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Benson Relaxation Therapy to Reduce Pain: a Quasy Experimental Study on Post Digestive Surgery Patients

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Abstract

Background: Postoperative pain is the body's reaction to tissue damage (ranging from skin incisions to damage from surgery), stretching or tightening of internal organs, and diseases (eg cancer, spinal diseases, etc.). The purpose of this study was to The Different Effect of Benson Relaxation Therapy on Pain Scale in Postoperative Digestive Surgery Patients at Government Hospital in Bukittinggi.

Methods: The type of this study was quasy-experimental with two group pre-test post-test design by measuring the pain scale using the NRS (Numeric Rating Scale). It was conducted on October 2022 with 30 respondents for Benson relaxation. The samples were chosen by purposive sampling technique. The data were collected through computerization by using an dependent t-test.

Results: The results of univariate data analysis showed that the average pain intensity of the respondents before being given the Benson therapy technique was 4.65 (moderate pain) and the average pain intensity of the respondents after being given the Benson therapy technique was 4.083 (moderate pain).

Conclusion: It can be concluded that the Benson relaxation therapy interventions had the effect on reducing the pain scale of post-digestive surgery patients. It is hoped that this therapy can be used as an alternative therapy for treating pain patients, especially post-operative patients.

Keywords:
Postoperative Pain, Benson Relaxation Therapy, Digestive Surgery

Introduction

Pain is a sensory and emotional experience that occurs due to tissue damage, both actual and potential or described in the form of such damage. Pain is also related to avoidance reflexes and changes in output autonomous (Meliala, 2004). There are two types of pain, namely acute pain and chronic pain. Postoperative pain is one of the most frequently encountered acute pain (Adrian, 2017). Post-operative pain is the body's reaction to tissue damage (ranging from skin

incisions to damage caused by surgery), stretching or tightening of internal organs, and disease (for example cancer, spinal disease, etc.). One of the things that post-operative patients will experience is the sensation of pain which is one of the effects of the surgical process. The pain felt by postoperative patients is acute pain. The intensity of pain felt by patients after surgery varies from moderate to severe. Moderate to severe pain in postoperative patients has been demonstrated through a cross-sectional survey conducted in 13,000 people from Northern Norway reporting that 25% of individuals had undergone one or more surgical procedures during the previous three years and 40% of these reported pain. persistent in the surgical area. Moderate to severe pain was reported by 18.3% of patients (Smeltzer et al, 2014). There is no data on post-operative pain cases in Indonesia, but according to research conducted in 10 hospitals in Indonesia, it was found that the prevalence of postoperative patients experiencing moderate to severe pain was 41% of patients (Ayudianingsih, 2019).

Many types Surgical procedures that cause pain in patients, ranging from general surgery, orthopedics, neurosurgery, oncology, thoracic, obstetrics and gynecology, obstetrics, eyes, teeth and mouth, and digestive. One type of surgery that is often performed is digestive surgery. Digestive surgery is an operation on the digestive tract. Digestive surgery is a major surgical method that focuses on the digestive organs. These organs include the abdominal wall and digestive tract such as the spleen, pancreas, liver, gall bladder, intestines, and ducts as well as other supporting structures in the abdomen. Digestive surgery cases often occur in the world, including Indonesia. Client pain intensity after major surgery, most post-operative clients experience moderate to severe pain intensity, almost all of them underwent abdominal surgery (Sulung et al 2017)

The most common types of digestive surgery are laparotomy and appendectomy. Digestive surgery cannot be separated from post-operative pain (da Mata et al. 2012). Postoperative pain can be treated with pharmacological and non-pharmacological measures (Tamsuri 2007). Pharmacologically, analgesic drugs can be given. Non-pharmacological management includes guided imagination relaxation, aromatherapy, distraction, music therapy, massage, giving warm and cold sensations and mind body. One of therapy use to reduce post-operative pain was listening to Quran cite (Murrotal Al-Qur'an) which can reduce the pain (Kartika, 2015). Mind body intervention is the utilization of the mind's capacity to optimize body function There are Guided imagery that can also reduce post-operative pain (Kartika, et.al., 2023). One of the theraphy was relaxation. Relaxation can manage the anxiety and pain (Wijaya, et al. 2020). The focus of this therapy is to create balance between thoughts, emotions and breathing. Some complementary therapies that are effective for treating post-operative pain in patients are mind-body therapy namely Benson Relaxation Theraphy.

