IMPLEMENTATION OF BENSON RELAXATION THERAPY FOR ACUTE PAIN MANAGEMENT IN MR. A FOLLOWING SURGERY FOR A LEFT FOOT FRACTURE AT DR. H. KOESNADI REGIONAL GENERAL HOSPITAL, BONDOWOSO, 2026

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Abstract

Fracture of the left foot (pedis sinistra) may cause acute pain following surgical intervention. Comprehensive pain management includes pharmacological and non-pharmacological therapies. Benson relaxation therapy is a non-pharmacological technique that may promote relaxation and improve patient comfort. This case study aimed to describe the implementation of Benson relaxation therapy in a postoperative patient with a left foot fracture and acute pain in the Dahlia Ward of dr. H. Koesnadi Regional General Hospital, Bondowoso. A case study design was employed using a nursing care approach consisting of assessment, nursing diagnosis, intervention, implementation, and evaluation. The subject was Mr. A, a 51-year-old male diagnosed with a left foot fracture and acute pain. Benson relaxation therapy was implemented over three consecutive days. The initial assessment showed severe pain with a score of 8, described as stabbing and intermittent, localized to the left foot surgical wound. Following the intervention, pain intensity decreased progressively, from 8 to 7 on the first day, from 6 to 5 on the second day, and from 3 to 2 on the third day. The patient also demonstrated reduced facial grimacing and was able to perform Benson relaxation independently. The intervention was associated with reduced pain intensity and improved postoperative comfort. However, these changes cannot be attributed solely to Benson relaxation therapy because the patient also received analgesics and underwent postoperative recovery. Benson relaxation therapy may be considered a complementary intervention for postoperative pain management.

Keywords: Left Foot Fracture, Acute Pain, Benson Relaxation Therapy, Postoperative Care, Nursing Care.

1. INTRODUCTION

Fracture is a condition characterized by disruption of bone continuity that may occur due to trauma, accidents, impact, or pathological factors (Nur Hidayat et al., 2022). Fractures not only cause disruption to the bone structure but may also result in damage to surrounding tissues, such as muscles, nerves, blood vessels, and soft tissues. One of the problems commonly experienced by patients with fractures, particularly after undergoing surgery, is acute pain (Aska, 2021). Inadequately managed pain may cause physiological responses, including increased respiratory rate, heart rate, blood pressure, and stress hormone production (Zhao et al., 2022). In addition, pain may interfere with the healing process, disrupt patients' activities and rest, and reduce quality of life (Ngurah et al., 2023).

Fractures remain a health problem that requires serious attention. According to the World Health Organization (WHO) report in 2022, the global number of fracture cases reached 440 million (World Health Organization, 2022). Based on data from Indonesia, the Ministry of Health in 2023 reported that accidents resulted in approximately 137 million injury cases, with approximately 8 million of these

involving fractures (Kementerian Kesehatan Republik Indonesia, 2024). At the healthcare service level, data from dr. H. Koesnadi Regional General Hospital, Bondowoso, in 2025 showed that 281 postoperative fracture patients were treated in the Dahlia Ward (Data Primer RSUD dr. H Koesnadi Bondowoso, 2025). These data indicate that fractures and their associated problems, particularly postoperative pain, remain issues that require attention in the provision of nursing care.

Acute pain in postoperative fracture patients may occur due to tissue damage, inflammatory processes, surgical procedures, and the body's response to trauma. This condition may be characterized by pain complaints, facial grimacing, protective behavior, restlessness, increased pulse rate, and sleep disturbances (Nur Hidayat et al., 2022). If pain is not optimally managed, patients may experience prolonged discomfort, and the recovery process may be disrupted (Niedermeier & Crouser, 2021). Therefore, comprehensive pain management is required through both pharmacological and non-pharmacological approaches.

One non-pharmacological intervention that can be applied in pain management is Benson relaxation therapy (Kusumaratni et al., 2025). Benson relaxation therapy is a relaxation technique that combines deep breathing with an individual's beliefs or spirituality through the repetition of words or phrases that provide a sense of calm (Aminatun Indah Kumalasari, Mulyaningsih, 2026). This technique aims to help patients achieve a state of physical and psychological relaxation, thereby reducing muscle tension, stress, anxiety, and responses to pain. Benson relaxation therapy has the advantages of being simple, easy to perform, relatively inexpensive, and applicable independently by patients (Sari et al., 2025).

