International Journal of Health and Medicine
Vol.1, No.3 July 2024
e-ISSN: 3047-793X, p-ISSN: 3047-7948, Page 148-156
DOI: https://doi.org/10.62951/ijhm.v1i3.51
Available online at: https://international.arikesi.or.id/index.php/IJHM

Influence of Guided Imagination on Pain Intensity in Fracture Patients at Bumiayu Regional Hospital

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Abstract. *A survey by the Indonesian Ministry of Health found that 25% of fracture sufferers died, 45% experienced physical disabilities, 15% experienced psychological stress due to anxiety and even depression and 10% recovered well. Both open and closed fractures will affect nerve fibers which can cause pain and discomfort. Efforts that can be made to reduce pain in fracture patients are with one of the non-pharmacological techniques, namely guided imagination. The aim of this research is to determine the effect of guided imagination on reducing pain intensity in fracture patients at Bumiayu Hospital 2024. The type of research is Quasi Experiment research with a One Group Pre-test Post-test design. The population in this study were all fracture patients at Bumiayu Regional Hospital in the period 4 March - 2 April 2024, totaling 52 people and the sample was taken using a purposive sampling method, namely 35 people. Data collection used a numerical scale research instrument sheet or The Pain Numerical Rating Scale (PNRS). The data analysis used is univariate and bivariate analysis. The results of this study show that statistical analysis showed that the difference in average pain intensity in fracture patients before guided imagination was 6.83 and after guided imagination was 3.46 with a probability value of (p=0.000), so Ho was rejected and Ha was accepted, meaning that guided imagination had an effect on reducing the intensity. pain in fracture patients. In conclusion, there is an effect of providing guided imagery on pain intensity in fracture patients at Bumiayu Regional Hospital in 2024.*

Keywords: *Influence, Guided Imagination, Pain in Fractures*

1. INTRODUCTION

A fracture or broken bone is a break in the continuity of bone tissue which is determined according to its type and extent (Fajri et al., 2021). Usually fractures are caused by trauma or physical exertion (Permatasari & Sari, 2020). According to the Indonesian Ministry of Health and the World Health Organization (WHO), in 2020 more than 7 million people died due to accidents and around 2 million people experienced physical disabilities. One of the accident incidents that has a fairly high prevalence is the incidence of lower extremity fractures, which is around 46.2% of the accidents that occur. A fracture is a condition where bone disintegrity occurs, the most common cause is an accident, but other factors such as degenerative processes can also influence the incidence of fractures. The causes are different, from the results of a survey by the Indonesian Ministry of Health team, it was found that 25% of fracture sufferers died, 45% experienced physical disabilities, 15% experienced psychological stress due to anxiety and even depression and 10% experienced good recovery (Rohimin, Lukman, 2017).

Received: June 20, 2024; Revised: June 25, 2024; Accepted: July 27, 2024; Published: July 31, 2024

Efforts that can be made to reduce pain in fracture patients are various complementary nursing actions in accordance with the Minister of Health of the Republic of Indonesia number HK.02.02/MENKES/148/I/2010 concerning Licensing and Implementation of Nursing Practice, as mentioned in paragraph 3, namely Nursing Practice is carried out through activities for implementing nursing care, implementing promotive, preventive, recovery and community empowerment efforts as well as implementing complementary nursing actions (Permenkes, 2010).

The application of complementary therapy is not yet well known by the public because so far complementary therapy is better known as alternative medicine. Apart from that, complementary therapy was not carried out in health service facilities some time ago (Kozier B, 2014).

Broadly speaking, there are two management methods for dealing with pain, namely pharmacological management and non-pharmacological management. Non-pharmacological management is one of the most basic responsibilities of nurses to protect patients from harm. There are a number of non-pharmacological agents that reduce the perception and reception of pain and can be used in acute care and tertiary care settings as well as at home and in restorative care settings. Non-pharmacological measures include cognitive behavioral interventions and the use of physical agents. The action of cognitive behavioral intervention is to change the patient's perception of pain, change pain behavior and give the patient a greater sense of control. Non-pharmacological measures to treat pain consist of several treatment measures based on: physical treatment or physical stimulation including: skin stimulation, electrical stimulation, acupuncture, placebo and cognitive behavioral interventions including: relaxation, hypnosis, biological feedback, distraction and guided imagination (Kozier B , 2014).

