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THE EFFECT OF ADMINISTRATION OF ACUPRESSURE LI4 (HEGU) ON THE SCALE OF LABOR PAIN IN ACTIVE PHASE 1 IN PRIMIPARA MOTHERS IN SEHATI KEPANJEN MATERNITY HOMES

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ABSTRACT

This study aims to determine whether there is an effect of giving LI4 (hegu) acupressure on pain during labor in primiparous mothers in RB Sehati Kepanjen. This study uses the True Eskperimen method (pure experiment) in the form of a post test only control design. The sample used in this study were mothers who were about to give birth entering an opening of 4-10 cm as many as 33 mothers gave birth at the Sehati Kepanjen Maternity Home, where the sampling technique was simple random sampling. The LI4 (Hegu) acupressure method is located in the middle of the first and second metacarpals by applying gentle pressure to the protruding area during labor pain. The scale for measuring labor pain in this study was the Wong-Baker Cat FACES Rating Scale. Data analysis used independent t-test statistical test because the data were normally distributed. The results showed that there was an effect of giving acupressure LI4 (Hegu) on the intensity/scale of maternal pain, especially in the first period at RB Sehati Kepanjen, with T count = 8,383 sig = 0.0001 < 0.05, which means there is a difference in pain where the control group higher (8.59) than the treatment (3.75) statistically stated that there was a significant difference, there was a difference between the control group and the treatment group. The control group (without acupressure LI4) was higher than the treatment group (which was given acupressure LI4).

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1. Introduction

Childbirth is a normal or physiological event experienced by most women. The process of expulsion of the products of conception (placenta and fetus) at term/term (37-42 weeks gestation) naturally, spontaneously, head presentation, UUK at 12 hours, not more than 18 hours, no maternal and fetal problems can be called with normal delivery. Feelings of anxiety during childbirth are common, one of which is caused by the perception in society that the pain is excruciating/unbearable/severe and strong (Fear Tension Pains) False contractions (Braxton Hicks) can be a sign of labor pain because there is a contraction in the uterus but it is irregular. When the cervix dilates 4-10cm the mother will feel excruciating pain. The dilated cervix will cause pain in the mother (Hashemi Asl et al., 2018).

Study from 400 pregnant women experienced very severe labor pain at the beginning of labor or in the first stage of the active phase. In Indonesia, it has been reported that the level of labor pain has an average result of 85-90% of pregnant women who have severe labor pain and as many as 7-15% do not experience pain. Mother's feelings about labor pain cause trauma, some mothers who will give birth decide to postpone pregnancy or choose to have a cesarean section(Whitburn et al., 2017). Maternal mothers who are not able to adapt to labor pains increase the danger and threat to life for the mother and fetus, because it can cause an increase in the mother's body metabolism, which

results in increased blood pressure, pulse, respiration and temperature that can affect the gastrointestinal, urinary, and respiratory systems. resulting in deceleration of the fetal heart rate so that prolonged labor, eclampsia, pain and death in the mother and fetus can occur. Another impact of labor pain during pregnancy, an increase in maternal physical barriers and psychological stress that can interfere with the delivery process and increased maternal discomfort during childbirth which can cause postpartum depression. The incidence of postpartum blues in Indonesia is around 50-70% of postpartum mothers. Psychological trauma can be even greater due to the magnitude of the physical trauma caused during childbirth(Mukhoirotin & Mustafida, 2020)(Smith et al., 2020). (Parthasarathy & Busso, 2016)

Interventions that can be given to reduce pain during childbirth are pharmacological and nonpharmacological. The pharmacological method that can be given is anesthesia. The use of epidural analgesics is recognized to be effective in relieving pain, but these analgesics can reduce the rate of normal delivery due to women choosing to have cesarean section over vaginal delivery(Nehbandani et al., 2019; Wu et al., 2017). Non-pharmacological methods that can be used are breathing techniques, music, massage, acupuncture,acupressure which have minimal side effects, are safe, simple, inexpensive, effective, and can be done by husbands and families. Especially by using the acupressure method, some researchers say that acupressure can increase endorphins in the blood. affect memory and mood, provide a relaxed feeling so that the mother is able to control pain (Yam et al., 2018). Acupressure Li4 is a uterine point, uterine contractions can be increased by administration. therapy Point LI 4 or hegu is between the first metacarpal bone (thumb) and metacarpal 2 (index finger), then near the 2 metacarpals there is the most prominent (distal) that is where acupressure is done (Mukhoirotin & Mustafida, 2020; van Campen et al., 2021).

