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Reducing the Level of Mothers' Intrapartum Pain in the Active Phase with Counter Pressure Technique

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***Abstract*—** *The type of this research is quantitative with a quasi-experimental research design with a pretest-post-test one group design with a sample of 16 people. The results of the Paired Sample T Test with SPSS were obtained (p = 0.000), which showed the effectiveness of the counter pressure technique in reducing the level of labor pain in the first stage of the active phase. So it can be concluded that there is a change in the form of a decrease in the level of labor pain in the first stage of the active phase between the pretest and posttest regarding the effectiveness of the counter pressure technique to decrease the level of labor pain in the first stage of the active phase. Because by applying massage counter pressure techniques can block pain transmission, reduce anxiety, and as a relaxation technique for maternity mothers.*

***Keywords*—** *Intrapartum; Pain; Counter Pressure.*

I. INTRODUCTION

During labor the mother experiences back pain, labor pain is an extraordinary physiological process and the intensity of pain felt varies. Labor is associated with two different types of pain. The first comes from the uterine muscle when it contracts, the second arises near the time of birth. Pain during labor is caused by stretching and tearing during cervical contractions. Actually, pain is needed to recognize the presence of uterine contractions during the delivery process, but sometimes the pain can cause pathological consequences that are felt continuously, plus the anxiety and fear experienced by mothers in labor. This can lead to fatigue resulting in decreased uterine contractions and the labor process lasts longer. Prolonged labor (prolonged labor) can harm the mother and fetus. (1)(2)

The results of research in Poland in 2018-2019 showed that 72% of mothers experienced mild pain, 25.5% moderate pain, and 5.2% severe pain. Another study in Indonesia in 2019 stated that 62.5% of mothers experienced severe pain during the active phase of labor. (3,4)

Pain in labor causes the trend of caesarean delivery to increase, in Poland Caesarean deliveries increased from 23.6% to 77.9% in 2014. In major cities of Indonesia in 2017 the Caesarean delivery rate was 34.7% in Bali, 30.3 % in DKI Jakarta and 29% in the Riau Archipelago. Whereas WHO states that the ideal rate of caesarean delivery is only 10-15%. (5–7)

Labor pain is characterized by uterine contractions, contractions have actually occurred in the 30th week of pregnancy called Braxton Hicks contractions due to changes in the estrogen and progesterone hormones but are irregular, painless and the strength of the contractions is 5 mmHg, and the strength of Braxton contractions. These hicks will be his strength in labor and are regular in nature. Sometimes there is a discharge of amniotic fluid which usually breaks before complete dilatation, but can also come out before the delivery process. (3)

Medically, contraction pain is categorized as sharp and hot or somatic-sharp and burning. The pain occurs when the baby's head appears in the vagina. The tissue between the vagina and the anus (perineum) is stretched tight due to the baby's head pushing it open. The Mother feels pain from tissue tearing. Some mothers feel their bottom will "explode" while others feel like they are going to defecate after a month of constipation. (1)(8)

One of the ways to prevent complications due to contraction pain before delivery is by providing care in the form of correct pain management in laboring mothers so that mothers can adapt to labor contraction pain. Management of contraction pain before delivery can be applied by pharmacological and non-pharmacological methods. Non-pharmacological methods are certainly safer and refer to maternal care, especially in providing pain management care. The technique is the Counter pressure technique. The Counter pressure technique used can reduce labor pain, reduce anxiety, provide pain transmission blocks, and make the patient feel comfortable. (1,9)

II. MATERIAL AND METHODS

This study is a quantitative study with a pre-experimental design and a one-group pretest-posttest approach which was carried out on mothers giving birth in the first stage of the active phase as many as 16 respondents with accidental sampling technique.

Research data collection was carried out in the area of Siti Midwife Practice, Bogor City in June-July 2022. The stages of the study were conducting research informed consent, then giving the pretest NRS (Numeric Rating Scale) questionnaire to the respondents and after that a counter pressure intervention was carried out using a special massage tool for approximately 10 minutes and finally the NRS posttest questionnaire was given to measure the level of pain after the intervention.

