

## **The Effect of Deep Breath Relaxation and Acupressure Point Li4 is Exposed to the Intensity of Labor Pain Kala I at the Duren Sawit Health Center in Jakarta**

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**ABSTRACT :** Childbirth is the most awaited moment for every mother around the world, but on the one hand it is a stressful thing. According to a 2018 data report by Riskesdas, there is a risk of childbirth complications that always lurks in every mother who undergoes the delivery process in Indonesia, one of which is the old partus triggered by mothers who are unable to adapt to the labor pain felt. Efforts to reduce pain during childbirth are divided into 2 methods, namely non-pharmacological and pharmacological methods. One of the many nonpharmacological methods of reducing pain is acupressures and deep breath relaxation. The purpose of this study is to identify the effectiveness of LI4 point acupressure and deep breath relaxation as an effort to reduce the intensity and scale of labor pain the active kala I phase in mothers who are facing the delivery process at the Duren Sawit Jakarta Health Center for the May 2022 period. In this study, the author used the Quasy Experimental quantitative method, with a personal pre and post test design approach. The population chosen in the study were maternal clients who were going through the delivery stage when the first phase was active. Sample selection by total sampling method and using purposive sampling technique. The paired t-test is a test used for data analysis. The result after the study was carried out was that it was found that the  $\rho$ -value was 0.000, which means that both techniques are effective against pain reduction efforts.

**Keywords:** Deep breath relaxation, first stage of labor, labor pain, *acupressure*.

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## **INTRODUCTION**

Pregnant women around the world will definitely be waiting in hope and anxiety waiting for the day of delivery to arrive, that day will be the happiest day, as well as stressful for every mother around the world(1).

World data quoted from the WHO organization states that more than 140 million mothers undergo childbirth every year. Other data is data on AKI (maternal mortality rate) in 2017, as many as 295,000 were caused by the childbirth process. In Indonesia, AKI in 2019 was 4,221 cases out of 4,778,621 the total number of live babies born. The prevalence of maternal mortality per district and per provincial city in West Java from January to July 2020 is 416 events. AKI in Bekasi City in 2018 there were 28 incidents and in 2019 the case fell to 22 mortality events after that in 2020 AKI in Bekasi City increased again to 33 cases. According to data in 2018 by Riskesdas, prolonged labor is one of the most common birth complications in which one of the causes is the mother's inability to adapt to the pain she feels(2).

Efforts to reduce pain when facing labor are divided into two parts, namely non-pharmacological and pharmacological methods. One of the non-pharmacological methods for pain reduction is deep breathing relaxation techniques(3). This technique is done by taking long and deep breaths when the contraction takes place, meaning by using chest breathing, inhaling air through the nose. Then the O<sub>2</sub> produced from the respiratory process will be distributed into the blood throughout the body. The second non-pharmacological method is acupressure techniques. This technique is done by applying pressure without using needles at certain acupressure points on the human body. Acupressure applied to points BL60, BL67, GB21, L14, SP9, and SP6 affects contractions, as well as duration of labor by stimulating oxytocin secretion from the pituitary(4).

One of the locations of emphasis that can be chosen as a point of doing acupressure to treat labor pain is the LI4 point. LI4 is the point where the large ileum or large intestine is located between the thumb and index finger (the first and second metacarpal bones) distally when the two fingers are pressed together. The L14 point helps manage emotions. LI4 produces a sedative effect/endorphins so that it can be applied when you are not sick either in the meridians or organs, especially in the stomach, uterus and intestines making it very effective to apply to reduce pain due to the labor process and also speed up the delivery process(5).

Based on a preliminary study in March 2022, at the Duren Sawit Health Center, Jakarta, it was obtained. Mothers who underwent the first stage of the active phase said they could not stand the pain they felt especially during the opening period. The location of the pain felt by the mother includes the abdomen, waist, back and radiates to the spine. At the Duren Sawit Public Health Center,

Jakarta, there has never been a non-pharmacological therapy for deep breathing relaxation and LI4 point acupressure to mothers who gave birth, therefore, the author was moved to be able to conduct research on methods of reducing labor pain with a combination of the two techniques and entitled the research "Effectiveness of Deep Breathing Relaxation. and Acupressure on Reduction of Labor Pain at the Duren Sawit Health Center, Jakarta in 2022.

The purpose of this study was to identify the effectiveness of LI4 point acupressure and deep breath relaxation on the intensity of pain in the first stage of the active phase of labor in women giving birth.

## METHODES

On this occasion, the authors conducted a study by choosing a quantitative method of Quasy Experiment, with a personal pre and post test design approach to correspondents about the effect and effectiveness of LI4 point acupressure and deep breath relaxation on the intensity of labor pain in the first active phase of pre and post intervention(6). The delivery room at the Duren Sawit District Health Center, Jakarta, was chosen as the place for this research to be carried out, starting for 2 weeks in March 2022. The author uses the observation sheet as a research instrument. Data on the implementation of acupressure was measured using a pain development record form. The deep breathing relaxation technique is performed when the mother is having contractions, while the LI4 point acupressure technique is performed outside of the time when the mother is not having contractions.

Data analysis using univariate SPSS 23 using dummy tables and graphs that describe the characteristics of respondents based on education, age, occupation and parity. And Bivariate Analysis was conducted to test the correlation between the dependent variable and the independent variable using the paired t-test to determine the difference.

