Anxiety among patients undergoing major general surgery

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Shirin Aziz Bakr* Sirwan Kamil Ali** Saadia Ahmed Khudhr***

ABSTRACT

Background and Objectives: It has been recognized for more than 40 years that patients experience different levels of anxiety when faced with impending surgery. The degree to which each patient manifests anxiety is related to many factors; this study aims to assess the level of anxiety among patients undergoing major general surgery and to identify the effect of gender on preoperative anxiety

Methods: A sample of 300 patients who were admitted from 5th April 2009 to the 10th November 2009; in general surgery units of teaching hospitals (Rezgari & Hawler) in Erbil city were interviewed to assess their level of anxiety before surgery. The instrument used for this purpose was a questionnaire that included socio-demographic information and the State-Trait Anxiety Inventory (STAI) of Spilberger.

Results: Most of the patients showed moderate to severe anxiety level; (moderate=50% and severe=38.3%) others showed mild anxiety level (11.7%). A statistically significant relationship was seen between preoperative anxiety and gender; female patients showed high levels of anxiety (severe anxiety=46.9%) while male patients showed less severe anxiety level (severe anxiety=28.6%).

Conclusions: According to the results of the study patients undergoing major general surgery need to be assessed regarding level of anxiety before surgery. This anxiety should be reduced through appropriate interventions, especially in women who have been found to experience high levels of anxiety.

Key words: preoperative anxiety, major general surgery

INTRODUCTION:

Patients experience different levels of anxiety when undergoing surgery and it is commonly associated with loss of independence or control, anesthesia concerns, unwanted diagnoses, postoperative pain and fear of death [1]. Many studies describe anxiety as an intense, unpleasant emotional state. There are two main groups of symptoms of anxiety: physical and psychological. Physical symptoms include palpitation, tremors, dizziness, nausea, fatigue and insomnia. Psychological symptoms include tension, nervousness, fear, irritability, agitation, restlessness and concentration difficulties [2]. The degree to which each factors. These include age, gender, type and extent of the proposed surgery, previous surgical experience, and personal susceptibility to stressful situations. Some degree of anxiety is a natural reaction to the unpredictable and potentially threatening circumstances typical of preoperative period, especially for the patient's first surgical experiences [3]. There are two types of anxiety which affect patient's reports of physical symptoms and the duration of hospitalization. These are state anxiety and trait anxiety. Trait anxiety is seen as relatively permanent personality characteristic, whereas state anxiety is seen as a transitory fluctuating state, increasing in surgical patients. Transitory or state anxiety level is high in threatening

* M.Sc psychiatric nursing, PhD candidate, collage of nursing, HMU
** F.I.C.M.S psych, consultant psychiatrist, Lecturer in psychiatry, collage of medicine, HMU
*** PhD, Ass. Professor of nursing, head of fundamental nursing, college of nursing, HMU

circumstances, and relatively low in situations in which there is little or no danger. However, trait anxiety is not affected by situational stress. Consistent with these assumptions from trait-state anxiety theory, a number of studies indicated that state anxiety is elevated prior to surgery and declines after surgery and during the post-operative recovery period [4].A variety of objective and subjective methods are available for measuring preoperative anxiety. Objective methods include indirect measurement of sympathetic-adrenal activity using heart rate, blood pressure or skin conductance. Plasma catecholamine excretion measurement has been used as more direct method of detection of sympathetic-adrenal activity. Subjective methods include self assessment by the patient using a multiple affect adjective check list. The gold standard for preoperative anxiety measuring is State-Trait Anxiety Inventory (STAI) of Spielberger. This test has been

PATEINT AND METHODS:

used in more than one thousand studies [5].
For the purpose of this study a written official permission has been obtained from College of Nursing, Hawler Medical University and two teaching hospitals (Hawler and Rezgary) in Erbil city as well as patient's informed consent. A sample of 300 patients who were admitted to general surgery units from 5th April 2009 to the 10th November 2009were interviewed for about (40) minutes using a questionnaire. The questionnaire included socio-demographic information and State-Trait Anxiety Inventory (STAI) of Spilberger, which contains 20 items for state anxiety measuring. High scores indicate high levels of anxiety.

- Scores 0-20 = no anxiety
- Scores 21-40 = mild anxiety
- Scores 41-60 = moderate anxiety
- Scores 61-80 = severe anxiety

Inclusion criteria were: the age of 18 and above and from Erbil governorate. applying SPSS through Chi-square test and descriptive analysis (frequency and percentage).

RESULT:

Three hundred patients undergoing major general surgery participated in this study. From these 160 were female and 140 were male; the highest percentage of patients (27%) were at age range of 40-49 years, most of them were married (85%), majority of them were illiterate (58%), housewife occupation for female patients (50%), free work occupation for male patients (25.3%), and poor economic level (58%) **(Table 1 (A+B))**.
Most of patients showed moderate to severe anxiety level (50%, 38.3%) respectively, others showed mild anxiety level (11.7%). (**Figure 1**).
Significant association was seen between preoperative anxiety and gender; female patients showed high levels of anxiety (severe anxiety=46.9%) while male patients showed less severe anxiety level (severe anxiety=28.6%) while mild anxiety level represents (3.1%) for female and (21.4%) for male (**Table 2**).

