

APPLICATION OF GUIDED IMAGINATION TO REDUCE PAIN IN POST OPEN REDUCTION FRACTURE PATIENTS INTERNAL FIXATION (ORIF)

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ABSTRACT

A fracture is a disruption of the normal continuity of the bone and surrounding soft tissue. This fracture can cause pain which is a subjective sensation and emotional experience of the sufferer. One non-pharmacological therapy to reduce pain is to use guided imagery. In 2018, the incidence of bone fractures in D.I.Yogyakarta was 64.5%. Objective describes the application of guided imagery to reduce pain in post-operative fracture patients in Ward Cendana 2 Dr. Sardjito Hospital. Methods The descriptive method used is a case study to obtain an overview by observing and analyzing accurate data so that it is easy to understand. Result After applying guided imagery to post-operative fracture patients at Dr. Sardjito General Hospital with a frequency of 2 times a day for 3 days, the pain results decreased from scale 6 (moderate pain) to scale 1 (mild pain). Conclusion Based on the results of a case study conducted at Dr. Sardjito Hospital, Yogyakarta for 3 days with a duration of 10-15 minutes, it can be concluded that guided imagery can reduce pain in post-operative fracture patients.

Keywords: fractures; guided imagery; post-operative pain

INTRODUCTION

Fractures are traumatic injuries with a high incidence percentage. Fracture is a disruption of the normal continuity of a bone accompanied by the surrounding soft tissue is also often disturbed. The most common fracture symptoms are pain, swelling and deformity. The pain will be heavier with movement and pressure on the fracture. This condition can cause pain which is a subjective sensation and emotional experience of the patient (Ndama & Ismunandar, 2023). According to World Health Organization (WHO) the incidence of fractures in Indonesia in 2020 has increased, recording the incidence of fractures in approximately 13 million people with a prevalence rate of 2.7%. In 2018, there were 92,976 incidents of falls and 5,144 people experienced fractures, the prevalence of fractures in Indonesia was 5.5% (Riskesda, 2018). Pain will arise after surgery. Severe postoperative pain is felt in intrathoracic, intra-abdominal and surgical surgeries. Postoperative (postoperative) patients experience severe pain and 75% of patients have an unpleasant experience due to inadequate pain (Alza et al., 2023). Pain management is divided into 2, namely pharmacological and non-pharmacological techniques. Non-pharmacological techniques that can help reduce pain in postoperative patients such as music therapy, deep breathing techniques, distraction techniques and guided imagination. Guided imagination is a part of Hypnotherapy that involves the senses of sight, hearing, touch, smell and taste, which aims to help patients become more relaxed and calm. The benefits of guided imagination to help limit stress, anxiety, and can also reduce pain. This is because Guided imagination can activate the parasympathetic nervous system (Karyatin & Fitriani, 2022).

METHOD

Research Design. This research is a descriptive research in the form of a case study. The descriptive method is a research method that aims to obtain an overview by observing and analyzing accurate

data according to facts so that it is easy to understand. The design of this proposal uses a descriptive study that aims to describe the application of guided imagination therapy to reduce the pain scale in postoperative fracture patients in the Cendana 2 ward of Dr. Sardjito Hospital. Location and Subject. This research was carried out in the Cendana 2 ward of Dr. Sardjito Hospital. The subject of this study was carried out on postoperative *patients with Open Reduction Internal Fixation (ORIF)* who experienced pain. The inclusion criteria carried out in this study include: patients who are willing to be research respondents, patients with *composmentis* awareness aged 25-60 years, postoperative fracture patients starting from H-0 who experience pain on a scale of 4-7.

Data Collection Methods.

The data collection methods carried out in this study are:

1. Observation
 Observation is a method of collecting data by observing the patient's behavior and circumstances directly to obtain data and problems that are being addressed by the patient.
2. Interview
 Interview is a data collection method that is carried out by interacting, asking questions and listening to what is said by the patient with the aim of obtaining information to identify pain in fracture patients after *Open Reduction Internal Fixation (ORIF)*
3. Rating scale
 In this study, the data collected was related to the evaluation data before and after the application of guided imagination to reduce pain in fracture patients after *Open Reduction Internal Fixation (ORIF)* by providing a *Numeric Rating Scale (NRS)* evaluation sheet.

