EFFECT OF RESPIRATORY RELAXATION TECHNIQUES ON PAIN INTENSITY IN THE FIRST STAGE OF LABOR AT MIDWIFER ANDRIANI'S INDEPENDENT PRACTICE

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Abstract :
Pain during labor is a physiological process. As many as 12% - 67% of women are worried about the pain they will experience during childbirth. One effort to reduce labor pain is with relaxation techniques. Deep breathing relaxation techniques are one way to reduce pain in mothers giving birth. This study aims to determine the effect of breathing relaxation techniques on the intensity of pain during the first stage of labor at the Independent Practice of Midwife Andriani. The method used in this research is pre-experimental design, namely one group pre-test post-test. Sample selection was carried out proportionally at random at Midwife Andriani's Independent Practice from January to June 2023. The total sample was 24 respondents. Pain intensity was measured using a numerical rating scale. Data analysis using the non-parametric statistical test Wilcoxon test. The results of the analysis obtained p-value = 0.000 (<α 0.05) which means that there is an influence of breathing relaxation techniques in reducing the intensity of pain in the first stage of labor. It is hoped that every birth attendant can apply comprehensive services during the first stage of labor by controlling labor pain through breathing relaxation techniques.
Keywords: breathing relaxation techniques, labor pain, first stage

INTRODUCTION

Labor pain is part of the normal process, has time to prepare for birth, stops on its own, is intermittent, not constant, has an end that can be known with the birth of a baby (Manuaba, 2017). The birth process is synonymous with pain, where most births are accompanied by pain. Pain during labor is a physiological process. Pain causes frustration and despair, so some mothers worry that they will not be able to go through the birthing process. A recent study found that 67% of women felt a little worried, 12% felt very worried and 23% were not at all worried about labor pain. (Cunningham, 2013 & Reeder, 2011)

Pain is a subjective sensation or discomfort that is often related to actual or potential tissue damage. In general, pain is defined as an unpleasant condition that occurs due to physical stimulation or from nerve fibers in the body to the brain, and is followed by physical, physiological and emotional reactions (Padila, 2014). Meanwhile, according to Andarmoyo & Suharti, (2014), pain is an experience of discomfort in which each individual will experience different sensations in perceiving pain.

According to Lally JE (2008) the pain that occurs is actually a signal that the labor process has begun. Currently, the development of health science emphasizes a holistic approach by paying

attention to the psycho-neuro-endocrinoimmune (PNEI) aspect, which explains that a lack of harmony between the mind and soul will result in disturbances in the balance of nerves, hormones and ultimately the body's immune system.

Andarmoyo and Suharti (2014) revealed that handling labor pain can be done by pharmacological management and non-pharmacological management, the choice of therapy in providing pain relief interventions can be seen from the nature of the pain felt and the extent to which the pain interferes with the individual's own well-being. Non-pharmacological pain management can be interpreted as reducing the pain response without medication.
Non-pharmacological pain management can be carried out by health workers, namely by using psychological pain modulation approaches such as hypnotherapy, relaxation, imagination, psychoprophylaxis, biological feedback and distraction. Meanwhile, the sensory modulation approach to pain involves massage, therapy, acupressure, acupuncture, music, zet hydrotherapy, electrical nerve stimulation (tens) transcultanues, homeopathy, environmental modification, position and posture adjustment and ambulation (Solehati & Kosasih, 2015).

Labor pain can be controlled with 2 methods, namely pharmacological and non-pharmacological. Pharmacological methods of pain relief are methods of relieving pain using chemical drugs, while non-pharmacological methods are methods of relieving pain naturally without using chemical drugs using relaxation techniques, which are external actions that influence the individual's internal response. against pain. Pain management with relaxation measures includes muscle relaxation, deep breathing, massage, meditation and behavior. (Hamdiah Ahmar, 2021).

Relaxation is an effective method for reducing pain which is an unpleasant sensory and emotional experience with a mechanism that stops the pain cycle (Faisol, 2022). Deep breathing relaxation techniques are one way to reduce pain in mothers giving birth non-pharmacologically. By taking a deep breath when there is a contraction using chest breathing through the nose, oxygen will flow into the blood which will then circulate throughout the body so that the mother in labor will feel relaxed and comfortable because the body will release endorphin hormones which are natural pain relievers in the body. W, 2015)

Research conducted (Bonica JJ, 1995) on 2,700 parturients in 121 obstetric centers from 36 countries found that only 15% of labor was painless or mild pain, 35% of labor was accompanied by moderate pain, 30% of labor was accompanied by severe pain and 20% of labor was accompanied by moderate pain. accompanied by very severe pain (Lestari Indah, 2012). The intensity of pain felt by each individual is different, pain perception can be influenced by various factors such as fear and anxiety, focus on pain and fatigue (Randayani Lubis & Anggraeni, 2020). The results of research (Widiawati & Legiati, 2017) stated that as many as 91.9% of women experienced pain during the first stage of labor, primiparas felt the most severe pain, namely 63% higher than multiparas at 37%.