Several previous studies have shown that Benson relaxation therapy can help reduce pain intensity in postoperative fracture patients. Rohmadhoni and Jamaluddin (2026) demonstrated a reduction in pain scores among postoperative fracture patients after Benson relaxation therapy was administered for two days, with a duration of 15 minutes per session (Rohmadhoni & Jamaluddin, 2026). Sugiantari et al. (2026) also reported a reduction in pain scores among patients following fracture surgery after the implementation of Benson relaxation therapy (Sugiantari et al., 2026). Sari et al. (2025) further demonstrated that Benson relaxation therapy could have a positive effect on reducing pain intensity and improving patients' comfort and calmness (Sari et al., 2025).

One of the nursing interventions in the management of fracture-related pain is the provision of non-pharmacological techniques. These techniques may be performed independently by nurses or combined with pharmacological therapy (Hardila & Sari, 2026). According to the Indonesian Nursing Intervention Standards (SIKI), one of the therapeutic interventions in pain management is the provision of non-pharmacological techniques to help reduce pain (Tim Pokja SLKI DPP PPNI, 2018). Meanwhile, the success of the intervention can be evaluated through changes in pain intensity, pain complaints, facial grimacing, protective behavior, and the patient's ability to rest according to the established nursing outcomes.

Although several studies have demonstrated the benefits of Benson relaxation therapy in reducing pain, the implementation of this therapy in postoperative patients with left foot fractures and acute pain as a nursing problem needs to be examined directly within the context of nursing care. A case study approach provides a more detailed description of the assessment process, identification of nursing problems, implementation of Benson relaxation therapy, and evaluation of changes in the patient's pain response during the intervention (Sulistyawati & Hilfida, 2025). Based on this background, Benson relaxation therapy has the potential to serve as a complementary non-pharmacological intervention in pain management for postoperative fracture patients. Therefore, this case study aimed to describe the implementation of Benson relaxation therapy in a postoperative patient with a left foot fracture and acute pain in the Dahlia Ward of dr. H. Koesnadi Regional General Hospital, Bondowoso. Specifically, this study described the patient's pain condition before and after Benson relaxation therapy and evaluated the patient's response to the intervention.

2. METHODOLOGY

This study employed a case study design using a nursing care approach to explore the implementation of Benson relaxation therapy in a postoperative patient with a left foot fracture and the

nursing problem of acute pain. The study was conducted in the Dahlia Ward of dr. H. Koesnadi Regional General Hospital, Bondowoso, from April 15 to 17, 2026.

The study participant was one postoperative patient with a left foot fracture and the nursing problem of acute pain. The inclusion criteria were male or female patients aged 15–60 years who had recently undergone surgery for a foot fracture, had no complications, and were willing to participate in the study. Patients with impaired consciousness or those who declined to participate were excluded from the study. The intervention consisted of Benson relaxation therapy administered for three consecutive days, twice daily, with each session lasting 10–15 minutes according to the standard operating procedure. The patient was positioned comfortably and guided to close their eyes, relax their muscles, perform slow and regular breathing, and repeat words or phrases according to their personal beliefs.

Data were collected through interviews, observation, physical examination, and documentation review. Pain intensity was measured using the Numeric Rating Scale (NRS) before and after each therapy session. Evaluation also included the patient's verbal and non-verbal responses, including facial grimacing, protective behavior, comfort, and ability to rest. Data were analyzed descriptively by comparing the patient's condition before and after the intervention. Subjective and objective data were presented narratively and in tables and subsequently interpreted based on relevant theories and previous research. Ethical principles were applied throughout the study, with ethical clearance No. 358/KEPK/UDS/IV/2026.

3. RESULTS

This study was a case study using a nursing care approach involving one postoperative patient with a left foot fracture who was treated in the Dahlia Ward of dr. H. Koesnadi Regional General Hospital, Bondowoso. The results of the case study are presented according to the stages of the nursing process, including nursing assessment, nursing diagnosis, nursing intervention, nursing implementation, and nursing evaluation.

3.1 Nursing Assessment

The assessment showed that Mr. A was 51 years old and had undergone surgery for a left foot fracture. The patient sustained an injury to the left foot following an accident while repairing a grinding machine and subsequently underwent surgery. During the initial postoperative assessment, the patient reported pain at the surgical wound on the dorsum of the left foot, with a pain intensity of 8 based on the Numeric Rating Scale (NRS). The patient described the pain as stabbing and reported that it worsened when the foot was moved. The patient also reported difficulty sleeping and discomfort due to the pain.

