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# Anxiety before General Anaesthesia

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A THESIS

Submitted to the department of surgery in  
Al-Nahrain University - College of Medicine as partial fulfillment  
of the requirements for graduation

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## Acknowledgement

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## Dedication

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To my beloved parents, who were there for me  
With their support and encouragement,  
I dedicate this work to all their loving tears and beautiful smiles.

To all my respectable teachers,  
Who enlightened me with their knowledge and understanding

To all my fellow students, friends, and colleagues  
For their unconditional Support and love.

To all patients out there, hoping this little work will do something to  
help them more in their sufferings.

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# Abstract

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**Background:** Preoperative anxiety is one of the most important problems for the patients, because it causes emotional and psychiatric problems as well as physical problems. It is crucial to detect the patient's existing anxiety to assist patients.

**Aim of the study:** Our aim in this study is to investigate how the patient's age, gender, the operation type, marital state and smoking affect the patient's anxieties.

**Patients and methods:** Our study was conducted as a cross-sectional study between October 2018 to April 2019 in Al-Imamein Al-Kadhimein Medical City. Interviews with the patients were performed in the anesthesia clinic for preoperative examination. A total of 100 patients were recruited to the study, after excluding the patients who do not meet the criteria for inclusion, and 60 patients were included.

**Results:** Anxiety sub-scores of the patients whom ASA (American Society of Anaesthesiologists) score is II were found to be significantly higher than ASA score I and Anxiety sub-scores of females were found to be significantly higher than the males ( $p = 0.001$ ).

**Conclusion:** We think that being aware of the patients' anxiety and finding appropriate approaches for their anxieties can be valuable. Patient satisfaction and superior outcomes can be achieved in this way.

**Key words:** Anxiety, General anesthesia, surgery

# Chapter One

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## Introduction

# Introduction

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Preoperative anxiety is one of the most important problems for the patients, because it causes emotional and psychiatric problems as well as physical problems [1]. Anxiety is particularly important, because it has the potential to affect all aspects of anesthesia such as preoperative visit, induction, perioperative, and recovery periods [2,3]. Perioperative anxiety is found to be correlated with increased autonomic fluctuations and increased requirement of anesthetic, elevated incidence of nausea and vomiting, and augmented pain during postoperative period [4,5]. As a result of these complications, it was reported that recovery period and the length of hospital stay were extended [6]. High levels of anxiety were seen in many patients during the preoperative period and all patients had different levels of anxiety.

The exact etiology of anxiety can be due to anesthesia, surgery, and several other different reasons [7–9]. Thus, it is crucial to detect the patient's existing anxiety to assist patients. Many different approaches have been reported on this subject, but some of the methods are not practical to use and can be time consuming during the preoperative preparatory period due to non-specific questions [10]. Our primary aim in this study is to investigate how the patient's age, gender, the operation, surgical briefing, general anesthesia that recommended for the operation ahead, and patient's prior anesthesia experience affect the patient's anxieties regarding general anesthesia and surgery.

## Aim

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Our aim in this study is to investigate how the patient's age, gender, the operation type , marital state and smoking affect the patient's anxieties.



# **Chapter Two**

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## **Patients and method**

## Patients and methods

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This descriptive cross-sectional study was performed on 100 patients in the anaesthesia clinic for preoperative examination in Al-Imamein El-kadhimain medical city from October 2018 to March 2019.

### **Selection criteria**

Patients of both sexes whom going to do elective surgery under general anesthesia were included in the study

### **Base line assessment**

Data was collected through a direct interview with the participants. A verbal consent was taken. Thorough information concerning the patient's condition was obtained, via the questionnaire, from the history. Details about the patient's age, gender, marital state, residency, educational level, smoking, premedication, type of surgery, all regarding general anaesthesia and how it affects the patient's anxieties were taken.

### **Exclusion criteria**

Patients with ASA Score III and more, emergency surgeries, and age below 10 or above 50 years old were all excluded.

