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**EFFECT OF HANDHELD FINGER RELAXATION ON REDUCTION OF
PAIN INTENSITY IN PATIENTS WITH POST-APPENDECTOMY
AT INPATIENT WARD, RSUD SIDOARJO**

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ABSTRACT

Background

Pain is the nursing problem of post-appendectomy patients, they have a less pleasant experience due to inadequate pain management. This pain may have impacts that present as not only reduce the ability and willingness of individuals to recover, but also the ability of individuals to maintain self-care, resulting in fatigue adue to pain sensation among patients.

Objective

The objective of this study was to analyze the effect of handheld finger relaxation on reduction of pain intensity in patients with post-appendectomy at inpatient ward, RSUD Sidoarjo.

Methods

This study used pre experiment one group pre-post test non control group design. The experiment unit was post-appendectomy patients at inpatient ward, RSUD Sidoarjo. Total replication (samples) was 12 respondents, who met the criteria. The independent variable was handheld finger relaxation, which was provided as intervention, that were performed 30-50 minutes per day. The dependent variable was pain intensity. Data collection was undertaken using questionnaire and observation sheet Numerical Pain Rating Scales (NPRS). Data were analyzed with Wilcoxon Signed Rank Test with significance level of 0,05.

Results

Results showed that the majority of Post-appendectomy patients was severe pain, and after handheld finger relaxation was given for 30-50 minutes, the majority of Post-appendectomy patients felt moderate pain, there was reducing in pain intensity after handheld finger was given ($p = 0.001$). Based on this results, handheld finger relaxation has a significant effect in reducing pain intensity.

Discussions

Holding a finger while breathing deeply (relaxation) can reduce and heal physical and emotional tension, because it will warm the finger dots on the exit and entry of meridian energy (energy channels) located on our fingers. Reflex points on the hands will give reflex stimulation (spontaneous), these stimuli will flow in electric or shock waves to the brain. The waves received by the brain and processed quickly, and then forwarded to the nerves in the body organs impaired, so that blockages in the energy pathways to be smooth. The flow of this energy will generate impulses that are sent through the afferent nerve fibers resulting in non-nociceptors "gate" closed result of the dominant input from A-beta

fibers that secrete the neurotransmitter inhibitor that inhibited and reduced pain stimulus. CONCLUSION : Implication of this study is that handheld finger relaxation as one of nurse independent intervention. It is suggested to improve nurses capability in this pain management to help post-appendectomy patient in countering the pain.

KEYWORDS: Handheld Finger Relaxation, Pain, Post-Appendectomy, Gate-Control Theory

INTRODUCTION

Pain is an unpleasant experience for patients post-appendectomy because their tissue trauma surgical incision. handheld finger relaxation is a therapy that can be applied to reduce pain in patient. Pain is the nursing problem of post-appendectomy patients, they have a less pleasant experience due to inadequate pain management. This pain may have impacts that present as not only reduce the ability and willingness of individuals to recover, but also the ability of individuals to maintain self-care, resulting in fatigue due to pain sensation among patients.

MATERIALS AND METHODS

This study used pre experiment one group pre-post test non control group design. The reaserch conducted in June 2013 in RSUD Sidoarjo. The experiment unit was post-appendectomy patients at inpatient ward, RSUD Sidoarjo. Total replication (samples) was 12 respondents, the first day Post-appendectomy patient, felt moderate to severe pain and exclude the Post-appendectomy with complication such Peritonitis. This research conducted to analyse the difference in pain intensity before and after the post-appendectomy patients given the handheld finger relaxation techniques for 30-50 minutes. Handheld finger relaxation technique is the relaxation method by holding each of the five fingers one by one, about 3 to 5 minutes when the patient felt pain.

The procedure given by laying on the bed with closed eyes and deep breathing. Hold the finger one by one, thumb to little/pinky finger about 2-3 minutes each finger (Hoaglund, 2009). The unpleasant feelings caused by abdominal surgery before and after intervention were observed by researcher.

