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DIFFERENCES IN THE EFFECTIVENESS OF EAR MASSAGE, DEEP BREATH RELAXATION, AND GUIDE IMAGERY IN REDUCING LABOR PAIN

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Abstract

Background: Labor and birth are physiological processes of women. Although it is natural for women, but in general, the process is accompanied by severe pain and sometimes even lead to life-threatening. Childbirth pain is a problem that receives proper attention from nurses. Many alternative and complementary methods besides the use of drugs, can be applied to reduce pain. The methods applied include a holistic approach to ear massage, deep breathing relaxation, and guided imagery.

Research method: This research is a quasi experiment. The research design used in this study is the "pre test and post test group design experiment" research by collecting data twice, namely before and after treatment.

Results: From the analysis results obtained p value<0.05 indicating the three variables give the effect of the difference in pain between before and after the intervention. The difference in mean between the three interventions, ear massage and guide imagery have the same effect of reducing pain scale. However, if observed from the large value, imagery guide is the most effective in reducing labour pain. This is because the guide imagery can minimise labor pain by up to 12 times, while ear massage reduces labor pain by up to 10 times and breathing relaxation in reducing labor pain by up to 8 times.

Conclusion: There is an effect of ear massage, deep breathing relaxation and guide imagery in reducing labor pain.

Keywords: ear massage, deep breathing relaxation, and guide imagery, labor pain

Introduction

Labor and birth are physiological processes of women.. The pain of labor is pain due to myometrial contractions accompanied by physiological and biochemical changes mechanisms. Besides psychological factors, emotions and motivation also affect the emergence of childbirth. Factors that cause psychological pain in labor are panic, fear and physiologically opening and thinning of the cervix, hypoxia (lack of oxygen) in the uterine muscles, tense segments of the uterus, strained uterine muscles, the tension in the cervix, ligaments stretched uterus.[1]

Physical and psychological barriers to the mother during labor can also increase pain. When the most tiring, severe, and most mothers begin to feel pain or pain is the first phase of the active phase, in this phase, most mothers feel extreme pain because the uterine activity begins to be more active. In this phase the contractions are getting longer, stronger and more frequent.[2]

Methods

This research is a quasi experiment. The research design used in this study was "pre test and post test group design experiment" research by collecting data twice, namely before treatment (ear massage = 01, relaxation of breath in = 03, guide imagery = 05) and after treatment (massage ears = 02, deep breath relaxation = 04, guide imagery = 06). The difference between 01 and 02, i.e. 02-01 is assumed to be the effect of ear massage treatment, the difference between 03 and 04, i.e. 04-03 is assumed to be the treatment effect of deep breathing relaxation, and the difference between 03 and 04 i.e. 04-03 is assumed to be the effect of guide imagery treatment. Differences 0201, 0403, xvii and 06-05 as differences in pain reduction between those treated with ear massage, deep breathing relaxation, and guide imagery. In this study, the two groups were initiated by measuring pain levels, then treated with ear massage, deep breathing relaxation, and guide imagery.

Furthermore, measurements were taken again after treatment. The population in this study were all women giving birth in the Grabag Health Center, Magelang Regency. The number of samples recorded during the period of data retrieval in September - October 2017 was 60 respondents.

Results

Based on table 1, it is known that the average pain before an ear massage intervention was 4.70 and decreased after the intervention was given at 2.50. The

maximum or minimum value of pain also decreases between before and after the intervention. The results of the analysis using paired t-test results obtained p-value of 0,0001 (p-value <0.05), which means there are differences in pain before and after ear massage intervention. T value of 9,787 which means that by giving ear massage intervention will reduce pain by ten times compared to before the intervention was given.

Table 1: Frequency Distribution of Labor Pain in Respondents with Ear Massage Interventions

Pain Scale	Mean	Deviation	Minimum	Maximum
Pre-Massage	4.7	2,386	1	9
Post-Massage	2.5	1,906	0	7

Table 2 shows that the average pain before a deep breathing relaxation intervention was 3.55 and decreased after the intervention was 1.70. The maximum or minimum value of pain also decreases between before and after the intervention. Paired t-test test for differences in pain before and after breathing relaxation intervention in the results obtained p-value of 0.0001 (p-value <0.05), which means there are differences in pain before and after breathing intervention in breathing. T value of 7.955, which means that by giving breathing intervention in breathing, will reduce pain by eight times compared to before being given the intervention.