### **ASA Score**

For the study, American Society of Anaesthesiologists (**ASA**) **Score** has been used. The **ASA physical status classification system** is a system for assessing the fitness of patients before surgery. In 1963 the American Society of Anaesthesiologists (ASA) adopted the five-category physical status classification system. These are:

1. Healthy person.
2. Mild systemic disease.
3. Severe systemic disease.
4. Severe systemic disease that is a constant threat to life.
5. A moribund person who is not expected to survive without the operation.

While Anxiety score answers were evaluated with Likert Scale as shown in questionnaire below, A total of 100 patients were recruited to the study, after excluding the patients who do not meet the criteria for inclusion, and 60 patients were included.

### **Statistical analysis**

Data were encoded and filled using Microsoft excel for windows then analyzed using SPSS Inc. version 24.

# Questionnaire

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Patient name:

Age:

Gender:            Male        Female

Marital state:    single    married    divorced    widow

Residence:        city        rural

ASA score:        I            II            III            IV            V

Educational level: Literate | primary school | middle school | high school | university

Smoker:            yes        no

Premedication:

Type of surgery:

## **Anxiety score:**

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	<b>Not at all</b>	<b>somewhat</b>	<b>moderately so</b>	<b>very much so</b>
1. I feel calm	(1)	(2)	(3)	(4)
2. I feel secure	(1)	(2)	(3)	(4)
3. I feel tense	(1)	(2)	(3)	(4)
4. I feel regretful	(1)	(2)	(3)	(4)
5. I feel at ease	(1)	(2)	(3)	(4)
6. I feel upset	(1)	(2)	(3)	(4)
7. I am worrying over possible misfortunes	(1)	(2)	(3)	(4)
8. I feel rested	(1)	(2)	(3)	(4)
9. I feel anxious	(1)	(2)	(3)	(4)
10. I feel comfortable	(1)	(2)	(3)	(4)
11. I feel self-confident	(1)	(2)	(3)	(4)
12. I feel nervous	(1)	(2)	(3)	(4)
13. I feel jittery	(1)	(2)	(3)	(4)
14. I feel high strung	(1)	(2)	(3)	(4)
15. I feel relaxed	(1)	(2)	(3)	(4)
16. I feel satisfied	(1)	(2)	(3)	(4)
17. I feel worried	(1)	(2)	(3)	(4)
18. I feel over-excited & rattled	(1)	(2)	(3)	(4)
19. I feel joyful	(1)	(2)	(3)	(4)
20. I am pleasant	(1)	(2)	(3)	(4)

# Chapter Three

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## Results

# Results

In this study, the most frequent age group were between 20 to 29 years old (45%) and less frequent age were 10 to 19 years old (13.3%), as well as there is little difference between two genders were males (58%) while females were (42%) as shown below in both Figures no.1 and 2.

