THE EFFECT OF COUNTER PRESSURE ON THE SCALE OF LABOR PAIN IN ACTIVE PHASE I IN

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ABSTRAK : PENGARUH COUNTER PRESSURE TERHADAP SKALA NYERI PERSALINAN KALA I FASE AKTIF

Latar Belakang: Nyeri persalinan merupakan suatu kondisi yang fisiologis. Nyeri yang terjadi dapat mempengaruhi kondisi ibu berupa kelelahan, rasa takut, khawatir dan menimbulkan stres. *Massage counter pressure* adalah pijatan yang dilakukan dengan memberikan tekanan yang terus-menerus selama kontraksi pada tulang sakrum pasien dengan pangkal atau kepalan salah satu telapak tangan.

Tujuan penelitian diketahui pengaruh counter pressure terhadap skala nyeri persalinan kala I fase Aktif di wilayah kerja Puskesmas Tanjungsari Natar Kabupaten Lampung Selatan tahun 2022..

Metode penelitian: Jenis penelitian kuantitatif dengan pendekatan *quasi esksperiment*. Populasi penelitian ini adalah seluruh ibu dalam proses persalinan kala I pembukaan 4-10 cm di wilayah kerja Puskesmas Tanjung Sari Natar Kabupaten Lampung Selatan sebanyak 52 ibu dengan sampel sampel sebanyak 30 orang menggunakan teknik *Acidental Sampling.* Penelitian telah dilaksanakan di wilayah kerja Puskesmas Tanjung Sari Natar Kabupaten Lampung Selatan pada bulan April - Juni tahun 2022. Pengumpulan data menggunakan lembar observasi. Analisi data secara univariat dan bivariat *uji t* (*uji wilcoxon*).

Hasil penelitian: rata-rata nyeri persalinan terapi *counter pressure* adalah 7,0 dan sesudah diberikan *counter pressure* adalah 5,7. Ada pengaruh counter pressure terhadap skala nyeri persalinan kala I fase Aktif di wilayah kerja Puskesmas Tanjungsari Natar Kabupaten Lampung Selatan tahun 2022 dengan nilai p-value = 0,000. Saran : diharapkan bagi tenaga kesehatan untuk dapat mempertimbangkan metode *counter pressure* hangat sebagai salah satu cara untuk mengurangi nyeri persalinan pada ibu bersalin normal.

Kata Kunci : Nyeri, Persalinan, *Counter Pressure*

ABSTRACT

Background:Labor pain is a physiological condition. Pain that occurs can affect the mother's condition in the form of fatigue, fear, worry and cause stress. Counter pressure massage is a massage performed by applying continuous pressure during contraction of the patient's sacrum with the base or fist of one hand.

Purpose Knowing the effect of counter pressure on the labor pain scale of the active phase I in the working area of Tanjungsari Natar Health Center, South Lampung Regency in 2022.

Methods: This type of research is quantitative with a quasi-experimental approach. The population of this study were all mothers in the first stage of labor, opening 4-10 cm in the working area of the Tanjung Sari Natar Health Center, South Lampung Regency as many as 52 mothers with a sample of 30 people using the Acidental Sampling technique. The research has been carried out in the working area of Tanjung Sari Natar Health Center, South Lampung Regency in April - June 2022. Data collection uses observation sheets. Data analysis was univariate and bivariate t test (Wilcoxon test).

Results: of the study average labor pain counter pressure therapy was 7.0 and after being given counter pressure was 5.7. There is an effect of counter pressure on the labor pain scale of the Active Phase I in the working area of Tanjungsari Natar Health Center, South Lampung Regency in 2022 with a p-value = 0.000. Suggestion: it is expected for health workers to be able to consider the warm counter pressure method as a way to reduce labor pain in normal delivery mothers.

Keywords: Counter Pressure, Labor, Pain

INTRODUCTION

Labor and delivery are physiologically normal processes. The birth of a child is also a social occasion for which mothers and families have waited nine months (Diana, 2019). The final few hours of pregnancy are characterised by uterine contractions that thin the cervix, dilate it, and force the fetus into the birth canal. The active phase of labor is characterized by an increase in the frequency and duration of uterine contractions, as well as excruciating agony for the mother. At this moment, significant amounts of energy are expended. Myometrial contractions during labor are painful, hence this process is referred regarded as labor pain (Winkjosastro, 2016).