One non-pharmacological thing that can be done is guided imagination. Guided imagination is a process that uses the power of the mind by moving the body to heal one self and maintain health or relax through communication in the body involving all the senses including touch, smell, sight and hearing so that a balance is formed between mind, body and soul (Prasetyo & Sigit, 2015). This therapy technique involves guiding the patient to create an impression in the mind, concentrating on the impression that the patient imagines, so that the patient gradually feels less pain. Nurses train patients in building impressions and concentrating on sensory experiences (Potter & Perry, 2014).

From the results of initial data collection at Bumiayu Regional Hospital, it was recorded that the number of fracture patients from January-February 2024 was 68 people. For this reason, the author is interested in conducting research on "Influence of Guided Imagination on Pain Intensity in Fracture Patients at Bumiayu Regional Hospital.

2. METHOD STUDY

The research method used is Quasi Experiment (pretend experiment), so called because this type of experiment does not meet the requirements, such as an experimental method that can be said to be scientific, following certain rules (Arikunto, 2016). With a One Group Pre-test Post-test design, namely a research design that only uses one group of subjects and takes measurements before and after giving treatment to the subjects. This study aims to determine the influence of guided imagination on pain intensity in fracture patients at Bumiayu Hospital.

The population is the group of subjects who want to generalize the research results. A population must have shared traits or characteristics that differentiate it from other groups of subjects, including location characteristics, individual characteristics or certain characteristics (Notoatmodjo, 2016). The population in this study were fracture patients at Bumiayu Regional Hospital taken from 4 March – 2 April 2024, totaling 52 people.

3. RESULTS STUDY AND DISCUSSION

This research was conducted at Bumiayu Hospital, Brebes Regency for 1 month from 4 March to 2 April 2024. The sample size studied was 35 respondents who met the inclusion criteria. From the results of the data processing carried out, the following will present univariate and bivariate analysis.

Univariate analysis was carried out on each research variable to produce the distribution and percentage of each variable, namely as follows:

1. Univariate Analysis
   a. Pain intensity in fracture patients before guided imagery

Table 1. Frequency Distribution of Pain Intensity in Fracture Patients Before Guided Imagination

Pain intensity	frequency (f)	percentage (%)
There isn't any	0	0
Light	1	2.9%
Currently	14	40%
Heavy	20	57.1%
Amount	35	100%

Based on table 1, it can be seen that the intensity of pain in fracture patients before guided imagination was carried out by the majority of respondents with severe pain intensity, namely 20 people (57.1%).

b. Pain intensity in fracture patients after guided imagery

The results of data analysis of pain intensity in fracture patients after guided imagination was carried out on 35 respondents can be seen in the following table:

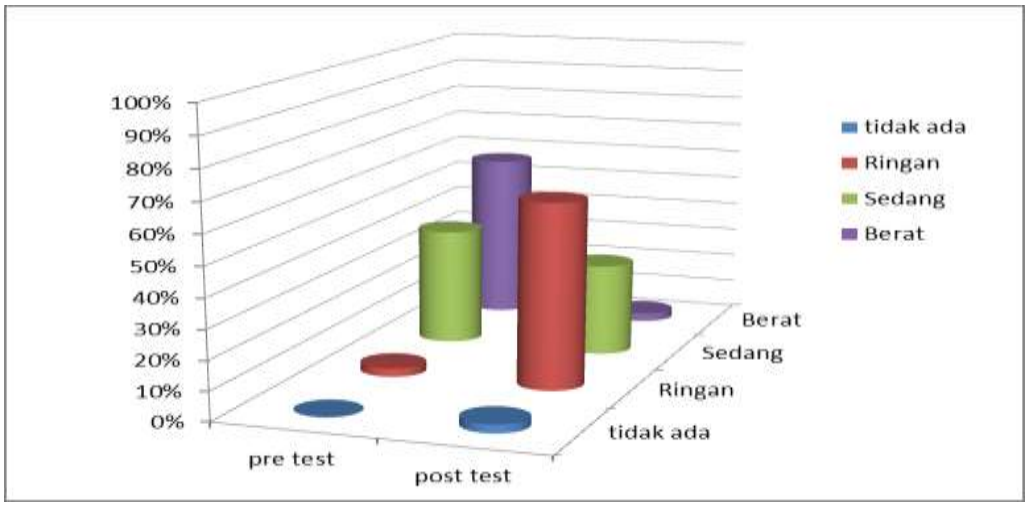
Table 2. Frequency Distribution of Pain Intensity in Fracture Patients After Guided Imagination

