

Preoperative Anxiety among Adult Patients Subjected to Elective Surgery in Karbala

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Abstract

Background: Preoperative anxiety is a considerable problem that could affect the surgical outcome of patients. Anaesthesiologists can assess preoperative anxiety sufficiently and accurately through special tools.

Objective: To assess the preoperative anxiety level before elective surgery among patients who underwent surgery and its correlates.

Patients and methods: A cross-sectional study, 104 patients who were admitted as planned to Al-Hussein Teaching Hospital in Karbala were assessed for their anxiety felt before the surgery using the Amsterdam Preoperative Anxiety and Information Scale (APAIS) which is a standardized questionnaire for measuring the intensity of the stress and anxiety, and the need for information.

Results: More than one third 37 (35.6%) of the patients had anxiety. The Mean anxiety score for surgery was 5.64 ± 2.03 which is higher than that for anesthesia 4.39 ± 2.07 . The preoperative anxiety level was significantly higher among females. While 58 (55.8%) have a low level of need for information about procedures. And the need for information requirement was positively correlated with preoperative anxiety.

Conclusion: Patients had experienced moderate levels of preoperative anxiety which was more among females. The need for information was moderate. However, those with a higher need for information were more anxious. Anxiety can be assessed in the preoperative period so appropriate steps to ameliorate it could be considered.

Keywords: Preoperative anxiety •Anxiety •APAIS •Elective surgery •Anaesthesia

Introduction

Preoperative anxiety is a considerable condition in the preoperative setting of patients. Numerous patients experience anxiety from elective surgery and it is widely accepted as an expected response. Where hundreds of thousands of major surgical interventions are performed every day globally. Percentages of patients who had anxiety preoperatively vary, however, researchers reports an incidence between 60% and 80% [1-4].

Many patients consider surgery as one of the most stressful and threatening events in their lives. Anxiety starts as soon as the surgery is scheduled and rises to a maximal intensity upon admission to the hospital. Further, if anxiety was not recognized and managed, extended anxiety could lead to stress which can hurt the patient and delay recovery afterward. The level of anxiety experienced depends on many factors which including Age, gender, form, and magnitude of the intended operation, experience with and anticipation for the procedures, prior surgical experience and personal vulnerability to stressful situations (trait-anxiety) [5-7].

Several validated questionnaires had been utilized to assess anxiety. These include: Amsterdam Preoperative Anxiety Information Scale (APAIS), the State-Trait Anxiety Inventory (STAI), Hospital Anxiety and Depression Scale (HADS), Visual Analogue Scale (VAS), and Multiple Affect Adjective Check List (MAACL). Nevertheless, APAIS can effectively and accurately assess preoperative anxiety [8,9].

Further, the APAIS was the first tool used for assessing the patients' need for information, besides anxiety. This makes the APAIS widely used as it had been translated into many languages [10-13].

Iraqi people faced various stressful conditions over years of wars, sanctions, and conflict. Further, due to shortage in numbers of anesthetist in Iraq and the large numbers of patients underwent surgical operations, the preoperative assessment and counseling of patients is below standards and not uncommon that patients do not given adequate time for counseling or responding to their inquiry. Furthermore, some degree of mistrust or non-contentment towards health services including surgical interventions are present among Iraqi patients. The issues that might affect the preoperative anxiety.

This study aims to assess the preoperative anxiety level before elective surgery among patients who underwent surgery and its association with some socio-demographic characteristics.

Patients and Methods

A cross-sectional study, conducted on 104 patients, who were planned to undergo an elective surgery in the surgical wards of the Al-Hussein Teaching Hospital in Karbala city. It was carried out over six month period from August 1, 2017, to January 31, 2018.

Ethical approval attained from the research ethics committee at College of Medicine, University of Kerbala and from research ethics committee at Karbala Health Directorate. Further, the patients were informed about the aim of the study and a verbal consent on participation was obtained from them. The patients who had a known psychiatric or mental disorder, using a sedative drug and those who refused to participate in the study were excluded.

The APAIS anxiety scale consists of six items or questions as shown below.