Physical examination showed that the patient appeared to be grimacing, demonstrated protective behavior around the surgical wound, and had limited movement of the left extremity. These findings indicated subjective and objective responses associated with postoperative pain.

3.2 Nursing Diagnosis

Based on the subjective and objective assessment findings, the nursing diagnosis established for Mr. A was acute pain related to a physical injuring agent, namely the surgical procedure. The diagnosis was supported by subjective findings, including pain at the surgical wound with an intensity of 8, stabbing pain, increased pain during movement, difficulty sleeping, and discomfort. Supporting objective findings included facial grimacing, protective behavior around the wound, and limited movement.

3.3 Nursing Intervention

The interventions included monitoring pain intensity and characteristics, monitoring the patient's response to pain, providing a non-pharmacological intervention in the form of Benson relaxation therapy, educating the patient about relaxation techniques, and collaborating in the administration of analgesic therapy according to the medical treatment plan.

Benson relaxation therapy was selected as a non-pharmacological intervention to help the patient achieve a state of relaxation and manage the response to pain. The therapy was administered for three consecutive days, twice daily, with each session lasting approximately 10–15 minutes.

3.4 Nursing Implementation

Benson relaxation therapy was implemented for three consecutive days, with two sessions conducted each day. Before each therapy session, the patient's pain intensity was assessed using the NRS. Following each session, pain intensity was reassessed using the same instrument. Changes in pain intensity before and after Benson relaxation therapy are presented in Table 1.

Table 1. Changes in Pain Intensity Before and After Benson Relaxation Therapy

Day	Session	Before Therapy	After Therapy
Day 1	Session 1	8	7
Day 1	Session 2	6	5
Day 2	Session 1	5	4
Day 2	Session 2	4	3
Day 3	Session 1	3	2
Day 3	Session 2	2	2

Based on Table 1, on the first day, pain intensity decreased from 8 to 7 during the first session. During the second session, pain intensity decreased from 6 to 5. On the second day, pain intensity decreased from 5 to 4 during the first session and from 4 to 3 during the second session. On the third day, pain intensity decreased from 3 to 2 during the first session, whereas pain intensity remained at 2 during the second session.

Throughout the implementation, the patient was able to follow the instructions for Benson relaxation therapy appropriately. The patient appeared more relaxed after the therapy and reported feeling more comfortable. Non-verbal responses, including facial grimacing and protective behavior around the surgical wound, also gradually decreased during the intervention.

3.5 Nursing Evaluation

The evaluation showed a gradual decrease in pain intensity over the three-day intervention period. The initial pain intensity of 8 decreased to 2 by the end of the intervention.

In addition to the reduction in pain intensity, the patient demonstrated improved comfort. The patient appeared more relaxed, facial grimacing decreased, protective behavior around the surgical wound was reduced, and the patient was able to perform light activities more comfortably.

At the end of the third day, the patient continued to report pain at an intensity of 2; however, the pain was mild and more controlled compared with the initial condition. Based on the evaluation, the nursing problem of acute pain showed improvement following three days of nursing care, with Benson relaxation therapy applied as one of the non-pharmacological interventions.

Overall, the case study findings showed that during three days of nursing care, pain intensity decreased from 8 at the initial assessment to 2 at the end of the intervention, accompanied by improved comfort and the patient's ability to control pain.

4. DISCUSSION

The nursing care provided to Mr. A, who was medically diagnosed with a postoperative left foot fracture and had the nursing problem of acute pain, was carried out through the stages of assessment, nursing diagnosis, planning, implementation, and evaluation. The discussion in this case study focuses on the implementation of Benson relaxation therapy as one of the non-pharmacological interventions for pain management in a postoperative patient with a left foot

fracture. Benson relaxation therapy was provided as a complementary intervention alongside other pain management measures, including monitoring pain characteristics, facilitating rest and sleep, providing education, and collaborating in analgesic administration.

The initial assessment was conducted on April 15, 2026, at 2:30 p.m. Western Indonesian Time (WIB), shortly after the patient underwent surgery at 12:00 p.m. At the time of assessment, Mr. A reported pain at the surgical wound on the dorsum of the left foot. The pain was described as stabbing, intermittent, and rated 8 on the pain scale. Objectively, the patient appeared to grimace and experienced limitations in performing activities due to pain. These findings indicated an acute pain response associated with tissue injury caused by the surgical procedure. The assessment findings were consistent with the characteristics of acute pain, which may include pain complaints and non-verbal responses such as facial grimacing and protective behavior.

