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Effectivity of Large Intestine 4 Point Acupressure on Labour Pain Stage-I Active Phase

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ABSTRACT

Background: Law of the Republic of Indonesia No. 36 of 2009 concerning traditional health services (Yankestrad), namely articles 1, 48, 59, 60 and 61. Acupressure is included in Yankestrad skills that are easy, cheap, simple, effective, and without any side effects. harmful. Acupressure at the Large Intestine 4 Point (LI4) based on the literature is able to reduce labor pain in the first stage of the active phase. **Methods:** This type of research is quasi-experimental with a pre-test and post-test research design. The samples were divided into two groups, the treatment group and the control group. **Results:** Based on the results of the research that has been carried out, it can be concluded as follows: Active phase I labour pain before being given Acupressure Therapy for primigravida mothers in PMB Aceh Besar District averaged 7.35. Active phase I labour pain after being given Acupressure Therapy to primigravida mothers in PMB Aceh Besar District decreased by an average of 5.47. **Conclusions:** There are differences in labour pain in the stage-I of active phase in the Acupressure therapy group with the Routine care group for the stage-I of labour for primigravida mothers in PMB Aceh Besar District.

1. Introduction

Pain during labor is felt. 67% feel worried about pain during labour, the pain experienced by mothers in labor needs to be considered about how to deal with the pain. Research in the United States about 70% to 80% of mothers who give birth expect labour to take place without feeling pain, currently 20% to 50% of deliveries in private hospitals in Indonesia are carried out by Caesarean section. The current trend is the tendency of mothers to choose delivery by sectio case area to avoid pain during normal delivery¹. Murray in Kristina (2016) reported the incidence of pain in 2,700 maternity mothers, 15% had mild pain, 35% had moderate pain, 30% had severe pain and 20% had very

severe pain².

Mothers giving birth feel pain during the stage-I of labour, the pain felt by mothers in labor is severe pain for a longer time, in Indonesia the number of mothers giving birth in Primigravida who experience severe pain is 46%, 54% have moderate and mild pain, while in multigravida as many as 37% of mothers who gave birth experienced severe pain, and 63% experienced moderate and mild pain³.

Pain during labour makes it difficult for the mother to adapt, causing uncoordinated uterine contractions which can result in an extension of the first stage of labor and the condition of the fetus will be disturbed.

To relieve pain, pharmacological and non-pharmacological methods can be used. Pharmacological pain management such as giving analgesics and anesthetics is considered to still cause a lot of conflict because the administration of drugs during labor will have a negative effect on the fetus and mother. Uterine contractions cause cervical dilatation and propel the fetus through the birth canal. Uterine contractions during labour cause pain⁴.

Pain conditions that are not managed properly will cause various effects for the mother and fetus⁵. The impact of labor pain is causing hyperventilation so that oxygen demand increases, blood pressure increases, and decreases intestinal and bladder motility. This situation will stimulate an increase in catecholamines that may cause interference on the strength of uterine contractions resulting in uterine inertia⁶. It is undeniable, in the labor process, labor pain is an inseparable part of the labour process. Physiologically all women who give birth will experience pain during the labor process⁷.

Actions taken to reduce labour pain include relaxation techniques, position changes, massage, hot or cold therapy, music and can use acupressure. Acupressure uses the principle of touch which shows behavior caring that can provide calm and comfort for the patient so that the therapeutic relationship is closer. There have been many journals that have examined relaxation techniques, position changes, massage, hot or cold therapy, and music. So the researchers wanted to provide acupressure therapy for active labor pain in the first stage. According to Ethyca's research, acupressure therapy can divert feelings of labor pain in the stage-I of the active phase⁸.

Pharmacological procedures are more effective than non-pharmacological methods, but pharmacological methods are more expensive, pharmacological procedures include the administration of analgesics, namely to reduce or eliminate pain⁹. While non-pharmacological methods are cheap, simple, effective, and without adverse effects. Non-pharmacological methods can also increase satisfaction during labor because the patient can control his feelings and strength. There are several relaxation techniques

including breathing techniques, movement and position changes, massage, hydrotherapy, hot/cold therapy, music, guided imagery, acupressure, and aromatherapy are some non-pharmacological techniques that can increase patient comfort during childbirth and have an effective influence on the experience. childbirth¹⁰. Acupressure therapy is more effective, non-destructive and his technique is done to lower the labour pain¹¹.