Based on the results of a preliminary study on August 21, 2021 in several health facilities, namely the Dinoyo Health Center, Mutiara Hati clinic, and at the Sehati Maternity Home, it was found that the midwives who served in various health facilities had used non-pharmacological methods such as providing KIE regarding complaints and how to overcome them such as stroking back pain, breath control therapy when there is no contraction, for the LI4 (Hegu) acupressure method has not been given to the patient (Gülmezoglu & Oladapo, 2020). According to the midwives who carry out this treatment, it must be improved and more effective in reducing labor pain. So it requires additional therapy that has minimum side effects and the husband or family can provide intervention. Because there are still many who have not done acupressure when giving birth, researchers want to do research on this and whether there is an effect for maternity mothers, especially the pain, especially in the (RB) Sehati Kepanjen Maternity Home.

The researcher chose the Sehati Kepanjen maternity home as a place to conduct acupressure research on labor pain because the number of mothers giving birth at the Sehati Kpanjen maternity hospital was high, strategically located, easily accessible by researchers, and had not been given acupressure techniques by the midwife / health worker to reduce pain at opening. 4-10 cm. Based on this description, the researcher wishes to examine the effect of giving acupressure on the pain scale, especially in primiparous mothers with an opening of 4-10 cm (active phase) in RB Sehati Kepanjen.

2. Method

2.1 Research design

The method used in this research is True Eskperimen (pure experiment) and the form of the research design is post-test only control group where the experimental group is given treatment, namely LI4 acupressure and then pain measurements are taken with post-test after treatment. This study was obtained by comparing and then looking at the difference between the two post-test data between the experimental group (giving LI4 acupressure) and the control group.

2.2 Data source

a. Initial/primary data (Interview)
   Information taken from a study using instruments or interviews, the data obtained directly are primary data. The primary/direct data source from this study was the level of labor pain after LI4 (Hegu) acupressure therapy through the Wong – Bangker FACES Pain Rating Scale (Wolde et al., 2018).
b. Data Sekunder

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This secondary data can be obtained from the Kepanjen Sehati Maternity Home, Malang.

2.3 Research Target (Population/Sample/Research Subject)

Population is a collection or number of research objects that have the same characteristics. The population is primiparous stage 1 willing to give birth in RB Sehati Kepanjen. Then the number of samples can be determined using the lameshow formula: the number needed for the control or intervention group. With a total of 33 people.

2.4 Data analysis technique

After completing data processing Apnue can perform data analysis using a distribution table, namely a computer program called SPSS. The analysis used is as follows:

a. Univariate Analysis:
In this study (the effect of acupressure on the labor pain scale). The analysis is to describe the effect of each research variable, namely the dependent variable in the form of giving Acupressure LI4 and the independent variable in the form of a 4-10 cm opening maternal pain scale in primiparous mothers, to see the labor pain scale in both groups produced in table form.

b. Bivariate Analysis:
Bivariate analysis was performed on two related variables. The dependent variable in the form of giving Acupressure LI4 and the main variable pain felt by the respondent/subject. After each data already exists and the final result is known, if the data is normally distributed then the data analysis is carried out using an independent t-test, but if the data is not normally distributed then the data analysis uses the Wilcoxon test. This test is to see the effect of giving Acupressure LI4 on the maternal pain scale.

