

# Anxiety Levels Among Preoperative Patients in Dr. Hasan Sadikin Hospital, Bandung

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Proceedings STIKep PPNI Jawa Barat

## Website :

<https://proceedings.stikep-ppnijabar.ac.id/index.php/psj>

Volume 1 (1), 155-161

## Article info

Received : December 28, 2024

Revised : April 22, 2025

Accepted : May 02, 2025

Published : May 19, 2025

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## Citation

Yuningsih, & Hayati, S. N. (2025). Anxiety Levels Among Preoperative Patients In Dr. Hasan Sadikin Hospital, Bandung. *Proceedings STIKep PPNI Jawa Barat*, 1(1), 155-161.

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## Abstract

**Objective:** This study aimed to evaluate the level of anxiety experienced by patients prior to undergoing surgery.

**Method:** A quantitative research approach was applied, as the data collected were numerical in nature and analyzed using statistical procedures. The study employed a descriptive design. The target population included preoperative patients admitted to the 4th floor Central Operating Theatre (COT) of RSUP Dr. Hasan Sadikin Bandung. Participants were selected through convenience sampling. Using G\*Power software version 3.1.9.4, the minimum required sample size was calculated to be 83 respondents.

**Results:** The demographic characteristics of the respondents showed that 28.92% (24 individuals) were in late adulthood, 61.45% (51 individuals) were female, and 42.17% (35 individuals) had attained a high school level of education. In terms of anxiety levels, 67.5% (56 respondents) reported moderate anxiety related to anesthesia, 68.7% (57 respondents) exhibited moderate anxiety about the surgical procedure itself, and 87.9% (73 respondents) experienced moderate anxiety concerning the information they received.

**Conclusion:** The results indicated that the majority of preoperative patients experienced moderate levels of anxiety. At this level, most patients were generally able to comprehend instructions and apply coping strategies effectively, suggesting the importance of tailored preoperative education and support to address their informational and emotional needs.

**Keywords:** preoperative anxiety, surgical patients, anesthesia, patient education, coping strategies

## INTRODUCTION

In today's era of globalization, shifts in human lifestyles have profoundly influenced the prevalence and progression of various diseases. In recent years, Indonesia has experienced an increase in both illness and mortality rates. Efforts to address these health challenges range from conservative, non-surgical treatments to more invasive, surgical interventions (Suhadi et al., 2020). Surgical procedures involve invasive techniques that typically include the opening

and exposure of targeted body parts. This process generally requires making an incision, repairing the affected area, and closing the wound with sutures (Syaminghidajat & De Jong, 2017). According to data from the World Health Organization (WHO), surgical care has been an integral component of global healthcare for over a century, with approximately 230 million surgeries performed annually worldwide. In Indonesia, data from the Ministry of Health (2016) ranks surgical interventions as the 11th most prevalent medical procedure,

accounting for 12.8% of medical cases. Among these, 32% are major surgeries, while 25.1% involve mental health disorders, and 7% are associated with anxiety. In West Java, the number of surgeries increased significantly by 89.96% from 2016 to 2017, with 3,884 cases reported in 2017 (Ministry of Health, RI, 2017). At Dr. Hasan Sadikin Hospital (RSHS), the utilization of operating rooms in 2022 exceeded its target of 65%, reaching a realization rate of 65.84% or 101.29%. Performance achievements for the medium-term target in 2024 reached 87.78%, with an increase of 15.87% in operating room utilization compared to 2021. Over a three-month period in 2023 (June to August), the hospital recorded 4,309 surgical cases at its Central Surgical Installation (Dr. Hasan Sadikin Hospital, 2022). These statistics indicate a consistent upward trend in surgical procedures over the years.