Based on the assessment findings, the nursing diagnosis established was acute pain related to a physical injuring agent, namely the surgical procedure. This diagnosis was supported by subjective complaints of severe pain, stabbing pain characteristics, pain localized to the surgical wound, and objective findings of facial grimacing. The diagnosis was also consistent with the patient's postoperative condition because surgical procedures cause tissue injury that may stimulate nociceptive responses and produce pain (Muzaki, 2023). Nursing planning focused on pain management, with the goal of reducing pain intensity and improving the patient's response to pain (Tim Pokja SLKI DPP PPNI, 2018). The interventions included identifying the location, characteristics, duration, frequency, quality, and intensity of pain; assessing pain intensity using a pain scale; providing Benson relaxation therapy; facilitating rest and sleep; educating the patient regarding the causes and duration of pain; teaching Benson relaxation techniques for independent use; and collaborating in analgesic administration (Tim Pokja SLKI DPP PPNI, 2018). The selection of Benson relaxation therapy was consistent with pain management interventions that incorporate non-pharmacological techniques to help reduce pain perception and improve patient comfort (Sugiantari et al., 2026).

Benson relaxation therapy is a relaxation technique that combines breathing regulation, focused attention, and the use of words or phrases that have personal meaning to the individual (Aminatun Indah Kumalasari, Mulyaningsih, 2026). In patients experiencing pain, relaxation may help reduce physical tension and promote a calmer state, allowing patients to better manage their responses to pain (Sari et al., 2025). In Mr. A's case, Benson relaxation therapy was not used as a substitute for analgesic therapy but as a non-pharmacological intervention complementary to pain management. This approach is important because postoperative pain management is generally multimodal, involving a combination of pharmacological and non-pharmacological interventions.

The first implementation was conducted on April 15, 2026, from 2:40 to 3:08 p.m. At the beginning of the session, the patient reported pain at the surgical wound on the dorsum of the left foot, described as stabbing and intermittent, with a pain intensity of 8. The patient was provided with an explanation of the purpose of the therapy, pain characteristics were assessed, Benson relaxation therapy was administered, rest was facilitated, information regarding the causes and duration of pain was provided, and the Benson relaxation technique was taught. The patient was cooperative and willing to participate in the intervention. At the same time, collaboration was carried out for the administration of ketorolac 30 mg.

The evaluation conducted on April 15, 2026, at 8:45 p.m. showed that pain intensity decreased from 8 to 7. The patient continued to report stabbing and intermittent pain, and facial grimacing was still observed. Vital signs remained stable, with blood pressure of 120/80 mmHg, pulse rate of 95 beats/minute, body temperature of 36°C, and respiratory rate of 20 breaths/minute. Based on the evaluation, the acute pain problem was considered unresolved, and the intervention was continued. A one-point reduction in pain intensity indicated an initial change following pain management, although the pain remained severe and non-verbal responses were still present.

On April 16, 2026, from 8:00 to 8:40 a.m., a subsequent intervention was implemented. The patient reported that pain at the surgical wound remained stabbing and intermittent, with a pain intensity of 6. At this stage, the patient was willing to participate in Benson relaxation therapy and was able to perform the technique with guidance. The patient also reported sleeping normally

without awakening during the night. In addition to Benson relaxation therapy, ketorolac 30 mg was administered in collaboration with the medical team.

The evaluation on April 16, 2026, at 2:00 p.m. showed a decrease in pain intensity from 6 to 5. The patient reported that pain was still present at the surgical wound but had decreased and was less severe than previously. Objectively, the patient was observed to grimace less frequently. Vital signs were blood pressure 120/80 mmHg, pulse rate 89 beats/minute, body temperature 36°C, and respiratory rate 20 breaths/minute. The problem was considered partially resolved, and the intervention was continued. These findings indicated an improvement in the patient's response to pain, demonstrated not only by the reduction in pain intensity but also by decreased facial grimacing and improved rest.

The subsequent implementation was conducted on April 17, 2026, from 8:00 to 8:45 a.m. At the beginning of the intervention, the patient reported that pain was still present at the surgical wound on the dorsum of the left foot but was no longer as sharp as previously. The pain was milder and intermittent, with an intensity of 3. The patient was able to perform the Benson relaxation technique independently. This finding indicated an improvement in the patient's ability to use a non-pharmacological technique to manage pain. At this stage, the patient continued to receive ketorolac 30 mg in collaboration with the medical team.