Table 2: Distribution of Frequency of Labor Pain in Respondents with Deep Breath Relaxation Interventions

Pain Scale	Mean	Standard Deviation	Minimum	Maximum
Pre-Relaxation	3.5	1.731	1	7
Post-Relaxation	1.7	1.218	0	4

The average labor pain based on table 3 is known that before being given a Guide Imagery intervention that is 5.35 and has decreased after being given the intervention, which is 3.15. The maximum or minimum value of pain also decreases between before and after the intervention. Comparative analysis of labor pain before and after being given the Guide Imagery intervention using paired t-test results obtained p-value of 0,0001 (p-value <0.05), which means there are differences in pain before and after the Guide Imagery intervention was given. T value of 11,804 which means that by giving the guide Imagery intervention will reduce pain by 12 times compared to before being given the intervention.

Table 3: Distribution of Frequency of Labor Pain in Respondents with Guide Imagery Intervention

Pain Scale	Mean	Standard Deviation	Minimum	Maximum
Pre-Guide Imagery	5.35	1,785	2	8
Post-Guide Imagery	3.15	1,899	0	7

Table 4 shows that the three interventions gave an effect of pain differences between before and after the intervention. If you pay attention to the difference in mean between the three interventions, ear massage and Guide Imagery have the same effect of reducing the pain scale. However, if observed from the magnitude of the t value, it is known that Guide Imagerypaling is effective in reducing labor pain xxv. This is because the Imagery Guide can reduce labor pain by up to 12 times, while ear massage reduces labor pain by up to 10 times and breathing relaxation in reducing labor pain by up to 8 times.

Table 4: Effect of Massage Ear against Labor Pain Decrease

Interventions	Pain Scale		
	P-value	Difference Mean	Value T
Massage	0.00001	2:20	9787
Relaxation Breath	0.00001	1.80	7955
Guide Imagery	0.00001	2:20	11 804

Discussion

The results showed there were differences in pain before and after the intervention was given. This means that ear massage affects the decrease in labor pain. Ear massage can reduce labor pain by ten times. Acupoints are located throughout the body, close to the surface of the skin and connected to each other through a complex network of meridians. Each acupoint has a special effect on certain body systems or organs. Gently stimulate and massage the point will occur changes in body physiology and will affect mental and emotional states. Based on these principles, ear massage/acupressure massage techniques have been developed to reduce disease complaints. According to the results of previous studies, they are showing that the integration of massage therapy into pain care makes overall positive results on patients' ability to deal with challenging physical and psychological aspects in their health conditions. The study showed not only a significant reduction in pain levels, but also the linkages of pain, relaxation, sleep,

emotions, recovery, and finally, the process of adaptation.[2]

The difference in pain before and after the administration of the intervention shows that relaxation of breath in effect on reducing labor pain. The purpose of deep breathing relaxation techniques is to improve alveoli ventilation, maintaining gas exchange, prevent lung atelectasis, improve cough efficiency reduce stress, both physical and emotional stress, namely reduce pain intensity and reduce pain.[1] Relaxing can provide emotional and psychological benefits when stress occurs. Some emotional benefits include; provide positive experiences about giving birth to mothers, reduce tension and fear of mothers during childbirth, help foster relationships between parents and children, help foster relationships between mothers and fathers.[3] While physiological benefits include reducing pain without using drugs and reducing the risk of the baby, preventing complications such as pain and decreasing oxygen, the mother can cooperate at the time of examination, and she does not feel tired during and after birth. Can be felt by the client after performing deep breathing relaxation techniques that can reduce pain, and provide peace of mind.[4]

