

## THE EFFECTIVENESS OF COUNTERPRESSURE TECHNIQUES IN REDUCING LABOR PAIN LEVELS OF FIRST STAGE ACTIVE PHASE

Triana Indrayani<sup>1</sup>, Siti Syamsiah<sup>2</sup>, Disty Septiarani<sup>3</sup>

<sup>123</sup>Universitas Nasional, Jakarta, Indonesia

Email Correspondance: trianaindrayani@civitas.unas.ac.id

### ABSTRAK : EFEKTIVITAS TEKNIK COUNTERPRESSURE DALAM MENURUNKAN TINGKAT NYERI PERSALINAN FASE AKTIF TAHAP I

Latar Belakang : Menurut WHO (2019) mengatakan sebanyak 90% persalinan senantiasa disertai nyeri hebat, prevalensi nyeri saat melahirkan cukup tinggi, yaitu sekitar 86,8% dan sekitar 35,9%. Nyeri persalinan yang tidak diatasi dengan manajemen nyeri yang benar akan menimbulkan masalah lainnya. Salah satunya timbulnya kecemasan, kelelahan serta stress perasaan khawatir Berdasarkan RIESKESDAS tahun 2018 persalinan dengan nyeri antara 85-90% dan hanya 10-15% persalinan yang berlangsung tanpa rasa nyeri, Upaya untuk mengurangi rasa nyeri dapat menggunakan cara farmakologis dan non farmakologis. Salah satu dari berbagai metode untuk menangani rasa sakit selama persalinan yaitu Counterpressure.

Tujuan : Mengetahui Pengaruh Teknik Counterpressure Untuk Mengurangi Nyeri Ibu Inpartu Kala I Fase Aktif Persalinan Normal Sebelum Dan Sesudah Dilakukan Counterpressure

Metode : Metode penelitian menggunakan Quasy Eksperiment (eksperimen semu), sampel menggunakan Total sampling sebanyak 40 responden ibu bersalin. Instrument yang digunakan adalah observasi yang sudah di uji normalitas dan analisis bivariat menggunakan Uji Paired T-Test.

Hasil: Diketahui ibu bersalin di RSU Kartini Kategori umur 20-30 tahun sebanyak 33 (82,5%), Ibu Rumah Tangga sebanyak 19 responden (47,5%), dan berpendidikan SMA sebanyak 24 responden (60,0%). Hasil analisis bivariat menunjukkan terdapat pengaruh sebelum diberikan Counterpressure skala nyeri adalah 3.10 dengan St.Deviasi 0.118 dengan skala nyeri tertinggi 9 dan terendah 5, setelah dilakukan terapi Counterpressure diperoleh hasil rata-rata 1.95 dengan St. Deviasi 0.087 skala nyeri tertinggi 6 dan terendah 2.

Kesimpulan : Terdapat penurunan intensitas nyeri persalinan kala 1 fase aktif sebelum dan sesudah dilakukan Counterpressure dengan selisih mean 1.15

Saran : Ibu bersalin di harapkan bisa melakukan Counterpressure dan dapat menciptakan rasa nyaman sehingga dapat mengurangi rasa nyeri pada saat proses persalinan.

Kata Kunci : Teknik Counterpressure, Nyeri Persalinan, Ibu bersalin

### ABSTRACT

Background: Pain can interfere with comfort during contractions, WHO data (2019) says 90% of births are accompanied by severe pain, Riekesdas data in 2018 gives births with pain between 85- 90%. Labor pain is not treated with proper pain management, causing anxiety and worry, causing the number of births via Caesarean section in Indonesia to increase by 10% in the 2007 Indonesian Demographic and Health Survey (SDKI) to 23% in the 2017 IDHS. Non-pharmacological is a safe alternative to help relieve pain delivery, with massage or compression techniques.

Objective: To determine the effectiveness of the Counterpressure technique in reducing labor pain levels during the first active phase at Kartini General Hospital in 2023

Methodology: The research method uses Quasy Experiment (quasi-experiment), the sample uses a total sampling of 40 maternal respondents. The instruments used are observations that have been tested for normality and bivariate analysis using the Paired T-Test.