Labor pain that can affect the birthing process. The primary effect is due to the activation of the sympathetic nervous system, which increases plasma levels of catecholamines, particularly epinephrine, which can interfere with contractions (Rezeqi, 2020). Ineffective contractions might prolong labor. Pain also promotes uncoordinated uterine activity, resulting in prolonged labor, which might endanger the fetus and mother's lives (Mander, 2013).

Uncoordinated uterine contractions caused by moms who find it difficult to cope with the discomfort of labor might extend the initial stage and negatively affect the welfare of the fetus. One of the worrying, complex, and unanticipated issues of labor is no progress or slow progress. *Intrapartum infection, uterine rupture, pathological retraction rings, fistula formation, pelvic floor muscle injury, and head succedaneum, or molasses of the baby head*, are only a few of the major side effects of prolonged labor that could affect either the mother or the father (Winkjosastro, 2016).

According to the WHO, in 2020 there were 289 incidents of prolonged labor in women worldwide, or one in every 100,000 live births. This is one of the causes of maternal mortality worldwide. In contrast, mothers die from prolonged labor in Indonesia, where the rate is the highest in ASEAN (359 per 100,000 live births) (Oktafiani, 2021). According to Riskesdas 2018, the average complication of extended labor was 4.3%, with DI Yogyakarta having the greatest rate of prolonged labor at 7.9%, Papua Province having the lowest rate at 2.7%, and Lampung Province having the highest rate at 3.7%. (Ministry of Health). , 2018).

Coverage of Maternal Health Services by District and Health Center in Lampung Province in 2019, with Central Lampung Regency having the largest number of births at 20,141, followed by Tulang Bawang Regency at 18,485, South Lampung at 19,100, Bandar Lampung City at 18,237, and East Lampung at 17,975. (Profile Lampung Province , 2020).

Data on mothers giving birth in South Lampung Regency in 2020 showed that there were 21,310 mothers who gave birth, with the Tanjungsari Health Center having the highest number of mothers giving birth (977), followed by Sidomulyo Health Center with 677, Katibung Health Center with 421, and Banjar Agung Health Center with 322. The total number of pregnancies in 2021 was 23,102, with Tanjung Sari Health Center having the most pregnancies (1,112), Katibung having the second-highest number (811), and Sidomulyo having the third-highest number (629). (South Lampung Health Profile, 2021).

In 2021, the Katibung Health Center saw an increase in the number of mothers giving birth, with 811 mothers giving birth and 21 mothers giving birth (a rate of 2.6%) experiencing problems. In addition, there were no maternal deaths in Katibung Health Center in either 2020 or 2021. (South Lampung Health Profile, 2021).

In general, two and four wheeled vehicles can get to Tanjungsari Health Center, which is situated in Natar District, South Lampung Regency, with a total of 5 villages. Tanjungsari Health Center is a hospital for inpatients. Number of deliveries According to data gathered from Tanjungsari Health Center, 977 mothers gave birth in 2020, while 1112 did so in 2021. According to data from Tanjungsari Health Center, there were 640 normal deliveries in 2021, and up to 112 (17.5%) of them had problems. In 2020, 63 patients were referred (Puskesmas Tanjungsari, January 2022). Uncoordinated uterine contractions brought on by the agony the mother experiences after childbirth are one of these issues. The researchers performed research in the Tanjung Sari Health Center region due to the rise in the number of mothers giving birth there in the last two years and the higher number of problems compared to the Katibung Public Health Center.

The responsibility of health professionals in providing treatment to reduce issues that might be caused by pregnancy and childbirth, one of which is by minimizing labor pain, is necessitated by a rise in pregnancy and childbirth. Both pharmaceutical and non-pharmacological methods have been used in various attempts to lessen childbirth pain. While pharmacological pain management is more efficient than non-pharmacological approaches, it is also more expensive and may result in side effects. While non-pharmacological techniques are less expensive, straightforward, efficient, and risk-free (Mander, 2013).

In addition to causing uncoordinated *uterine activity,* pain can also lead to prolonged labor, which can endanger both the mother and the fetus' lives. Mothers tend to select the simplest and fastest method of pain relief when they are experiencing intense pain during labor. Drugs might cause harmful side effects such as *prenatal hypoxia, neonatal respiratory depression risk, and decreased heart and central nervous system activity* (CNS).) and elevated body temperature of the mother, which can affect the fetus (Mander, 2013).