2. Methods

The research design used in this study was a quasi-experimental or quasi-experimental with pre-test and post-test design.¹² This research was conducted from March to October 2021 in Aceh Besar District. The population in this study were all primigravida mothers who gave birth in the independent practice of midwives throughout Aceh Besar District.

The sample in this study were primigravida mothers who gave birth at PMB from March to October 2021, totaling 80 people. Consisting of a control group, there are 40 respondents who receive regular care in the form of massage or rubbing on the waist and 40 people in the treatment group who receive acupressure therapy at the LI4 point. The sampling technique in this study used a purposive sampling method. Data collection was carried out by enumerators, namely midwives who had been trained in advance to perform acupressure actions. The inclusion criteria in this study were as follows: active phase I primigravida who gave birth in PMB Aceh Besar district, willing to be respondents, able to read and write. While the exclusion criteria in this study were pregnant women who experienced complications during childbirth in the form of bleeding, irregular fetal heart rate (DJJ), anxiety. Data collection tools and materials used in this study were partograph sheets, questionnaires, observation sheets and baby oil.

Data analysis using a computer with SPSS software program was carried out univariate and bivariate. The data displayed in the univariate analysis is in the form of a frequency distribution of the mother's characteristic variables, namely age and education.

Bivariate analysis used in this study in the form of

paired t-test and independent t-test. Paired t-test was used to determine the average difference between giving acupressure therapy and providing routine care in the first stage before and after treatment in each group. The conditions for using the paired t-test are numerical, dependent and normally distributed data (if the data is not normally distributed, the Wilcoxon test is used).

Independent t-test is used to identify the level of

labor pain on acupressure therapy group and the level of labour pain in the routine care group stage-I. Terms of use independent t-test, namely the numerical data, homogeneous and normal distribution (if not normally distributed, using the test mann whitney).

This research already has ethical approval with No.I.B.02.03/013/2021.

3. Results

Table 1. Distribution of the frequency of respondents based on the characteristics of the mother giving birth.

No	Characteristics of Respondents	Control Group		Treatment Group	
		n	%	n	%
1	Age				
	35 years	32	80	30	75
	> 35 years	8	20	10	25
2	education				
	Elementary/junior high school	14	35	10	25
	Senior high school	22	55	26	65
	Diploma/S1	4	10	4	10
	Total	80	100	40	100

Based on the table above, it can be seen by age that the control group is at reproductive age as much as 80%, for the majority of education, it is high school background as much as 55%. In the group that was

given the treatment, they were at reproductive age as much as 75%, for the majority of education background as much as 65%.

Table 2. Results of normality test (Kolmogorov-Smirnov) on maternal active phase of stage-I in the treatment group in independent practice Aceh Besar District Midwife.

Group	Mean ± SD	Kolmogorov-Smirnov		
		Statistic	df	Sig.
Pretest	7.35 - 1.122	0.219	40	0.00
posttest	5.47 - 1.336	0.175	40	0.03

Results of normality using the Kolmogorov-Smirnov test showed abnormal distribution data ($p < 0.05$), so

that the test used is the Mann Whitney test.

Table 3. Normality test results (Kolmogorov-Smirnov) in active phase I birth mothers in the control group in the independent practice of Midwives Aceh Besar District.

Group	Mean ± SD	Kolmogorov Smirnov		
		Statistics	df	Sig.
Pretest	6.93 - 0.888	0.209	40	0.00
Posttest	6.50 - 1.783	0.160	40	0.011

The results of the normality test using Kolmogorov Smirnov showed that the data was not normally distributed ($p < 0.05$), so the test used was the Mann-Whitney test.

Table 4. Statistical test (Wilcoxon test) the effectiveness of acupressure therapy on labour pain in the intervention group.

