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THE EFFECTS OF BENSON RELAXATION THERAPY IN EXPLORATORY LAPAROTOMY APPENDICITIS: A CASE STUDY

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ABSTRACT

Appendicitis is inflammation of the vermiform appendix and is considered a common cause of abdominal diseases in low and middle-income countries, including Indonesia. In Indonesia, the incidence of appendicitis is highest compared to other cases of abdominal emergencies. Accurate diagnosis and appropriate surgical treatment significantly reduce the mortality and morbidity rate of this disease. Surgery will trigger stress reactions, both physiological and psychological, that can cause anxiety. Appendicitis also cause pain, which is felt both before surgery and as a post-surgery. Benson Relaxation Therapy can be effective in reducing both anxiety and pain. This study used a case study and the nursing process approach for people with appendicitis. The nursing process consisted of assessing the patient, analyzing nursing problems, determining priority problems, creating a nursing care plan, implementing the nursing care plan, evaluating the results of implementation, and documenting the nursing process during pre-, intra-, and post-surgery. The sample of this study was an adult male patient with appendicitis who underwent appendectomy and was hospitalized at PKU Muhammadiyah Gamping Hospital, Yogyakarta, from November 4 to 7, 2024. The patient received Benson Relaxation Therapy pre- and post-surgery. The instruments used in this study were an assessment form, the Amsterdam preoperative Anxiety and Information Scale (APAIS) to measure anxiety, and the Visual Analog Scale (VAS) to assess the pain score. The results showed a significant decrease in anxiety and pain levels after regular Benson Relaxation Therapy pre- and post-surgery. This research concluded that Benson Relaxation Therapy is effective in reducing anxiety and for pain management, especially for patients with appendectomy.

Keywords: *Appendicitis; appendectomy; laparotomy; nursing intervention; benson relaxation therapy*

INTRODUCTION

Appendicitis is inflammation of the vermiform appendix and is a common cause of acute abdominal disease in developing countries. The incidence of appendicitis in Indonesia ranks highest among other cases of abdominal emergencies, accounting for around 7% of the population in Indonesia, or approximately 179,000 people (Ahmad, S., Kardi, 2022). This disease can affect all ages, both men and women, but it more often attacks men aged 10 to 30 years. A study conducted in Luwu, Palopo, South Sulawesi among 34 patients with appendicitis showed that there were 32 (60,4%) male patients, while there were 21 (39.6%) female patients (Awaludin, 2020).

Appendicitis is a disease that occurs in the digestive system, which not only requires pharmacological intervention, but also requires special surgery called appendectomy. According to the results of the Household Health Survey (*Survey Kesehatan Rumah Tangga* or SKRT) in Indonesia, acute appendicitis is one of the causes of acute abdominal pain condition caused by inflammation of the vermiform appendix, and may require emergency abdominal surgery. Among 159 patients with appendicitis, surgery occurred on 146 patients (92%) and 13 patients (8%) did not receive surgery (Rachmadina et al.,

2024). Acute appendicitis can cause dangerous complications if surgery is not performed immediately, such as appendiceal perforation, either in the form of free perforation or perforation of the appendix that has experienced a wall (infiltration) in the form of a mass consisting of a collection of the appendix, cecum, and small intestine. Perforation complications can increase the risk of very high peritonitis and other complications of around 17-32% can cause sepsis and increase morbidity and mortality if not treated quickly (Ramadhani et al., 2021). Immediate surgical procedure is beneficial for patients with appendicitis to prevent complications. Accurate diagnosis and appropriate surgical treatment significantly reduce the mortality and morbidity rate of this disease. Delay in diagnosis and treatment will increase morbidity and mortality if complications arise. While the surgical procedure is essential, it potentially causes problems for patients.

Surgery can trigger stress reactions, both physiological and psychological. One of the common psychological responses is anxiety. In general, the worldwide prevalence of pre-surgery anxiety is estimated to range between 60%-92% of the population (Adhikari et al., 2023). Anxiety can stimulate increased work of the autonomic nervous system, especially, the adrenal glands, which can cause increased heart rate and blood pressure (Choerunisa & Hidayati, 2023). Both increased heart rate and blood pressure increase the risk of bleeding during surgery (Choerunisa & Hidayati, 2023). Consequently, surgery may be delayed or cancelled to prevent the risk of bleeding during surgery (Choerunisa & Hidayati, 2023). If a delay in surgery occurs, the patient's condition can worsen. Therefore, effective intervention must be taken to reduce anxiety.

