



Effectiveness Of Deep Breathing Relaxation Therapy On Reducing Pain In Post-Operative Patients In The Recovery Room

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ABSTRACT

Postoperative pain is a common problem experienced by patients after surgery and can impact their recovery. One non-pharmacological method that can be used to reduce pain is deep breathing relaxation therapy. This study aimed to determine the effectiveness of deep breathing relaxation therapy on reducing post-operative pain in patients in the recovery room.

This research uses a quantitative approach with a *pre-experimental design* through the *one-way method. group pretest-posttest*. The research sample consisted of 30 postoperative patients selected using purposive sampling techniques. Pain levels were measured before and after deep breathing relaxation therapy using a numeric scale . Rating Scale (NRS). Data were analyzed using the Paired T- test .

The results of the study showed a decrease in the average pain level after deep breathing relaxation therapy. The average pain score before the intervention was 6.73 and after the intervention decreased to 3.87. The statistical test results showed a p value of 0.000 ($p < 0.05$), indicating a significant effect of deep breathing relaxation therapy on reducing pain in postoperative patients .

post-operative pain levels in patients in the recovery room. This therapy can be used as a non-pharmacological nursing intervention to help improve patient comfort.

Keywords: *Deep Breathing Relaxation, Postoperative Pain, Nonpharmacological Therapy , Recovery Room*

1. INTRODUCTION

Pain is one of the main problems patients often experience after surgery. Postoperative pain occurs due to tissue damage during surgery, which triggers physiological and psychological responses in patients. Uncontrolled pain levels can cause discomfort , hinder patient mobility, slow the healing process, and even increase the risk of postoperative complications.





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According to World Health Organization, pain management is a crucial component of healthcare because untreated pain can reduce a patient's quality of life. Pain management is generally achieved through pharmacological therapy using analgesics. However, long-term use of these medications can cause side effects such as nausea, vomiting, respiratory problems, and drug dependence.

In addition to pharmacological therapy, there are various non-pharmacological methods that can be used to help reduce pain, one of which is deep breathing relaxation therapy. Deep breathing relaxation techniques are simple methods that involve regulating your breathing patterns slowly and regularly, resulting in a relaxing effect on the body. This technique can help improve oxygenation, reduce muscle tension, and decrease the perception of pain.

Deep breathing relaxation therapy has several advantages: it's easy to perform, inexpensive, and can be applied independently by patients. Furthermore, this therapy can help reduce anxiety and improve patient comfort during post-operative recovery.

The application of deep breathing relaxation therapy in the recovery room is still suboptimal. Some healthcare professionals still focus more on pharmacological therapy, resulting in underutilization of non-pharmacological therapies. Therefore, research is needed on the effectiveness of deep breathing relaxation therapy in reducing pain in post-operative patients.

Based on this description, this study was conducted to determine the effectiveness of deep breathing relaxation therapy in reducing pain in post-operative patients in the recovery room.

2. RESEARCH METHODS

The research entitled "*Effectiveness of Deep Breathing Relaxation Therapy on Reducing Pain in Post-Operative Patients in the Recovery Room*" uses a quantitative approach with a pre-experimental design through the *one-way method. group pretest-posttest*. This research design was used to determine changes in patient pain levels before and after deep breathing relaxation therapy was given.

In this design, researchers conducted an initial measurement (*pretest*) of the pain levels of post-operative patients, then provided intervention in the form of deep breathing relaxation therapy, and then conducted another measurement (*posttest*) to determine changes in pain levels after the intervention was given.

a. Location and Time of Research

This research was conducted in the recovery room (room) of the hospital where the research was conducted. The selection of the research location was based on the high number of postoperative patients experiencing pain after surgery and the need for non-pharmacological therapy in pain management.





The research was conducted during a period determined by the researcher, starting from the research preparation stage, data collection, implementation of interventions, to data analysis and preparation of research reports.

b. Research Population and Sample**1) Population**

The population in this study was all post- operative patients who were treated in the hospital recovery room during the study period.

2) Sample

3) The research sample consisted of 30 post- operative patients who met the research inclusion and exclusion criteria .