The preoperative phase plays a critical role in preparing patients to undergo surgery successfully, recover quickly, and avoid postoperative complications. The overall success of surgical procedures largely depends on this preparatory stage. Surgery often triggers significant physiological and psychological stress, with anxiety being a common reaction among patients awaiting surgical intervention (Amidos Pardede et al., 2021). Before surgery, patients undergo anesthesia, a medical procedure designed to alleviate pain, induce unconsciousness, and cause reversible amnesia. Anesthesia is categorized into general, local, and partial types. General anesthesia ensures the patient does not recall the surgical event and can be administered through inhalation, intravenous methods, or a balanced approach (Pramono, 2015; Kindangen, 2022).

Anxiety is characterized by feelings of unease, uncertainty, helplessness, and insecurity, often accompanied by fear unrelated to the present situation. It is commonly triggered by unfamiliar experiences (Stuart, 2017). Preoperative anxiety varies in intensity, ranging from mild unease to severe panic, depending on individual responses. Uncontrolled anxiety can lead to physiological disharmony, impaired

concentration, and maladaptive reactions that may disrupt surgical outcomes (Setyowati et al., 2022). Preoperative anxiety requires effective management, as it can induce physiological changes, such as elevated blood pressure, that complicate surgical procedures. For instance, heightened anxiety can hinder bleeding control during surgery and slow postoperative recovery (Amidos Pardede et al., 2021). Anxiety activates the sympathetic autonomic nervous system, increasing heart rate, blood pressure, and respiratory rate, which depletes the patient's energy and negatively impacts the surgery's success. Insufficient information is a primary contributor to pre-surgery anxiety (Islamiyah & Umiyyat, 2022).

Symptoms of preoperative anxiety include behavioral indicators such as restlessness and repetitive questioning, even after receiving answers. Physical signs may include an elevated pulse, rapid breathing, sweaty palms, and continuous movement. Anxiety is influenced by internal biological and psychological factors, as well as external environmental factors (Sutejo, 2018). Patients' concerns during the preoperative period often center around fears of postoperative pain, physical disfigurement, malignancy (if the diagnosis is unclear), surgical failure, anesthesia-related complications, or death. Other triggers include apprehensions about the operating room environment, surgical equipment, and medical staff (Trihadi, 2020). Anxiety disorders are prevalent in Indonesia, as demonstrated by research at Dr. Soekarjo Tasikmalaya Hospital, which found that 71.4% of preoperative patients experienced anxiety (Rismawan et al., 2019). To measure preoperative anxiety, the Amsterdam Preoperative Anxiety and Information Scale (APAIS) is commonly used. This instrument assesses both anxiety levels and the need for information (Perdana et al., 2016). Therefore, this study aimed to explore anxiety levels among preoperative patients in Dr. Hasan Sadikin Hospital, Bandung

## **METHODS**

### **Study Design**

This study utilized a descriptive quantitative design with a cross-sectional approach to evaluate anxiety levels among preoperative patients. Data were gathered through a validated instrument, the Amsterdam Preoperative Anxiety and Information Scale (APAIS). The research was conducted on the 4th floor of the Central Operating Theatre (COIT) building at Dr. Hasan Sadikin Hospital in Bandung.

### Sample

The study included 83 preoperative patients, with the sample size determined through G\*Power analysis for a two-tailed test. Parameters included a significance level ( $\alpha$ ) of 0.05, an effect size of 0.5, and a power ( $1-\beta$ ) of 0.8, ensuring adequate statistical power for regression analysis. Participants were recruited using purposive sampling, which allowed for the selection of individuals most relevant to the study objectives. Inclusion criteria encompassed patients scheduled for major surgical procedures, of either gender, undergoing surgery for the first time, and without diagnosed psychiatric disorders. Exclusion criteria included refusal to provide informed consent or the inability to complete the questionnaire due to language barriers or cognitive impairments.