The final evaluation was conducted on April 17, 2026, at 2:00 p.m. The patient reported that pain at the surgical wound had substantially decreased. The pain, which had previously been described as stabbing, had become much milder and less sharp. Pain intensity decreased from 3 to 2, and the patient reported that pain occurred only occasionally and was less frequent. The patient also stated that his condition had improved and that he felt ready to return home. Objectively, no facial grimacing was observed. The pain score was 2, with vital signs of blood pressure 120/70 mmHg, pulse rate 85 beats/minute, body temperature 36°C, and respiratory rate 20 breaths/minute.

Overall, there was a downward trend in pain intensity throughout the implementation period, from 8 on April 15, 2026, to 7 at the first evaluation, from 6 to 5 on April 16, 2026, and from 3 to 2 on April 17, 2026. This change was accompanied by improvement in the patient's non-verbal responses, from observable facial grimacing during the first evaluation to less frequent grimacing during the second evaluation and no facial grimacing during the final evaluation.

The reduction in pain suggests that the implementation of Benson relaxation therapy as part of pain management was associated with a positive response in Mr. A. Benson relaxation therapy allows patients to practice relaxation, regulate breathing, and focus their attention, which may help them remain calmer when experiencing pain. This was reflected in the patient's progression from initially requiring guidance to independently performing the Benson relaxation technique by April 17, 2026. In addition to the reduction in pain intensity, the ability to perform the technique independently represents an important outcome because it may support patients in managing pain through non-pharmacological means.

The findings of this case study are consistent with several previous studies cited in the original nursing report. Azka (2021) reported a reduction in pain intensity following Benson relaxation therapy (Aska, 2021). Similar findings were reported in studies demonstrating decreased pain intensity among patients following Benson relaxation techniques (Sumiati et al., 2021; Aminatun Indah Kumalasari & Mulyaningsih, 2026). These findings support the potential use of Benson relaxation therapy as a complementary intervention to help reduce pain perception in postoperative patients. However, the findings from Mr. A's case should be interpreted as an individual patient response and cannot be used to establish a general causal relationship.

The reduction in Mr. A's pain cannot be attributed solely to Benson relaxation therapy. During the treatment period, the patient received analgesic therapy in the form of ketorolac and underwent physiological recovery following surgery. Therefore, the observed changes in pain intensity may have resulted from a combination of factors, including pharmacological therapy, Benson relaxation therapy, rest, the patient's adaptation to the postoperative condition, and the wound healing process. Accordingly, Benson relaxation therapy in this case study is more appropriately viewed as a complementary intervention supporting overall pain management.

Based on the established outcome criteria, the patient's progress demonstrated improvement in pain-related indicators. Pain complaints decreased, facial grimacing became less frequent, and the patient's ability to independently perform the relaxation technique improved. At the final evaluation, the patient's pain intensity was 2, and no facial grimacing was observed. However, the evaluation record on April 17, 2026, at 2:00 p.m. documented the problem status as “not resolved,” after which the intervention was discontinued because the patient was discharged from the hospital. Therefore, it would not be appropriate to state that the acute pain problem was completely resolved. A more appropriate interpretation is that the acute pain problem improved, as indicated by decreased pain intensity and reduced non-verbal responses to pain, but was not considered completely resolved at the final evaluation.

Overall, the implementation of Benson relaxation therapy in Mr. A, a postoperative patient with a left foot fracture, demonstrated a positive response in pain management. The gradual implementation of the therapy helped the patient become more capable of performing relaxation and managing his response to pain. The reduction in pain intensity from 8 at the initial assessment to 2 at the final evaluation, accompanied by reduced facial grimacing and increased ability to perform Benson relaxation independently, indicates that Benson relaxation therapy may be used as a complementary non-pharmacological intervention in postoperative pain management. However, because this study involved only one patient and included other interventions, such as analgesic administration and the postoperative recovery process, these findings should be interpreted as an individual patient response rather than evidence that Benson relaxation therapy was the sole cause of the reduction in pain.

5. CONCLUSION

Based on the findings of this case study, the implementation of Benson relaxation therapy as a non-pharmacological intervention in Mr. A, a postoperative patient with a left foot fracture and the nursing problem of acute pain, demonstrated a positive response. The patient's pain intensity decreased from 8 at the initial assessment to 2 at the final evaluation, accompanied by reduced facial grimacing and the patient's ability to perform Benson relaxation independently. Benson relaxation therapy may be used as a complementary intervention in pain management to help improve patient comfort. However, the reduction in pain intensity may also have been influenced by analgesic administration and the postoperative recovery process.

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