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With Likert based answers, each question has been scored from 1 for “Not at all” to 5 for “Extremely”. These 6 questions are [13-15]

1. Are you worried about the anaesthetic?
2. Is the anaesthetic is on your mind continually?
3. Do you like to know as much as possible about the anaesthetic?
4. Are you worried about the surgery?
5. Is the procedure on your mind continually?
6. Do you like to know as much as possible about the procedure?

Questions 1 and 2 were designed for assessing anxiety about anaesthesia. Questions 4 and 5 have been designed for assessing anxiety from surgery. The sum of these four questions represents the total (global) anxiety score with a scoring range from 4 to 20. The cutoff point for anxiety in the global anxiety score is 11[13-15].

Questions 3 and 6 represented the need for more information about procedures. Further, the patients were divided into three groups according to the need for information score. Patients with an information scale score of 2-4, 5-7, and 8-10 were classified into having low, intermediate, and high need for information respectively.

The internal consistency of the answers to the APAIS questionnaire was measured by calculating the Cronbach’s alpha value for the 6 questions and its value was 0.775. Where the acceptable value is above 0.7.

Data were entered and analyzed using the Statistical Package for Social Science (SPSS) program version 21. Qualitative variables were expressed as frequency/Number (N) and percentages (%). The quantitative variables were expressed in minimum (Min.), maximum (Max.), mean and Standard Deviation (SD). The 95% confidence interval (95% CI) was also measured.

The One-Sample Kolmogorov-Smirnov test performed to test the linearity of the data, and the results showed that the data was not normally distributed. So non-parametric statistical tests were used for the statistical analysis. The Mann-Whitney U test, the Kruskal-Wallis test, and a non-parametric correlation test. A p-value of less than 0.05 was considered statistically significant.

Results

Of the 104 patients, 53 (51%) were women. Their age ranged from 16 to 70 years. The mean age ± Standard Deviation (SD) was 37.01 ± 12.32 years. Most of them, 49 (47.1%) had primary education, 48 (46.2 %) had a major operation, 40 (38.5%) were housewives. While only 40 (38.6%) of them had a history of previous surgery as shown in Table 1.

Table 1. The demographic characteristics of the patients.

Variable		N	(%)
Gender	Male	51	49%
	Female	53	51%
Education level	Illiterate\read and write	8	7.7%
	Primary	49	47.1%
	Secondary	27	26%
	Higher Education	20	19.2%
Class of operation	Minor	2	1.9%
	Medium	25	24%
	Major	48	46.2%
	Super major	29	27.9%
History of previous surgery	Negative	64	51.4%
	Positive	40	38.6%
Occupation	House wife	40	38.5%
	Student	6	5.8%
	Free work	25	24.0%
	Employee	33	31.7%

The highest mean score was for question number 4 that concerns worry from surgical procedures as shown in Table 2.

Table 2. Responses of patients to the 6 items APAIS questionnaire.

	N	Min.	Max	Mean	SD	95% CI of the mean
Question 1	104	1	5	2.18	1.08	1.97 – 2.39
Question 2	104	1	5	2.23	1.14	2.01 – 2.47
Question 3	104	1	5	2.60	1.10	2.38 – 2.82
Question 4	104	1	5	3.07	1.17	2.85 – 3.31
Question 5	104	1	5	2.38	1.22	2.13 – 2.63
Question 6	104	1	5	2.04	1.20	1.81 – 2.27

The mean APAIS scores for anxiety for surgery was higher than that for anaesthesia, and the global anxiety mean ± SD was (10.04 ± 3.43), while the need for information mean ± SD was (4.42 ± 2.05) as shown in Table 3.

Table 3. Anxiety score classification according to the 6 items APAIS questionnaire.

APAIS dimensions	Mean ± SD	95% CI of the mean
Anxiety about anaesthesia (Questions 1,2)	4.39 ± 2.07	4.04 – 4.87
Anxiety about surgery (Questions 4, 5)	5.64 ± 2.03	5.29 – 6.07
Global anxiety (Questions 1, 2, 4, 5)	10.04 ± 3.43	9.42 – 10.79
Need for information (Questions 3, 6)	4.42 ± 2.05	4.02 – 4.83

Based on the cut-off point for anxious patients which is 11 as mentioned above, 37 (35.6%) of patients had anxiety, and the 95% CI was 26.0%-45.2%. As shown in Figure 1. More than half of patients 58 (55.8%) were with low information requirements as shown in Figure 2.

