

Reducing Pre-Operative Anxiety in Major Surgery Patients (Laparotomy) Through Emotional Support and Deep Breathing Relaxation Therapy at Hospital X

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Preoperative anxiety is a common psychological response among patients undergoing major surgery and may negatively affect physiological stability and surgical outcomes. This study aimed to examine the effectiveness of emotional support and deep breathing relaxation in reducing preoperative anxiety among major laparotomy patients at RSUD X. A quantitative quasi-experimental study with a one-group pretest–posttest design was conducted involving 10 patients selected through total sampling. Anxiety levels were measured using the Amsterdam Preoperative Anxiety and Information Scale (APAIS). The intervention, consisting of emotional support and deep breathing relaxation, was administered for 10–15 minutes before surgery. Data were analyzed using the Paired Sample t- test. The results demonstrated a significant reduction in anxiety levels following the intervention ($p = 0.02$). These findings indicate that emotional support and deep breathing relaxation are effective non-pharmacological nursing interventions for reducing preoperative anxiety and may improve patients' psychological readiness before major surgery.

Keywords: Preoperative anxiety, Emotional support, Deep breathing relaxation, Laparotomy patients, Nursing intervention

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1. Introduction

The perioperative phase consists of three phases: preoperative, intraoperative, and postoperative [1]. The preoperative phase is the initial stage of perioperative care, beginning when the patient enters the treatment room and ending when the patient is transferred to the operating table for the surgical procedure [2]. Surgery can pose both potential and actual threats to a person's integrity, triggering physiological and psychological stress responses [2]. One psychological response that often occurs in patients undergoing surgery is anxiety [3]

Preoperative anxiety is a condition where, before surgery, individuals who have never had surgery before experience excessive fear and worry about undergoing surgery due to the feeling of being threatened [4]. Anxiety, or fear, is a subjective feeling experienced by patients before undergoing surgery. This feeling is related to a feeling of inability to cope with physical or mental functions [5]

Psychological reactions, such as anxiety, exhibited by patients before surgery range from mild to moderate to severe, with some patients reaching the panic level [6]. Managing preoperative anxiety is crucial because anxiety can impact various aspects of health and surgical outcomes. Anxiety can interfere with the body's physiological response to surgical procedures, such as increasing blood pressure, heart rate, and stress hormone levels, which can lead to surgical cancellation or postponement [1] Recent research shows that

interventions aimed at managing preoperative anxiety, such as cognitive behavioral therapy, hypnosis, relaxation, and emotional support, can reduce anxiety levels and improve surgical outcomes and postoperative recovery [7].

Preoperatively, emotional support and deep breathing relaxation are effective in reducing anxiety [8]. One important aspect of healthcare is emotional support, as this intervention impacts the patient's emotional and physical well-being. The scope of emotional support provided by nurses to patients experiencing high levels of anxiety includes providing warmth, understanding, and emotional attention [9]. This intervention can provide a sense of comfort and calm, thereby reducing sympathetic nervous system activity and the production of stress hormones such as cortisol and adrenaline when someone is anxious [10]. This also affects rapid heart rate, shortness of breath, and muscle tension [3]. This support is essential for helping patients cope with anxiety and significantly improves their morale [9].

Deep breathing relaxation techniques involve regulating breathing to be deeper, slower, and more controlled, which can help reduce the body's response to stress and anxiety [11]. By practicing deep breathing relaxation, patients can shift their attention from anxious thoughts to focusing on their breathing, thereby relaxing the body and reducing anxiety levels [12].

A preliminary study conducted by the author on patients in the inpatient ward of Hospital X, found that the average client exhibited anxiety before major surgery. They worried about various potential outcomes, such as failure, changes in physical condition, and pain. Therefore, interventions are needed to help reduce anxiety levels through emotional support and deep breathing relaxation techniques, so clients can feel calmer and more prepared for surgery.

2. Literature Review

In addition to physical complications, preoperative laparotomy patients commonly experience anxiety, defined as an emotional response to perceived threats or uncertainty, accompanied by psychological tension and physiological changes such as increased heart rate and blood pressure [13]. Anxiety levels range from mild to panic and are influenced by cognitive appraisal, perceived threat, and feelings of helplessness [14]. Preoperative anxiety is commonly assessed using the Amsterdam Preoperative Anxiety and Information Scale (APAIS) [10]. Nursing interventions to manage anxiety include non-pharmacological approaches such as deep-breathing relaxation, emotional support, distraction, and patient education, which have been shown to reduce sympathetic nervous system activity and stress hormone levels, thereby promoting patient calmness and cooperation prior to surgery [3].

Based on the literature review, preoperative anxiety remains a common psychological problem among patients undergoing major surgery and may adversely affect physiological stability and postoperative recovery [12]. Although non-pharmacological nursing interventions such as emotional support and deep-breathing relaxation therapy have been recommended to reduce anxiety levels, their implementation and combined effectiveness are not consistently evaluated in quantitative clinical settings [13]. Previous studies tend to examine these interventions separately or focus on specific surgical populations, leaving limited empirical evidence regarding their combined effect on reducing preoperative anxiety in major surgery patients, particularly in regional hospital settings. Therefore, this study is conducted to address this gap by formulating the following research problem: Is there an effect of emotional support and deep-breathing relaxation therapy on the reduction of preoperative anxiety levels among major surgery patients at RSUD X?

