

COMBINATION OF AUTOGENIC RELAXATION AND NATURAL SOUNDS TO REDUCE POST OPERATION PAIN

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Keywords

Postoperative pain, Autogenic, Nature sounds

ABSTRACT

Introduction

Surgery causes sores and pain in the patient's body. Pain after surgery usually lasts 24 to 48 hours, pain can last longer depending on the extent of the wound and the patient's pain response. Postoperative pain can prolong the wound healing process. The purpose of this study was to determine the combination of autogenic relaxation and natural sounds to reduce pain in postoperative patients.

Method(s)

The research method uses pre-experimental research design with one group pretest posttest design. The sampling technique used purposive sampling totaling 50 respondents. The statistical test used in this study was Wilcoxon Signed Rank.

Result(s)

The results of statistical tests showed that the $-value$ was 0.000 (p -value $0.000 < 0.05$) so it can be concluded that there is an effect of giving a combination of autogenic relaxation and natural sounds to reduce postoperative pain.

Conclusion(s)

It is hoped that the combination of Autogenic Relaxation and Natural Sounds can be used as input in applying non-pharmacological techniques to help reduce pain.

INTRODUCTION

The World Health Organization (WHO) revealed that the number of patients with surgery has increased significantly from year to year. In 2011 there were 140 million hospitals worldwide, while in 2012 the data increased by 148 million people. In Indonesia, operations in 2012 reached 1.2 million people. At Dr. Hospital. H. Abdul Moeloek Lampung Province In February 2018 the number of surgical patients was 257 patients, 163 surgeries under general anesthesia and 94 surgeries with spinal anesthesia (Prabowati, 2018).

Surgery or surgery is all treatment actions that use invasive methods by opening or

displaying the body part to be treated, carried out with an incision, until the part to be treated appears for corrective action which ends with closure and suturing of the wound (Sjamsuhidajat, 2011). According to the Indonesian Surgical Room Nurses Association (HIPKABI) surgery is an invasive medical procedure for the diagnosis of disease, trauma and deformity (HIPKABI 2014 in Taufik, 2017).

Surgery causes sores and pain in the patient's body. Pain after surgery usually lasts 24 to 48 hours, but can last longer depending on the extent of the wound and the patient's pain response. Postoperative pain can prolong the wound healing process, because it will interfere with the patient's return to activity and this is one of the reasons for the patient not to move

and mobilize immediately (Gusty, 2011).

Pain is a subjective sensory and emotional experience that is unpleasant related to actual, potential, or perceived tissue damage in the events where the damage occurred. Pain management is one of the methods used in the health sector to treat pain experienced by patients. Broadly speaking, there are two managements to deal with postoperative pain, namely pharmacological management and non-pharmacological management

Autogenic relaxation as a technique or deliberate effort directed at the individual's life both psychologically and somatically causes changes in consciousness through autosuggestion so that a relaxed state is achieved (Luthe, 1969 in Kang et al, 2009). Listening to nature sounds is also a relaxation technique.

Based on Zakaria's research (2019), autogenic relaxation can reduce pain in postoperative sectio caesarea patients with p value <0.05. Based on Doddy Setyawan's research (2013), with the research title "Intervention of Relaxation Music Therapy and Nature Sound (Nature Sound) Against Patient Pain and Anxiety Levels (Literature Review) Treatment combined with natural sound therapy is 75% more effective in reducing anxiety and 100% effective reduce the patient's

Variable	Variable	SD	n	ρ-Value
Pre Test	8,16	.710	50	0.000
Post Test	5,36	.631	50	

pain level compared to no natural sound therapy.

Based on the research above, after the intervention of autogenic relaxation and natural sounds can effectively reduce pain in patients. So that researchers are interested in researching "The effect of a combination of autogenic relaxation and natural sounds on reducing postoperative pain".

METHODS

Variable	Min	Max	Mean	Med	SD	n
Before	7	9	8,16	8	.710	50
After	4	6	5,36	5	.631	50

This type of quantitative research uses pre-experimental research methods with one group pretest posttest research design. The population of this study were postoperative patients at RSUD Dr. H. Abdul Moeloek Lampung Province. The number of samples in this study were 50 respondents.

The sampling technique used in this study was non-random sampling with accidental sampling. The data collection instrument in this study was an observation sheet with a pain scale measuring instrument (NRS) Numeric Rating Scale 0-10 (Potter & Perry).

The researcher will ask for willingness to be a respondent and sign the informed consent, then the researcher will measure the pain scale that is felt after more than 6 hours postoperatively using the Numeric Rating Scale (NRS) before the intervention.