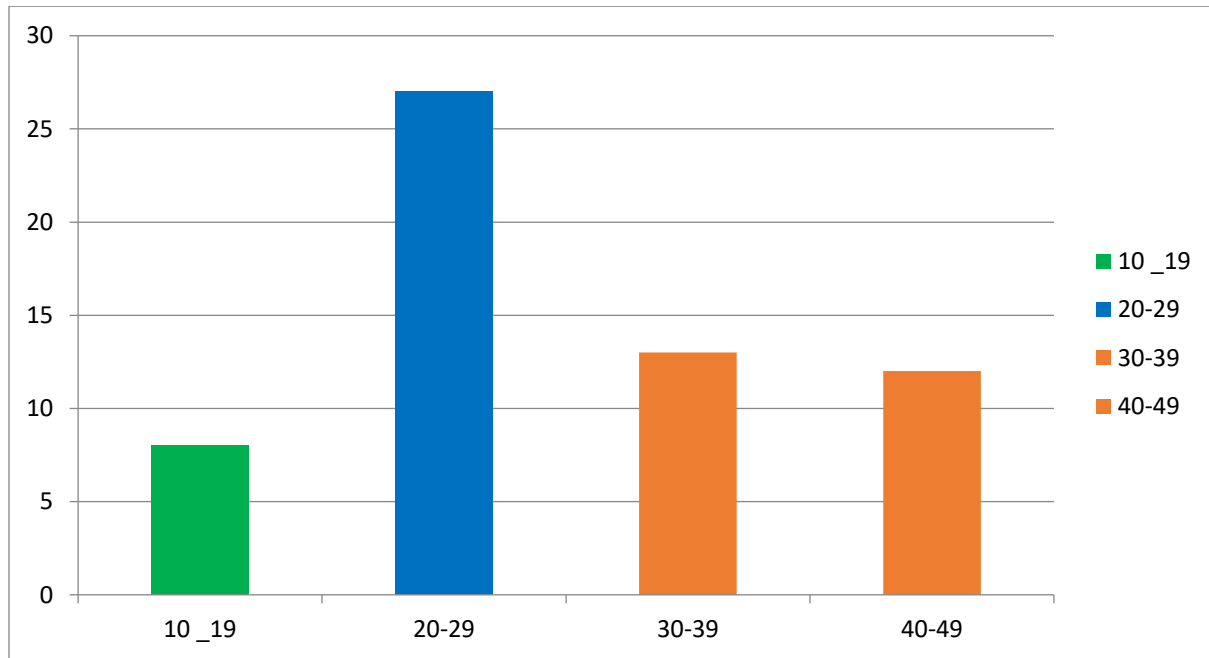


Figure 1: Frequency of age group in this study (The x axis represents the number of patients, while Y axis represent the age)

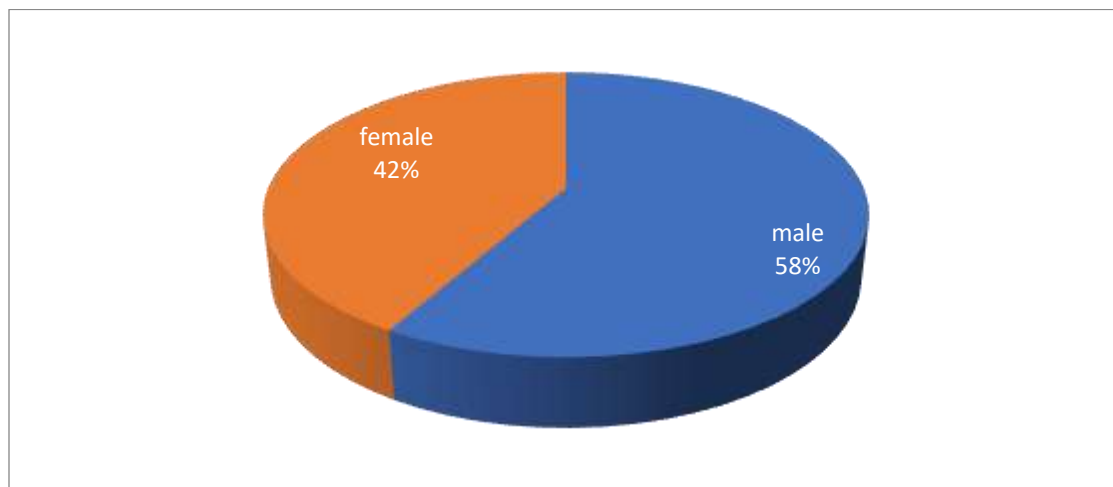


Figure 2: Percentage of gender in this study

The study was performed on patients whom ASA Score was either I or II only, were patients whom ASA Score was I form the majority (65%) while patients whom ASA Score was II form (35% ) of total percentage of patients . also Anxiety Score was in this study found to be high in (70%) of cases , while only (30%) found that they have mild or no anxiety , as shown below in figure no.3 and no.4 , respectively.