Appendicitis will also cause pain, which can be felt both before and after surgery. A study by Yildirim et al. (2023) measured preoperative pain in patients with acute appendicitis using the Numerical Rating Scale (NRS) and Wong–Baker Scale (WBS) and found that the majority of patients experienced moderate to severe pain (between 4 to 7 on a scale of 0–10 according to the NRS) before surgery (Yildirim et al., 2023). Meanwhile, a study at Padangsidimpuan City Hospital reported that the majority of patients complained of pain on a scale between 6-8 (scale 0-10), with 62.5% of patients experiencing severe pain after appendectomy (Simamora et al., 2021). To reduce pain and increase comfort, effective pain management is needed.

Nurses play pivotal roles in anticipating and managing anxiety and pain as the effects of appendicitis and appendectomy during pre-, intra- and post-surgery. An intervention that can be done to manage both anxiety and pain is Benson relaxation therapy. Several studies reported that Benson relaxation therapy is effective in reducing the level of anxiety in patients before and after undergoing surgery (Talitha & Relawati, 2023). The results of a quasi-experimental research by Sutri et al. concluded that there was an effect of Benson relaxation in reducing anxiety levels in 31 pre-operative patient samples as indicated by a decrease in scores after being given Benson relaxation therapy, where the p value = 0.000 (Sutri et al., 2024). Benson relaxation therapy can help the body relax, relieve tension when patients experience anxiety, pain and stress and be free from threats (P. P. Sari et al., 2024).

Considering the importance of effective anxiety and pain management for patients with appendicitis who are undergoing surgery or appendectomy, the Benson relaxation therapy, along with the nursing process, which consists of assessment, formulation of diagnosis, planning, implementation, evaluation, and documentation, is critical to be implemented. This case study aimed to evaluate the effects of Benson relaxation therapy on anxiety and pain in patients with appendicitis undergoing appendectomy at PKU Muhammadiyah Gamping Hospital.

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MATERIALS AND METHODS

This study used a case study approach through the nursing process on a patient with appendicitis undergoing surgery (appendectomy). The nursing process was started with assessing the patient, analyzing nursing problems, determining priority nursing problems, creating a nursing care plan, implementing the nursing care plan, evaluating the results of implementation, and documenting the nursing process during pre-, intra-, and post-surgery.

The sample of this study was an adult male patient with appendicitis who was hospitalized at At-Tin room PKU Muhammadiyah Gamping Hospital, Yogyakarta. The patient was observed during his hospitalization period in At-Tin room and the surgery process at the operating room at PKU Muhammadiyah Gamping Hospital, Yogyakarta, from November 4 to November 7, 2024.

The assessment tool used the adult nursing assessment form in the medical-surgical nursing ward developed by the Nursing Professional Education, Universitas Muhammadiyah Yogyakarta. The data is then analyzed and presented in narrative form, which includes a presentation of the case study results, as well as verbal and nonverbal responses from the patient and the data from the patients medical records.

The implementation of Benson relaxation therapy used the following standard operating procedure (SOP) according to Sari et al., 2021 :

1. Position the patient in the most comfortable sitting position.
2. Instruct the patient to close their eyes to help improve concentration and calmness.
3. Direct the patient to calm down and start to relax the muscles of the body slowly, starting from the tips of the feet to the muscles of the face, while feeling the body become more relaxed.
4. When the body calms, ask the patient to inhale through the nose, hold for three seconds, and exhale slowly through the mouth while saying a prayer or positive words.
5. Continue with the patient letting go of all negative thoughts and staying focused on the rhythm of the breath and the words spoken.
6. This therapy was done for 10–20 minutes.
7. After that, ask the patient to end the relaxation session.

The evaluation of the anxiety was measured using the anxiety assessment instrument of Amsterdam Preoperative Anxiety and Information Scale (APAIS) which classified anxiety levels into five categories: not anxious/normal (score 6), mild anxiety (score 7-12), moderate anxiety (score 13-18), severe anxiety (score 19-24), panic (score 25-30) (Moerman et al., 1996). Pain was assessed using the Numerical Rating Scale (NRS), a numeric scale with a range of 0 to 10 which is categorized into four pain levels including no pain (0), mild pain (1-3), moderate pain (4-6), to severe pain (7-10) (Eyüboğlu, 2020).

