract

Background: Anxiety is an unpleasant emotional experience which may cause patients undergoing planned surgical operation to avoid such procedures. **Aims and Objectives:** To study state trait anxiety in women, pre and post hysterectomy in general hospital setting. **Methodology:** The sample of the present study consisted of 30 patients who were admitted to OBG department of Kempe Gowda Institute of Medical Sciences exclusively for total abdominal hysterectomy without oophorectomy. Patients who were admitted exclusively for total abdominal hysterectomy without oophorectomy and who had given written informed consent for the participation in the study were included. While patients who were undergoing total abdominal hysterectomy with oophorectomy, patients who were diagnosed to have malignancy of genital tract, patients with major physical illnesses were excluded from the study. A sample of Patients who were admitted at OBG ward at KIMS who fulfilled the inclusion criteria were selected. **THE STATE TRAIT ANXIETY INVENTORY (STAI)** (Spielberger *et al* 1970) was used to measure state trait anxiety. The statistical analysis done by SPSS 19 version software. **Result:** In our study we have seen that Majority of the patients (56.7%) were between the age group of 36-45 years. The least number of patients (5) were between the ages of 46-55 years. A diagnosis of fibroid uterus was made in 50% of patients who underwent hysterectomy. Anxiety Scores prior to hysterectomy (SA1) was found to be significantly high ($p < 0.01$ on RMANOVA) when compared to SA2 i.e. anxiety scores reassessed after 6 weeks after surgery. No Significant difference was found between the anxiety scores when assessed on the same scale 6 weeks and 12 weeks respectively. **Conclusion:** Comparison of pre and postoperative STAI scores indicated high levels of anxiety pre-operatively. Scores indicating low anxiety were obtained on both re-assessments. This could be attributed to the fact that high levels of anxiety are usually present prior to any major surgical procedure.

Key Words: State trait anxiety in women, hysterectomy, The State Trait Anxiety Inventory (STAI).

*Address for Correspondence:

Dr. Radhika Madhusoodan, Assistant Professor, Department of Psychiatry, Kempegowda Institute of Medical Sciences, V. V. Puram, Bengaluru, Karnataka, INDIA.

Email: manjuaswath@yahoo.com

Received Date: 10/01/2018 Revised Date: 01/02/2018 Accepted Date: 20/02/2018

DOI: <https://doi.org/10.26611/107521>

Access this article online

Quick Response Code:	Website: www.medpulse.in
	Accessed Date: 24 February 2018

INTRODUCTION

Anxiety is an unpleasant emotional experience which may cause patients undergoing planned surgical operation to avoid such procedures¹. Anxiety can be defined as feelings of tension, apprehension, nervousness, fear and high autonomic activity that varies in intensity and degree of fluctuation over time². Extreme form of anxiety prior to surgical operation has been shown to lead to cardiovascular disturbances such as tachycardia, hypertension, arrhythmias and increase in postoperative pain³. Patients with high levels of anxiety require higher doses of anesthetic induction agents and recover poorly^{1,4}. Therefore, efforts at assessing and reducing preoperative anxiety should include timely preoperative visit by the

anesthesiologist, and appropriate premedication and psychological preparation of the patient. Various instruments have been used in the assessment of levels of anxiety in adult surgical patients in the developed countries. The commonly used scales include the Depression, Anxiety and Stress Scale (DASS)⁵, the State-Trait Anxiety Inventory questionnaire (STAI)⁶ and the Visual Analogue Scale of Anxiety (VAS)¹. The STAI has been validated and used in the Nigerian general adult population^{7,8}. Among adult patients, prevalence rates of preoperative anxiety have been reported to vary from 11% to 80%^{9,10}.

MATERIAL AND METHODS

The sample of the present study consisted of 30 patients who were admitted to OBG department of Kempe Gowda Institute of Medical Sciences exclusively for total abdominal hysterectomy without oophorectomy. Patients who were admitted exclusively for total abdominal hysterectomy without oophorectomy and who had given written informed consent for the participation in the study were included. While patients who were undergoing total abdominal hysterectomy with oophorectomy, patients who were diagnosed to have malignancy of genital tract, patients with major physical illnesses were excluded. A sample of Patients who were admitted at OBG ward at KIMS who fulfilled the inclusion criteria were selected. Informed consent in writing was obtained before patients were included in the study. pre-operative assessment included assessment of the patient about 2 to 3 days prior to the surgery. Sociodemographic details of the like age, education, address, medical illness, history of psychiatric illness, family history of psychiatric illness reason for surgery and sexual functioning was taken. General Health questionnaire and State and Trait Anxiety Inventory scales were administered preoperatively. The same scales were re-administered on the same subjects 6 weeks and 12 weeks later. THE STATE TRAIT ANXIETY INVENTORY (STAI) (Spielberger *et al* 1970) was used to measure state trait anxiety: This comprises two separate self-rated scales, one measuring state anxiety and the other trait anxiety. Each consists of 20 statements, the trait scale being concerned with how subjects generally feel, the state scale with how they feel at that particular movement in time. It is said to be a sensitive indicator of changes in levels of anxiety. It takes 6-10 minutes for each scale to be completed. It is recommended that the examiner and the examinee read the instruction out and together to allow time for questions and to ensure that the examinee understands the instructions. The best re-test co-relations for the trait scale are reported as +0.73 to +0.86, and those of the state scale as +0.16 to +0.54 concurrent validity was indicated by co-relation with the

Taylor manifest anxiety scale (0.80). Scores on the state scale were demonstrated to increase with stress and decrease with relaxation the statistical analysis done by SPSS 19 version software.

