

# Levels and Determinants of Preoperative Anxiety in patients scheduled for Cataract Surgery

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## ABSTRACT

**Aim:** To assess the levels and determinants of pre-operative anxiety in patients scheduled for cataract surgery

**Methods:** Hundred patients scheduled for cataract surgery at Pak Red Crescent Medical and Dental College were enrolled. The levels of preoperative state anxiety were estimated through state portion of the State-Trait Anxiety Inventory (STAI), a night before surgery. In addition various determinants of anxiety were selected by the patients from a list provided to them.

**Results:** Majority of the patients (72%) had little or no anxiety while 28% had moderate anxiety. None of the participants had high levels of anxiety. Fear of subjective sensations during surgical procedure was the most common determinant for preoperative anxiety. Financial loss and concern about family ranked second and third.

**Conclusion:** The levels of anxiety in patients undergoing cataract surgery were significantly low. Fear of subjective sensations during surgical procedure was the most common factor responsible for preoperative anxiety.

**Keywords:** Anxiety, cataract surgery,

## INTRODUCTION

Anxiety is defined as the tense anticipation of a threatening or vague event which can be further divided into two dimensions: state and trait anxiety<sup>(1)</sup>. State anxiety is the experience of unpleasant feelings when confronted with specific situation, demand or a particular event. State anxiety is a temporary condition which arises when a person perceives some type of threat. It is no longer experienced when the situation perceived as threatening goes away. The Trait anxiety is referred to as relatively enduring difference among people in how they perceive the world and respond to it. It indicates individual differences in anxiety proneness. Anxiety in surgical patients is highly acknowledged<sup>(2-4)</sup>. Former researchers have reported that cataract patients can experience anxiety preoperatively, peroperatively, and postoperatively<sup>(5-8)</sup>. Studies have indicated that cataract related anxiety is maximum preoperatively. The anxiety level drops immediately after surgery<sup>6,9</sup>. There is scarcity of data in Pakistan on anxiety levels among patient undergoing cataract surgery. The current study was conducted to assess the levels and determinants of pre-operative anxiety in patients scheduled for cataract surgery. The rationale of this study was to generate initial data on this subject.

## MATERIALS & METHODS

The study was conducted at Department of Ophthalmology Pak Red Crescent Medical and Dental College Dina Nath District Kasur, Pakistan between August 2018 and January 2019. Hundred candidates of cataract surgery from both

sexes were included. Patients with known psychiatric disorder were excluded from study. Each patient was interviewed a night before surgery after taking informed consent. An already prepared list of possible determinants of anxiety was presented to patients and they were requested to select determinants which they thought were causing anxiety. Levels of anxiety were estimated through state portion of Spielberger State Trait Anxiety Inventory (STAI) questionnaire. The state portion of STAI contains 20 statements which are randomly arranged. Ten of them represent anxiety while other ten indicate relaxed and pleasant state of mind. Each statement has four response options 1, 2, 3 and 4. 1 stands for no anxiety at all, 2 indicates somewhat anxiety, 3 means moderate anxiety and 4 represents high level of anxiety. The patients had to choose one response for each statement. The scoring points for statements indicating anxiety are the same as those of response options. The scoring points for statements indicating absence of anxiety are counted in reverse order. The possible score for a respondent therefore ranged from 20 to 80. The scores obtained were sub classified as (20-37) indicating "absent or low level of anxiety", (38-44) indicating moderate anxiety and (45-80) indicating high level of anxiety.

## RESULTS

Mean age of the patients participated in study was 64.5 years (range 43- 88 years). Demographic characteristics of the patients are shown in table 1. Majority of the patients (72%) had little or no anxiety while 28% had moderate anxiety. None of the participants had high levels of anxiety (Table 2). Frequency and percentages of determinants of preoperative anxiety are shown in table 3.

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Table 1: Demographic characteristics of participants

Variables	No
<b>Age in years</b>	
40-60	36
61-80	62
Above 80	2
<b>Sex</b>	
Male	46
Female	54
<b>Education</b>	
Undermatric	67
Intermediate	18
Graduate	12
Post graduate	3
<b>Domicile</b>	
Rural	89
Urban	11

Table 2: Levels of Anxiety

Level of anxiety	Score	Frequency	%age
Little or no anxiety	20-37	72	72
Moderate	38-44	28	28
High	45-80	0.00	0

Table 3: Determinants of anxiety

Determinant	Frequency	%age
Fear of complications	16	16
Result of operation	12	12
Concern about family	29	29
Fear for one's life	2.00	2
Fear of subjective sensations during surgical procedure	57	57
Fear of losing sight	4	4
Financial Loss	30%	30
Fear of unknown	16	16
Needle phobia	8	8
Harm from mistake by medical/paramedical staff	5	5

## DISCUSSION

Majority of patients had little or no anxiety. Our results agree with those of Foggitt PS et al who reported average patient was not unduly anxious about cataract surgery<sup>(6)</sup>. Nijkamp MD et al also reported that little anxiety was present among patients coming in for surgical treatment cataract<sup>(9)</sup>. In contrast to that Chaudry S. et al in 1995 reported that all of the patients enrolled in their study had anxiety and worry before undergoing cataract surgery<sup>10</sup>. In fact the level of preoperative anxiety in cataract patients has declined over years. This is because technique of cataract surgery has improved step by step and has turned out to be of the safest procedures in medicine. The outstanding advantages of this surgery like smaller incisions, short surgical time and early restoration of vision have increased patient satisfaction. Positive outcome expectancies have alleviated anxiety in patients waiting for cataract surgery<sup>9</sup>.

The commonest determinant of preoperative anxiety was fear of subjective sensations during surgical procedure. Subjective sensations during cataract surgery have been reported by many researchers<sup>11-19</sup>. Several sensations such as sensitivity to microscope light, eye bulges and pain have been described by patients. Financial loss and concern about family were other two common predictors of

preoperative anxiety in our study. In literature different research workers have shown different results regarding determinants of preoperative anxiety. Chaudry S. et al reported that most common factor provoking anxiety in their study was concerns about success of surgery which was present in 64% of the participants. The second commonest factor was fear of staying immobile during surgery<sup>10</sup>. Jawaid et al. mentioned that concern about family was most common determinant of preoperative anxiety in their study. The fear of complications and results of surgery were second and third most common determinants in Jawaid's study<sup>20</sup>. Akinsulore A et al depicted fear of complications and result of the operation as major risk factors responsible for preoperative and post operative anxiety in patients undergoing major elective surgeries under general anesthesia in a tertiary hospital of Nigeria<sup>21</sup>. This is because lots of uncertainties are associated with the general surgical procedure performed under general anesthesia. According to Marback 33.3% of the patients were scared of surgical procedure, 54% were concerned about visual loss and 12.7% were afraid of table death<sup>22</sup>. This variation in presence and frequency of determinants may be on grounds that different researchers worked in different communities and diverse circumstances.

Our study has certain limitations. We did not measure levels of trait anxiety. Also the impact of trait anxiety on state anxiety was not evaluated. We likewise could not study the effect of co-morbidities on state anxiety. Further studies are required to address these dimensions.

## CONCLUSION

This study suggests that level of anxiety in patients scheduled for cataract surgery was significantly low. Fear of awareness during surgical procedure was the most common determinant of preoperative anxiety. Adequate patient education through preoperative patient counseling can help in further reducing preoperative anxiety levels.

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