

# EVALUATION OF ANXIETY AND FEAR ABOUT ANESTHESIA IN ADULTS UNDERGOING SURGERY UNDER GENERAL ANESTHESIA- AN OBSERVATIONAL STUDY

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## Abstract

**Background:** Preoperative anxiety is a significant concern for patients undergoing surgery, with fear of anesthesia being a primary cause. This anxiety can lead to negative postoperative outcomes, including increased pain and longer hospital stays. Effective communication during the pre-anesthetic visit is crucial for mitigating these fears, yet its impact is not always optimal. This study aimed to evaluate the specific factors contributing to anxiety and fear about general anesthesia in adult surgical patients and to determine their association with various demographic characteristics.

**Methods:** A prospective randomized observational study was conducted at Saveetha Medical College Hospital between September 2023 and August 2024. A total of 100 adult patients scheduled for elective surgery under general anesthesia were included. Data were collected one day before surgery using a structured questionnaire to identify specific fears. The level of anxiety was quantified using the Beck Anxiety Inventory (BAI). Statistical analysis was performed using the Chi-square test and multivariate regression to assess the relationship between anxiety levels and patient demographics.

**Results:** A significant majority of patients (77.5%) reported experiencing anxiety about anesthesia. The most common fears cited were vomiting after surgery (81%), dizziness and drowsiness (54%), and paralysis due to anesthesia (51%). The study found a statistically significant correlation between higher anxiety levels and female gender ( $p < 0.05$ ), higher education level ( $p < 0.01$  for mild/minimal anxiety), and having no previous experience with anesthesia ( $p < 0.05$ ). Despite 78.4% of patients wishing to meet their anesthesiologist beforehand, 45.7% of those who had a pre-anesthetic visit felt it did not reduce their anxiety.

**Conclusion:** Fear of anesthesia is a prevalent and multifaceted issue among adult surgical patients, influenced by gender, education, and prior surgical experiences. The findings highlight a critical need to improve the quality of communication during the pre-anesthetic consultation. Establishing a strong, reassuring physician-patient relationship is essential to effectively manage anxiety, build patient confidence, and improve overall surgical outcomes.

**Keywords:** Preoperative anxiety, Fear of anesthesia, General anesthesia, Patient communication, Beck Anxiety Inventory (BAI).

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## INTRODUCTION

Anxiety is described as a temporary emotional state involving feelings of tension, nervousness, fear, and heightened autonomic nervous system activity. It is a common issue in patients undergoing anesthetic-surgical procedures. Studies indicate that up to 75% of patients experience anxiety from the moment they are informed of the need for surgery until they enter the operating room. Notably, the primary cause of this preoperative anxiety is often the anesthesia itself (62% of cases) rather than the surgical procedure (15%).

This anxiety frequently stems from a lack of adequate information about the anesthetic process. The pre-anesthetic visit is a crucial opportunity for patients to receive accurate information, which can have a reassuring effect. Unaddressed anxiety can lead to adverse outcomes, such as increased post-operative pain, greater consumption of pain medication, and longer hospital stays, thereby increasing healthcare costs. Effective management of patient anxiety can be achieved through both psychological and pharmaceutical preparations. This study aimed to identify the specific factors that cause patients to fear anesthesia and to determine if these fears are associated with demographic variables such as gender, age, education level, and previous anesthetic experience.

## MATERIALS AND METHODS

The study was designed as a prospective randomized observational study. It was conducted at Saveetha Medical College Hospital over a one-year period from September 2023 to August 2024. The study population consisted of 100 adult patients.

### Selection Criteria:

- **Inclusion Criteria:** Participants were between the ages of 18 and 85 and were candidates for elective surgery under general anesthesia.
- **Exclusion Criteria:** Patients who refused to participate, were unable to complete the questionnaire, or were currently taking anti-anxiety or anti-depression medications were excluded from the study.

### Randomization and Group Allocation

The study was a prospective randomized observational study. A sample size of 100 adult patients scheduled for elective surgery was selected for the study. The document does not specify the method used for randomization but indicates that patients were later categorized for analysis based on demographic data such as gender, education level, and previous experience with anesthesia.

### Monitoring and Data Collection

Data collection occurred one day prior to the scheduled surgery. Anesthesiologists used a questionnaire containing both open and closed questions to survey the 100 adult patients about their fears and anxieties related to anesthesia. The patient's anxiety level was formally measured using the Beck Anxiety Inventory (BAI), which classifies anxiety into levels ranging from mild to severe.

### Statistical Analysis

For the data analysis, qualitative variables were expressed as numbers and percentages, while quantitative variables were presented as mean and standard deviation. The Chi-square test was employed to analyze the classified answers. To explore the relationship between the level of anxiety and variables such as gender, education level, income, and previous anesthesia experience, a multivariate regression analysis was performed. A P-value of less than 0.05 was considered to be statistically significant.