RESULT

The data collected is summarized in form of tables

Table 1: Demographic Statistics for age

In Years	Frequency	Percent	Valid	Cumulative Percent
26-35	8	26.7	26.7	26.7
36-45	17	56.7	56.7	83.3
46-55	5	16.7	16.7	
Total	30	100	100	100

Majority of the patients (56.7%) were between the age group of 36-45 years. The least number of patients (5) were between the ages of 46-55 years

Table 2: Clinical Diagnosis

	Frequency	Percent	Valid	Cumulative Percent
Fibroid	15	50	50	50
DUB	9	30	30	80
Others	6	20	20	
Total	30	100	100	100

A diagnosis of fibroid uterus was made in 50% of patients who underwent hysterectomy. Thirty Percent received the diagnosis for DUB and a diagnosis of chronic cervicitis, pelvic inflammatory diagnosis was done in the rest 20%

Table 3: Assessment of Pre and Post-operative state anxiety on the STAI

	SA	SA	SA
N Valid Missing	30 0	30 0	30 0
Mean	61.1	71.1	71.8
Median	63.5	70.5	72.0
Std. Deviation	8.3	1.9	1.7
Minimum	44	68	68
Maximum	72	75	75

Table 4: Multivariate Tests (RMANOVA) b

Effect	value	F	Hypothesis	Error	Sig.
FACT Pillai's					
Trace					
Wilks Lambda	.638	24.6a	df 2.0	28.0	.000
Hotelling's	.362	24.6a	2.0	28.0	.000
Trace	1.760	24.6a	2.0	28.0	.000
Roy's Largest Root	1.760	24.6a	2.0	28.0	.000

Exact Static, Design: Intercept, Within Subjects Design: FACTOR 1

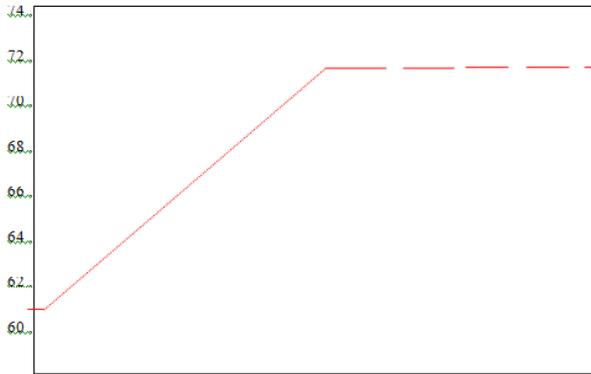


Figure 1:

FACTOR 1 It was found that there was significant difference in anxiety pre operatively and post operatively. Anxiety Scores prior to hysterectomy (SA1) was found to be significantly high ($p < 0.01$ on RMANOVA) when compared to SA2 i.e. anxiety scores reassessed after 6 weeks after surgery. No Significant difference was found between the anxiety scores when assessed on the same scale 6 weeks and 12 weeks respectively.

DISCUSSION

Medical procedures especially surgery is very stressful with associated psychological effects such as anxiety. Generally, patients undergoing surgery experience anxiety before surgery. The result of this study showed that the prevalence of high anxiety in surgical patients preoperatively was found to be higher than the postoperative prevalence. In our study we have seen that Majority of the patients (56.7%) were between the age group of 36-45 years. The least number of patients (5) were between the ages of 46-55 years. A diagnosis of fibroid uterus was made in 50% of patients who underwent hysterectomy. Thirty Percent received the diagnosis for DUB and a diagnosis of chronic cervicitis, pelvic inflammatory diagnosis was done in the rest 20%. It was found that there was significant difference in anxiety pre operatively and post operatively. Anxiety Scores prior to hysterectomy (SA1) was found to be significantly high ($p < 0.01$ on RMANOVA) when compared to SA2 i.e. anxiety scores reassessed after 6 weeks after surgery. No Significant difference was found between the anxiety scores when assessed on the same scale 6 weeks and 12 weeks respectively. Comparison of pre and postoperative STAI scores indicated high levels of anxiety pre-operatively. Scores indicating low anxiety were obtained on both re-assessments. This could be attributed to the fact that high levels of anxiety are usually present prior to any major surgical procedure. This is consistent with prior study by Nijkamp *et al*¹¹, who reported that the level of anxiety in their patient decrease after surgery. There are possible explanations