Benson Relaxation is effective in reducing post-surgical pain. Benson relaxation was developed from the relaxation response method involving belief factors. The patient relaxes by repeating words or sentences that match the respondent's beliefs, thus inhibiting noxious impulses in the descending control system (gate control theory) and increasing control over pain (Datak et al, 2018). According to (Wainsani and Khoiriyah, 2020), Benson relaxation can reduce the pain scale of Post Appendectomy patients.

Methods

a. Research design

This research uses a quasi-experimental design with a one group pre-test post-test approach. The intervention in this study was using Benson Relaxation Therapy. The intervention is used to determine the patient's pain condition and pain intensity as measured by the NRS (Numeric Rating Scale). Researchers conducted research by starting an interview for consent to become a respondent and accompanied by an explanation of the purpose of providing therapy. Benson Relaxation Therapy begins by positioning the patient in a comfortable position for pain measurement before intervention (pre-test)., in which the patient is given the option of pursed-lip breathing. The patient relaxes by repeating words or sentences which is in accordance with the respondent's beliefs thereby inhibiting noxious impulses on the descending control system (gate control theory) so that reducing their pain. Therapy is carried out for 20 minutes, 1 hour before analgesic administration, once a day for two consecutive days. Then the patient's pain intensity scale was repeated after being given therapy.

b. Setting and samples

This study used a sample of patients who experienced post-surgery. The research was carried out in the operating room of RSUD dr. Achmad Mochtar Bukittinggi. A total of 30 post-digestive surgery patients were selected as respondents using a purposive sampling technique with several inclusion criteria. The inclusion criteria for sample selection in this study were (1) post-digestive surgery patients who were undergoing treatment in hospital; (2) patients at least late adolescence (17 years and over); (3) patients who were in the condition 1 hour before being given analgesics; (4) patients who have no contraindications for relaxation therapy; (5) post-operative patients who experience moderate pain, can communicate verbally and can hear well; (6) patients who do not use traditional medicines and (7) patients with the same type of anesthesia, namely general anesthesia. Data collection was carried out for 28 days.

c. Measurement and data collection;

This study uses research instruments to measure and assess the pain scale with the NRS (Numeric Rating Scale). The numeric pain scale (NRS) is the simplest and most commonly used scale to measure patient pain (Hansen et al., 2020). There are eleven number options on this numerical scale, ranging from 0 to 10, with 0 being "no pain" and 10 being "the worst pain imaginable." The patient chooses the number that best describes the intensity of pain. The advantages of this pain scale are reproducibility, easy understanding, and sensitivity to small changes in perceived pain. This scale is more likely to be used in adults (Hansen et al., 2020).

d. Data analysis;

The analysis used in this research is a description of the characteristics of respondents with a frequency distribution. In this study, a normality test was used to determine whether the data obtained was normally distributed or not. From the normality test, it was found that the data was not normally distributed, this can be seen from the results of the Shapiro Wilk normality test which is marked with a p-value <0.05. To see the effect of Benson relaxation therapy used to reduce pain in post-operative patients, this study used the Wilcoxon test.

e. Ethical considerations.

This research has received ethical approval Number: 516/KEPK/IX/2023. This research was also carried out following ethical principles by maintaining confidentiality and providing informed consent before starting treatment for all respondents.