The principles of adequate pain treatment, which include minimizing anxiety, routinely monitoring pain, giving the right analgesics for best pain relief, and reviewing their efficacy, are crucial for midwives to perform. An essential component of patient care is effective pain control. Medications and non-pharmacological therapies such as cutaneous stimulation are the two main types of interventions used in pain management (Zakiah, 2015).

Because the woman has control over her emotions and strength throughout labor, non-pharmacological techniques can boost satisfaction. The use of non-pharmacological techniques such as *relaxation, breathing exercises, movement and position changes, hydrotherapy, hot/cold therapy, massage (counter pressure), music, guided imagery, acupressure, and aromatherapy* can increase a mother's comfort during childbirth and have an impact on how she copes with the delivery process (Mander, 2013). There are numerous methods for reducing pain, such as massage (counter pressure), rest, hot and cold compresses, and others (Perry and Potter, 2013).

In the first active phase at BPM Ellok Ekaria Safitri Gedongkiwo Yogyakarta, counter pressure massage had an impact on mothers' pain levels, according to Rilyani's research (2020). According to the Triwibowo Research (2019), there is a correlation between counter pressure and labor pain levels in active phase I inpartum women with a coefficient value ρ = 0,013 with α = 0,05 mean ρ < α According to Rezeqi's research (2020), the husband's *counter-pressure* practice was 75% effective. 60 percent less discomfort was experienced by the wife after her husband applied *counterpressure*. In order to lessen the level of mother pain during delivery, it is crucial to involve the husband or partner in this study's recommendations.

Based on the results of a pre-survey conducted on January 1-4, 2022, the data shows that in December of 109 mothers who gave birth, 15 people experienced childbirth complications with details: as many as 6 (40%) people experienced non-progressive labor, 3 (20%) people experienced premature rupture of membranes, 2 (13.3%) people experienced PER/PEB, 2 (13.3%) people with breech delivery and 2 (13.3%) mothers experienced uterine contractions that were not well coordinated. Then the researchers conducted observations on three patients who were ready to give birth. All three of the respondents—2 on an 8-point scale and 1 on a 7—said that there was pain experienced during delivery. When the mother was in labor, the woman exhaled through her nose, urged her to be patient, and counseled her husband and family to support her. However, she did not offer *counterpressure* massage therapy, despite the fact that theory and related research indicated that *counterpressure* massage may have an impact on labor pain.

RESEARCH METHODOLOGY

The population in this study were all mothers in the first stage of labor with an opening of 4-10 cm in the working area of the Tanjungsari Natar Health Center, South Lampung Regency where in the period April - July 2022 based on the delivery bag there were 52 mothers who will give birth, in this study, a sample of 30 people will be taken for treatment (*counter pressure*).

The goal of this quantitative study using a quasi-experimental design was to ascertain the impact of *counter pressure* on the labor pain scale. All women giving birth at the first stage of opening (4–10 cm) were the study's goal, and the research was conducted in the Tanjung Sari Natar Health Center's operational region in the South Lampung Regency. April to June 2022 saw the study's execution. An observation sheet for the VAS was utilized to collect the data. There was univariate and bivariate data analysis (Wilcoxon test). Pain measurement using *the Numerical Rating Scale* (NRS)

RESEARCH RESULTS

Tabel 1
Characteristics of the mother in labor

Variable	Category	n	%
Age	20-35 Year	26	86.7
	>35 Year	4	13.3
Parity	Primipara	11	36.7
	Multipara	9	30.0
	Grandemulti	10	33.3

According to the findings, 86.7% of respondents are known to be at low risk, whereas 13.3% of respondents are known to be at risk. The majority of the 30 respondents—36.7%—were

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primiparas, followed by grandemultis (33.3%) and multiparas (30.0%).

Univariate Analysis

Table 2
In the South Lampung Regency's Tanjungsari Natar Health Center work region in 2022, the typical scale of labor pain during the active stage of the first stage prior to receiving counter pressure therapy

Variable	Labor pain before being given therapy *counter pressure*
N	30
Mean	7.0
SD	0.7
Min	6
Max	8

According to the data in table 1 above, the average labor pain before receiving counter pressure therapy is 7.0, with a standard deviation of 0.7, a minimum value of 6, and a maximum value of 8.