## RESULT AND DISCUSSION

### *Univariate Analysis Results*

**Tabel 1** : characteristics of respondent.

Variabel	Frequency	Percentage (%)
<b>Mothers Age</b>		
< 20 years old	5	20
20-35 years old	18	72
>35 years old	2	8

<b>Education</b>			
Low (<High School)	6	24	
Intermediate (High School)	13	52	
Hight (>High School)	6	24	
<b>Job Status</b>			
Working	11	44	
Doesn't work	14	56	
<b>Parity</b>			
Primipara	9	36	
Multipara	16		67

Based on table 1 above, it can be seen that the total number of respondents was 25 people with the majority having a range of 20-35 years as many as 18 respondents (72%). The majority have a high school education/equivalent as many as 13 respondents (52%), respondents who do not work as many as 14 respondents (56%). And 16 respondents (65%).

#### *Bivariate Analysis Results*

**Table 2 :** Normality Test Results of Deep Breathing Relaxation and Acupressure Point LI4 at Duren Sawit Health Center Jakarta in 2022.

Measurement Category	Mean ± SD	α = 0.05
Intervention Group		
Pre-Test	4.40 ± 0.500	0.000
Post-Test	3.28 ± 0.458	

Table 2 proves that the average pain intensity before deep breathing relaxation and acupressure point LI4 is in the range of 4.40 (severe pain on a scale of 7-9) with a standard deviation of 0.500, then after intervention it becomes 3.28 (moderate pain with scale 4-6) with a standard deviation of 0.458. The value of Sig.(2-tailed) is  $0.000 < 0.05$ , so it was found that there was a significant difference in the intensity of labor pain in the active phase I after giving the intervention of deep breathing relaxation and acupressure point LI4. So it can be concluded that deep breathing relaxation and acupressure point LI4 can reduce the intensity of labor pain in the active phase of the 1st stage.

Deep breathing relaxation is a part of a variant of breathing techniques, the benefit of which is to reduce pain in the mother who is going through the labor process without the use of drugs. The way to do deep breathing relaxation is to take deep breaths when the uterus contracts by using chest breathing

through the nose and then regulate the breath until it becomes a bit slow,  $\pm$  half of the usual breathing rate(7)

Then when the contraction pauses, acupressure is also performed at the LI4 point. Acupressure point LI4 is pressing using the thumb on the skin surface area of the large intestine point number 4 (point LI4) which is located on the back of the hand in the highest area when the thumb and index finger are made close together(8). Giving stimulation at acupuncture points by applying pressure and massage can stimulate sensory nerve cells around the acupuncture points so that they become a stimulant for the body to produce local endorphins and close the pain gate through the release of large nerve fibers. The function of the endorphins itself is as a pain reliever and pain reliever which is produced naturally and endogenous opioid peptide in the central nervous system. Then the neural network will stimulate the endocrine system to release endorphins to adjust to the body's needs and hopes that pain due to undergoing the labor process can go down(9)

The combination of these two non-pharmacological methods is able to reduce pain intensity, this is proven in this study where it is known that the average score of pain in the first stage of active labor before giving the intervention (pre-test) deep breathing relaxation and acupressure point LI4 is 4.40 and the average pain decreased to 3.28 after the intervention (post-test) so that there was a decrease in the average pain of 1.12.

The results of another study explained that most of the pain and pain in maternity pre-intervention with deep breathing and acupressure point LI4 was severe pain but could still be controlled by 17 respondents (68%) and severe pain could not be controlled by 8 respondents (32%). After doing deep breathing relaxation and acupressure point LI4 which initially found severe pain that could not be controlled became no longer found but most of them experienced moderate pain as many as 16 respondents (64%) and severe pain but could still be controlled as many as 9 respondents (34% ).

Based on the results of the study, the -value score was 0.000, which means that the breath relaxation and acupressure methods are very effective in reducing pain simultaneously. the incorporation of non-pharmacological combinations in an effort to reduce pain intensity has proven successful and this has also occurred in several other studies related to non-pharmacological combinations in an effort to reduce pain intensity.

Another non-pharmacological combination carried out found that combining kneading techniques and deep breathing relaxation could reduce pain. In this study, out of 16 respondents, 10 respondents (31.3%) experienced severe pain and then decreased to 6 people (18.8%) experiencing moderate pain. Research conducted found that previously the average pain intensity was 7.5

then after that the pain intensity dropped to 5.9, so that there was a significant influence from the combination intervention of Murotal Al Qur'an Surat Ar Rahman and dhikr on the intensity of pain in the first stage of normal delivery at PMB Lia Maria Sukerame Bandar Lampung in 2018 with a p value of 0.000 ( $p < 0.05$ )(10).

Based on the results of tests conducted by the author on the effectiveness of deep breathing relaxation and acupressure point LI4 in an effort to reduce labor pain in the active phase of the 1st stage, it can be concluded that "deep breathing relaxation and acupressure point LI4 are effective in reducing labor pain in the active phase I of the first stage".

## **CONCLUSION**

The results of the study on the Effectiveness of Deep Breathing Relaxation and Acupressure Point LI4 on Reduction of Labor Pain in the Active Phase I at Duren Sawit Health Center Jakarta in 2022, the authors conclude:

1. Based on the use of deep breathing relaxation methods and acupressure point LI4 to reduce pain intensity of pain, decrease labor pain in the first stage of active phase in mothers giving birth, all respondents amounted to 25 people (100%).
2. After doing the research, it can be identified that the average value of pain in childbirth before giving the deep breath relaxation intervention and acupressure point LI4 is 4.40 and the average pain reduction after giving the deep breath relaxation intervention is 3.28.
3. From the research results, the -value score is 0.000, which means that both deep breathing relaxation techniques and LI4 point acupressure have been proven to be effective in reducing pain intensity and scale.

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*Nurlaela, Tridiyawati*

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