Results

This research produced the characteristics of respondents which can be seen in the table below:

Table 1. Characteristic of Respondent (N=30)

No.	Variable	Mean (SD)	Frequency (%)	Percentage (%)
1.	Age	42.23 (9.93)		
2.	Gender			
	Male		11	36.7
	Female		19	63.3
3.	Type of Digestive Operation			
	Laparascopy Cholelitiasis		24	80.0
	Laparoscopy Hernia		1	3.33
	Le Cbd (Laparatomi Eksploration Common Bile Duct)		3	10.0
	Laparascopy Apendictomy		2	6.67

In table 1, data on the frequency distribution of respondents' characteristics is obtained with an average age of 42.23 years (SD=9.93). This age range is the middle adulthood age range. The gender of most respondents was female (63.3%). For the type of surgery, the majority of respondents after surgery were Laparoscopy Cholelithiasis surgery (80%).

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The results of the next research are related to the effect of Benson Relaxation therapy which was carried out to reduce the pain scale of post-operative patients. The research results processed using the Wilcoxon test can be seen in the table below:

Table 2. The effect of Benson Relaxation therapy based to reduce the pain scale of post-operative patients (N=30)

Variabel	N	Mean (SD)	Min-Max	p-value
Pre Test	30	4.650 (1.009)	3.5-6.5	0.001
Post Test		4,083 (1.144)	2.5-6.5	

*α=0.005

Based on table 2, the average pain intensity of respondents is known before and after being given the Benson therapy technique. The average pain intensity of respondents before being given the Benson therapy technique was 4.65 (moderate pain) with a standard deviation of 1.0099 and the Minimum-Maximum value in the group before being given the Benson therapy technique ranged from 3.5 - 6.5. Meanwhile, the average pain intensity of respondents after being given the Benson therapy technique was 4.083 (moderate pain).

Discussion

The pain felt by post-digestive surgery patients is a subjective experience or cannot be felt by other people. One of the actions taken by nurses is to intervene in pain or relieve pain to return the patient to a comfortable state (Sarfika et al., 2018). Benson Relaxation Therapy is one of the complementary (non-pharmacological) therapies in nursing which aims to instill suggestions in individuals to overcome health problems.

Researchers assume that post-digestive surgery pain has various pain scales from (moderate-severe pain) according to the type of operation, some are light-severe. During the research, researchers found various types of surgery with varying pain scales. The type of surgery with a severe pain scale (7-8) is Le Cbd (Laparotomy Exploration of the Common Bile Duct), while the type of surgery with a moderate pain scale (4-6) is the type of surgery, Laparoscopy Hernia, Laparoscopy Appendectomy and Laparascopy Chole.

At the time of conducting the research, every day the patient was given the IV analgesic keterolac 30 mg and oral analgesic in the form of paracetamol 500 mg 3 times a day and every day the patient said the scale of pain he felt had decreased. After conducting the assessment, it was found that the average pain intensity of respondents before being given therapy techniques was 5.167 (moderate pain). When conducting an assessment of post-op digestive patients, they said that when administering analgesic drugs, patients still felt a little pain after a few hours, some even still felt pain and said it with a different facial expression as if they were in pain. It can be seen from the expression on the patient's face that he is grimacing and anxious and uncomfortable.

The research results in table 2 show the average pain intensity of respondents before and after being given the Benson therapy technique. The average pain intensity before being given the Benson therapy technique was 4.65 (moderate pain) with a standard deviation of 1.0099 and the Minimum-Maximum value in the group before being given the Benson therapy technique ranged from 3.5 - 6.5. Meanwhile, the average pain intensity of respondents after being given the Benson therapy technique was 4.083 (moderate pain) with a standard deviation of 1.1148 and the Minimum-Maximum value in the group after being given the Benson therapy technique ranged from 2.5 - 6.5. Pain is one of the most common complaints in patients after undergoing a wound care procedure. Post-surgical pain is one of the most common complaints among patients in hospitals. As many as 77% of post-surgical patients (on day 2) received inadequate anti-pain treatment with 71% of patients still experiencing pain after being given medication and 80% described still experiencing moderate to severe pain (Smeltzer and Bare, 2014). The pain felt by post-surgical patients is an experience which is subjective or cannot be felt by other people. Pain is very annoying and troubles more people than any other disease. Patients who experience pain will feel suffering or depressed and seek efforts to reduce the pain they feel. One of the actions taken by the nurse is to relieve pain and to return the patient to a comfortable state (Potter & Perry, 2016). Benson relaxation is effective in reducing post-surgical pain. Benson relaxation was developed from the relaxation response method involving belief factors. The patient

relaxes by repeating words or sentences that match the respondent's beliefs so as to inhibit noxious impulses in the control system descending (gate control theory) and increasing control over pain (Datak et al, 2018).