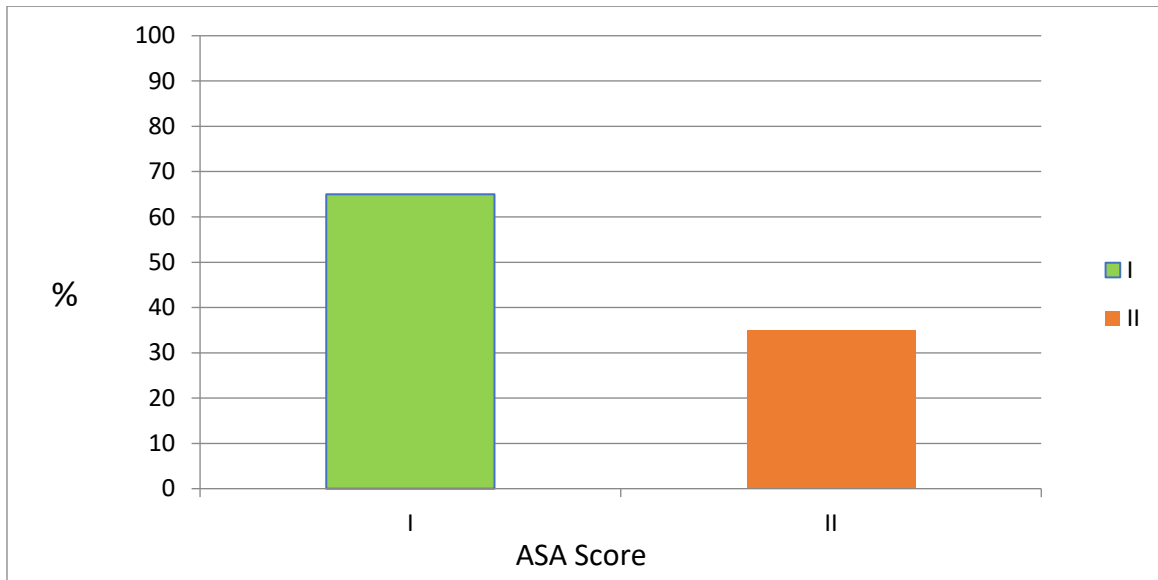


Figure 3: Percentage of ASA Score of total patients in this study

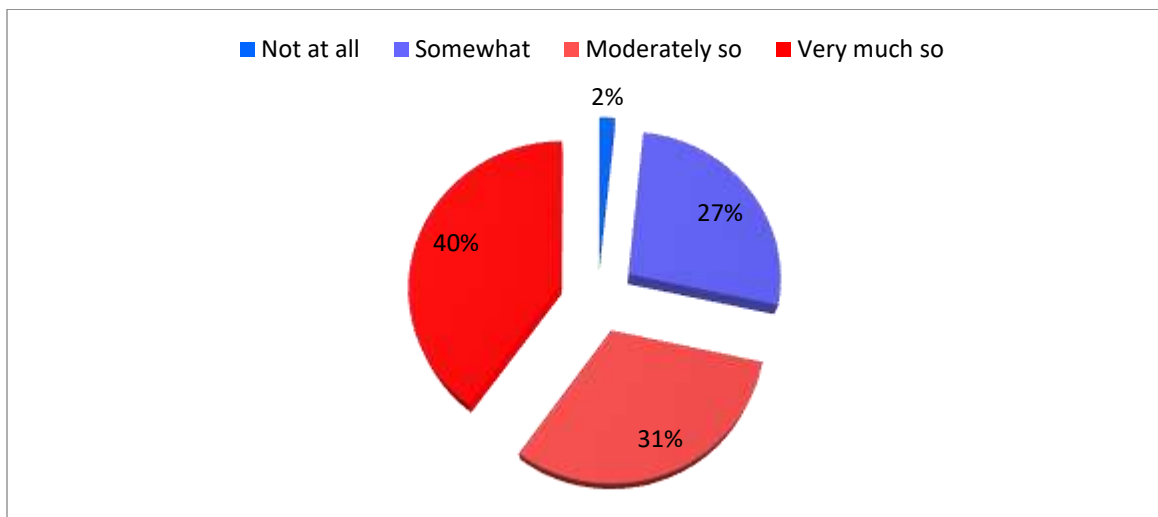


Figure 4: Percentage of Anxiety Score of total patients in this study

A positive and statistically significant correlation was determined between anxiety score and being female (90%), which is higher than in males (60%) as shown in table no.1 and figure no.5 below. Regarding the type of surgery Anxiety score was found to be higher in people ongoing major surgery like General surgery (80%), and