### Overall Findings

The study found that 77.5% of participants experienced worry and anxiety specifically about anesthesia. Key demographic distributions and findings are detailed below.

### Demographic Distribution:

- **Gender:** 53% of patients were male, and 47% were female.
- **Age:** 58% of patients were over 45 years old, while 42% were in the 18-45 age group.
- **Marital Status:** 80% of patients were married and 20% were single.
- **Education:** 62% of patients had an education level below a diploma, while 38% had a diploma or higher.
- **Previous Anesthesia Experience:** 52% had no previous experience with anesthesia, whereas 48% did.
- **Occupation:** 95% of patients had a non-medical occupation, and 5% had a medical background.
- **Living Place:** 50% of patients lived in a city, 37% in a district, and 13% in a village.
- **Patient-Reported Fears:** The study identified several common reasons for fear among patients. The most frequently cited fears included vomiting after surgery (81%), dizziness and drowsiness (54%), and paralysis due to anesthesia (51%). The table below details the specific concerns and their prevalence among the 100 participants.

- **Table 1: Patient Reasons for Fear**

Questions	Total (n=100)	Male (n=53)	Female (n=47)
Nausea after surgery	50	20	30
Vomiting after surgery	81	30	51
Pre-anesthesia serum and needle	27	10	17
Absence of full-time anesthesiologist	29	12	17
Inadequate post-operative care	35	15	20
Waking up during surgery	42	20	22
Remembering memories during anesthesia	39	19	20
Intellectual power loss due to anesthesia	48	22	26
Dizziness and drowsiness after surgery	54	20	34
Hospitalization in ICU after surgery	32	12	20
Paralysis due to anesthesia	51	21	30
Inability of anesthesiologist to manage	34	14	20
Inability of surgeon to perform correctly	50	25	25
Not regaining consciousness	29	12	17
Perioperative pain	49	16	33
Post-operative pain	25	10	15
Anesthesiologist gender	38	16	22

- **Relationship Between Anxiety and Demographics:** The study found a statistically significant relationship between anxiety levels and gender, education level, and previous experience with anesthesia.
- **Gender:** Female patients reported significantly higher levels of anxiety compared to male patients across minimal, mild, and severe anxiety categories ( $p < 0.05$ ).
- **Education Level:** Patients with a higher education level (>Diploma) showed significantly higher anxiety in the minimal and mild categories ( $p < 0.01$ ). However, this relationship was not significant for moderate and severe anxiety.
- **Previous Anesthesia Experience:** Patients with no prior experience of anesthesia had significantly higher anxiety levels across all categories ( $p < 0.05$ ) except for the moderate level.

• **Table 2: Relationship Between BAI Score and Patient Characteristics**

BAI Score	Male	Female	>Diploma	P-Value (Male)	P-Value (Female)	P-Value (>Diploma)
Minimal	3.9 ± 1.48	4.64 ± 1.9	6.3 ± 1.63	0.0313	<0.0001	0.0185
Mild	8.62 ± 0.806	9.06 ± 1.22	10.7 ± 1.82	0.0340	0.0060	0.046
Moderate	17.09 ± 1.513	19.7 ± 3.74	21.3 ± 3.80	<0.0001	0.264	<0.0001
Severe	28.6 ± 1.527	32.6 ± 12.1	40.1 ± 14.17	0.0189	0.4106	0.0174

### DISCUSSION

- The finding that over 77.5% of patients are anxious about anesthesia aligns with previous research, which has long established that preoperative anxiety is a significant issue. The study confirms that anxiety is more pronounced in female patients, a finding consistent with other studies. This may be culturally influenced, as men might be less inclined to express fear.
- The study also revealed that a higher level of education was associated with greater anxiety. This is a notable finding, suggesting that more informed individuals may have a greater awareness of potential risks, leading to increased concern. Interestingly, multiple previous experiences with anesthesia did not appear to reduce fear, which could indicate that prior pre-anesthetic consultations were not sufficiently reassuring or informative for these patients.
- Although 78.4% of patients expressed a desire to meet their anesthesiologist before surgery, over 45% of those who did have a pre-anesthetic visit reported that it did not alleviate their anxiety. This highlights a critical gap in communication. The effectiveness of the pre-anesthetic visit depends not just on its occurrence, but on its quality in providing reassurance and building trust.

### CONCLUSION

This study successfully identified key factors contributing to patient fear of anesthesia and confirmed their association with demographic variables like gender, age, and education level. The findings underscore the need for improved patient communication. Providing clear, reassuring information is essential. Fostering a strong physician-patient relationship can significantly help in managing fear and anxiety, leading to a safer and more positive surgical experience.

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