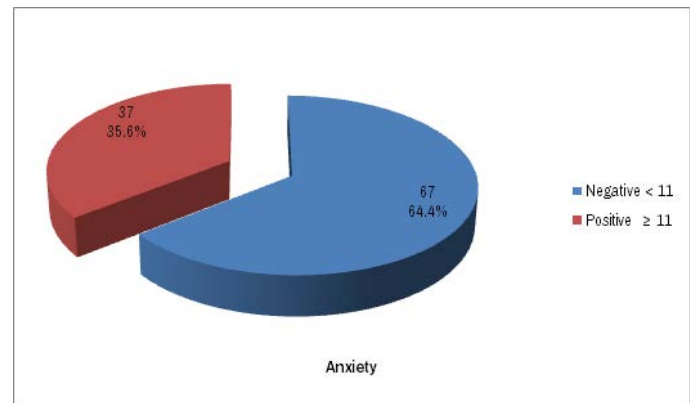


Figure 1. Classification of patient according to anxiety status.

The preoperative global anxiety mean score was significantly higher among females than males. While no significant difference regarding the need for information score appeared between both genders. Also, no significant difference in anxiety level and the need for information appeared in regards to age, education, class of operation, history of previous surgery and occupation as shown in Table 4.

Table 4. The relations between anxiety mean score for different categories with some socio-demographic characteristics.

Variable		Global anxiety Mean ± SD	Need for information Mean ± SD
Age	<45 years (61)	10.34 ± 3.04	4.54 ± 2.04
	≥ 45 years (43)	9.60 ± 3.91	4.26 ± 2.07
	P value *	0.106	0.465
Gender	Female (53)	10.68 ± 3.604	4.36 ± 1.85
	Male (51)	9.37 ± 3.137	4.49 ± 2.248
	P value *	0.049	0.921
Education	Illiterate\read and write	10.25 ± 3.11	3.50 ± 1.07
	Primary	10.04 ± 3.52	4.12 ± 2.06
	Secondary	10.15 ± 3.57	4.93 ± 1.94
	Higher Education	9.80 ± 3.37	4.85 ± 2.30
	P value **	0.990	0.105
Class of operation	Minor	8.00 ± 4.24	6.00 ± 5.66
	Medium	9.36 ± 2.91	4.92 ± 2.00
	Major	9.69 ± 3.66	4.00 ± 1.94
	Super major	11.34 ± 3.19	4.59 ± 1.96
	P value **	0.108	0.208
History of previous surgery	Negative	10.22 ± 3.54	4.28 ± 1.87
	Positive	9.05 ± 3.99	4.42 ± 1.71
	P value *	0.353	0.809
Occupation	House wife	12.00 ± 3.35	4.67 ± 1.75
	Student	9.83 ± 3.45	3.95 ± 1.62
	Free work	9.36 ± 3.71	4.36 ± 2.25
	Employee	10.45 ± 3.16	5.00 ± 2.32
	P value **	0.413	0.253

Note: *Mann-Whitney U test , ** Kruskal – Wallis test

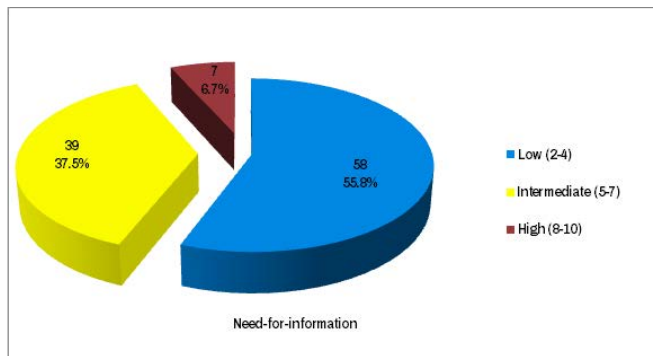


Figure 2. Classification of patient according to the need of information level.

To determine whether there was a correlation between the patient's need for information and the anxiety level. A significant positive correlation between the anxiety level and the need-for-information were identified, as shown in Figure 3.