Pain intensity	frequency (f)	percentage (%)
There isn't any	1	2.9%
Light	22	62.9%
Currently	11	31.4%
Heavy	1	2.9%
Amount	35	100%

Based on table 2, it can be seen that the pain intensity in fracture patients after guided imagination was carried out by the majority of respondents with mild pain intensity, namely 22 people (62.9%).

c. Differences in Pain Intensity Before and After Guided Imagination in Fracture Patients.

Based on the results of pre-test and post-test data analysis, the intensity of pain in fracture patients at Bumiayu District Hospital for 35 respondents can be seen in the graph as follows:



Graph 1. Difference in pain intensity before and after guided imagery in fracture patients

Based on graph 1. it shows that there is a difference in pain intensity in fracture patients between before and after guided imagery. The difference in pain intensity in fracture patients is due to the guided imagination actions given to respondents so that it can help respondents reduce the intensity of their pain. Based on the pre-test results, it was found that the intensity of pain in fracture patients was mostly severe, namely 20

people (57.1%). Meanwhile, the results of the post test showed that the intensity of pain in fracture patients was mostly mild pain, namely 22 people (62.9%). It could be said that the intensity of pain in fracture patients has decreased for the better.

2. Bivariate Analysis

a. Shapiro-Wilk Test Results

Table 3. Data Normality Test Using Shapiro-Wilk

	Pain intensity Before	Pain intensity After
Asymp Sign (2-tailed)	0.008	0.004

Based on the output of the test of normality, the significance value for pain intensity before was obtained at 0.008, while the significance for pain intensity after was 0.004 because the significance value for intensity before and intensity after was less than <0.05, it can be concluded that the pain intensity data is not normally distributed.

b. Wilcoxon Test Statistical Test Results

Table 4. HaSil Test Statistics Wilcoxon Test

	N	Mean	Minimum	Maximum	*P value* Asymp. sign (2-tailed)
Pain level before	35	6.83	3	9	0.001
Pain level after	35	3.46	0	7	

After carrying out the Wilcoxon test based on the results of the statistical table, a p value of 0.001 was obtained. Thus, the p value is smaller than α (5%) or 0.05 so that Ho is rejected and Ha is accepted, so guided imagination has an effect on reducing pain intensity in fracture patients.

Pain Intensity in Fracture Patients at Bumiayu Regional Hospital Before Guided Imagination.

Based on the results of this study, the intensity of pain in fracture patients as in table 1 can be seen that, the intensity of pain in fracture patients before guided imagination was carried out was severe pain intensity for 20 people (57.1%).

Pain as a subjective sensory and unpleasant emotional experience related to actual or potential tissue damage or perceived in incidents where damage occurs (Potter & Perry, 2014). The severity of pain felt by 20 respondents was due to cellular damage caused by trauma which caused the release of substances that caused pain. These substances include histamine, calcium and bradykinin which combine with nociceptors or receptors that respond to noxious stimuli to initiate neural transmission that is associated with pain. The pain felt by respondents causes various responses, both psychological responses and behavioral responses. Psychological

responses occur because respondents do not understand the pain that occurs or the meaning of pain for the respondent, this is influenced by past experiences and socio-cultural factors.

Pain management in patients who experience pain are generally given analgesics, because they think that using analgesics provides a faster working effect even though using analgesics will cause side effects on the body. For example, the effect of addiction if used frequently, there is also the effect of lowering blood pressure, apart from that Analgesics are also quite expensive. It is also important for nurses to understand the holistic meaning of pain for each individual so that they can develop pain management strategies other than providing analgesics (Potter & Perry, 2014).

Efforts that can be made to reduce pain in fracture patients are various complementary nursing actions. The application of complementary therapy is not yet well known by the public because so far complementary therapy is better known as alternative medicine. Apart from that, complementary therapy was not carried out in health service facilities for some time. One complementary therapy that can be used is guided imagination (Potter & Perry, 2014).