Tabele 3
In the Tanjungsari Natar Health Center work area in South Lampung Regency in 2022, the average scale of labor pain in the active phase of the first stage following counter pressure therapy

Variable	Labor pain after being given therapy *counter pressure*
N	30
Mean	5,7
SD	1.1
Min	4
Max	7

According to the information in table 2 above, the average labor pain following *counter pressure* therapy is 5.7, with a *standard deviation* of 1.1, a minimum value of 4, and a maximum value of 7.

Table 4
Research Data Normality Test

Variable	Labor pain	*Shapiro-Wilk*	Info
Counter therapy *pressure*	Before	0.000	Abnormal
	After	0.000	Abnormal

According to table 3 above, the Shapiro-Wilk data normality test for both variables in the intervention group before and after yielded a significant value of 0.05, indicating that the data are not normal.

Bivariate Analysis

Table 5
The impact of *counterpressure* on the active phase I labor pain scale in the Tanjungsari Natar Health Center's working area, South Lampung Regency, in 2022

Labor Pain	Mean	Median	Min-Max	P- Value
Before	7.0	7.0	6-8	0.000
After	5,7	6.0	4-7	

Based on table 5.5 above, the Wilcoxon test results revealed p-value = 0.000 (p-value < = 0.05), indicating that counterpressure has an impact on the Active Phase I labor pain scale in the working area of

Tanjungsari Natar Health Center in South Lampung Regency in 2022.

DISCUSSION

The impact of counterpressure on the active phase I labor pain scale in the Tanjungsari Natar Health Center's working area, South Lampung Regency, in 2022

Based on the results of the Wilcoxon test, it was found that p-value = 0.000 (p-value < = 0.05) which means that there is an effect of counter pressure on the active phase I labor pain scale in the working area of Tanjungsari Natar Health Center, South Lampung Regency in 2022.

Both psychological reactions and bodily reflexes can cause pain. Symptoms of labor pain are easily identifiable. In response to pain, the sympathetic nervous system becomes more active, which can modify the skin's color, blood pressure, pulse, and respiration. Additionally quite frequent are episodes of nausea, vomiting, and profuse perspiration. During the early stage of labor, uterine contractions that produce cervical dilatation, effacement, and uterine ischemia are what cause pain. Visceral pain that the mother has in her lower abdomen and radiates to her lumbar area, back, and thighs is caused by cervical dilatation and uterine ischemia. The mother has pain during contractions, which subsides or stops at the break between them. In this study, counterpressure was used as a pain management technique (Mander, 2013)

A counter pressure massage is one that uses the base or fist of one hand to apply constant pressure when the patient contracts their sacrum. In a counterpressure massage, the pressure can be administered either directly or in little circles. Back pain from childbirth can be effectively relieved using this method. It should be understood, however, that some mothers find uncomfortable being handled or massaged during contractions because the contractions are so intense that the mother is no longer able to receive any stimulation to the body. (2011) Danuatmadja and Meilasari.

The active phase of the first stage of labor is when *counterpressure* is most effective at reducing labor pain. By using a counterpressure massage technique, one can block the transmission of pain signals to the spinal cord and brain. In addition, by applying intense pressure, one can also stimulate the endorphins that are responsible for pain. situated at the synapses between spinal cord and brain nerve cells, where it is possible to block the passage of pain signals and so reduce pain perception (Nastiti, 2012).

This is consistent with Pesak's (2014) study, which displays a significance level below 5% (p=0.000 < 0.05). Thus, counterpressure works well at the Manado Adventist Hospital to lessen the degree of discomfort during the initial stage of the active phase of normal labor. According to Surtiningsih's (2015) research, both procedures are good at reducing pain, however the counter pressure technique's average pain reduction—which is 2,364—is higher than the endorphin massage technique's average pain reduction, which is 2.273. A conclusion that the counter pressure technique is more effective than the endorphin massage approach can be drawn from the t-test results, which also showed that the *counter pressure* technique was higher at 8,480 than the endorphin massage technique, which was 8,333. According to Krestanti's (2013) research, the value of pain decreased by 3.27 following the intervention. The effectiveness of the Back-*Effleurage technique* and the *Counter-Pressure technique* on the degree of low back discomfort in the initial stage of the active phase of labor is significantly different, with a p value (0.046<0.05). The Counter-Pressure technique, which has a mean value of 3.63 and is higher than the mean for the Back-Effleurage technique of 2.92, is one of the two that is more successful in alleviating low back pain during labor..