### Instruments

The APAIS was employed to assess anxiety levels. Originally developed by Moerman et al. (1996), the scale consists of six items rated on a five-point Likert scale, with responses ranging from 1 ("Not at all") to 5 ("Extremely"). Anxiety scores are derived by summing responses to specific items, with higher scores indicating greater anxiety or information needs. The subscales assess anxiety related to anesthesia (items 1 and 2), anxiety related to surgery (items

4 and 5), and the need for information (items 3 and 6). The original version of the APAIS demonstrated strong internal consistency (Cronbach's alpha = 0.83), while the Bahasa Indonesia version, validated through a pilot study, showed comparable reliability (Cronbach's alpha = 0.81).

### Ethical Consideration

Ethical approval for the study was granted by the Institutional Review Board (IRB) of Dr. Hasan Sadikin Hospital. Participants were identified through a review of surgical schedules and medical records. Informed consent was obtained after providing detailed explanations of the study's objectives, procedures, and potential risks. The APAIS questionnaire was administered in a private setting to ensure confidentiality and minimize social desirability bias. Trained research assistants were available to address any participant queries, and feedback regarding the questionnaire was encouraged, though no significant issues were reported.

### Data Analysis

Data were analyzed using both descriptive and inferential statistics. Regression analysis was conducted to explore associations between anxiety levels and various demographic or clinical factors. Statistical significance was set at  $p < 0.05$ , and all analyses were performed using SPSS version 25.

### RESULTS

Based on Table 1, the majority of respondents (28.92%) were in the late adulthood age group (36–45 years). Most respondents were female (61.45%), and the largest proportion of respondents (42.17%) had a high school education.

**Table 1. Distribution of Characteristic Prevalence of Respondents**

Characteristic	Frequency (f)	%
Age		
Late teens (17-25)	9	10.84

Early adulthood (26-35)	13	15.66
Late adulthood (36-45)	24	28.92
Early Seniors (46-55)	15	18.07
Late Elderly (56-65)	22	26.51
Gender		
Man	32	38.55
Woman	51	61.45
Education		
Elementary School	12	14.46
Junior high school	18	21.69
Senior high school	35	42.17
College	18	21.69

Based on Table 2, the majority of respondents (74.7%) had a moderate level of anxiety based on the APAIS total score.

**Table 2. Distribution of anxiety frequency in surgical patients with a total score of APAIS**

Anxiety Level	Frequency (f)	%
High	14	16.9
Moderate	62	74.7
Low	7	8.4

Based on Table 3, most respondents (67.5%) had a moderate level of anxiety related to anesthesia.

**Table 3. Distribution of Anxiety Levels Related to Anesthesia**

Anxiety Level	Frequency (f)	Percentage (%)
High	22	26.5
Moderate	56	67.5
Low	5	6.0

Based on Table 4, the majority of respondents (68.7%) reported a moderate level of anxiety related to surgical procedures.

**Table 4. Distribution of Anxiety Levels Related to Surgical Procedures**

Anxiety Level	Frequency (f)	Percentage (%)
High	25	30.1
Moderate	57	68.7
Low	1	1.2

Based on Table 5, almost all respondents (87.9%) experienced a moderate level of anxiety related to information.

**Table 5. Distribution of Anxiety Levels Related to Information**

Anxiety Level	Frequency (f)	Percentage (%)
High	9	10.9

Anxiety Level	Frequency (f)	Percentage (%)
Moderate	73	87.9
Low	1	1.2

## DISCUSSION

The data in Table 1 indicates that a small proportion (28.92%), or 24 respondents, are in the late adulthood age range of 36-45 years. Late adulthood represents a critical stage for achieving an improved quality of life, which often coincides with heightened physical and psychological stress (Potter & Perry, 2016). Stuart (2017) notes that preoperative anxiety disorders frequently affect adults aged 21-45 years. Similarly, Ahsan (2017) emphasizes that anxiety can arise from internal factors. Contrasting this, research by Farah Feliska et al. (2022) suggests that adults exhibit greater cognitive maturity, enabling them to employ better coping mechanisms than children. According to Arifin (2021), as individuals age, their perspectives, attitudes, and understanding of problems or illnesses mature, leading to decreased anxiety levels. Consistent with this, the study revealed that respondents in late adulthood predominantly experienced moderate levels of stress. Beyond age, gender also significantly impacts anxiety levels.