3. Result and Discussion

3.1 Result

TABLE 1.
FREQUENCY DISTRIBUTION OF CHARACTERISTICS OF AGE, EDUCATION LEVEL AND OCCUPATION OF RESPONDENTS IN SEHATI MATERNITY HOMES

Characteristics	Frequents (N)	Procentage (%)
Age		
20–25 yo	15	45.5
26–30 yo	17	51.5
31–35 yo	1	3.0
Education		
Elementary	2	6.1
Junior High Scool	8	24.2
Senior High School	21	63.6
Academy	2	6.1
Job		
Housewive	23	66.7
Teacher	3	9.1
Private Sector	6	18.2
Civil Servant	1	3.0

The total number of samples was 33 respondents with 15 people (45.5%) aged between 20-25 years, 17 respondents (51.5%) aged 26-30 years, and one (1) respondent (3%) aged 31- 35 yrs. The maximum age is 51.5%, namely 26-30 years old. For the education of the 33 samples, 6.1% have elementary school education, 24.2% have junior high school education, 63.6% have high school education, and 6.1% have college education. The education of the respondent/dominant sample is SENIOR HIGH SCHOOL, which is 63.6% or 21 samples. For the work of 33 respondents, 69.7% (23) were housewives, 9.1% (3) were teachers, 18.2% (6) were private, and 3% (1 person) were village officials. Housewives are the majority occupation in the sample.

TABLE 2.
FREQUENCY DISTRIBUTION OF POST TEST PAIN SCALE CONTROL GROUP

Pain	Frequents (N)	Procentage (%)

Moderate	4	23.5
Severe	13	76.5

In the results of the post-test study of the control group (without being given LI4 intervention/acupressure), 4 respondents (23.5%) experienced moderate/moderate pain, 13 respondents (76.5%) had a severe pain scale and none felt low pain.

TABLE 3.
DISTRIBUTION OF POST TEST FREQUENCY PAIN SCALE INTERVENTION GROUP

Pain	Frequents (N)	Procentage (%)
Mild	5	31.3
Severe	11	68.8

For the results of the Post Test Intervention group (given acupressure LI4), as many as 5 people (31.3%) experienced mild pain scale after being given acupressure LI4 (Hegu), 11 people (68.8%) moderate pain and none experienced moderate pain. Experienced severe pain after being given acupressure.

TABLE 4.
TEST RESULTS INDEPENDENT SIMPLE TEST

	group	N	Mean	SD ± Std. Error	*p*
Pain	Control	17	8.59	1.69 ± 0.41	0.05
	intervention	16	3.75	1.61 ± 0.40	0.05

Notes: N: Number of Samples *p:* Probability value
T count = 8, 383 sig = 0.0001 < 0.05 in appendix 1.2 means that there is a difference in pain where the control group is higher (8.59) than the treatment (3.75) statistically there is a significant difference. So the conclusion is that Ha is accepted, meaning that there is / there is an influence in giving LI4 acupressure for sciale pains in labor / mothers giving birth for the first time, especially in RB Sehati Kepanjen.

3.2 Discussion

1. Univariate Analysis

Description of respondents' characteristics of age, occupation, and education.

The frequency distribution of respondents' characteristics in this study is based on age. The results showed that the age of the most respondents was 17 people (51.5%) i.e. aged 26-30 years which indicated that the age of the respondents was mostly included in the healthy reproductive age where when the mother during this period had a fairly high tolerance for labor pain. The results of this study are also in line with the theory where this age is a healthy age for pregnancy and childbirth. This research is also in line with the research of people aged 20-35 are the age that is not at risk in childbirth. This shows that the community is aware and understands to promote safe delivery and reduce the risk of giving birth too young or giving birth too late. The frequency distribution of the characteristics of the respondents in this study based on the education level of the most respondents was SENIOR HIGH SCHOOL equivalent as many as 21 respondents (63.6%). Pain response can also be influenced by receiving information and a person's perspective which can be related to the respondent's level of education. Someone who is pursuing higher education will be faster in receiving new information/activities and will be easier to adapt. For the respondent's occupation the most/dominant is housewife as many as 23 people (69.7%) (Dabiri & Shahi, 2014; Karcioglu et al., 2018; van Campen et al., 2021).