RESEARCH METHODOLOGY

The research design used was a pre-experimental design. The research was conducted at Midwife Andriani's Independent Practice. The sampling technique was carried out using proportional random sampling. The statistical test used is the Wilcoxon test.

RESULTS AND DISCUSSION

1. Univariate Analysis

Table 1 Frequency Distribution of Respondent

Characteristics	Quantity Characteristics n=24	Presentations
Age (Years) <20 and > 35 Years	6	25
20- 35 Years	18	75
Gravida	10	42
Primi	14	58
Multi		
Education	19	79
Height > high school	5	21
Low < high school		

From the research results, it was found that the majority of respondents were aged 20 - 35 years (75%), 58% were multigravida and 79% had higher education. The results of the research show that the greatest frequency of birthing mothers is 20-35 years old. This shows that the majority of respondents are of healthy reproductive age, and physiologically at that age mothers are able to control and endure pain. The results of research (Widiawati & Legiati, 2017) stated that as many as 91.9% of women experienced pain during the first stage of labor, primiparas felt the most severe pain, namely 63% higher than multiparas at 37%.

It is possible that this condition is also caused by personal pain. Pain during labor is influenced by physiological factors (uterine contractions, cervical dilatation, fetal head pressure on the pelvis, stretching of the birth canal) and psychosocial factors (anxiety, fear, level of education, mother's ability to cope, physical environment, culture and ethnicity, and emotional support). (Febriyatie, 2013)

Pain is everything a person says about the pain and can be felt at any time when he feels pain. Pain is subjective, so only the person who feels it can most accurately and precisely define pain. (Prasetyo SN, 2010)

Complex perceptual and cognitive processes in the central nervous system influence nociceptive impulses so that these impulses are interpreted with emotions, beliefs and expectations in the current situation. As a result of this process, the meaning, quality and intensity of pain, as well as behavioral and psychological responses to pain are related to a

person's personality, cultural background, past experiences and the psychological context in which the pain was experienced. (Simkin, 2005)

2. Bivariate Analysis

Table 2. Effect of Respiratory Relaxation Techniques on Pain Intensity in the First Stage of Labor

Pain Intensity	Median (min-Max)	SD	p-value	N
Before Relaxation Techniques	5 (1-9)	2,048	0,000	24
After Relaxation Techniques	3 (2-7)	1,853		

Based on the results of the Wilcoxon statistical test analysis, it was found that p-value = 0.000 (<α 0.05), which means that there is an influence of breathing relaxation techniques in reducing the intensity of pain in the first stage of labor. The results of Windi Lestari's 2015 research showed a significant influence of the deep breathing relaxation technique on the pain adaptation response in mothers during the first active phase of birth at BPM Midwife P, Yogyakarta City. Juistira Safitri, et al (2020) conducted research with the title "Relaxation Therapy (Deep Breathing) in Reducing Labor Pain". The aim of this research is to determine the effect of relaxation therapy (deep breathing) in reducing labor pain. The results of this research show the effect of relaxation therapy (deep breathing) in reducing labor pain.

Mothers who experience labor definitely experience pain. The pain felt during childbirth is very subjective for each mother. Labor pain is personal, each person perceives pain differently as a result of the same stimulus depending on their pain threshold. Pain during labor is a manifestation of contractions (shortening) of the uterine muscles. Most mothers consider and imagine labor pain as a frightening thing or experience (Andarmoyo and Suharti, 2013). In the first stage of labor, breathing relaxation techniques can improve the relaxation of the abdominal muscles and thereby increase the size of the abdominal cavity. This situation reduces friction and pain between the uterus and the abdominal wall. Because the genital muscles also become more relaxed, these muscles do not interfere with fetal descent. Generally, slow abdominal breathing, approximately half the normal rate of breathing for a laboring mother, begins when the laboring mother can no longer walk or talk during the contractions because the frequency and intensity of the contractions increases, the laboring mother needs to switch techniques to chest breathing, deeper breathing. shallow breathing at a rate approximately twice the normal breathing rate. The most difficult time to maintain control during contractions is when the cervix dilates to 8-10 cm. This period is also called the transition period. Even for mothers who have made preparations for labor, concentration on breathing techniques is difficult to

maintain. The type that can be used is a 4:1 ratio pattern, namely: breath, breath, breath, breath, exhale (like when blowing out a candle) (Manurung, 2012).

Respiratory relaxation techniques can control pain by minimizing sympathetic activity in the autonomic nervous system. This technique can reduce the sensation of pain and control the intensity of the mother's reaction to pain. The hormones adrenaline and cortisol which cause stress will decrease, the mother can increase concentration and feel calm, making it easier for the mother to regulate her breathing until the respiratory frequency is less than 60-70x/minute. PaCo2 levels will increase and reduce PH, thereby increasing oxygen levels in the blood. Like pain during childbirth, at a mild level, the pain felt can make someone pay more attention to their condition and that of their baby by seeking information and help from health workers. (Handerson Cristine, 2005).

CONCLUSION

There is an influence of relaxation breathing techniques in reducing the intensity of pain in the first stage of labor p value = 0.000 (<α 0.05)

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