This technique can reduce the sensation of pain and control the intensity of the mother's reaction to pain. Adrenaline and cortisol that cause stress will decrease; the mother can increase concentration and feel (calm, making it easier for the mother to regulate breathing until the respiratory frequency is less than 60-70 x / min. The PaCo2 content will increase and decrease. PH thereby increases the level of oxygen in the blood. As with pain in labor, at the level of light, pain experienced can make a person more attention to her condition and her baby to seek information and assistance on health care workers.[10]

Guided imagery technique begins with the process of relaxation in general, namely asking clients to close their eyes and focus on their breath slowly, clients are encouraged to relax their mind and fill the mind with shadows to make peace and calm.[5] Guided imagery is a type of relaxation technique, so the benefits of this technique are generally the same as the benefits of other relaxation techniques. Experts in the field of guided imagery techniques argue that imagination is an effective healer that can reduce pain, anxiety, accelerate healing and help the body reduce various diseases. Guided imagery has become standard therapy to reduce anxiety and provide relaxation to adults or children. It can also reduce chronic pain, procedural actions that cause pain, insomnia, prevent allergic reactions, and lower blood pressure. Besides guided imagery relaxation techniques that also use the power of the mind by directing the body to heal itself maintain health or relax through communication in the body involving all the senses (visual, touch, smell, vision and hearing) so that a balance is formed between mind, body and soul.[6] Guided imagery relaxation is a non-pharmacological pain management method that can be used by nurses. This works by changing cognitive perception and affective motivation.[7]

Changes in effective motivation will increase the client's mechanism of pain. Individuals who have an internal locus of control perceive themselves as individuals who can control their environment, such as pain. The results of previous studies suggest that this significant difference is related to the guided imagery mechanism that can weaken psychoneuroimmunology that influences the stress response. A mother who experiences labor pain will have tissue damage that stimulates the nociceptors to transmit pain to the brain but with guided imagery will reduce the transmission of pain to the brain so that the pain level decreases. In addition, guided imagery can function as a distraction from painful stimuli, thereby can reduce pain response.

Respondents become relaxed and calm when taking oxygen in the air through the nose, and oxygen enters the body, so that blood flow becomes smooth and combined with guided imagery causes the patient to turn his attention to pain to things that make him happy and happy so that he forgets the pain he is experiencing.[8] And with ear massage, the integration of massage therapy into pain treatment makes overall positive results on the ability of patients to face challenging physical and psychological aspects in their health conditions. The study showed not only a significant reduction in pain levels, but also the linkages of pain, relaxation, sleep, emotions, recovery, and finally, the process of adaptation.[3] This is what causes the intensity of pain felt by patients before delivery decreases after deep breathing relaxation techniques and guided imagery.[6]

Changes in pain intensity before and after ear massage techniques, deep breath relaxation and guided imagery can also be seen after statistical tests using paired sample t-test showed p-value <0.05, this indicates that the three interventions gave an effect of pain differences between before and after the intervention. If you pay attention to the difference in mean between the three interventions, ear massage and Guide Imagery have the same effect of reducing pain scale.[9] However, if observed from the large t value, it is known that Guide Imagery is the most effective in reducing labor pain. This is because the Imagery Guide can reduce labor pain up to 12 times,

while ear massage reduces labor pain up to 10 times and breathing relaxation in reducing labor pain up to 8 times. Therefore, the hypothesis is accepted. So, the results of this study indicate that ear massage techniques, deep breathing relaxation and guided imagery are proven effective in reducing the intensity of labor pain.[10]

Conclusion

The results of the analysis using paired t-test results obtained p-value of 0.0001 (p-value <0.05), which means there are differences in pain before and after ear massage intervention. All three interventions provide the effect of pain differences between before and after the intervention. If you pay attention to the difference in mean between the three interventions, ear massage and Guide Imagery have the same effect of lowering the pain scale. However, if observed from the large t value, it is known that Guide Imagery is the most effective in reducing labor pain. This is because the Imagery Guide can reduce labor pain up to 12 times, while ear massage reduces labor pain up to 10 times and breathing relaxation in reducing labor pain up to 8 times.

Declaration

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