less frequent anxiety counted in people ongoing ENT surgery (30%) as shown in table no2 and figure 6.

Table 1: Correlation between gender and anxiety score.

Gender	Anxiety Score								total
	Not at all		Somewhat		Moderately so		Very much so		
	N	%	N	%	N	%	N	%	
Male	1	2.9%	14	40.0%	13	37.1%	7	20.0%	35
Female	0	0%	2	8.0%	6	24.0%	17	68.0%	25
total	1	1.7%	16	26.7%	19	31.7%	24	40.0%	60

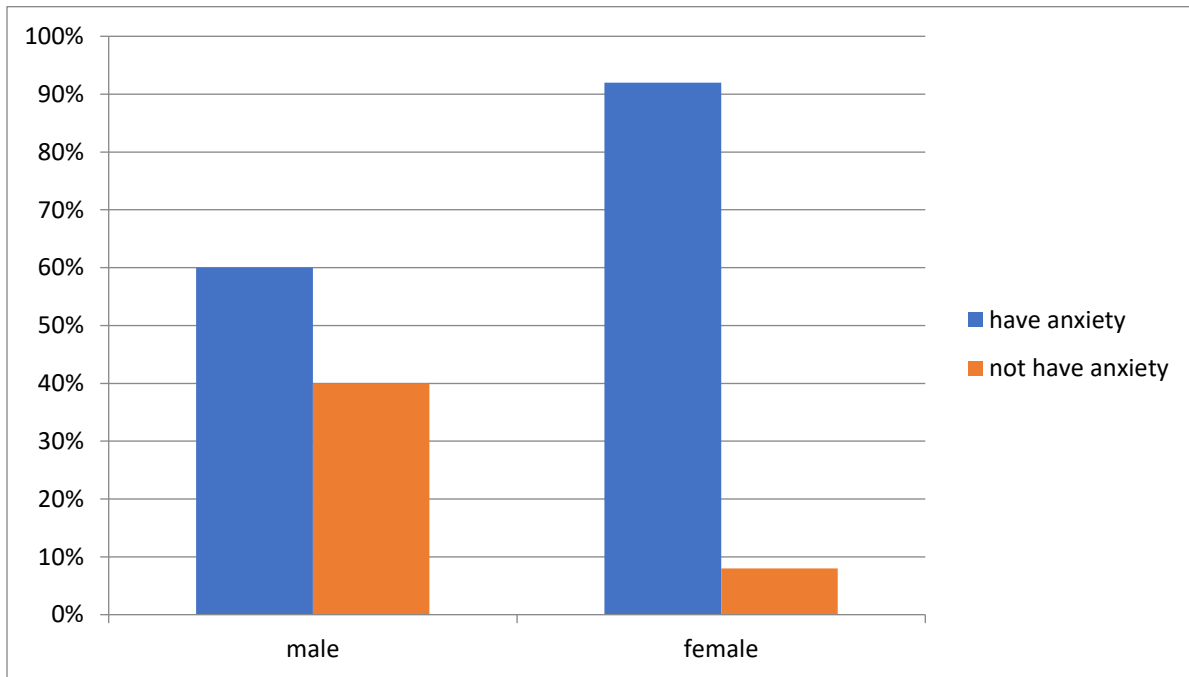


Figure 5: Correlation between gender and anxiety score



Table 2: Correlation between type of surgery and anxiety score.