Group	n	Mean±sd	Median		p
			minimum	maximum	
Pretest	40	7,35±1,122	5	9	0.000
Posttest	40	5,47±1,336	4	8	

Based on table 4 the Wilcoxon test results show a p-value of 0.000, this indicates that there is a significant difference in labor pain between before and after the administration of acupressure therapy in the stage-I of labour.

Table 5 Statistical test (Wilcoxon test) the effectiveness of providing routine care in the stage-I of labour pain pretest and posttest in the control

Group	n	Mean±sd	Median		p
			minimum	maximum	
Pretest	40	6.93±0.888	5	8	0.042
Posttest	40	6.50±1.783	3	9	

Based on table 5 Wilcoxon test results show a p-value of 0.042, this indicates that there is a significant difference in labor pain between before and after the provision of routine care for the first stage of labour in the stage-I of labour.

Table 6. Statistical Test Results (Mann-Withney Test) differences in labor pain in the routine care group I and the acupressure

Group	n	Mean Rank	p
Control	40	51.85	0.000
Intervention	40	29.15	

Based on table 6 the results of the test Mann Withey show p-value 0.000 then this shows that there is a difference in the provision of acupressure and routine care in the stage-I of labour pain in the stage-I of labour, where it can be seen that the p-value is 0.000 which means that there is a significant difference in giving acupressure to routine care in stage-I.

4. Discussion

The results of the study It was found that the average labour pain in the treatment group before giving acupressure was 7.35 and experiencing a decrease in labor pain after giving acupressure to 5.47. Meanwhile, the average labor pain in the control group before being given routine care in the first stage was 6.93 and decreased after giving routine care in the first stage to 6.50. Based on the data above, it can be concluded that both groups experienced a decrease in stage-I labor pain after the intervention was given.

Labour is the process of opening and thinning of the cervix. As a result of cervical dilatation at birth mothers there arises a painful¹³. Labour pain is a problem for pregnant women, because 90% of women experience pain during childbirth. One cause of the high rate of cesarean surgery is because mothers worry about the pain so choosing alternative delivery is relatively painless¹⁴.

Alternative actions that can reduce labor pain are pharmacological (using drugs) and non-pharmacological (traditionally). Acupressure is an effective method of reducing labor pain that has no side effects. This method can also make the mother comfortable, relaxed and increase stamina during labor¹⁰. Acupressure increases the effectiveness of uterine contractions and also helps produce endorphins. Endorphins function to reduce pain¹⁵.

Wilcoxon test results showed a *p-value* of 0.00 for both groups. This shows that there is a significant difference in labor pain before and after the administration of acupressure therapy in the first stage of labor. The results also show that routine care in the first stage and acupressure therapy can help reduce pain in women in labor. Acupressure is the chosen alternative method in reducing labor pain in women in the first stage. The use of this complementary therapy is sought to be widely introduced or promoted and implemented as a routine. in maternity care, especially in the active phase of the first stage. LI4 point acupressure can significantly prevent the long first stage of primigravida¹⁶.

The results of this study are in line with research conducted in Sumenep, namely that acupressure

therapy has an effect on reducing first stage labor pain in primiparous mothers. Primiparous mothers experience pain longer than multiparous mothers. The process of cervical effacement in multiparous women coincides with the process of cervical dilatation, while in primiparous women the process of dilatation and effacement do not occur simultaneously, but cervical dilatation occurs after the cervical effacement process¹⁷. The response experienced by primigravida mothers to pain in general is fear and anxiety¹⁸.

Mann Whitney test results obtained *p value* of 0.000 means that there are differences in the provision of acupressure and routine care to the first stage of labor pain on maternal stage-I. This research is in line with research conducted by Sunarto, 2021 that acupressure therapy performed at the point LI4 may reduce pain during childbirth. Acupressure therapy is a complementary therapy nonpharmacological can be an alternative option for healthcare facilities¹⁹.

5. Conclusions

The results of the study can be concluded that the group of pregnant women who received acupressure at the LI4 point experienced a significant reduction in pain during the process of stage-I

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