Results: It is known that there were 33 (82.5%) women giving birth at Kartini General Hospital, 19 respondents (47.5%) were housewives and 24 respondents had a high school education (60.0%). The results of the bivariate analysis showed that there was an effect before being given Counterpressure, the pain scale was 3.10 with a St. Deviation of 0.118 with the highest pain scale being 9 and the lowest being 5, after being given Counterpressure therapy the average result was 1.95 with St. Deviation 0.087, the highest pain scale is 6 and the lowest is 2.

Conclusion: There is a decrease in the intensity of labor pain during the 1st active phase before and after

Counterpressure with a mean difference of 1.15

Suggestion: Mothers in labor are expected to be able to do Counterpressure and create a sense of comfort so as to reduce pain during the birthing process.

Keywords: Counterpressure technique, labor pain, delivery women.

## INTRODUCTION

Counterpressure massage is a non-pharmacological technique that effectively reduces the pain of childbirth during the active phase (Daiyah, 2020). Counterpressure massage includes techniques used to relieve pain and can provide pleasant sensations as well as combat discomfort during contractions or between contractions during labor (Juniartati & Widyawati, 2018).

According to Bodeker *et al* (2019), as many as 90% of childbirth is always accompanied by severe pain and by using non-pharmacological methods massage provides emotional support and pain relief, because in the first stage, the laboring mother will experience cervical dilatation and uterine contractions, so that the mother feels moderate to very severe pain with the intensity of the pain scale 7-10. Due to the existence of non-pharmacological interventions such as massage to reduce labor pain with the Counterpressure Technique, making the mother feel a decrease in severe pain, providing a relaxing sensation that fights discomfort during labor, and can reduce tension in the sacrum and pelvic muscles. According to the World Health Organization (2018), the prevalence of pain during childbirth is quite high, which is around 86.8% and around 35.9% (WHO, 2018)

Labor pain that is not addressed with proper pain management will cause other problems. One of them is the emergence of anxiety, fatigue and stress and worryness. As a result of this stress factor, there can be tension in smooth muscles and vasoconstriction of blood vessels. Then uterine contractions will decrease resulting in prolonged labor, affecting fetal well-being Efforts to reduce pain can use pharmacological and non-pharmacological means. One of the various methods to manage pain during labor is Counterpressure. Many women believe that this method helps them cope with pain in a more natural way and does not require the use of pain medication.

Counterpressure massage is performed by applying pressure to the sacrum of a maternal mother at the time of contact using the base or palm of one of the palms (Andarmoyo, 2013). The principle of the counter pressure massage technique will give a block to the pain area so that it can reduce the pain of childbirth. Properly performed massage can reduce

pain as well as relieve muscle tension and individuals can perceive massage as a stimulus to relax, then appear a relaxation response that can reduce the rate of birth belt pain (Susanti *et al.*, 2019).

In various countries, health professionals add Counterpressure to the labor care plan, research conducted by Paseno *et al* (2019) which was obtained from a total sample of 20 respondents (10 respondents for Counterpressure massage and 10 respondents for Effleurage massage). Shows that Counterpressure massage is more effective than Effleurage massage to reduce the pain scale of labor during the active phase I. While Gall's research, Australia found that during labor, mothers who experience pain are very unbearable and then do the non-pharmacological method of Counterpressure massage, which is done in the sacrum can help reduce the scale of labor pain felt by mothers in the first phase of active labor, provide a sense of relaxation and are able to reduce tension due to the release of endorphine hormones that can reduce labor pain according to Akköz Çevik & Karaduman (2020), in Turkey non-pharmacological methods by massage are very effective for relieving pain and anxiety in mothers in the first phase of active labor.

From the survey that I have done in the delivery room of the Kartini General Hospital Jakarta, this research has never been done so this research is expected to be one way to apply complementary midwifery care. Seeing the psychological and physiological impact of using the Counterpressure technique on the perception of pain, the main problem is that laboring women want a comfortable delivery and require appropriate treatment. In addition to Counterpressure there is another method, namely Endorphine massage, which is effective in reducing pain, but if you look at the average reduction in pain in the Counterpressure Technique is 75% greater than the average reduction in pain in the Endorphin massage technique. Thus, non-pharmacological action is a safe alternative in helping to relieve pain during labor, one of which is massage or compression techniques. The lack of research conducted on the effectiveness of the Counterpressure Technique on reducing the level of Pain in Active Phase I Labor makes researchers interested in conducting this research.