for the above observation¹⁵. First, the reduction in the anxiety level may be due to reduction of presenting symptoms or the expected relief of symptoms immediately after surgery. Second, most patients in this study have great concern about the outcome of surgery. The fact that they survive the surgery and did not die on the operating table or having any serious complication known to them may be a possible explanation for the reduction in anxiety level during the post-operative period. Furthermore, the erroneous information received from the general public about the outcome of anesthesia may have great impact on the anxiety levels of patient; for example, it is believed that most patients that die did not wake up following surgery due to anesthetic complications¹². There are various factors responsible for preoperative anxiety in patients undergoing surgical operation. In this study, the most common factors responsible for preoperative anxiety were fear of complications and result of the operation. This shows that there are lots of uncertainties associated with the outcome of surgery in our environment. Jawaid *et al*¹³ demonstrated that their patient's most common cause of preoperative anxiety was concern about family while in our study it was ranked third. Similarly, fear of complications and results of operation that ranked second and third in Jawaid study¹³ were the most common cause of anxiety in our study. Interestingly, nil per mouth, getting stuck with needle and harm from doctor/nurse mistakes were the least concern for our patients. Reduction of fear and anxiety is one of the objectives of assessment by the anesthetist before surgery. The level of anxiety before surgery in this study was very high despite the fact that all the patients had pre-anesthetist visit. During the anesthetist visit prior to surgery, in most of the time, only the patients' fitness for anesthesia and health status were routinely assessed without considering the patients' anxiety level. Therefore, there is the need to assess the level of anxiety in all patient undergoing surgery and manage it effectively. In addition, provision of adequate information about the disease, diagnostic processes and treatment options will also help in reducing the level of patients' anxiety. However, the information provided for patient should be individualized and adjusted to their need in order to prevent paradoxical increase in the level of anxiety.¹⁴

CONCLUSION

Comparison of pre and postoperative STAI scores indicated high levels of anxiety pre-operatively. Scores indicating low anxiety were obtained on both re-assessments. This could be attributed to the fact that high levels of anxiety are usually present prior to any major surgical procedure.

REFERENCES

1. Kindler CH, Harms C, Amsler F, Ihde-Scholl T, Scheidegger D: The Visual Analogue Scale allows effective measurement of preoperative anxiety and detection of patients' anaesthetic concerns. *Anaesthesia and analgesia*; 90:706-12, 2000.
2. Valenzuela-Millán J, Barrera-Serrano JR, Ornelas-Aguirre JM: Anxiety in preoperative anesthetic procedures. *Cirugia Y Cirujanos*; 78:147-151, 2010.
3. Boker A, Brownell L, Donen N: The Amsterdam Preoperative anxiety and information scale provides a simple and reliable measure of preoperative anxiety. *Canadian Journal of Anaesthesia*; 49:792-98, 2002.
4. Maranets I, Kain ZN: Preoperative anxiety and intraoperative anesthetic requirements. *AnesthAnalg*; 89:1346-1351, 1999.
5. Sukantarat KT, Williamson RC, Brett SJ: Psychological assessment of ICU survivors: a comparison between the Hospital Anxiety and Depression Scale and the Depression, Anxiety and Stress Scale. *Anaesthesia*; 62:239-243, 2007.
6. Spielberger C: Manual for the State-trait Anxiety Inventory (Form Y). Palo Alto, Calif. Consulting Psychologists Press; 121, 1983.
7. Awaritefe AA, Kadiri AU: Validation of the STAI in Nigerian subjects. *IRCS Medical Science: Psychology and psychiatry. Social and Occupational Medicine*; 9:419-420, 1981.
8. Fatoye FO, Adeyemi AB, Oladimeji BY: Emotional distress and its correlates among Nigerian women in late pregnancy. *Journal of Obstetrics and Gynaecology*; 24(5):504-509, 2004.
9. Caumo W, Schmidt A, Schneider C, Petry S, Brathwait O, Bandeira D: Risk factors for preoperative anxiety in adults. *Acta Anaesthesiologica Scandinavica*; 45(3):298-307, 2001.
10. Kain ZN, Severino F, Alexander GM, Pincus S, Mayes LC: Preoperative anxiety and postoperative pain in women undergoing hysterectomy. A repeated-measures design. *J Psychosom Res*; 49:417-422, 2000
11. Nijkamp M, Kenens C, Dijker A, Ruiter R, Hiddema F, Nuijts R: Determinants of surgery related anxiety in cataract patients. *The British Journal of Ophthalmology*; 88(10):1310-1314, 2004.
12. McGaw CD, Hanna WJ: Knowledge and fears of anesthesia and surgery. The Jamaican perspective. *West Indian Med J*; 47:64-67, 1998.
13. Jawaid M, Mushtaq A, Mukhtar S, Khan Z: Preoperative anxiety before elective surgery. *Neurosciences*; 12(2):145-148, 2007.
14. Romanik W, Kański A, Soluch P, Szymańska O: Preoperative anxiety assessed by questionnaires and patient declarations. *Anaesthesiology Intensive Therapy*; 41(2):80-84, 2009.
15. Adesanmi Akinsulore, Afolabi M, Owojuyigbe, Aramide F, Faponle. Assessment of preoperative and postoperative anxiety among elective major surgery patients in a tertiary hospital in Nigeria. *M.E.J. ANESTH* 23 (2), 2015. 235-240.

Source of Support: None Declared
Conflict of Interest: None Declared