Data collection was undertaken using questionnaire containing demographic data of patients, standart operational procedure of handheld finger relaxation techniques by Hoaglund (2009) and observation sheet Numerical Pain Rating Scales (NPRS) by Potter & Perry (2005) done with interview to determine the pain intensity. The range of NPRS are no pain, 1-3 (mild pain), 4-6 (moderate pain), 7-9 (severe pain), and 10 (pain unbearable). Data of pain intensity were analyzed with Wilcoxon Signed Rank Test with significance level of 0,05

RESULTS

Overall, from 12 study participants, the majority of Post-appendectomy patients were female (91,7%), and the average age was 10-30 years old (93,4%). The majority of the study participants never undergone surgery before, means that most of the participants had no previous experience. Result showed that most of the participant felt severe pain, and after handheld finger relaxation was given for 30-50 minutes, Post-appendectomy patients mostly felt moderate pain, there was reducing in pain intensity after handheld finger was given ($\rho = 0.001$). Based on this results, handheld finger relaxation has a significant effect in reducing pain intensity.

Table 1: Participants Characteristic

Characteristic		Frequency	Percent
Age (Years)	10-<21	5	41,7%
	21-<31	5	41,7%
	31-<41	1	8,3%
	41-50	1	8,3%
Sex	Male	1	8,3%
	Female	11	91,7%
marital Status	Married	5	41,7%
	Not married	7	58,3%
Experience of previous surgery	Yes	2	16,7%
	No	10	83,3%

Table 2: Pain Intensity

Pain Intensity	Pre-Test		Post-Test	
	Frequency	Percent	Frequency	Percent
No pain	0	0%	0	0%
Mild pain	0	0%	0	0%
Moderate pain	0	0%	9	75%
Severe pain	10	83%	3	25%
Pain unbearable	2	17%	0	0%
	12	100%	12	100%
P value = 0,001				

DISCUSSIONS

Pain Intensity

The difference in pain intensity on respondents due to age and experience of previous surgery. Age can affect the patient's perception of pain. the younger-aged patient will have difficulty understanding the pain and how untukmengatasi pain. In a study conducted Woodrow et al (2005), found that tolerance to pain increases with increasing age, for example, increasing the person's age is increasing also the understanding of the pain and effort to overcome them. Experience of previous surgery also affects the perception of the patient to pain as less fear of future pain and able to tolerate pain well. Patients who had never had surgery, increasing anxiety and the patient is unable to tolerate pain well. If the individual has long series of episodes often experience pain without ever recover or suffer severe pain, the anxiety or even fear may arise.

Conversely, if an individual is experiencing pain, the same type over and over again, but then the pain is successfully removed, it will be easier for the individual to interpret the sensation of pain. As a result, patients will be better prepared to undertake the necessary measures for the relief of pain. Someone who never managed to overcome the pain of the past, and this time the same pain arises, then it will be easier to cope with the pain.

The way someone overcoming pain depends on past experience in dealing with pain, it is proved that from 12 participantss, mostly had never undergone surgery. it can be seen from the data of the respondents that the patients who had undergone previous surgery, have a lower pain intensity compared with patients who had never had surgery.

Psychological condition is the dominant factor affecting the perceived pain intensity in patients with post-appendectomy where the effect of the acute pain, the patient becomes anxious and unable to control the pain. Women are more likely to experience anxiety can increase pain than men.

This is because women felt to be more sensitive to the problem, so that more women coping mechanisms are less well than men (Smeltzer & Bare, 2002). Anxiety will result in patient injury conditions and long day care at the hospital so that the nurse should explain the cause of the pain and how to reduce them. But in this study can not be concluded that the intensity of pain in men is lower than women due to the limitations of respondents gender male.

After treatment handheld finger relaxation technique in patients with post-appendectomy, a significant decrease of pain intensity marked by a decline in scores that after given this relaxation obtained of 12 respondents mostly had complaints of pain were as many as 10 respondents (83.3%) and severe pain as much as two respondents (16.7%).

Reduction in pain intensity in patients with Post-appendectomy due to handheld finger relaxation therapy help respondents to relax by holding each of the five fingers one by one, about 3 to 5 minutes of the most simple and easy to release old emotions and helps people relax. This technique provides an easy touch of the hand and breathing for energy balance in the body (Liana, 2008).