CASE DESCRIPTION

A patient, Mr. A, 59 years old, was hospitalized on November 4, 2024, with a diagnosis of suspected acute appendicitis and perforated appendicular infiltrate. Patient complains of lower right abdominal pain on a scale of 7 (from 0-10) for 2 weeks prior to hospitalization. His general condition was moderate; he was conscious, blood pressure was 183/108 mmHg, heart rate was 66 x/minute, respiratory rate was 20 x/minute, SpO_2 was 99%, and temperature was 36.2 degrees Celsius. The abdominal ultrasound showed that there were periappendicular infiltrates, but there were no problems with the liver, vesica fellea (VF), both kidneys, pancreas, spleen, vesica urinary, and prostate. The laparotomy procedure was scheduled for November 5, 2024.

The patient's condition pre-surgery showed that he was anxious and fear with an APAIS

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score of 16 points. The patient repeatedly expressed his anxiety and fear of facing the action he was about to undergo. Vital sign examination results: blood pressure 202/131mmHg, heart rate 79 x/minute, respiratory rate 20 x/minute, SpO_2 100% RA.

The surgery began at 12.00 WIB with general anesthesia; fentanex 100 mcg, pecofol 100 mg, tramus 25 mg, sedacum 3 mg and ETT installation. The patient was also given ondansetron 4 mg and ketorolac 30 mg, and Ringer Lactate infusion was installed. The surgery finished at 13.45 WIB. The patient was in the recovery room at 13.45. While in the recovery room after surgery, blood pressure was 160/108 mmHg, heart rate 61 x/minute, respiratory rate 20 x/minute, SpO_2 98%, airway clear and airy, breathing spontaneously, and not fully conscious yet. The patient was discharged from the recovery room at 14.15 WIB with an Aldrette Score post-general anesthesia of 9 points, fully conscious, SpO_2 97%RA), able to take deep breaths and cough freely, and able to move his 4 extremities.

The patient was then transferred to the At-Tiin room, When in the ward, the patient received analgetic Antrain 1 gram intravenously every 8 hours (at 24.00 WIB, 08.00 WIB, and 16.00 WIB. Wound care was carried out on the third day after surgery, but every day the signs of infection were monitored. The condition of the wound was clean, no signs of infection such as no redness, the wound was not swollen and did not ooze pus, and it did not feel warm/hot. were found

NURSING CARE

The nursing care process during pre-surgery aimed to manage the pain and reduce anxiety. The intervention given was the Benson relaxation therapy. Benson relaxation therapy is a type of relaxation technique created by Herbert Benson (Kurnia, 2022). Benson relaxation therapy is a relaxation technique that combines relaxation response techniques and an individual's spiritual belief system. That is, focusing on certain expressions, which can be the names of God or words that have a calming meaning for the patient, which are said repeatedly in a regular rhythm, accompanied by an attitude of resignation (Septiana et al., 2021). Benson relaxation therapy can activate the parasympathetic nervous system, block the action of sympathetic nervous system hormones, and stimulate the hypothalamus to produce endorphins that can reduce blood pressure, respiratory rate, and heart rate and make the patient relax.(KURNIA, 2022) This endorphin hormone acts as the body's natural pain reliever, which prevents pain and anxiety from occurring (Kurniyati & Marsinova Bakara, 2021).

During the intra-surgery in the operating room, we implemented the patient's safety measures by implementing the surgical safety checklist (sign-in, time-out and sign-out) to ensure the safety of the patient during the surgery procedure. We ensured the equipment was ready to use and coordinated with the anaesthesia team to ensure the patient was in the appropriate condition before the surgery began. Monitoring of vital signs was carried out continuously during the procedure. We also ensured that there were no complications such as excessive bleeding. After the completion of the appendectomy, the patient was moved to the recovery room. We monitor the patient's level of consciousness, vital signs, assess deep breathing and coughing ability, oxygenation, and ability to move extremities every 5 minutes and ensure that the patient was above the minimum post-anaesthesia score before being transferred to the treatment room.