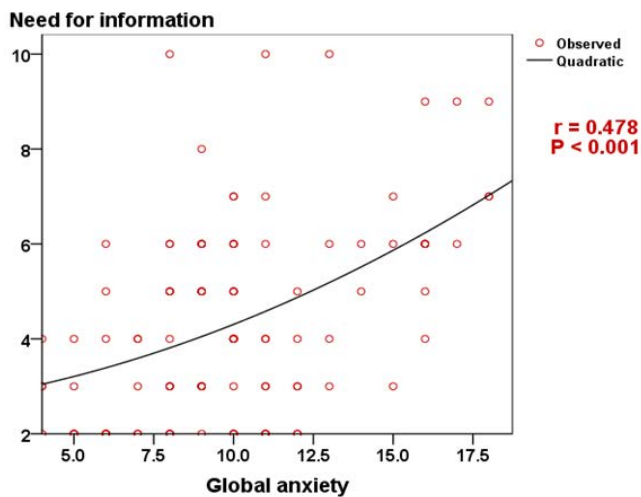


Figure 3. The correlation between preoperative global anxiety and the need for information among patients.

Discussion

Preoperative anxiety is a prevalent occurrence among patients with indoor surgery. The assessment of it is feasible and applicable by using valid and reliable measuring instruments such as the APAIS. Whereas, effective screening and management of anxiety could improve the patient situation and the surgical outcome [7].

More than one third (35.6%) of the patients appeared to have preoperative anxiety. The anxiety level detected could be considered moderate despite the fact that interviews were carried out shortly before the procedure, which was identified as the moment of greatest anxiety [12,16]. These results are in line with studies conducted in Brazil (33%) and Ethiopia (36.1%) [17,18].

The preoperative anxiety was below what was reported in two previous Iraqi studies in Baghdad and Erbil that showed (68%) and (80%) levels respectively. However, each of these two studies had used a different tool other than the APAIS [19,20]. Further, studies conducted in Pakistan, Tunisia, and India showed higher prevalence also of (62%), (67.5%) and (87.6%) respectively [21-23]. The minimum anxiety rate in the current study may be attributed to that the patients are getting access to more information about their procedure, different assessment tools used in other studies, the difference in socio-demographic characteristics or to that local citizen are more tolerant to anxiety.

Female patients showed a significantly higher global anxiety mean than males and this agrees with other studies in different regions of the world

including Iraq [4,16,19-24]. And this probably related to the nature of female personality that is more sensitive and prone to psychological pressure and stress. However, some other studies showed a non-significant association between gender and preoperative anxiety level [2,25,26].

Age, education, class of surgery and occupation appeared to have no significant effect on the intensity of the stress. Similar results were indicated by other researchers [1,11,16,27].

Also, non-significant difference in anxiety levels had been identified between participants who had and had not undergone previous surgery. This is in agreement with the results of two studies [4,15,28]. While other authors indicate that the previous surgery experiences decrease the preoperative anxiety status [5,20,29].

The anxiety for surgery was higher than the anxiety for anaesthesia. These findings are consistent with the results of previous studies conducted in Turkey, Pakistan, and Brazil [1,23,30].

Patients prefer getting more information (score ≥ 5) was (44.2%). And there was a direct correlation between the pre-operative anxiety levels and acquiring preoperative information. Meaning that patients with higher need for information are those with a higher level of anxiety than those with low demand for information. These findings highlight the importance of supporting the provision of information concerning surgery and anesthesia in the preoperative setting. Which will probably decrease the anxiety levels as been indicated [7,25]. Although, guidelines indicate that patients must be given information before any operation. It's not necessarily that everyone wants to be fully informed about certain aspects.

Conclusion

Preoperative anxiety is quite a common event and assessing anxiety prior to surgery is easily applicable. Anxiety for surgery was higher than that for anesthesia, and the anxiety is more common among females. Further, the anxiety level was positively correlated with the need for information by patients. To minimize preoperative anxiety and achieve better quality of care we recommend the need to promote preoperative counseling and communication with patients through special clinics and by taking an appropriate and effective informed consent before surgery that will improve the postsurgical sequels and increase patient satisfaction.

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