Guided imagery is a process that uses the power of the mind by moving the body to heal one self and maintain health or relax through communication in the body involving all the senses including touch, smell, sight and hearing so that a balance is formed between mind, body and soul in a way guiding the patient to create an impression in the mind, concentrating on the impression yang in the patient's imagination, so that gradually the patient feels less pain (Prasetyo & Sigit, 2015).

Pain Intensity in Fracture Patients at Bumiayu Regional Hospital After Guided Imagination.

Based on the results of this study, the intensity of pain in fracture patients as in Table 2 shows that the intensity of pain in fracture patients after guided imagination was mild pain intensity for 22 people (62.9%). Guided imagination is the client's activity of creating a pleasant image and concentrating on that image and gradually freeing themselves from attention to pain (Tamsuri, 2017).

The activity of applying guided imagination techniques was carried out for 15 minutes and twice a day, for 2 days, given to respondents. The researcher carried out the guided imagination technique 1 hour before administering the analgesic. After being given the guided imagination, the respondents were asked to rest for 5 minutes and then measured the level of pain after administering the guided imagination. The second administration was given another 7 hours before giving analgesics again, guided imagination was given for 15 minutes after which the respondent rested for 5 minutes and the respondent's pain scale was measured again.

Respondents said that during the guided imagination therapy process they felt more relaxed, comfortable and forgot about the pain they were feeling. Respondents became more aware of techniques for reducing pain without using medication and the respondents could do it themselves. Apart from reducing pain, the respondents were also blessed with the fact that this therapy also trained the respondents' concentration of mind. Respondents were not seen wincing in pain as before after being given guided imagery therapy.

This therapy can reduce pain because it contains therapeutic elements that function for relaxation or for the purpose of the healing process. Relaxation techniques give individuals self-control when discomfort or pain occurs, physical and emotional stress in pain. Relaxation will cause a decrease in the adrenaline hormone. A decrease in the adrenaline hormone will cause a feeling of calm, a feeling of calm will cause sympathetic nerve activity to decrease which will cause a decrease in pain (Potter & Perry, 2014).

The way guided imagination works on our body is by influencing the autonomic nervous system in our body to make the body more relaxed and comfortable. When the respondent is encouraged to breathe deeply, the respondent's body will slowly feel relaxed. The feeling of relaxation will be transmitted to the hypothalamus to produce Corticotropin Releasing Factor (CRF). Furthermore, CRF stimulates the pituitary gland to increase the production of Proopioidmelanocortin (POMC) which causes increased production of enkephalin by the adrenal medulla. The pituitary gland also produces the neurotransmitter endorphin which is believed to influence a relaxed mood.

Through guided imagination, patients will be helped to divert attention from the pain they are feeling by imagining pleasant things. This can gradually reduce the client's perception of the pain they feel (Tamsuri, 2017).

The Effect of Guided Imagination on Reducing Pain IntensityIn Fracture Patients at Bumiayu Regional Hospital in 2024

Based on the results of calculations using the Wilcoxon test after being given guided imagination, a *p value* of 0.001 was obtained which was smaller than α 0.05, thus meaning that guided imagination had an effect on reducing pain intensity in fracture patients.

Apart from that, it can be seen from the results of the differences in results in graph 1, the pretest results show that the intensity of mild pain was 1 respondent, the intensity of moderate pain was 14 respondents and the intensity of severe pain was 20 respondents. Mean while, the post test results showed that there was no pain intensity for 1 respondent, mild pain intensity for 22 respondents, moderate pain intensity for 11 respondents and severe pain

intensity for 1 respondent. This shows that guided imagery is a way to reduce pain intensity in fracture patients.

Guided imagination is the client's activity of creating a pleasant image and concentrating on that image and gradually freeing themselves from attention to pain (Tamsuri, 2017).

4. CONCLUSIONS AND SUGGESTIONS

Based on the results of research conducted on 35 respondents, namely fracture pain patients at Bumiayu District Hospital with the conclusion that there was a difference in the average pain intensity in fracture patients before guided imagination of 6.83 and after guided imagination of 3.46 with a probability value of (p = 0.001), meaning that imagination guided there is an effect on reducing pain intensity in fracture patients.

It is recommended that respondents apply guided imagination therapy both in health and illness to support health. Especially if the respondent experiences a feeling of discomfort and pain, treatment is needed to reduce the pain. As per the manual provided.

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