Post-surgery, nursing care continued when surgery was completed. Post-surgery intervention included post-operative pain management, wound care, and infection prevention. Patients also received Benson relaxation therapy in conjunction with pharmacology management to manage post-surgery pain. Education regarding the signs and symptoms of wound infection, how to check the

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condition of surgical wounds, and aseptic techniques during wound care was also provided

RESULT

PRE-SURGERY

The results of the assessment before surgery: the patient complained of lower right abdominal pain. The patient reported a pain level of 7 (0-10 scale), describing it as intermittent and intensifying with movement. The results of the vital signs examination at that time were that blood pressure was 183/108 mmHg, heart rate was 66 x/minute, respiratory rate was 20 x/minute, SpO2 was 99% room air (RA), and temperature was 36.2 degrees Celsius. The patient said he was uncomfortable and felt anxious because he had never had a serious medical procedure done in the hospital. Prior to surgery, the patient received three sessions (once on the first day and twice on the second day) of Benson relaxation therapy (see table 1).

Table 1 Observation Results of Pre-surgery Anxiety Level Before and After Benson Relaxation Therapy

Date and Time	Observation of Anxiety Levels	
	Before	After
4 November 2024 18.30 WIB	16	12
5 November 2024 07.30 WIB	14	10
5 November 2024 11.30 WIB	8	6

Based on table 1, it is known that anxiety level continuously decreased after the Benson therapy was given for 10-20 minutes. Overall, the anxiety level was decreased from 16 (moderate anxiety level) in day 1 to a score of 6 (not anxious) in day 2 before the surgery was done.

Table 2 Observation Results of Pre-surgery Pain Level Before and After Benson Relaxation Therapy

Date and Time	Observation of Pain Levels Scale (0-10)	
	Before	After
4 November 2024 18.30 WIB	7 scale	6 scale
5 November 2024 07.30 WIB	7 scale	5 scale
5 November 2024 11.30 WIB	6 scale	5 scale

Based on table 2, it is known that the level of pre-surgery pain decreased after Benson therapy for 10-20 minutes. Overall, the level of pain decreased by 1 level after Benson therapy was given.

INTRA-SURGERY

The patient underwent an appendectomy laparotomy with exploration. During the surgery, the patient's vital signs were continuously monitored. The patient's blood pressure was high at the beginning of the surgery and

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gradually decreased during the surgery. The heart rate was within the normal range during the surgery. Bleeding during surgery was less than 500 ml, and no transfusion was given during surgery.

Table 3 Observation Vital Signs of Mr. A during Surgery

Time	Blod Pressure	Heart Rate
12.00 WIB	218/141mmHg	81x/minute
12.05 WIB	219/141 mmHg	82x/minute
12.10 WIB	210/138 mmHg	81x/minute
12.15 WIB	200/140 mmHg	80x/minute
12.20 WIB	190/137 mmHg	80x/minute
12.25 WIB	191/137 mmHg	80x/minute
12.30 WIB	194/135 mmHg	80x/minute
12.35 WIB	195/133 mmHg	79x/minute
12.40 WIB	206/124 mmHg	81x/minute
12.45 WIB	205/124 mmHg	83x/minute
12.50 WIB	196/123 mmHg	82x/minute
12.55 WIB	196/122 mmHg	79x/minute
13.00 WIB	180/121 mmHg	78x/minute
13.05 WIB	178/120 mmHg	79x/minute
13.10 WIB	144/89 mmHg	80x/minute
13.15 WIB	145/89 mmHg	80x/minute
13.20 WIB	150/96 mmHg	81x/minute
13.25 WIB	150/90 mmHg	83x/minute
13.30 WIB	147/94 mmHg	82x/minute

The patient was in the recovery room from 13.45 WIB to 14.15 WIB. While in the recovery room after surgery vital signs were monitored again.

Table 4 Observation Vital Signs of Mr. A in the recovery room

Time	Blod Pressure	Heart Rate
13.45 WIB	160/108 mmHg	61x/minute
13.50 WIB	161/108 mmHg	62x/minute
13.55 WIB	158/107 mmHg	65x/minute
14.00 WIB	163/108 mmHg	68x/minute
14.05 WIB	151/109 mmHg	65x/minute
14.10 WIB	154/105 mmHg	63x/minute

The patient was discharged from the recovery room at 14.15 WIB with a Score Aldrette post-general anesthesia of 9 points with full consciousness, SpO2 97% room air (RA), able to take deep breaths and cough freely, and able to move his 4 extremities.