**RESEARCH METHODS**

This study was conducted by observation, The research method used is one group pretest-posttest the number of samples that is a group of intervention of 40 people. Furthermore, a pretest was conducted to determine the respondent's first stage labor pain scale before being given Counterpressure to reduce labor pain. Then the treatment was given Counterpressure then assessed posttest to re-measure the level of labor pain. The research was conducted at RSU Kartini which is one of the Mother and Child Referral Hospitals in the Cipulir area, Kebayoran Lama, South Jakarta. The research instrument used in this study was an observation sheet to determine the pain level of laboring women

in the first phase of active labor. filling in the observation sheet by the researcher was carried out twice, namely before and after Counterpressure. Research instruments to assess labor pain in the active phase I using verbal and numeric scales.

**RESEARCH RESULTS**

**Univariate analysis**

Table 1 shows that the characteristics of 40 respondents are as follows: Age category 20-30 years as many as 33 (82.5%), respondents who became housewives as many as 19 respondents (47.5%), and those with high school education as many as 24 respondents (60.0%).

**Table 1  
 Respondent Characteristics**

Characteristics	N	Percentage (%)	N	Percentage (%)
Age				
<20	4	10.10	10.0	10.0
20-30	33	82.5	82.5	92.5
>35	3	7.5	7.5	100.0
Jobs				
IRT	19	47.5	47.5	47.5
Self-employed	8	20.0	20.0	67.5
Private Employee	13	32.5	32.5	100.0
Education				
Elementary School	2	5.0	5.0	5.0
Junior High School	7	17.5	17.5	22.5
Senior High School	24	60.0	60.0	82.5
Graduate	7	17.5	17.5	100.0

**Table 2  
 Distribution of differences in birth pain levels when active phase I (before and after) does Counterpressure**

	Mean	N	Std.Deviation	Std. Error Mean	Min	Max
PRE Scale	3.10	40	.744	.118	5	9
Post Scale	1.95	40	.552	.087	2	6

Based on the above data of 40 respondents, the average pregnancy pain scale before giving Counterpressure was 3.10 with st. deviation 0.744 with the highest 9 and the lowest 5 pain scales. After performing the Counter Pressure technique, a mean pregnant pain scala of 1.95 with st deviation of 0.552 was obtained with a highest 6 lowest 2.

**Bivariate analysis**

Based on the above data, the average Pre-Test score was 3.10 while for the Post-test score the average was 1.95 with the total sample of 40 respondents. Due to the average pre-test value is 3.10> Post-test 1.95, so it is known that there is a decrease in the intensity of birth pain when 1 active phase and it can be concluded that the significant influence of the administration of Counterpressure on the reduction in birth pain once 1 with a mean difference of 1.15

**Table 3**  
**Distribution of differences in birth pain levels when active phase I (before and after) does Counterpressure**

	Mean	N	Std.Deviation	Std. Error Mean	Min	Max	P Value
Pre Scale	3.10	40	.744	.118	5	9	0.000
Post Scale	1.95	40	.552	.087	2	6	

## DISCUSSIONS

Based on the results of univariate data, the average pain scale during labor phase 1 active phase before the Counterpressure Technique was 3.10 with a minimum of 5, a maximum value of 9 and a standard deviation of 0.744, the scale of labor pain before the Counterpressure Technique was performed, the frequency of pain was very severe as many as 35 respondents (86%). It can be seen from the results of the table that there is a decrease in the pain scale after the Counterpressure Technique is performed.

This is in line with research conducted by (Pangli *et al.*, 2014) on the effectiveness of Counterpressure on the reduction of kala 1 active phase of normal labor at Advent Manado hospital on 15 respondents in partu kala 1 active phase can be known that after Counterpressure obtained quite good results, namely a decrease in pain intensity from an unbearable pain scale to a severe scale and a moderate pain scale. There were 2 (13.7%) respondents who said pain on a scale of 7-8 and 13 respondents (86.7%) on a scale of 3-6. This shows a decrease in pain intensity after the intervention, where on the 9-10 pain scale before the intervention 15 respondents (100%) after the Counterpressure intervention became 0%.