3. Methods

This scientific study employed a quantitative method using a quasi- experimental design with a one-group pretest–posttest approach. The dependent variable was anxiety level, while the independent variables included emotional support and deep breathing relaxation techniques. Data analysis was conducted using the Paired Sample t-test to determine differences in mean anxiety levels before and after the intervention within the same group. The study population

consisted of 10 patients scheduled for major laparotomy surgery at RSUD X, selected using a total sampling technique. Inclusion criteria included patients undergoing their first laparotomy surgery, experiencing preoperative anxiety, able to communicate effectively, and willing to participate as respondents. The focus of this study was the application of non- pharmacological therapy to reduce preoperative anxiety.

The instruments used included questionnaires, observation sheets, and nursing care documentation. Anxiety levels were measured using the Amsterdam Preoperative Anxiety and Information Scale (APAIS). Interventions consisting of emotional support and deep breathing relaxation techniques were provided according to standard operating procedures for 10–15 minutes and could be repeated to achieve optimal results. After the intervention, anxiety levels were reassessed using the same instrument. Data collection methods included in-depth interviews to explore patients’ complaints and health conditions, direct observation of patients’ clinical conditions prior to surgery, and documentation studies derived from medical records and supporting examinations.

Data analysis was conducted by presenting field findings and comparing them with relevant theories and previous research. The analysis stages included data collection, data reduction, data presentation, and conclusion drawing, arranged systematically and narratively. Data were presented in tables or descriptive narratives while maintaining respondent confidentiality. The case study was conducted from August 9 to September 30, 2025, in the VK and Nusa Indah 3 wards of RSUD X. Ethical principles applied in this study included informed consent, anonymity, confidentiality, and non- maleficence.

4. Results and Discussion

Case Study Results

Frequency Distribution of Respondent Characteristics

Table 1 1Distribution of Respondents Based on Respondent Characteristics (n: 10)

Characteristics	Group	F	%
Gender	Woman	9	90%
	Man	1	10%
Total		10	100%
Age	15 – 25 years	4	40%
	26 – 35 years old	3	30%
	36 – 45 years old	2	20%
	46 – 55 years old	1	10%
Total		10	100%
Education	Elementary School	0	0%
	Junior High School	2	20%
	High School	6	60%
	College	2	20%
Total		10	100%

Characteristics	Group	F	%
Work	housewife	5	50%
	Students	1	10%
	Farmer	1	10%
	Private	2	20%
	civil servant	1	10%
Total		10	100%

Based on Table 1, the average age of respondents is 15-25 years. The education level is elementary school (0%), junior high school (20%) 2 respondents, high school (60%) 6 respondents and college (20%) 2 respondents. The occupation of respondents is mostly housewife (50%) 5 respondents.

Comparison of Respondents' Anxiety Levels

Table 2 Comparison of Respondents' Anxiety Pre and Post Emotional Support and Deep Breathing Relaxation (n: 10)

Variables	Indicator	Frequency	Percentage (%)
Pre Emotional Support & RND	No worries	0	0%
	Light	0	0%
	Currently	2	20%
	Heavy	8	80%
	Very heavy	0	0%
Total		10	100%
Emotional Support Post & RND	No worries	0	0%
	Light	2	20%
	Currently	8	80%
	Heavy	0	0%
	Very heavy	0	0%
Total		10	100%

Based on Table 2 above, it is known that before the intervention, most respondents experienced preoperative anxiety ranging from moderate to severe. However, after the intervention, 8 respondents (80%) experienced a decrease in moderate anxiety, while the remaining 20% experienced mild anxiety. These results indicate that emotional support and deep breathing relaxation have a positive effect on reducing preoperative anxiety in patients.

Comparison of Average Pre and Post Anxiety Levels

Table 32 Statistical Comparison of Mean Anxiety Levels Pre and Post Emotional Support and Deep Breathing Relaxation (n : 10)

Paired Samples Statistics					
		N	Mean	Standard Deviation	Std. error Mean
Pair 1	Pre	10	21.40	2,366	.748
	Post	10	15.80	2,201	.696

Table 3 illustrates the changes in respondents' anxiety levels before and after providing emotional support and deep breathing relaxation. The mean anxiety level before deep breathing relaxation was 21.40 with a standard error of 0.748. The mean anxiety level after the intervention was 15.80 with a standard error of 0.696.