Type of surgery	Anxiety Score								Total
	Not at all		Somewhat		Moderately so		Very much so		
	N	%	N	%	N	%	N	%	
General surgery	0	0%	4	19.0%	4	19.0%	13	61.9%	21
Orthopedic surgery	0	0%	1	20.0%	4	80.0%	0	0%	5
Gynecological surgery	0	0%	1	7.1%	5	35.7%	8	57.1%	14
Urological surgery	0	0%	4	44.4%	5	55.6%	0	0%	9
ENT Surgery	1	9.1%	6	54.5%	1	9.1%	3	27.3%	11
Total	1	1.7%	16	26.7%	19	31.7%	24	40.0%	60

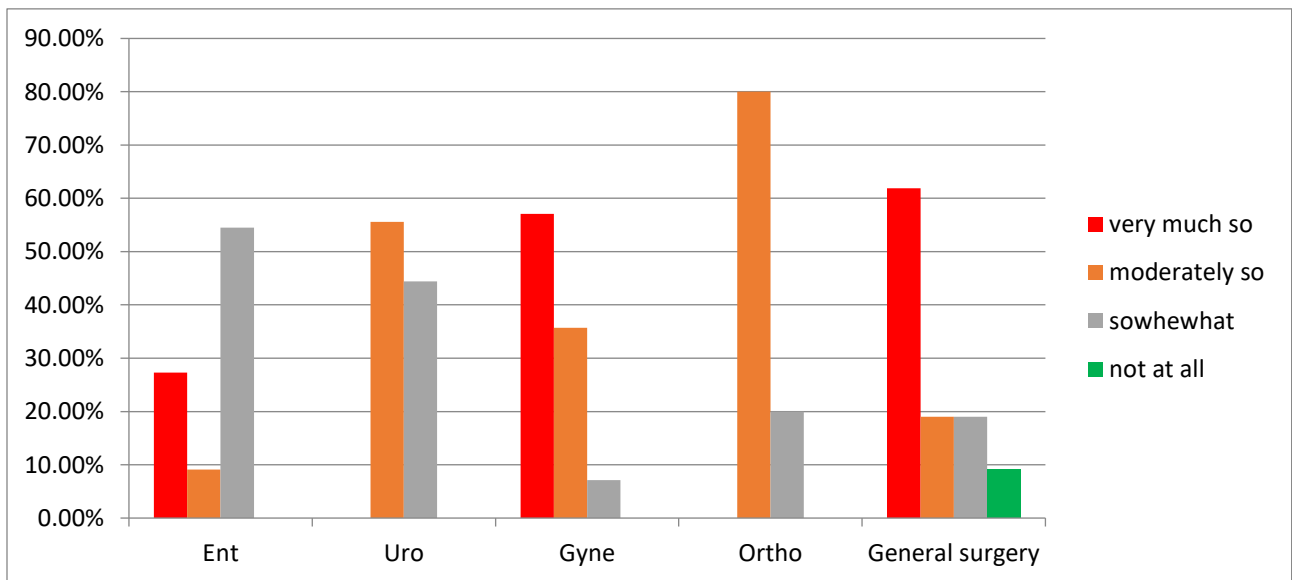


Figure 6: Correlation between type of surgery and anxiety score.

In this study ASA Score II was found to had a significant correlation with Anxiety score (90.4%) which is more than the percentage of anxiety in ASA I (61.5%) as shown below in figure no.7.