The frequency distribution of the characteristics of the respondents in this study based on the education level of the most respondents was SENIOR HIGH SCHOOL equivalent as many as 21 respondents (63.6%). Pain response can also be influenced by receiving information and a person's perspective which can be related to the respondent's level of education. Someone who is pursuing higher education will be faster in receiving new information/activities and will be easier to adapt. For the respondent's occupation the most/dominant is housewife as many as 23 people (69.7%) (Gönenç & Terzioğlu, 2020).

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Frequency Characteristics of the Post-test Pain Scale Intervention Group (treatment)

For the results of the Post-Test frequency distribution of the Intervention group (given acupressure LI4), as many as 5 people (31.3%) experienced mild pain scale after being given acupressure, 11 people (68.8%) experienced moderate pain scale and experienced severe pain / pain. /severe pain (none) after giving acupressure. For handling labor pain, one of them can use non-pharmacological methods, namely acupressure points that can be given, including the provision of LI4 acupressure which has minimal side effects and is safe for use by the mother and fetus.

The results of previous research, (Mukhoirotin & Mustafida, 2020) stated that massage at the LI4 and SP-6 meridians can be used to increase maternal comfort, due to the release of the hormone oxytocin and the pituitary gland. Where the massage can stimulate the mother's uterine contractions to increase the speed of labor and can regulate labor pain.

2. Analisi Bivariate

The Effect of Giving Acupressure LI4 (Hegu) on the Active Phase I Childbirth Pain Scale in Primiparous Mothers in Sehati Maternity Homes.

The effect of giving acupressure point LI4 (Hegu) on the maternal pain scale in primiparous women in the first stage of the active phase can be determined using a parametric independent t-test. Based on the Independent T-test, the results of T count = 8.383 sig = 0.0001 <0.05, it means that there is a difference in pain where the control group is higher (8.59) than the treatment (3.75). stated that there was a significant difference. So the conclusion is that Ha is accepted, which means that there is an effect of giving LI4 acupressure on the scale/intensity of labor pain in primiparous mothers in the active phase of 1st stage. This study is supported by research conducted by Mirzae, F. et al., (2021) which stated that in the results of the study, pregnant women who were given LI4 acupressure with ice experienced less or lower labor pain than the control group, but there was no difference between acupressure and or without ice the research results can reduce the scale of labor pain (Mirzaee et al., 2021).

Different research results found that SP6 acupressure had not been able to reduce maternal pain scale, so it had to be combined with other noninvasive analgesic methods. Acupressure given to 130 maternity mothers has not been able to reduce labor pain, the points used are acupressure points BL23 and GB21(Casey, 2020). Acupressure has not been able to reduce the labor pain scale, possibly because the use of acupressure techniques is not based on the philosophy of traditional Chinese medicine or the wrong way of giving acupressure techniques so that the desired effect does not occur (Dabiri & Shahi, 2014; Hashemi Asl et al., 2018; Wu et al., 2017).

The effect of giving acupressure point LI4 (Hegu) on the maternal pain scale in primiparous women in the first stage of the active phase can be determined using a parametric independent t-test. Based on the Independent T-test, the results of T count = 8.383 sig = 0.0001 <0.05, it means that there is a difference in pain where the control group is higher (8.59) than the treatment (3.75) stated that there was a significant difference. So the conclusion is that Ha is accepted, which means that there is an effect of giving LI4 acupressure on the scale/intensity of labor pain in primiparous mothers in the active phase of 1st stage. This study is supported by research conducted by Mirzae, F. et al., which stated that in the results of the study, pregnant women who were given LI4 acupressure with ice experienced less or lower labor pain than the control group, but there was no difference between acupressure and or without ice the research results can reduce the scale of labor pain (Mirzaee et al., 2021).

4. Conclusion

Level of labor pain scale in the control group (without giving acupressure LI4) experienced the most severe pain (76.5%) and none experienced mild pain. Scale level labor pain in the intervention group (given acupressure LI4) the most moderate pain (68.8%) and none experience severe pain. There is an effect of giving acupressure LI4 (Hegu) on pain scale of active phase 1 labor in primiparous mothers at home give birth in Sehati

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