

Benson Relaxation Technique for Pain Management in Patients

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Abstract: Background: A fracture is defined as a disruption or loss of bone continuity caused by an external force that exceeds the bone's ability to absorb it. Fractures can occur due to direct impact, crushing force, sudden twisting motion, or even extreme muscle contraction. Fractures generally cause pain, which varies between individuals and can affect thinking, daily activities, and overall quality of life. Therefore, effective pain management is crucial, and one non-pharmacological intervention is the Benson Relaxation Technique. Methods: This study used a case study design involving patients with preoperative right radius fractures. The intervention involved applying the Benson Relaxation Technique, in which patients were guided to sit in a comfortable position, breathe slowly, and repeatedly say words, phrases, or prayers according to their belief system for 20–30 minutes. Results: The initial assessment at 08:00 showed that the patient experienced pain with an intensity of 7/10, characterized by grimacing, restlessness, and frequent touching of the fracture site. After the Benson Relaxation intervention, the evaluation at 09:00 showed a decrease in pain intensity to 6/10, and the patient appeared calmer, more relaxed, and less grimacing. Conclusion: The Benson Relaxation Technique was effective in reducing pain intensity in preoperative patients with right radius fractures. Before the intervention, the patient reported a pain score of 7, whereas after the intervention, the score decreased to 6. Therefore, the Benson Relaxation Technique can be considered a useful non-pharmacological intervention in pain management in fracture patients.

Keywords: Benson Relaxation, Pain Management, Non-Pharmacology

INTRODUCTION

A fracture can be defined as a crack or break in a bone. Bones are vital components of the body, serving as attachment points for muscles and supporting the body, enabling movement. optimally (1) . A broken bone, or fracture, is a condition in which bone tissue is disrupted, resulting in impaired mobility. A fracture is an acute condition for which the client and his family are not prepared to deal. (2)

According to WHO data on fracture incidence in the "Global Burden of Disease Study 2019" report, WHO estimates that there were 178 million new fractures worldwide, an increase of 33.4% (3) A single comprehensive figure on global data for upper arm fractures is not available; however, upper extremity fractures (including the upper arm) are the most common type of fracture in Indonesia and globally, with millions of new cases occurring each year (4) . The incidence of upper extremity fractures varies widely by age and sex. (5)

Based on data from the Ministry of Health of the Republic of Indonesia in 2020, the incidence of fractures in Indonesia reached 9.2%, with the highest prevalence in the lower extremities at 67.9% and in the upper extremities at 37.2% (6). Based on data from the Ministry of Health of the Republic of Indonesia, fractures most often occur in the lower extremities (7). Data from South Sulawesi itself shows that the number of traffic accidents decreased in 2019-2020. According to data from the National Police of the Republic of Indonesia, the Traffic Directorate of the South Sulawesi region, the number of traffic accidents increased in 2021 to reach 8,600 cases. accidents) (8) Makassar City has the highest number

of cases with 1,376 in 2019-2021. Dr. Wahidin Sudirohusodo Central General Hospital (RSUP) is a referral for sick patients throughout South Sulawesi, so many cases of fractures are treated at the hospital (9)

Pain management relies more heavily on pharmacological therapy, such as the administration of analgesics. However, long-term use of analgesic drugs can potentially cause side effects such as nausea, vomiting, and even dependence (10). Therefore, non-pharmacological methods are needed that can support effective and safe pain control (11).

One non-pharmacological method that has been proven effective is Benson relaxation (12). This technique combines relaxation breathing, focusing on specific words or phrases (mantras), and an attitude of surrender in accordance with the patient's spiritual beliefs (Benson, 1975; adapted in modern research). (13) Benson's relaxation mechanism works by activating the parasympathetic nervous system, reducing muscle tension, reducing anxiety, and stimulating the release of endorphins, which function as an analgesic experience for the body. (14).

CASES

A patient with the initials Mr. A, male, aged 15, was admitted to the pre-operative room for orthopedic surgery, with a medical diagnosis of a right radius fracture due to an accident. During the assessment, the patient was seen groaning in pain and holding his right arm, which was fitted with a splint. The patient groaned in pain in the right wrist area, with an intensity of 7 out of 10 on the NRS scale, especially when doing slight movements. The pain was described as... Stabbing pain: the pain disappeared, reappeared, and its duration was uncertain, worsening when the arm was moved. The patient looked restless; his face grimaced. Blood pressure was 145/90 mmHg, pulse 105 x / min, respiration 22 x / min, temperature 36°C, and blood oxygen saturation 99%.

A radiological exam confirmed a right radius fracture, and the orthopedic surgeon planned surgery. The patient had received only a single intravenous analgesic dose in the emergency room, so his pain remained severe.