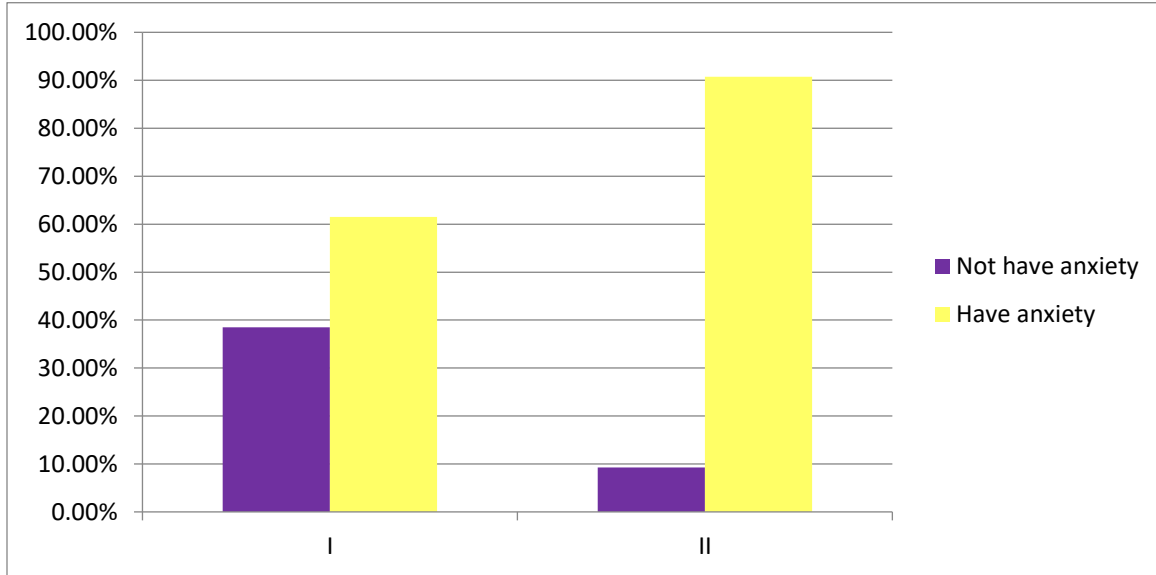


Figure 7: Correlation between ASA Score and anxiety score.

According to the marital state the study revealed equivocal anxiety level in single patients (50%) but higher in married patients (80%) also high in divorced and widow patients, as shown below in table no.3, while Anxiety score did not significantly differ according to the following parameters: smoking, educational state, residence.

Table 3 : Correlation between marital state and anxiety score.

Marital state	Anxiety Score								total
	Not at all		Somewhat		Moderately so		Very much so		
	N	%	N	%	N	%	N	%	
Single	1	3.8%	10	38.5%	7	26.9%	8	30.8%	26
Married	0	0%	5	20.8%	10	41.7%	9	37.5%	24
Divorced	0	0%	0	0%	1	20.0%	4	80.0%	5
Widow	0	0%	1	20.0%	1	20.0%	3	60.0%	5
Total	1	1.7%	16	26.7%	19	31.7%	24	40.0%	60

# Chapter Four

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## Discussion

## Discussion

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In this study which is done at Al-Imamein Al-Kadhimein medical city at, Baghdad, Iraq, 2019, positive and statistically significant correlation was determined between anxiety score and female gender (90%), and these results was found to be approximately similar to these reported by Jawaid et al [11] which stated that females had highest Anxiety scores.

Anxiety level with ASA Score II was significantly high (90.4%) while it was lesser in ASA I (61.5%) that goes with many other researches. Fekrat F et al [12].

Regarding the correlation between type of surgery this study revealed a greater level of anxiety associated with Major surgery like general surgery (80%) in comparison to anxiety which is associated with minor surgery like ENT surgery (37.4%) and these results were similar to these reported by Fekrat F et al [12]

In this cross-sectional study age is not that significance but in other study anxiety increase with increasing with age this because of the random way of samples collection that were reported by Jawaid et al [11].

# Chapter Five

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## Conclusion

## Conclusion

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- Anxiety before general anesthesia was higher in female patient than male
- Anxiety also higher in patients with medical illness whom ASA II than healthy patients whom ASA II.
- Type of surgery have a big effect on patient anxiety, so it was higher in patients on going major surgery than minor surgery.

# Recommendation

## Recommendation

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We think that being aware of the patients' anxiety and finding appropriate approaches for their anxieties can be valuable.

Patient satisfaction and superior outcomes can be achieved in this way.



# References

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