Sampling Procedure. The selection of respondents in this study was carried out by considering the inclusion and exclusion criteria that had been set previously. The respondents in this study were in accordance with the inclusion criteria, the respondents taken were 58 years old with a Medical Diagnosis of Postoperative Fracture on the 1st day, respondents with *composmentic* awareness and felt pain on a moderate scale (4-6) and were willing to be respondents at the time of this study.

RESULT AND DISCUSSION

The following is table 1 which explains the results of pain scale measurements before and after guided imagination therapy:

Table 1
 Results of Guided Imagination Actions

Day/ Date	Inter vention	Hour	Pain Scale	
			Before	After
Thursday, 14/03/24	1	11.00 am	6 (Moderate pain)	6 (Moderate pain)
Thursday, 14/03/24	2	19.00 pm	6 (Moderate pain)	5 (Moderate pain)
Friday, 15/03/24	3	11.15 am	5 (Moderate pain)	4 (Moderate pain)
Friday, 15/03/24	4	19.10 pm	4 (Moderate pain)	3 (Mild Pain)
Saturday, 16/03/24	5	11.05 am	3 (Mild Pain)	2 (Mild Pain)
Saturday, 16/03/24	6	19.00 pm	2 (Mild Pain)	1 (Mild Pain)

The following is a chart of pain scales before and after guided imagination therapy:

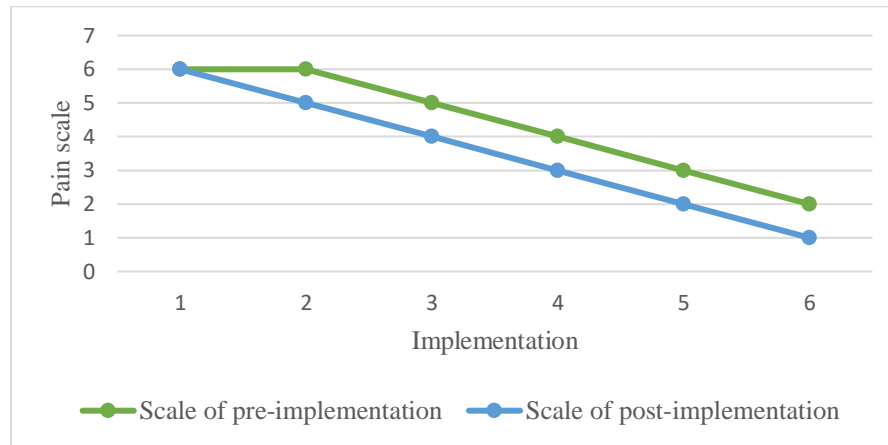


Chart 1. Graph of Pain Measurement Before and After the Procedure

Based on the table and graph above, it shows that there is a decrease in the pain scale before and after guided imagination therapy. On Thursday, March 14, 2024 at 11.00 WIB, before guided imagination therapy is carried out on patients, pain intensity is measured first, then patients are given guided imagination therapy. After being guided by imagination therapy for approximately 10-15 minutes, the patient said that the pain was still the same, which was initially 6, but still 6. When the first guided imagination therapy was carried out, the patient was cooperative but still a little awkward. The 2nd implementation on Thursday, March 14, 2024 at 19.00 WIB was again carried out guided imagination therapy on the patient, before guided imagination therapy was carried out, the scale of pain felt by the patient was measured, after knowing the pain experienced by the patient, then the patient was given guided imagination therapy for 10-15 minutes. Then after the therapy was finished, the patient was asked again about the scale of pain felt by the patient, the patient said that the pain decreased from 6 to 5. When guided imagination therapy was carried out for the 2nd time, the patient was cooperative and began to enjoy the therapy.