POST-SURGERY

Post-surgical intervention was carried out for three days. The first day post-surgery began when the patient returned to the inpatient room after the completion of appendectomy. The assessment was carried out at 16.25 WIB. The patient was fully conscious and complained pain at surgical wound with a scale of 7 (0-10 scale), felt sore and continuous. The results of vital signs were blood pressure 218/122 mmHg, heart

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rate 69 x/minute, respiratory rate 19 x/minute, SpO2 RA 99%, and temperature 36.0 degrees Celsius. The wound was covered with a semiocclusivedressing of the wound with a non-waterproof dressing and did not show any leakage.

Table 4 Implementation of Benson Relaxation Therapy Post Surgery

	Pre Intervention Benson Therapy			Post Intervention Benson Therapy		
	Blood Pressure	Heart Rate	Pain Level (0-10)	Blood Pressure	Heart Rate	Pain Level (0-10)
Day 0 5/11/2024 16.25 WIB	218/122 mmHg	69 x/minute	7 scale	210/121 mmHg	72 x/minute	6 scale
Day 1 6/11/2024 10.30 WIB	193/111 mmHg	68 x/minute	6 scale	189/109 mmHg	71 x/minute	5 scale
Day 1 6/11/2024 18.30 WIB	195/98 mmHg	75 x/minute	4 scale	158/91 mmHg	78 x/minute	3 scale
Day 2 7/11/2024 11.00	184/108 mmHg	73 x/minute	4 scale	167/90 mmHg	74 x/minute	3 scale
Day 2 7/11/2024 18.30 WIB	156/88 mmHg	66 x/minute	3 scale	148/82 mmHg	74 x/minute	2 scale

Based on table 4, Benson relaxation therapy was given routinely for three days, 10–20 minutes each morning and evening, while the patient was hospitalised in the hospital. The goal of the Benson relaxation therapi was to reduce the patient's post-surgery pain level. Implementation was carried out based on interventions or activity plans from each diagnosis containing realization actions. During the Benson relaxation therapy, patients can practice it independently under the nurse's supervision. Analgesics were given every 08.00 WIB, 16.00 WIB and 24.00 WIB, while the Benson relaxation therapy was given at different hours every day, regardless of the time of analgesics injection.

DISCUSSION

PRE-SURGERY

Based on the Indonesian Nursing Diagnosis Standards (SDKI), two nursing diagnoses were determined pre-surgery: acute pain related to a biological injury agent, as evidenced by the facial expression appearing to grimace several times due to pain. The second diagnosis was anxiety related to situational crisis because the patient said he was anxious and worried about

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the operation, and the APAIS score was 16 points. Nursing interventions for acute pain include monitoring vital signs, assessing pain intensity, teaching relaxation techniques, and collaborating in administering analgesics. Meanwhile, nursing intervention for anxiety was a relaxation technique (stretching technique) to reduce signs and symptoms of discomfort, including anxiety. Despite receiving the interventions based on the Indonesian Nursing Intervention Standard (Standar Intervensi Keperawatan Indonesia or SIKI), the patient also received the Benson relaxation therapy.

In Benson relaxation therapy, breathing techniques that were frequently used in hospitals for patients experiencing pain or anxiety were combined with a belief component in the form of words that suggested positive affirmation for the patient. This relaxation was demonstrated by focused expression, which involved repeating specific actions in a repetitive order and with a subservient demeanour. In order to relax the patient, the suggestion given to the patient was the name of God (*Dzikir*) or words with a similar meaning which were repeated frequently. When doing Benson relaxation therapy, the patient repeatedly said sentences of belief in God's power. It was believed to provide a strong relaxation response and could reduce pain and anxiety (Febiantri et al., 2021). A powerful relaxation response that eliminates pain and anxiety can be induced by the patient's faith in God.