The majority of respondents (61.45%) are female. Anxiety and psychiatric disorders affect both genders; however, men generally demonstrate higher resilience than women (Maharani, 2013). Saputri et al. (2016) explain that women tend to rely more on emotional responses, whereas men utilize logical reasoning. Men often analyze emotional memories before making active, emotion-independent decisions. Gumilang et al. (2022) observed that men typically experience mild anxiety levels due to frequent external interactions and access to information. Conversely, women, particularly housewives with limited external activities, often have reduced information exposure. Prima (2019), however, found that severe preoperative anxiety was more common in men, particularly those undergoing surgery for fractures. This could be

attributed to the physical limitations imposed by fractures on typically active men.

Education also plays a role in anxiety levels. As shown in Table 1, 42.17% of respondents, or 35 individuals, have completed high school. Research by Musyaffa et al. (2024) highlights that education influences anxiety by enabling individuals to process information more effectively and make better decisions. Similarly, Hasanah (2017) found that higher education equips individuals with the knowledge needed to understand disease and surgical procedures, reducing anxiety. Conversely, Putri, Darmayanti, and Dewi (2022) reported that highly educated individuals may still experience anxiety if they lack effective coping mechanisms, despite having access to extensive information. Anxiety is a natural reaction to challenging situations. Table 1.2 reveals that most respondents (74.7%), or 62 individuals, experience moderate anxiety according to their APAIS scores. Moderate anxiety is characterized by nervousness and restlessness but allows individuals to remain receptive to guidance (Stuart, 2017). The demographic characteristics in Table 1.1 show that respondents are predominantly adults, and Danu et al. (2021) argue that older adults tend to employ better coping mechanisms. Additionally, the most respondents have a high school education. Stuart (2019) emphasizes that higher education enhances critical thinking and sensitivity, enabling individuals to better manage internal and external pressures.

About 67.5% of respondents, or 56 individuals, experience moderate anxiety related to anesthesia. Providing thorough education about anesthesia procedures from healthcare professionals can significantly reduce physiological stress (Yulianti & Mulyono, 2021). Patubun et al. (2022) support this, asserting that preoperative health education effectively reduces anxiety through non-pharmacological

means. The data suggests that adult respondents with high school education are better able to process information, resulting in moderate anxiety levels related to anesthesia. Regarding anxiety associated with surgical procedures, 68.7% of respondents, or 57 individuals, report moderate levels of anxiety. Pre-surgical anxiety often stems from fears about the surgical process and postoperative pain. Marlina (2017) emphasizes the importance of healthcare professionals in reducing anxiety through health education, empathetic interactions, and emotional support. The moderate anxiety levels observed suggest effective education and support from nurses and doctors.

Lastly, study found that 87.9% of respondents, or 73 individuals, experience moderate anxiety related to information. Providing patients with clear explanations about surgical procedures, potential risks, complications, alternatives, and administrative processes is essential (Stuart, 2017). Nuraeni (2015) highlights that comprehensive information can correct misconceptions, reducing preoperative anxiety. Lubis (2019) similarly found that education from healthcare professionals minimizes misunderstandings about surgical procedures, fostering patient confidence. The findings suggest that effective communication from healthcare providers plays a critical role in alleviating anxiety, as most respondents reported moderate anxiety levels.

## CONCLUSION

This study reveals that preoperative patients generally experience a moderate level of anxiety. At this stage, patients are still able to comply with instructions and effectively manage their coping mechanisms. To address this, it is recommended that operating room nurses prioritize creating a comforting and supportive environment for patients. This approach ensures that patients feel attended to and valued, reducing the likelihood of feeling neglected. By fostering a sense of reassurance and care, preoperative anxiety can be managed more effectively, ultimately contributing to better overall patient outcomes.

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