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The data collection tool in this study is the NRS questionnaire, which is a numerical rating scale containing numbers from 0-10 which is suitable for measuring pain scales. The NRS shows a high correlation with other pain assessments and has been demonstrated in several studies. The assessment category is 0 which states no pain, 1-3 mild pain, 4-6 moderate pain, 7-9 severe pain and 10 uncontrolled pain. For this reason, the researcher used the NRS questionnaire as an indicator of the labor pain scale. (10)

III. Observation and Result

This study uses T-Test in processing bivariate analysis with the fulfillment of the data normality test requirements. The following are the results of this research data processing:

TABLE I. Frequency Distribution of Intrapartum Pain Level Before Intervention

S. No.	Intrapartum Pain	Frequency	Percentage (%)
1	No Pain	0	0
2	Mild Pain	0	0
3	Moderate Pain	4	25.0
4	Severe Pain	6	37.5
5	Uncontrolled pain	6	37.5

Based on Table I, the distribution of the frequency of labor pain scale before being given the counter pressure technique for maternity women in the first phase of the active phase of the Siti Midwife Practice, Bogor City area, showed that from 16 respondents there were 6 (37.5%) respondents experiencing uncontrolled pain on a scale of 10.

TABLE II. Frequency Distribution of Intrapartum Pain Level After Intervention

S. No.	Intrapartum Pain	Frequency	Percentage (%)
1	No Pain	0	0
2	Mild Pain	4	25.0
3	Moderate Pain	12	75.0
4	Severe Pain	0	0
5	Uncontrolled pain	0	0

Based on Table II, the distribution of the frequency of the labor pain scale after being given the Counter Pressure Maternity technique during the first phase of the Active Phase of the Siti Midwife Practice, Bogor City area showed the results of 16 respondents there were 12 (75%) respondents experiencing moderate pain on a scale of 4-6.

TABLE III. The Effect of Counter Pressure Technique on Reducing Labor Pain in Inpartu Stage 1 Active Phase

Intrapartum Pain Level	SE	SD	95% CI	*p-value*
Pretest-posttest	0,319	1,276	3,132-4,493	0,000

Based on table III Analysis of the Effectiveness of Counter Pressure Techniques on Reducing Labor Pain Levels in the Active Phase of the Siti Midwife Practice, Bogor City area, statistically, p-value = 0,000 < 0,05 (Ha accepted, H0 rejected) it can be concluded that the data is distributed and there is Effect of the Effectiveness of the Counter Pressure Technique on Reducing the Level of Labor Pain in the Active Phase of the Siti Midwife Practice, Bogor City area.

IV. Discussion

The results of this study are in line with research conducted by Dwienda with the results of statistical tests obtained p-value = 0.000 which means <0.05 (Ho is rejected and Ha is accepted) it is concluded that there is an effect of counter pressure on the labor pain scale at the May Jend. HM. Ryacudu, North Lampung, Bumi City in 2017.(11)

According to the theory put forward by the counter pressure technique, it is useful to meet the needs for comfort, reducing / relieving pain, reduce or prevent muscle spasms, and provide a sense of happiness to the mother(12)(13)

According to the theory put forward, the relationship between counter pressure techniques in decreasing the intensity of labor pain is theoretically caused because this technique makes a person feel a pleasant sensation and fights discomfort during contractions or between contractions, counter pressure is the easiest method to do and does not require much equipment to do so, which can reduce pain by compressing the sacrum area to block the transmission of painful stimuli from the uterus to the brain. This technique can be done by health workers or families when the uterus contracts.(14)

According to the researcher's assumption, the application of the counter pressure technique method in the first stage of labor in the active phase is influenced by several characteristics of the respondents. Based on the age of most respondents which is in the age range of 20-35 years, this shows that most of the respondents are in a healthy reproductive age, and physiologically at that age it is possible for the mother to be able and strong to withstand labor pains. Based on parity, most of the mothers are multiparous, meaning that they have had previous childbirth experience so that they can cope with pain during labor. The intensity of pain felt by maternity mothers has a meaningful relationship with the husband's assistance, this is due to psychological influences, with emotional support from the husband can distract the mother and reduce stressors that become the stimulus for labor pain so that the intensity of pain is reduced. Mothers who were given counter pressure techniques during labor experienced lower labor pain intensity than mothers who were not given counter pressure techniques. The higher a person's education, the easier it was to receive information and knowledge provided in overcoming labor pain.(8)

According to the researcher, there was a change in the form of a decrease in the level of labor pain in the active phase I between the pretest and posttest regarding the effectiveness of the counter pressure technique to reduce the level of labor pain in the active phase I. The results of the pretest study showed an increase in the level of labor pain reaching a scale of 10 (uncontrolled pain) and the pain felt by the mother in labor was mostly in the lower back area. the posttest showed a decrease in the level of labor pain reaching a scale of 4-6 (moderate pain) and changes after being given a massage the pain of childbirth became mild. (1,8,10)

V. Limitation of Study

This study has limitation. As far as the sample size of the main study is concerned, an adequate proportion of the

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population was examined allowing for generalization of the results.