METHODS

This study uses a descriptive research method with a case study design to describe in depth the nursing care process for patients with right radius fractures. And explain in depth the application of Benson relaxation techniques in pain management in one preoperative patient with a right radius fracture. The subject of the study was one patient who was about to undergo surgery for the treatment of a right radius fracture. The selection of subjects used a purposive sampling technique, namely selection based on certain criteria such as the patient suffering from a right radius fracture and being in the preoperative phase, being in the OR during the preparation for surgery, being able to communicate and cooperate, not in critical condition, and willing to participate in the intervention. Before the study was conducted, the researcher asked for informed consent from the patient. The researcher explained in detail the purpose of the study, the procedures to be carried out, the benefits, and guaranteed the confidentiality of the patient's identity.

This research was conducted in *the Operating Room (OK)* of Tadjuddin Chalid Hospital, Makassar, on August 14, 2025. Data collection was conducted using several techniques: direct observation, short interviews to assess the patient's pain complaints while in the OK room, pain measurement using the NRS (*Numeric Rating Scale*), and the Benson relaxation technique.

RESULT AND DISCUSSION

Table 1.Implementation before and after the intervention of Benson relaxation

Time	Pre-data	Implementation	Time	Post data
08:00 (previous)	Pain in the right hand. Pain scale 7, like being stabbed.	location of identification, characteristics of duration, frequency, quality of pain intensity, pain identification scale,	08:05	One right hand still feels sore, the pain scale is still 7. (severe pain)
08:05	The patient appears restless, grimaces, and often holds the fractured area.	Provide Benson relaxation therapy techniques to reduce pain. First prize)	08:20	The patient reported that the pain was still the same, but it was starting to feel a little more relaxed.
Evaluation of pain after 20 minutes of relaxation.				
08:20	it will get worse when the arm is moved.	Relaxation continues, the patient remains focused on repeating words/prayers and breathing.		The patient is more cooperative, facial expressions are a little calmer.
(2nd Prize)				
08:40		Evaluation showed pain relief after 40 minutes of intervention.	08:45	The pain persists and feels the same, but the patient says it is more controlled.
08:45	Still seen grimacing and complaining of pain.	Benson's relaxation program returns with guidance and a calming atmosphere.	08:50	The patient looks more relaxed, less grimacing.
(3rd Prize)				
08:50	The patient looked calm, and his face no longer showed a grimacing expression.	Pain Evaluation	09:00	The patient said he felt calmer and the pain had reduced, pain scale 6 (pain at this time)

Based on Table 1, after a 1-hour Benson relaxation intervention in a patient with a preoperative right radius fracture, the results showed that the intensity of pain experienced by the patient decreased from a scale of 7/10 (severe pain) to 6/10 (moderate pain), as measured by the NRS (*Numeric Rating Scale*). In the initial assessment, the patient sighed in severe pain, looked grimaced, and was restless. During the relaxation process, the patient was instructed to lie down in a comfortable position, focus on deep, regular breathing, and repeat simple words/prayers according to their beliefs. Evaluations showed that although the reduction in pain was not significant, patients reported feeling calmer, more relaxed, and more in control of their pain sensations. Facial expressions appeared more relaxed, patient, and less nervous.

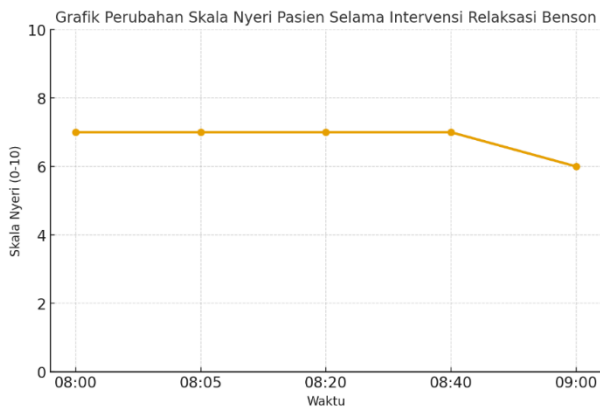


Figure 1. Pain Scale Reduction Graph

Based on the assessment at 8:00 AM, the patient complained of pain in his right hand with an intensity scale of 7/10, described as stabbing. He appeared restless, grimaced, and frequently touched the fractured area. After identifying the location, characteristics, duration, frequency, quality, and intensity of the pain, intervention was provided using the Benson relaxation technique. At the first evaluation at 8:20 AM, the patient continued to experience pain at the same 7/10 level, but appeared more relaxed and reported a slight sense of calm. This indicated that, although pain intensity had not changed, the patient's comfort level was beginning to improve. A second evaluation at 8:40 a.m. revealed that the pain was still present at a 7/10, particularly with arm movement, but the patient reported that it was more manageable. His facial expression also appeared calmer than before, although he still grimaced. Following the intervention, a third evaluation at 9:00 AM showed a decrease in pain intensity to 6/10. He also appeared more cooperative, had less facial grimacing, and felt more relaxed.