On the 2nd day, March 14, 2024, before guided imagination therapy, the intensity of the pain scale was measured first after 4 hours of analgesics, then at 11.15 WIB the patient was given guided imagination therapy. After 15 minutes of guided imagination therapy, the patient said the pain was reduced from 5 to 4. Still on the 2nd day of the 4th implementation, March 14, 2024, guided imagination therapy was carried out again, which had previously been measured first. Then at 19.00 WIB the patient was given guided imagination therapy for 15 minutes. After the guided imagination therapy was again measured on the patient's pain scale, the patient said that the pain was reduced from 4 to 3. Continued on the 3rd day, March 15, 2024 at 11.05 am, guided imagination therapy was carried out again, but pain intensity measurements were carried out before guided imagination therapy was carried out. Then at 11.05 a.m. the patient was given guided imagination therapy for 15 minutes, then the patient said the pain was reduced from 3 to 2. Implementation on day 3, March 15, 2024 at 19.00 Guided imagination therapy was again carried out, but previously pain intensity measurements had been carried out first, then the patient was given guided imagination therapy for 15 minutes, the patient said the pain was reduced from 2 to 1.

In this study, the first time carried out by the researcher was to take care of *Ethical Clearance* through the Kepk Polytechnic of the Ministry of Health Yogyakarta, *Ethical Clearance* was obtained with Number No.DP.04.03/e-KEPK.1/381/2024. There is a difference in the location of the implementation between what is written in the *Ethical Clearance* and the time of the research. In the *Ethical Clearance*, the location of the research was written in the Cendana 1 ward of Dr. Sardjito Hospital Yogyakarta, while in the implementation of the research was carried out in the Cendana 2 ward of Dr. Sardjito Hospital Yogyakarta. The researcher selects patients as respondents to the study which is carried out based on the inclusion and exclusion criteria that have been set. After obtaining respondents who meet the inclusion criteria, the researcher develops the procedures for actions, as well as ethics in the research to be carried out such as maintaining confidentiality and initiating the identity of the respondents in the research results. *Ethical Clearance* or ethical feasibility is a written statement provided by the Research Ethics Commission for research involving living things that states that a research proposal is feasible to be carried out after meeting certain requirements. On the other hand, the approval of the Commission *Ethical Clearance* In a research, it is indispensable in the publication of national or international scientific journals (Qur'aniati, 2021).

When respondents say they agree to be respondents in this study, they will be given a sheet *Informed Consent* which was then signed by the respondent and his family as witnesses. Consent as intended is given after the patient has received a complete explanation, at least including the diagnosis, the action to be given and the risk of complications that may occur, such consent can be given either in writing or orally (Rahman, 2021). According to Rezki Pebrina *et al* (2022), *Informed consent* It is the process of obtaining permission before performing a health intervention on a person, or to seek personal health information. So it can be quoted that *Informed consent* is a condition for the occurrence of an agreement. Respondents who have signed the sheet *Informed Consent* then a pain scale measurement will be carried out using *Numerical Rating Scale* (NRS), then respondents were asked to state the scale of pain felt and recorded according to the scale felt on the pain scale observation sheet. Respondents will then be given paracetamol 10 mg/ml analgetic 3 times a day at 08.00, 14.00 and 20.00 WIB. According to Utami (2014), analgesics and sleeping pills can also be given to reduce pain. However, excessive use has addictive side effects and can harm the user if overdosed. The non-pharmacological pain relief method is a nurse's independent action to reduce the intensity of pain to a level that can be tolerated by the patient.

Paracetamol is an analgesic and antipyretic drug that inhibits the enzyme cyclooxygenase, the half-life of paracetamol is short about 1-4 hours (Azis *et al.*, 2018). According to research conducted by Yensenem *et al* (2018), the half-life of paracetamol is about 1-3 hours. Meanwhile, according to Turama *et al* (2020), paracetamol is known to reach peak levels in plasma within 30-60 minutes and has a half-life of 1-3 hours. After 4-6 hours of analgetic, the researcher guided the respondents to do guided imagination therapy for 15 minutes starting with closing their eyes and focusing on imagining something that the respondents liked. The half-life of analgetics is 4-6 hours, therefore to avoid data confusion as a result of the application of guided imagination, the action is carried out after 4-6 hours after the administration of analgetics (Sulastri *et al.*, 2024). According to Afni (2013), giving therapy for 10-15 minutes can provide a relaxing effect. The implementation of this guided imagination therapy is carried out 1-2 times a day for 3 days. According to Wati *et al* (2022), the application of guided imagination is given for 15 minutes carried out 1-2 times a day guided by standard operating procedures. After the respondent finished the guided imagination therapy, the scale of pain felt by the respondent was re-measured using *Numerical Rating Scale* (NRS).