Then the researchers intervened using MP3 and earphones that were attached to the respondent's ears, after 30 minutes the intervention was combined with autogenic relaxation and natural sounds, the researchers measured the pain scale using the Numerical Rating Scale (NRS) by filling out the observation sheet. And the data obtained was processed using the Wilcoxon Signed Rank Test statistical test.

RESULTS

Based on the results of the study, it was found that from 50 respondents, the highest number of genders were women, amounting to 26 respondents (52%), the highest number of ages was the late elderly age (56-65 years) as many as 13 respondents 26%, the highest ethnic group was Javanese as many as 30 respondents. 60% and the highest number of surgical history experiences is Never had a history of surgery as many as 44 people (88%).

Table 1. Distribution of Average Pain Scale Before and After Combination of Autogenic Relaxation and Nature Sounds

The average value of the pain scale before the intervention was 8.16 with a standard displacement of .710, the lowest pain scale was 7 and the highest pain scale was 9, while the average value of the pain scale after the intervention was 5.36 with a standard displacement of .631, The lowest pain scale is 4 and the highest pain scale is 6.

Table 2. Respondents Characteristics based on Gender

The average difference in pain before and after the intervention is 2.8. The results of statistical tests using the Wilcoxon Signed Ranks test showed an -value of 0.000 (ρ-value 0.000 < 0.05), it can be concluded that there is an effect of giving a combination of autogenic

relaxation and natural sounds to decrease postoperative pain in Dr. Hospital. H. Abdul Moeloek Lampung Province Year 2020.

DISCUSSIONS

It was found that the highest number of genders was women, amounting to 26 people (52%). In general, men and women did not differ significantly in response to pain. Recent studies have shown that sex hormones in mammals affect the level of pain tolerance.

The sex hormone testosterone increases the pain threshold in animal experiments, while the hormone estrogen increases the recognition/sensitivity to pain because women feel pain more quickly, however, a person's pain tolerance can be influenced by several factors including personal, social, cultural and other influences (Prasetyo, 2010).

It is known that the highest age is the late elderly age (56-65 years) as many as 13 respondents, 26%. Age can affect pain, especially in infancy and late adulthood. The developmental differences found between these age groups influence how children and late adults respond to pain. Children have difficulty recognizing/understanding pain. In elderly individuals experiencing pathological conditions that make them range to feel pain, an elderly person who suffers from pain will experience serious functional disorders such as mobilization, self-care activities and decreased activity tolerance (Potter & Perry, 2006).

At the age of late adolescence and early adulthood will be more able to withstand and control the pain that is felt, in late adolescence and early adulthood are still experiencing cell regeneration (formation), while for late adulthood to late elderly age will experience a degenerative process (destruction) cells so that a person's adaptive response to pain will be lower.

Based on the results of the research on the characteristics of the respondents in table 4.3, it is known that the highest number of ethnic groups is Javanese, with 30 respondents 60%. According to the researchers, during the research, the Javanese might be more closed in responding to pain, while the Lampung and Batak tribes would be more likely to express the pain response they felt. This is supported by the statement of Davidhizar and Giger (2004), Lasc (2002), Values and Beliefs in culture affect individuals in overcoming pain and reacting to pain.

it is known that the highest number of

surgical history experiences is never had surgery history as many as 44 people (88%). According to researchers, someone who has never had a history of surgery may be more anxious about the pain that is felt so that the perception of pain increases. Meanwhile, someone who has had a history of surgery and feels prolonged pain will be more tolerant of pain.

According to Potter & Perry (2006), if individuals often experience a series of pains without ever recovering or suffer from severe pain, anxiety or even fear can arise. Conversely, if the individual experiences pain of the same type over and over again, then the pain is successfully eliminated, the individual will more easily interpret the sensation of pain and be ready to take the necessary actions to relieve pain.

Individuals who have multiple and prolonged experiences with pain are less anxious and more tolerant of pain than people who experience little pain. For most people, this is not always true. Often, the more experienced the individual is with frequent pain, the more fearful the individual will be of the painful events that will result from Lowdermilk, (Perry, & Bobak, 2002).

The results of the analysis of the average pain scale for 50 respondents showed that the average pain score before the combination of autogenic relaxation and natural sounds was 8.16 and the average pain after the combination of autogenic relaxation and natural sounds was 5.36. These results indicate a decrease in the average pain scale before and after the combination of autogenic relaxation and natural sounds is 2.80.

According to researchers, a decrease in the average pain scale in respondents is due to autogenic relaxation by breathing in and closing the eyes can help a person in suggesting himself to be more relaxed and focused, so that a person can control respiratory function, blood pressure, heart rate and blood flow in the body. smooth. And combined with the sound of nature which has a positive impact in the form of calm and coolness for someone who listens to it. So that it causes a relaxing effect that can reduce a person's anxiety and pain.