Based on the results of the Bivariate analysis, it is known that the results of the Paired Sample T-Test test aim to determine the pain scale before and after treatment. The average Pre-Test value is 3.10% with a standard deviation of 0.744. The results of the statistical test obtained a p value of 0.000, it can be concluded that there is a significant difference in the pain scale before and after treatment with a p value of 0.000 ( $0.000 < 0.005$ ).

The principle of counter pressure massage technique will provide a block on the pain area so as to reduce labor pain. The correct implementation of massage can reduce pain and reduce muscle tension and individuals can perceive massage as a stimulus to relax, then a relaxation response appears so that it can reduce the level of labor pain (Susanti *et al.*, 2019). This is in line with research deducted by Darmayanti & Suhwardi (2019) on Counterpressure effectively reducing labor pain in phase 1 of the active phase at BPM Banjarbaru City

area in 2016 against 23 respondents of laboring mothers showed that of the 23 respondents before being given Counterpressure intervention showed that 16 respondents (69.9%) experienced moderate pain, mild pain (47.8%), moderate (43.5%) and severe (8.7%). In the Counterpressure intervention group, the pain intensity before being given Counterpressure intervention averaged 3.13 (moderate pain and severe pain) then the pain intensity after being given Counterpressure intervention averaged 2.61 (mild pain and moderate pain). The difference between before and after Counterpressure is 0.52.

The results of the statistical test using the paired t-test test showed that sig. (2-tailed) 0.398. The mean in the pre-test group was 3.10 and the mean in the post-test group was 1.95. Thus, it can be concluded that there is a difference in pain scale with the Counterpressure Technique. Based on the results of research conducted by researchers, the Counterpressure Technique is effective for reducing labor pain because there is a significant difference as evidenced by sig. (2-tailed)  $0.398 > 0.05$ .

By giving massage with Counterpressure technique can close the gate of pain messages that will be delivered to the spinal cord and brain, besides that with strong pressure when giving the technique it will be able to activate endorphin compounds that are in the synapse of spinal cord cells and the brain, so that the transmission of pain messages can be inhibited and cause a decrease in pain sensation (Farida & Sulistiyanti, 2019)

This study shows that the Counterpressure Technique is performed to reduce labor pain. This is in accordance with the theory put forward by Erinda with counter pressure massage techniques will provide a block on the pain area so that it can reduce labor pain. Correct massage management can reduce pain and reduce muscle tension and individuals can perceive massage as a stimulus to relax, then a relaxation response appears so that it can reduce the level of labor waist pain.

This is in line with the research of Lestari & Andayani (2021) conducted at the Rahayu Ungaran Clinic on the application of the Counter Pressure technique to reduce labor pain during phase I at the Rahayu Ungaran Clinic on 20 respondents in partu

kala I active phase, it can be seen that the intensity of pain before Counter Pressure is mostly in the category of severe pain on a scale (7-9) as many as 16 people. Pain intensity after Counter Pressure is mostly in the mild pain category on a scale (1-3) as many as 14 people. This shows that there is an influence and there are differences before and after the Counter Pressure technique is carried out on reducing labor pain in phase I.

Researchers see based on these results that the Counterpressure Technique is effectively carried out to reduce labor pain so that the mother becomes more relaxed and comfortable. In addition, the Counterpressure Technique can be done easily and no extra costs are required.

### CONCLUSION

Before the Counterpressure Technique was performed, it showed that 40 respondents had an average labor pain scale before being given Counterpressure of 3.10 with a st. Deviation 0.744 with the highest pain scale 9 and the lowest 5. After the Counterpressure Technique is performed, it shows that 40 respondents, the average scale of labor pain after being given Counterpressure is 1.95 with a st. Deviation 0.552 with the highest pain scale 6 lowest 2. There is a significant decrease in the intensity of labor pain in phase 1 of the active phase before and after the Counterpressure.

### SUGGESTION

It is hoped that as a method of application to maternity patients and it is hoped that there will be more non-pharmacological research in reducing labor pain in the active phase 1 with the aim of realizing labor that runs smoothly, easily, and comfortably. As a midwife, you need to know and understand the Counterpressure technique to reduce the level of pain during labor, so that laboring mothers feel comfortable when giving birth.

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