VI. CONCLUSION

The provision of relaxation using the counter pressure technique has been shown to have an effect on reducing labor pain during the active phase of the 1st stage, so that this can be used as an alternative pain reduction management that can be given by health workers so that maternity mothers feel comfortable.

Conflict of Interest: No

REFERENCES

1. Labor S, Maguire S. The Pain of Labour. Rev Pain [Internet]. 2008 Dec 1;2(2):15–9. Available from: https://doi.org/10.1177/204946370800200205
2. Agustuti, Tri, Fitria Hari Wibawati, Utami Sulistyaningsih, Sara Tania, Elpinaria Girsang & WA. Postpartum Hemorrhagic Incidence Based on Parities in Public Health Center of Bogor. J Keperawatan Respati Yogyakarta [Internet]. 2022;9:1. Available from: https://nursingjurnal.respati.ac.id/index.php/JKRY/article/view/650
3. Pietrzak J, Mędrzycka-Dąbrowska W, Tomaszek L, Grzybowska ME. A Cross-Sectional Survey of Labor Pain Control and Women's Satisfaction. Int J Environ Res Public Health. 2022;19(3):1–12.
4. Wijayanti YT, Sumiyati S, Prasetyowati P. Anxiety, Age, Partity, and Active Labor Pain. J Health Metro Sai Wawai. 2019;12(2):47.
5. Cole SK. Caesarean Section Rates. Lancet. 1980;315(8168):606.
6. Mędrzycka-Dabrowska W, Czyz-Szypenbejl K, Pietrzak J. A review of randomized trials comparisons of epidural with parenteral forms of pain relief during labour and its impact on operative and cesarean delivery rate. Ginekol Pol. 2018;89(8):460–7.
7. Yogatama A, Budiarti W. Determinants of cesarean delivery for women without pregnancy complications in Indonesia 2017. Semin Nas Off Stat. 2020;2019(1):545–56.
8. G SY, Susanti A, Siswanti R, Risdianti H, Yanti T. The Relationship between Health Workers' Support and Frequency of Visual Inspection with Acetic Acid for Cervical Cancer Early Detection among Childbearing Age Women at Pasir Mulya Health Center. Indian J Forensic Med Toxicol. 2022;16(3).
9. WHO. WHO recommendations: Intrapartum care for a positive childbirth experience. Transforming care of women and babies for improved health and well-being Executive summary. WHO Recomm Intrapartum care a Posit childbirth Exp [Internet]. 2018;1–8. Available from: https://apps.who.int/iris/bitstream/handle/10665/272447/WHO-RHR-18.12-eng.pdf
10. Haefeli M, Elfering A. Pain assessment. Eur Spine J. 2006;15(SUPPL. 1):17–24.
11. R OD, Megasari M, Lusiana N. The Effectiveness of massage in reducing pain in phase I of Childbirth. J Kesehat Komunitas [Internet]. 2015;2(5):274–7. Available from: https://media.neliti.com/media/publications/275608-the-effectiveness-of-massage-in-reducing-452e4f72.pdf
12. Rejeki S, Widayati E, Machmudah M, Yanto A. Decreasing labor pain through sacralist counter-pressure therapy using tennis ball in the mother during the labor process. Open Access Maced J Med Sci. 2021;9(T4):83–6.
13. Yosali MA, Girsang E, Yanti T, Fajria SH. Factors that Influence Self-Efficacy in Maintaining Personal Hygiene of Postpartum Mothers. Indian J Forensic Med Toxicol. 2021;15(2):2780–5.
14. Safitri Y. Comparison of the Effectiveness of Massage and Warm Compresses on Labor Pain in First Active Phase. J Ners Univ Pahlawan Tuanku Tambusai [Internet]. 2017;1(2):52–7. Available from: https://journal.universitaspahlawan.ac.id/index.php/ners/article/view/117/86

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