In physiological, handheld finger relaxation techniques can reduce pain. Pain stimulation causes the release of mediators respondents pain transmitted by delta-fibers A and C, impulses along nerve fibers brought into the substantia gelatinosa afferent nociceptors (gate) in the spinal cord for the next pass through the thalamus and then delivered to the cerebral cortex and interpreted as pain. Finger handheld relaxation treatment will generate impulses that are sent through the afferent nerve fibers of non-nociceptors which leads to a "gate" closed as a result of the dominant input from A-beta fibers that secrete the neurotransmitter inhibitor that inhibited and reduced pain stimulus. Gate can be found in the cells of gelatinous at the end of the spinal cord, thalamus and cerebellum. By understanding what may affect the gate / gates, the nurse can obtain a useful conceptual framework for the management of pain. This theory states that the stimulus will be hampered when a door is closed. Closing of the door is the basis for pain relief therapy (Potter & Perry, 2005). Similarly, Suhartini (2007) said that pain is a mechanism for the production of the body, which occurs when tissue is being damaged and cause the individual to react or eliminate pain stimuli.

According to research conducted Pinandita. et al, pain intensity in the respondents after receiving treatment finger hold/handheld relaxation techniques will change or suffered modulation as a result of stimulation handheld finger relaxation the first and more reaches the brain thereby inhibiting pain stimulation to otak.

The handheld finger relaxation techniques is an effective pain management strategy in first day post-appendectomy patients as it can be seen a decreasing in pain intensity, nurse also indispensable in the effort of non pharmacologic pain management to reduce pain intensity.

Handheld Finger Relaxation Technique

In this study, respondents were given the treatment handheld finger relaxation techniques performed for 30-50 minutes. Based on the results of research in general about the effect of this relaxation techniques in Post-appendectomy patients found that respondents experiencing pain intensity differences, this means that the respondents were given a handheld finger for relaxation techniques can feel the excitement when the touch. These stimuli make respondents feel comfortable and decrease the sources of depression and anxiety, so that the pain can be controlled and improved body function. The decreasing of pain intensity occurs on the respondent after treatment for relaxation techniques finger hold a positive effect of the elements that can be giving out positive and adequate response, the respondent is able to respond to the touch of fingers shown by a decrease in the level of pain (Liana, 2008).

Each patient has a different response to touch felt and given to them. When the muscle tissue relaxes, it can improve blood circulation and lymph, which then can eliminate lactic acid in the muscle fibers and reduce fatigue and stress. When the patient relax and not stress decreases muscle tension which will reduce anxiety. Pain impulses can be blocked is to provide stimulus to the large diameter nerve that causes the control gate will be closed and no pain stimuli can be forwarded to the cerebral cortex and then the pain will be reduced (Mander, 2003).

The results are consistent with the opinion of Liana (2008) that hold the finger can be done as an alternative to non pharmacologic pain management in patients with complaints of pain and can inhibit pain neurotransmitter to transmits pain impuls caused by invasive procedures. Holding a finger while breathing deeply (relaxation) can reduce and heal physical and emotional tension, because it will warm the finger dots on the exit and entry of meridian energy (energy channels) located on our fingers. Reflex points on the hands will give reflex stimulation (spontaneous), these stimuli will flow in electric or shock waves to the brain. The waves received by the brain and processed quickly, and then forwarded to the nerves in the body organs impaired, so that blockages in the energy pathways to be smooth. The flow of this energy will generate impulses that are sent through the afferent nerve fibers resulting in non-nociceptors "gate" closed result of the dominant input from A-beta fibers that secrete the neurotransmitter inhibitor that inhibited and reduced pain stimulus.

CONCLUSIONS

Pain is an unpleasant experience for patients post-appendectomy because their tissue trauma surgical incision. handheld finger relaxation is a therapy that can be applied to reduce pain in patients. It is needed the improvement nurses capability in this pain management to help post-appendectomy patient in overcoming the pain.

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