Table 1(A): Demographic distribution of patients undergoing major general surgery.

Age interval (years)	No. of patients (300)	%
18-28	43	14.3
29-39	68	22.7
40-49	81	27
50-59	58	19.3
60-69	44	14.7
70 and above	6	2
Gender	**No. of patients**	**%**
Male	140	46.7
Female	160	53.3
Residency	**No. of patients**	**%**
Urban	178	59.3
Rural	122	40.7
Marital status	**No. of patients**	**%**
Married	255	85
Single	22	7.3
Widowed	22	7.3
Divorced	1	0.4

Table 1(B): socio-economic distribution of patients undergoing major general surgery.

Educational level	**No. of patients (300)**	**%**
Illiterate	174	58
Read & write	63	21
Primary graduation	34	11.3
Secondary graduation	18	6
Institute	9	3
College & higher	2	0.7
Occupation	**No. of patients**	**%**
Housewife	150	50
Jobless	29	9.7
Employer	45	15
Free work	76	25.3
Income	**No. of patients**	**%**
Sufficient*	126	42
Not Sufficient**	174	58

*having car, house and sufficient income
* *not having car, house and not sufficient

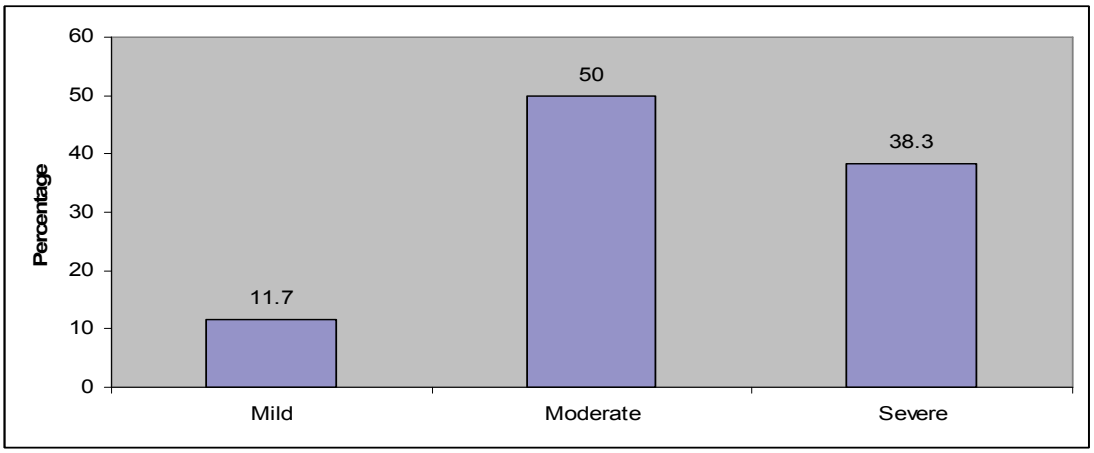

Figure1: The level of anxiety among patients undergoing major general surgery

Table 2: The association between gender and preoperative anxiety

Anxiety level / Gender	Mild		Moderate		Severe		Total	Mean & S D*	Chi-Square (P Value)
	No.	%	No.	%	No.	%			
Female	5	3.1	80	50	75	46.9	160	3.43±0.579	0.0001 Highly significant
Male	30	21.4	70	50	40	28.6	140	3.14±0.685	
Total	35	11.7	150	50	115	38.3	300		

*** Standard Deviation**

DISCUSSION:

The findings of this study showed that most of the patients awaiting major general surgery experienced moderate to severe levels of preoperative anxiety. There are many studies which support the findings of present research. Those studies are: (Wiens, 1998) [8,] (Khan& Nazir, 2007) [9], (Perks, 2009) [10] and (Stoddard, 2005) [11]. All of them found moderate to severe anxiety levels among patients undergoing major general surgery. However, finding is not supported by Bruggemann et al, 2004 [6] according to their findings 48% of patients were considered anxious, while 52% of patients were considered not anxious. Furthermore, our findings were not consistent with findings of Nijkamp et al, (2004) [7] who stated that the general patients reported little anxiety before surgery. This is probably related to different anxiety measurement tool or different sample and even difference in education and awareness about surgery. Because no information regarding surgery was given to the patients in our study samples, but in other health care systems some information is given by nurse or even surgeon to patients that may have effect on level of anxiety. The second finding is that there is relationship between gender and preoperative anxiety, being female will lead to high level of anxiety before surgery as females particularly in our societies express their emotions more than male and show higher level of fear and anxiety. This finding is supported by studies of (Kindler 2003) [13] and (Oztin et al, 2007) [14] who found that female patients showed higher anxiety scores before surgery and significant relationship between gender and preoperative anxiety. Also there are some studies which are not in agreement with our findings they found that there is no statistically significant difference between male and female regarding level of preoperative anxiety, such as: (Erci et al, 2007) [15] and (Kiyohara et al, 2004) [16.] This may be due to different socio-cultural background or using other ways of assessing patients preoperatively.

CONCLUSION:

Patients undergoing major general surgery generally experience moderate to severe anxiety level before surgery; however female patients experience higher level of anxiety before surgery than male patients. This anxiety should be assessed and reduced through appropriate interventions, especially in women who have been found to experience high levels of anxiety.

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