The physiological process of Benson's relaxation therapy contributes to reducing pain levels. This relaxation is able to create a feeling of comfort and calm, which will affect the central nervous system. A relaxed state transmits a signal to the hypothalamus, which subsequently triggers the release of corticotropin-releasing factor (CRF). This CRF will stimulate the pituitary gland to increase the production of proopiomelanocortin (POMC). This POMC compound is a precursor to several important hormones, including enkephalin produced by the adrenal medulla. The enkephalin and endorphins produced play an important role in reducing the perception of pain. Released from their bonds with deoxyribonucleic acid (DNA), endorphins serve as compounds that regulate cell life. They can signal cells to grow or stop growing. In conditions where endorphins are active and free from DNA, the body is in a stable, comfortable, and pain-free physiological state. Endorphins work by inhibiting the release of neurotransmitters that are responsible for conveying pain signals. Thus, pain stimuli cannot be transmitted to the center of consciousness; the sensation of pain is not felt by the individual (Septiana et al., 2021).

The body naturally produces endorphins, especially when an individual is in a relaxed state. This process also occurs during breathing exercises, relaxation interventions, and meditation practices. This type of relaxation technique serves to return the body to a calm and comfortable state, thereby helping to reduce stress levels and physical and psychological tension. In addition, relaxation also contributes to increasing alpha brain wave activity, which is an indicator of a calm and focused mental state. When the brain enters the alpha wave phase, individuals tend to be better able to focus on a particular object or thought and experience an increased sense of comfort, including in managing the perception of pain felt (Spalanzani, 2020).

The results of a case study at Sardjito Hospital showed that Benson therapy was effective in reducing the intensity of acute pain in pre-operative Low Back Pain (LPB) patients, with pain results that were previously on a scale of 6 to a scale of 3 (Mustaqim & Purwaningsih, 2022). Research by Bakhri, 2024 concluded that Benson relaxation therapy is effective in reducing pain and anxiety in pre-operative patients. The results showed a decrease in pain from a scale of 5 to 3 and anxiety from a score of 14 (moderate) to 6 (mild) (Bakhri et al., 2024). Benson relaxation therapy is also one of cost cost-effective therapies to reduce anxiety and has

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a low risk (Sutri et al., 2024). Benson relaxation therapy is recommended because the technique is simple, does not require special tools and materials, does not require special skills to apply and can be done by all patients who experience anxiety (Rini et al., 2024).

INTRA-SURGERY

Intra-surgery stage begins when the patient enters the operating room or department and ends when the patient is transferred to the recovery room. During the surgical procedure, the patient was given general anaesthesia so we did not perform Benson relaxation therapy, but we performed other interventions, intra-surgery monitoring and assessment. During the surgery, the patient's hemodynamics were monitored every 5 minutes and were stable, such as blood pressure and heart rate. Monitoring vital signs is important to ensure that the client's condition is within normal limit.

POST-SURGERY

Based on the Indonesian Nursing Diagnosis Standards (SDKI), the nursing diagnosis after surgery was acute pain related to physical injury agents, risk of infection and impaired skin integrity. Patients who had undergone surgery often experienced various common complaints during their hospital stay, especially after surgery. One of the most common complaints is pain due to post-operative wounds, which usually appears when the patient is already in the treatment room. To overcome this complaint, health workers play an important role in helping patients find effective ways to manage the pain. In nursing practice, post-operative pain management can be done using pharmacological and non-pharmacological techniques (Rosiska & Mimi, 2021).

One non-pharmacological method that can be used for pain management intervention is Benson relaxation therapy, which was used to manage the patient’s acute pain problem in this case study. Benson relaxation therapy works by suppressing the pain response in the form of a "fight or flight" reaction. Benson's relaxation therapy has been proven effective in reducing the pain scale in postoperative patients. Most patients experience significant changes in their pain levels, with a decrease to mild pain. In addition, by involving the parasympathetic nervous system, it can be used to lower blood pressure, lower heart rate, dilate blood vessels, and meet oxygen needs (Futuh et al., 2024).