Discussion

Application of Benson Relaxation Technique Therapy for Pain Management in Pre-Operative Fracture Patients

Preoperative patients, thereby reducing the level of pain felt. This emphasizes the importance of implementing Benson relaxation therapy as a first step in effectively managing pain in the sick patient's home (15).

Based on the client's assessment, which showed complaints of pain and grimacing, the author diagnosed Acute Pain Associated with a Physical Injury Agent. The interventions implemented included pain management, supplemented by Benson's relaxation technique. (16) The results of the intervention showed a decrease in the initial pain scale (at 7) to a scale of 6 (currently). Regular monitoring of clients undergoing therapy is very important to ensure the effectiveness of the intervention and to enable quick, appropriate action if necessary. (17) Based on the results of the intervention that has been carried out, the application of the Benson relaxation technique to manage pain in pre-operative patients with right radius fractures can reduce the pain scale (18) .

According to (19), explain that Benson relaxation can be implemented as a therapeutic companion in reducing pre-operative pain in patients with right radius fractures. Hospitals can make pain management with Benson relaxation a standard operating procedure (SOP). In the study, it was found that there was a decrease in pain of 3 on the NRS scale (scale 5 to scale 2) in patient 1 and 4 on the NRS scale (scale 5 down to scale 1 in patient 2 (20)

Researchers (21) conducted a study with the following results: before therapy, the patient's pain scale was 8; after Benson relaxation therapy was administered for 2 interventions, the patient's pain scale was reduced to 4. This means that there is an effect of Benson relaxation therapy on reducing the patient's femur pain scale. The patient said he felt more comfortable and relaxed. Benson relaxation actions can be performed independently by patients. Therefore, Benson relaxation can be carried out by nurses as an independent intervention to reduce pain in fracture patients (22).

Relaxation techniques are a development of the Breathing technique with the patient's belief factor (23) Benson's relaxation technique is a diversion of the patient's pain with a calm environment and a relaxed body (24) Benson's relaxation technique can be done not only for post-fracture surgery patients, but can also be done to reduce anxiety, stress, and can be done on post-cesarean surgery patients because Benson's relaxation technique can inhibit sympathetic nerve activity which can cause a decrease in oxygen consumption in the body and the body's muscles to relax and create a feeling of comfort in fracture patients. Decreased sympathetic nerve activity can affect pain reduction (25)

CONCLUSION

After completing the assessment, the client's pre-operative problem was found: The patient appeared to be groaning in pain, holding his right arm, which had been splinted, and groaning in pain with an intensity of 7 out of 10 on the NRS scale. mmHg, pulse rate 105 x/min, respiration 22 x/min, temperature 36°C, and oxygen saturation 99%, blood pressure 145/90 mmHg.

Nursing diagnosis that appears in pre-operative: pain I related to physical injury of the agent (D.0077). Nursing care interventions given in pre-operative: pain I (Benson relaxation technique).

Implementation of nursing care provided before surgery : diagnosis of acute pain: first identify the location, characteristics, duration, frequency, quality, intensity of pain, and pain identification scale. As a result, the patient said pain in the right side of the hand, stabbing pain, pain scale 7, severe. Then the second was given non-pharmacological therapy. As a result, the author provided Benson relaxation techniques to reduce pain. After being done 3 times in 1 hour, with evaluation every 20 minutes. The patient looked more relaxed, less grimacing, and reported that the pain scale decreased to 6.

The results of the evaluation after being given the Benson relaxation technique were: the first evaluation at 08:20 showed the patient still felt pain on a 7/10 scale, but appeared more relaxed and reported a slight feeling of calm. The second evaluation at 08:40 showed that the pain was still felt on a scale of 7/10, especially when the arm was moved, but the patient stated that the pain could be controlled better. The patient's facial expression also looked calmer than before, although he still looked grimaced. The third evaluation at 09:00, the patient reported a decrease in pain intensity to 6/10. In addition, the patient looked more cooperative, his facial expression was less grimacing, and he felt more relaxed.

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AUTHOR'S CONTRIBUTION STATEMENT

Nurfadillah, Haeril Amir, Idelriani, Erna Marini was responsible for the research design, data collection, analysis, and drafting of the manuscript. , Haeril Amir, Idelriani supervised the research

process, contributed to the theoretical framework and literature review, and revised the manuscript critically for intellectual content.

CONFLICT OF INTEREST

All author declare No conflict of interest

DECLARATION OF GENERATIVE AI AND AI-ASSISTED TECHNOLOGIES IN THE WRITING PROCESS

No AI tools to make in research.

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