Statistical Analysis of the Effect of Emotional Support and Deep Breathing Relaxation on Anxiety in Major Preoperative Patients

Table 4 Statistical Analysis of the Effect of Emotional Support and Deep Breathing Relaxation on Anxiety in Major Preoperative Patients

Paired Samples Correlations				
Pair		N	C	Sig.
1	Pre Emotional Support and RND & Post Emotional Support and RND	10	.828	.002

Based on Table 4 above, it is known that emotional support and deep breathing relaxation were statistically proven to have a positive effect ($p < 0.05$) in reducing pre-operative anxiety levels in laparotomy patients. Therefore, this intervention can be implemented in patient care prior to surgery, particularly laparotomy, to improve patient readiness for the procedure and increase the chances of success.

Discussion

Based on the assessment that has been conducted on 10 patients in the inpatient room of Hospital X, the same diagnosis was obtained among the 10 patients, namely Anxiety due to fear of failure and feeling worried about the consequences of the conditions faced. The data found from the results of the assessment of 10 patients in general are subjective data that the patient said he was worried about having surgery, objective data in the form of patients looking anxious and restless, patients asking a lot about their condition, patients often asking about the schedule and procedure of the operation.

Anxiety is a condition characterized by the emergence of fear accompanied by the appearance of somatic signs that indicate increased activity of the autonomic nervous system. Anxiety, or fear, is a subjective feeling experienced by patients before undergoing surgery. This feeling, such as anxiety associated with a feeling of being unable to cope with physical and mental functions [15]

The author prioritizes *anxiety* as the primary diagnosis because anxiety is the patient's primary complaint. In the same 10 cases, what differentiates anxiety in 10 patients is the level of anxiety. The level of anxiety before being given the application of emotional support and deep breathing relaxation in patient 1 was 17 (moderate anxiety), the level of anxiety in patient 2 was 22 (severe anxiety), the level of anxiety in patient 3 was 18 (moderate anxiety), the level of anxiety in patient 4 was 20 (severe anxiety), the level of anxiety in patient 5 was 22 (severe anxiety), the level of anxiety in patient 6 was 22 (severe anxiety), the level of anxiety in patient 7 was 23 (severe anxiety), the level of anxiety in patient 8 was 24 (severe anxiety), the level of anxiety in patient 9 was 24 (severe anxiety), the level of anxiety in patient 10 was 22 (severe anxiety).

Previous research conducted by [8] showed that respondents' anxiety levels decreased significantly after deep breathing relaxation. Statistically, deep breathing relaxation has a positive effect on reducing preoperative anxiety levels of fracture patients. Another study conducted by [3] based on the results of statistical test analysis using Spearman-rho obtained a significant value between nurses' emotional support and preoperative anxiety levels of patients, P value $0.00 < 0.05$. So it can be concluded that there is a significant relationship between nurses' emotional support and preoperative anxiety levels of patients in the Multazam Room of RSI Siti Hajar Mataram.

In this study, researchers applied non-pharmacological interventions to reduce anxiety to 10 patients, including emotional support and 10-15 minutes of deep breathing relaxation therapy. The interventions were administered twice: 5 hours before surgery and 1 hour before surgery. Emotional support is a nursing intervention that focuses on meeting the patient's psychological needs. This support can include listening

to the patient's concerns, providing clear information about the procedure, demonstrating empathy, and providing motivation to help the patient feel calmer. Meanwhile, deep breathing relaxation techniques are a non-pharmacological intervention aimed at reducing muscle tension and stimulating the parasympathetic nervous system, thereby reducing anxiety.

The evaluation results showed that after approximately 10–15 minutes of intervention, anxiety levels decreased from severe to mild, the patient felt calmer and was able to control his breathing well. Vital signs were within normal limits, and the patient's facial expression appeared more relaxed. The nursing plan was adjusted to the established diagnosis, so that the interventions provided were the same for all 10 patients. There was no discrepancy between the facts from the 10 patients and the existing theory.

Based on the results of statistical analysis using paired sample test, a significant value was obtained between emotional support and deep breathing relaxation with the level of anxiety of pre-operative patients, P value $0.02 < 0.05$. This proves that emotional support and deep breathing relaxation techniques are effective in reducing the level of anxiety of pre-operative laparotomy patients at Hospital X.

5. Conclusion

Based on the case study conducted on 10 patients experiencing preoperative anxiety prior to laparotomy surgery at RSUD X, all respondents demonstrated a reduction in anxiety levels after receiving emotional support and deep breathing relaxation interventions. Measurements using the Amsterdam Perioperative Anxiety and Information Scale (APAIS) revealed that before the intervention, most respondents experienced moderate to severe anxiety. Following the intervention, anxiety scores decreased across all respondents, with a shift toward mild and moderate anxiety categories. These findings indicate that the non-pharmacological interventions implemented were effective in improving patients' psychological conditions prior to surgery.

Furthermore, statistical analysis using the Paired Sample t-test yielded a p-value of 0.02 ($p < 0.05$), indicating a significant difference in anxiety levels before and after the intervention. This evidence confirms that emotional support and deep breathing relaxation techniques are effective in reducing preoperative anxiety among laparotomy patients at RSUD X. Therefore, these interventions are recommended as non-pharmacological nursing approaches to reduce anxiety prior to major surgery.

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