The presence of pain stimulation in the surgical wound area causes the release of pain mediators that will stimulate the transition of impulses along the nociceptor afferent nerve fibers to the gelatinous substance in the spinal cord to then pass through the thalamus and then be conveyed to the cerebral cortex and

interpreted as pain. The two gate control theory states that there is one more substance gelatinosa in the thalamus that regulates pain impulses from the trigeminal nerve.

Using relaxation techniques causes pain impulses from the trigeminal nerve to be inhibited and results in the closure of the substantia gelatinosa in the thalamus, the closure of the substance gelatinosa in the thalamus causes the stimulus to the cerebral cortex to be inhibited so that the intensity of pain is reduced. This study uses a combination of autogenic relaxation techniques and nature sounds.

Autogenic relaxation will produce impulses that will be sent through non-nociceptor afferent nerve fibers, non-nociceptive nerve fibers result in closed substance gelatinosa so that the pain stimulus is inhibited and reduced, while the effect of natural sound on the neuroendocrine system is to maintain body balance through secretion of hormones by substances chemicals into the blood, such as the excretion of endorphins that are useful in reducing pain, reducing catecholamine release and adrenal corticosteroid levels (Tuner, 2010).

Autogenic relaxation helps individuals to be able to control several body functions such as breathing, blood pressure, heart rate and blood flow so that a relaxed state is achieved. The effectiveness of this relaxation is done for 20 minutes (Asmadi, 2008). Autogenic relaxation will help the body to carry commands through autosuggestion to relax so that it can control breathing, blood pressure, heart rate and body temperature. Visual imagination and verbal incantations that make the body feel warm, heavy and relaxed are the standard of autogenic relaxation training.

The sounds of nature have been proven in several studies to reduce pain and anxiety in patients. The sound of nature can minimize the patient's perception of the sounds in the surrounding environment or thoughts that make the patient anxious and increase pain. Several studies on music as therapy say that there is a convergence that occurs between sensory input such as relaxation music therapy, nature sounds and a combination of both and neural output that regulates pain and stress responses (Susanne et al, 2011).

Based on this study, the results of statistical tests with the Wilcoxon Signed Ranks test showed the -value of 0.000 (-value $0.000 < 0.05$), it can be concluded that there is a combination of autogenic relaxation and natural sounds on postoperative pain reduction in Dr.

Hospital. H. Abdul Moeloek Lampung Province Year 2020.

This study is in line with research conducted by Zakaria (2019), with the research title "The Effect of Autogenic Relaxation on Reducing Pain Intensity in Patients with Postoperative Sectio Caesarea in the Pomegranate Room, Dr. H. Abdul Moeloek Lampung Province 2019". The research method used is quasi-experimental research design with non-equivalent control group design using accidental sampling technique. The number of samples used as many as 30 respondents. The results of this study obtained an average decrease in pain scale before and after in the intervention group from 6.67 to 5.27 and the average decrease in pain before and after in the control group from 6.87 to 6.13.

This research is also in line with research conducted by Doddy Setyawan (2013), with the research title "Intervention of Relaxation Music Therapy and Nature Sound (Nature Sound) Against Patient Pain and Anxiety Levels (Literature Review)". The research method used is literature review with literature study and electronic search using search engines EBSCOhost (MEDLINE), GALE (infotract galegroup). The results of a review of several studies show that 76% of standard room care combined with music therapy is more effective in reducing the golden level, 76.2% is effective in reducing pain levels in patients compared to without music therapy. Treatment combined with natural sound therapy is 75% more effective in reducing anxiety and 100% effective in reducing the patient's pain level than without natural sound therapy. Standard treatment combined with a combination of relaxation music therapy and nature sounds showed 100% effectiveness in reducing pain and anxiety in patients.

CONCLUSIONS

The average value of pain in postoperative patients before being given a combination of autogenic relaxation and natural sounds at RSUD Dr. H. Abdul Moeloek, Lampung Province in 2020, which is 8.16

The average value of pain in postoperative patients after being given a combination of autogenic relaxation and natural sounds at RSUD Dr. H. Abdul Moeloek, Lampung Province in 2020, which is 5.36

The difference in the average value of pain before and after the combination of autogenic relaxation and natural sounds in postoperative

patients at Dr. Hospital. H. Abdul Moeloek Lampung Province Year 2020 2.80

It is hoped that the combination of relaxation and natural sounds can be made into Standard Operating Procedures (SOP) and used as input in applying non-pharmacological techniques to help reduce postoperative pain so that it can be applied as an intervention in nursing care.

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