The researcher claims that a variety of factors, such as the study's findings from mothers who obtained the proper counterpressure technique to feel mild labor pain, contribute to the reduction of pain during delivery. This is due to the fact that applying counter pressure causes both fear and muscle tension to be reduced. The mother feels the touch, which eases any tension or worry she may be experiencing, and she also feels the counterpressure when it is applied. In a *counterpressure* massage, the pressure can be administered either directly or in little circles. Back pain from childbirth can be effectively relieved using this method. It should be understood, however, that some mothers find uncomfortable being handled or massaged during contractions because the contractions are so intense that the mother is no longer able to receive any stimulation to the body. Health workers must understand this and respect the wishes of the mother.

The mother's personality plays a significant role in pain; mothers who are naturally tense and anxious will take longer to deal with stress compared to women who are relaxed and confident. In mothers who have given birth but still experience pain, it may be due to the bad experience of the previous childbirth which will also increase anxiety. . Laboring mothers who are worn out and whose sleep has been interrupted by the discomforts of late pregnancy will find it harder to handle their agony.

Based on the findings, it is known that respondents typically had an opening between 6.6 and 7 cm, with a maximum of 11 (36.7% of respondents) having an opening between < 7 and

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11, and a maximum of 4 (13.3%) having an opening greater than > 7, with a pain intensity before intervention between 6 and 8, and a maximum of 1 person who did not experience a change in pain following the intervention, specifically in primiparous mothers by coming at the opening 9, where from the pain scale 7 and after the intervention was fixed with

Each respondent's pain scale experienced various changes, and 6 (20.0%) of the respondents had pain ratings that remained unchanged both before and after counterpressure interventions. This is likely because the study did not account for a number of variables, including age and parity. a mother's perception of pain during labor, the presence of other factors such as the mother's age—the average mother who does not experience changes in the pain scale is between 21 and 27 years old—or the perception of maternal pain during labor so that the mother does not feel changes in labor pain from the actions taken. There are various hypotheses that claim that age impacts a person's perception of pain, even though no theory specifies the age at which pain has a low threshold. Age-related brain degeneration results in a reduced pain threshold and decreased pain perception in older individuals.

Additionally, the possibility of parity played a role because the majority of respondents who did not notice a decline in their sense of searching were primiparous mothers, who, according to the researchers, were unable to anticipate childbirth because they had never given birth or experienced the pain associated with it. Due to the fact that in primiparas the effacement process typically occurs earlier than cervical dilatation, the birthing process is also different from that in multiparas. Comparatively, cervical effacement and dilatation happen simultaneously in multipara. This influence is brought on by multiparous mothers' prior experiences, which are one of the things that might affect how intensely pain is felt by various people.

As long as the mother is confident that she will get the necessary assistance and support, support during childbirth such as praise, reassurance, measures to increase maternal comfort, physical contact, explanations about what happened during labor and birth, and a constant friendly attitude can divert the mother. Other elements that may influence the degree of pain experienced include belief that childbirth is common. Because of this, the outcomes of this study were not consistent between each respondent. In order for the mother to feel comfortable with the delivery process and the need for support from the nearest family, in this case the husband who always offers support when the mother faces the labor process, it is hoped that health professionals can offer both physical and psychological support, such as speaking softly and touching the patient.

Conclusion

Prior to receiving counter pressure therapy, the typical level of labor pain was 7. Out of the 30 responders, up to 8 (26.7%) had a pain scale < 7 and 7 (23.3%) had a pain scale > 7. The average labor pain following counterpressure therapy is 5.7, according to known statistics. There were 30 responders; up to 10 (33.3%) had a pain scale < 5.7 and up to 20 (66.7%) had a pain scale > 5.7. In the operating area of Tanjung Sari Natar Health Center, South Lampung Regency, in 2022, there is a counterpressure effect on the active phase I labor pain scale. (p-value = 0,000).

SUGGESTION

It is envisaged that they would be able to offer counterpressure SOPs and use this as a substitute for lessening maternal discomfort. It is anticipated that midwives would keep an eye on the group of expectant women, educate them about the birthing process so that they may begin managing it themselves, and counsel laboring mothers on how to deal with pressure. Provide midwives in the Puskesmas working region with *counter pressure* training so that they are all equipped to apply counter pressure. The birth attendant applies counterpressure in accordance with SOP to moms who plan to give birth in the Puskesmas' operating area.

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