The results of a study conducted by Jelita et al. (2023) showed that Benson's relaxation therapy reduces pain intensity in postoperative patients without causing side effects (Jelita & Hakam, 2023). The research from Hermawan et al., (2024) concluded that interventions carried out using Benson relaxation therapy in postoperative patients can reduce pain intensity (Hermawan & Rosyid, 2024). Benson relaxation therapy, given in conjunction with analgesics, is an effective approach to control and reduce pain in patients after surgical procedures (Hidayah, 2023). This therapy works by decreasing the activity of the sympathetic nervous system and increasing muscle relaxation, thereby accelerating the healing process and reducing the need for analgesics. A case study of five patients showed significant changes in pain scales after intervention, supporting the use of Benson therapy as a complementary therapy to analgesic therapy in pain management (Hermawan & Rosyid, 2024). Another study at RSUD Dr. Achmad Mochtar Bukittinggi compared the effectiveness of Benson relaxation with analgesic therapy alone. The results showed that Benson relaxation was more effective in reducing post-operative pain and accelerating pain reduction when combined with analgesics.[28]

CONCLUSION

Nursing interventions in the pre-surgical phase focus on reducing anxiety and managing pain with the implementation of Benson relaxation therapy. This technique has proven effective not only in decreasing preoperative anxiety but also in reducing postoperative pain levels. The results of this study support the

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effectiveness of Benson relaxation therapy as a non-pharmacological intervention that can be integrated into nursing care for patients with appendicitis undergone exploratory laparotomy appendectomy.

REFERENCES

1. Adhikari, S. P., Pathak, B. D., Ghimire, B., Baniya, S., Joshi, P., Kafle, P., Adhikari, P., Rana, A., Regmi, L., & Dhakal, B. (2023). Prevalence Of Pre-Operative Anxiety and Associated Risk Factors Among Patients Awaiting Elective Surgery In A Tertiary Care Hospital. F1000research, 12, 1207.
2. Ahmad, S., Kardi, S. (2022). Pengaruh Teknik Relaksasi Genggam Jari Terhadap Tingkat Nyeri Pasien Post Operasi Appendiktomi di Ruang Melati RSUD Kota Kendari Tahun 2020. Jurnal Penelitian Sains dan Kesehatanavicenna.
3. Awaludin. (2020). Risiko Terjadinya Apendis Faktoritis Pada Penderita Apendisitis di RSUD Batara Guru Belopa Kabupaten Luwu Tahun 2020. Jurnal Kesehatan.
4. Bakhri, M. M., Maryati, I., & Koeryaman, M. T. (2024). Penerapan Metode Relaksasi Benson Terhadap Nyeri Dan Kecemasan Pada Pasien Pre Operasi Kista Ovarium di Ruangan Marjan Bawah RSUD Dr Slamet Garut: A Case Report. Sentri: Jurnal Riset Ilmiah,.
5. Choerunisa, N. Z., & Hidayati, E. (2023). Penurunan Kecemasan Pasien Pre Operasi Dengan General Anestesi Menggunakan Terapi Humor. Ners Muda, 280-286.
6. Eyüboğlu, T. F. (2020). Comparison Of Four Different Electronic Pain Rating Scales In Patients With Symptomatic Tooth. Ege Üniversitesi Diş Hekimliği Fakültesi Dergisi.
7. Febiantri, Novia, & Machmudah. (2021). Penurunan Nyeri Pasien Post Sectio Caesarea Menggunakan Terapi Teknik. Ners Muda, 2(2), 31–36.
8. Futuh, M. F., Handayani, R. N., & Surtiningsih. (2024). Implementasi Relaksasi Benson Dalam Menurunkan Skala Nyeri Pada Pasien Post Operasi. Jurnal Peduli Masyarakat.
9. Hermawan, G. D., & Rosyid, F. N. (2024). The Effect Of Benson Relaxation Technique To Reduce Acute Pain In Postoperative Patients: A Case Report. Malahayati International Journal Of Nursing And Health Science, 7(2), 190–195.
10. Hidayah, N. D. N. (2023). Benson's Relaxation Therapy To Reduce Postoperative Pain Intensity Of Tur-P: A Case Study. Surya: Jurnal Media Komunikasi Ilmu Kesehatan, 15(2), 72–79.
11. Jelita, O. N., & Hakam, M. (2023). Nursing Care Of Acute Pain In Rectal Cancer Patients Using Non-Pharmacological Approach With Benson Therapy: A Case Study. Jurnal Kegawatdaruratan Medis Indonesia, 2(1), 90–101.
12. Kurnia, S. R. (2022). Pengaruh Teknik Relaksasi Benson Terhadap Tingkat Kecemasan Pasien Pre Tindakan Treadmill Test. Media Husada Journal Of Nursing Science, 3(3), 216–226.
13. Kurniyati, K., & Marsinova Bakara, D. (2021). Pijat Endorfin Terhadap Nyeri Punggung Bawah Dan Kecemasan Pada Ibu Hamil Trimester III di Kabupaten Rejang Lebong. Jurnal Ilmu Kesehatan, 5(2), 375–381.
14. Moerman, N., Van Dam, F. S. A. M., Muller, M. J., & Oosting, H. (1996). The Amsterdam Preoperative Anxiety and Information Scale (Apais). Anesthesia & Analgesia, 82(3), 445–451.
15. Mustaqim, R. S., & Purwaningsih, I. (2022). Penerapan Terapi Relaksasi Benson Dalam Menurunkan Nyeri Akut