The results of this study are in line with research by Morita (2020), which explains that Benson relaxation can reduce pain in post-caesarean section surgery patients with the average pain scale value of respondents in the intervention group before being given Benson relaxation was 6.60 and It was found that the average pain scale value of respondents in the intervention group after being given Benson relaxation was 3.40. There was a decrease in the average value in the intervention group before and after being given Benson relaxation with a value of 2.20.

Based on the results of the discussion above, researchers assume that post-digestive surgery pain has various pain scales from (moderate-severe pain) according to the type of operation, some are light-severe. During the research, researchers found various types of surgery with varying pain scales. In Benson relaxation therapy there is a type of surgery with 26 respondents having Laparascopy Chole surgery, 2 respondents having Laparoscopy Hernia surgery and 2 respondents having Le Cbd (Common Bile Duct Exploration Laparatomy) surgery, which means there are variations in the types of pain scales among the respondents. In the Lap Chole and Lap Hernia types of surgery the patient experiences post op pain (moderate pain), while in the Le Cbd type of surgery the patient experiences post op pain (severe pain). At the time of conducting the research, every day the patient was given the IV analgesic keterolac 30 mg and oral analgesic in the form of paracetamol 500 mg 3 times a day and every day the patient said the scale of pain he felt had decreased. When researchers conducted an assessment, the average pain intensity of respondents before being given the Benson therapy technique was 4.65 (moderate pain). Before the intervention was given, the pain response shown by the respondents looked restless, grimaced, and their facial expressions did not relax because they were holding back the pain. Researchers use it as a neurotransmitter that influences mood so that it becomes relaxed and happy.

Benson intervention 1 hour before administering analgesics and the results were that the patient said he was comfortable and at ease while carrying out the Benson intervention so that the result was a decrease in the pain scale in the respondents. The researcher's assumption is that after the intervention, respondents generally showed a reduced pain scale, where respondents stated that after the intervention the pain they felt was lighter than before implementing the Benson relaxation technique, so that the average results were obtained. The respondent's pain intensity after being given the Benson therapy technique was 4.083 (moderate pain). This can also be seen from the pain response shown by the respondents, where after the intervention the respondents looked calm, did not show symptoms of grimacing and their facial expressions were more relaxed than before the intervention. According to researchers, Benson therapy can help reduce pain in post-digestive surgery patients because this technique triggers the parasympathetic nervous system, thus relaxation can suppress feelings of tension, resulting in feelings of relaxation and relief. The feeling of relaxation will be transmitted to the

hypothalamus to produce Corticotropin Releasing Hormone (CRH) and Corticotropin Releasing Hormone (CRH) activate the anterior pituitary to secrete encephalin and endorphin which act as neurotransmitters that influence mood so that it becomes relaxed and happy.

Conclusion

. It was concluded that Benson Relaxation therapy could have an effect on reducing post-operative pain in patients. The pain felt by the patient experienced a significant decrease in the intervention carried out for two consecutive days. It is hoped that patients who carry out Benson Relaxation Therapy in healing through well-designed and well-prepared communication patterns can heal and even change the patient's behavior to be more positive as desired by the patient, namely avoiding pain. It is hoped that this therapy can be used as an alternative therapy in treating patient pain, especially post-operative patients.

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Author Contribution

NPC: Data Collection
IRK, NPC: Manuscript Writing
IRK: Methodology

Conflict of interest

None

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