NRS pain analyzers are well suited for use in clinical practice, have good sensitivity and produce analyzable data (Andreyani & Bhakti, 2023). According to Nuryani & Waluya (2015), *Numerical Rating Scale* (NRS) is the most effective scale used when assessing pain intensity before and after therapeutic interventions. In the implementation of this study, the application of guided imagination was carried out 5 hours after the administration of analgetics, this was done to avoid confusion about the effect of guided imagination therapy on the pharmacological effects of the drug given because the half-life of analgetics is 4-6 hours (Daud & Muthmainnah, 2018). Based on the results of the implementation in the respondents above, there is a gradual decrease in pain levels which can be shown by the results of pain measurement using *the Numeric Rating Scale* (NRS). Guided imagination therapy is a distraction therapy to divert the focus of attention to pain to other stimuli so that it will reduce the pain felt by the patient. Before guided imagination therapy, the patient said a pain scale of 6 (moderate pain), then after guided imagination therapy for 3 days, the patient said a pain scale of 1 (mild pain). When guided imagination therapy is carried out, the patient appears relaxed and calm because the guided imagination technique stimulates the body to feel relaxed so that it can inhibit sympathetic nerves and reduce oxygen levels in the body so that it can reduce pain.

Pain management can be done through pharmacological and non-pharmacological measures. One form of non-pharmacological pain therapy is to do guided imagination therapy. Guided imagination therapy is the client's activity of creating a pleasant image and concentrating on the image and gradually freeing oneself from attention to pain (Amalia & Susanti, 2019). This is in line with research conducted by Maula & Khuzaimah (2017), the application of guided imagination techniques is carried out 2 times a day given in approximately 15 minutes, namely morning and evening carried out for 3 days with reduced pain results, the client's pain scale before the action is carried out 5 and after the action is carried out is 2. According to research conducted by Halim & Rochmawati (2023), suggesting that guided imagination relaxation therapy given 3 days in a row can lower pain scales in patients with post- *Open Reduction Internl Fixation* (ORIF) from a scale of 5 (moderate pain) to a scale of 2 (mild pain). Meanwhile, the results of the research conducted by (Udkhiyah & Jamaludin, 2020) The application of guided imagination techniques was applied to Mr. N. The pain scale was reduced from a scale of 6 to a scale of 2 and in Mr. A which was initially a scale of 5 to a scale of 2. The application of guided imagination techniques in postoperative cases is very effective, this is proven after management is carried out on Mr. N and Mr. A for 3 days.

Based on the results of theory and previous research, researchers assume that the application of guided imagination therapy is one of the non-pharmacological techniques that functions to achieve positive effects. By imagining pleasant things, there will be changes in motor activity so that tense muscles become relaxed, and the response to shadows becomes clearer. So that the subject will be easier to associate himself in reducing the pain sensation experienced. The guided imagination therapy that I did at Dr. Sardjito Hospital in the Sandalwood 2 ward was carried out 2 times a day with a duration of 15 minutes for 3 days. The regularity in the administration of guided imagination therapy can also make you feel relaxed and comfortable so that guided imagination therapy can be used to reduce pain.

CONCLUSION

The conclusion of this study is to describe the application of guided imagination to reduce pain in fracture patients after Open Reduction Internal Fixation (ORIF). The pain felt by the patient before guided imagination was at 6 (moderate pain), after 6 times of guided imagination application, the pain scale felt decreased to 1 (mild pain). Therefore, it can be concluded that the application of guided imagination is effective in reducing the scale of pain in postoperative fracture patients.

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