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p-ISSN :2655-9641

Pada Pasien Dengan Low Back Pain (LBP). Sby Proceedings, 1(1), 538–549.
16. Rachmadina, A, R., & S., A. (2024). Profil Pasien Apendisitis Akut di RSUD Dr. Zainal Umar Sidiki Kabupaten Gorontalo Utara Tahun 2022-2023. Jurnal Ilmiah Kesehatan Diagnosis.
17. Ramadhani, I. N., Nasir, M., & Munir, M. A. (2021). Case Report: Acute Appendicitis. Jurnal Medical Profession (Medpro), 3(1).
18. Rini, D. S., Nurfantri, N., & Muhsinah, S. (2024). Penerapan Terapi Relaksasi Benson Terhadap Tingkat Ansietas Pada Pasien Dengan Pre Operasi Appendisitis: Studi Kasus. Jurnal Keperawatan Majampangi, 1(1), 23–28.
19. Rosiska, & Mimi. (2021). Pengaruh Pemberian Teknik Relaksasi Genggam Jari Terhadap Penurunan Nyeri Pada Pasien Post Operasi. Jurnal Ilmu Kesehatan Dharma Indonesia. Jurnal Ilmu Kesehatan Dharmas Indonesia, 51–56.
20. Sari, D. W. I., Syarafina, F. Z., Ayuningtias, K., Rindiani, N. A., Setianingrum, P. B., Febriyanti, S., & Pradana, A. A. (2021). Efektivitas Terapi Relaksasi Benson Untuk Meningkatkan Kualitas Hidup Lansia: Telaah Literatur. Muhammadiyah Journal Of Geriatric, 2(2), 55–61.
21. Sari, P. P., Purba, J. M., & Sitepu, N. F. (2024). The Benson Relaxation Technique In Reducing Anxiety Levels In Pre-Operative Cataract Patients. Jurnal Keperawatan Silampari, 7(2), 257–266.
22. Septiana, A., Inayati, A., & Ludiana, L. (2021). Penerapan Teknik Relaksasi Benson Terhadap Penurunan Skala Nyeri Pada Pasien Post Operasi Appendiktomi di Kota Metro. Jurnal Cendikia Muda, 1(4), 444–451.
23. Simamora, F. A., Siregar, H. R., & Jufri, S. (2021). Gambaran Nyeri Pada Pasien Post Operasi Apendisitis. Jurnal Kesehatan Ilmiah Indonesia (Indonesian Health Scientific Journal), 6(1), 27–34.
24. Spalanzani, Y. (2020). Penerapan Tehnik Relaksasi Benson Terhadap Penurunan Skala Nyeri Pada Pasien Post Apendiktomy. Jurnal Kesehatan, 9(2).
25. Sutri, S. Y., Utami, R. W., & Darma, D. D. (2024). Pegaruh Terapi Relaksasi Benson Untuk Menurunkan Ansietas Pada Pasien Pre Operasi. Jurnal Riset Media Keperawatan, 7(1), 60–63.
26. Talitha, A. R., & Relawati, A. (2023). Efektivitas Penerapan Relaksasi Benson Dalam Menurunkan Kecemasan Pada Pasien Pre-Operasi: Studi Kasus. Jurnal Medika Nusantara, 1(1), 47–54.
27. Yildirim, A. C., Arslan, H. E., Zeren, S., Ekici, M. F., Algin, M. C., & Arik, O. (2023). Effect Of Mesoappendix Volume On Preoperative Pain Of Acute Appendicitis. Journal Of The College Of Physicians And Surgeons--Pakistan: Jcpsp, 33(11), 1235–1239.