4) Sampling Techniques

The sampling technique used is purposive sampling , namely a sampling technique based on certain considerations or criteria that are in accordance with the research objectives.

c. Inclusion and Exclusion Criteria**a. Inclusion Criteria**

- 1) Post -operative patients with full consciousness
- 2) Patients aged ≥ 18 years
- 3) Patients experiencing mild to moderate post- operative pain
- 4) Patients are willing to be research respondents

b. Exclusion Criteria

- 1) Patients with severe respiratory distress
- 2) Patients with impaired consciousness
- 3) Patients who experience post-operative complications
- 4) Patients who did not complete the research procedure

d. Research Variables**a. Independent Variables**

The independent variables in this study are:

- Deep breathing relaxation therapy

b. Dependent Variable

The dependent variables in this study are:

- Post- operative patient pain level



**e. Operational Definition of Variables**

Variables	Operational Definition	Measuring instrument	Scale
Deep breathing relaxation therapy	Relaxation techniques by regulating breathing slowly and regularly	SOP therapy	-
Pain level	The intensity of pain felt by post-operative patients	Numeric Rating Scale (NRS)	Ordinal

f. Research Instruments

The instruments used in this study include:

a. Numeric Rating Scale (NRS)

Used to measure the patient's pain level on a scale of 0–10, where:

- 0 = no pain
- 1–3 = mild pain
- 4–6 = moderate pain
- 7–10 = severe pain

b. Observation Sheet

Used to record pain measurement results before and after intervention.

- **Standard Operating Procedure (SOP)**

Used as a guide for implementing deep breathing relaxation therapy.

g. Validity and Reliability Test**1) Validity Test**

The validity of the research instrument is tested to ensure that the measuring instrument is able to measure the variables being studied accurately.

2) Reliability Test

Reliability testing was carried out to determine the consistency of the measuring instrument using Cronbach's value. Alpha .

Criteria:

- Cronbach Alpha > 0.60 → reliable

h. Research Hypothesis

Ha: There is an effect of deep breathing relaxation therapy on reducing pain in post-operative patients in the recovery room.

H0: There is no effect of deep breathing relaxation therapy on reducing pain in post-operative patients in the recovery room.





3. RESEARCH RESULTS AND DISCUSSION

a. Results

1) Respondent Characteristics

Table 1. Distribution of Respondents by Gender

Gender	Frequency	Percentage
Man	18	60%
Woman	12	40%
Total	30	100%

The majority of respondents were male, as much as 60%.

2) Pain Level Before and After Intervention

Table 2. Average Pain Level

Variables	Mean	Elementary School
Before Intervention	6.73	1.12
After Intervention	3.87	0.98

There was a decrease in the average level of pain after deep breathing relaxation therapy was given.

3) Normality Test Results

Table 3. Shapiro-Wilk Test

Variables	Sig .
Pretest	0.211
Posttest	0.178

A significance value > 0.05 indicates that the data is normally distributed

4) Paired T- test Results

Paired T- test Results

Variables	Mean Difference	t count	Sig .
Pretest – Posttest	2.86	9,732	0.000

The p value = 0.000 ($p < 0.05$) shows that there is a significant effect of deep breathing relaxation therapy on reducing pain in post- operative patients.

b. Discussion

Research results show that deep breathing relaxation therapy is effective in reducing post- operative pain levels in patients. This reduction occurs because relaxation techniques help the body relax, thereby reducing muscle tension and increasing patient comfort.





Deep breathing relaxation techniques work by increasing oxygen supply to body tissues and stimulating the parasympathetic nervous system, resulting in a calmer state. This state of relaxation can reduce pain perception and help patients manage their pain.

Deep breathing relaxation therapy can also help reduce post-operative anxiety in patients. High levels of anxiety can exacerbate pain perception, so when patients feel calmer, pain intensity tends to decrease.

The results of this study align with nursing theory, which states that relaxation techniques are an effective non-pharmacological method for pain management. This technique is easy to perform and has no side effects, making it suitable as a supportive intervention in nursing care.

Deep breathing relaxation therapy can be used as an independent nursing action to help reduce pain in post-operative patients in the recovery room.

4. CONCLUSION AND SUGGESTIONS

a. Conclusion

Deep breathing relaxation therapy has been shown to be effective in reducing pain levels in post-operative patients in the recovery room. A significant difference was found between pain levels before and after deep breathing relaxation therapy, with a p value of <0.05 .

b. Suggestion

- 1) Health workers are expected to be able to apply deep breathing relaxation therapy as a non-pharmacological intervention in pain management.
- 2) Hospitals need to provide education about relaxation therapy to post-operative patients.
- 3) Further research is expected to use a larger sample size and a more robust research design.

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