



The Effect Of Giving Rose Aromatherapy On Labor Pain

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ABSTRACT

Labor pain as a physiological process occurs due to contraction of the myometrium. Labor pain has a different intensity in each individual. If not handled properly, labor pain and anxiety experienced by the mother can cause trauma. One of the non-pharmacological treatments that can be done is rose aromatherapy. The objective to determine the effect of giving rose aromatherapy to labor pain in the first stage at the Ciputat Fruit Heart Hospital, South Tangerang, Banten Province in 2022. This type of research is a quasi-experimental with a pretest and posttest one group design. The study was conducted at Ciputat Fruits Hospital, South Tangerang, from July to early August 2022. The population of all physiological birth mothers at Ciputat Fruits Hospital, South Tangerang, Banten Province in July 2022, the total sample was 30 people. The sampling technique is purposive sampling. Data were analyzed using univariate and bivariate with the Wilcoxon test. Data were processed using a computer with the SPSS program. Before being given rose aromatherapy, it was found that the intensity of labor pain in the first stage of labor, namely only 1 person (3.3%) experienced mild pain. Meanwhile, after being given rose aromatherapy, it was found that the intensity of labor pain in the first stage of labor, namely those experiencing mild pain, increased to 9 people (30.0%). Statistical test results of the effect of giving rose aromatherapy to labor pain in the first stage at the Ciputat Fruit Heart Hospital, South Tangerang, Banten Province in 2022 (p value 0.000). Aromatherapy of roses is good in helping to reduce the intensity of labor pain during the first active phase. It is hoped that health workers can implement this intervention in maternity clinics to help mothers reduce the intensity of labor pain.

Keywords: Rose aromatherapy, pain intensity, labor

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INTRODUCTION

Childbirth is a physiological event in the life cycle of a woman. Labor and delivery are happy events but often cause pain. Labor pain is caused by stretching of the perineum and vulva, vertical uterine pressure during contractions and progressive pressure on the lower part of the fetus on the lumbosacral plexus, bladder, and other sensitive pelvic structures. Labor pain can occur in all birthing mothers, both primi and multi¹.

The intensity of labor pain in primiparas is more severe than multiparous labor pain because multiparas experience effacement (thinning of the cervix) simultaneously with cervical dilatation, whereas in primiparas the effacement process occurs earlier than cervical dilatation. This process causes the intensity of contractions felt in primiparas to be heavier than in multiparas, especially during the first stage of the active phase. The experience of pain and the number of parities also affect the perception of pain because generally primiparas have more sensitive pain sensors than multiparas. The peak of pain occurs in the active phase, especially at 5 cm opening because the pain can still be tolerated compared to wide opening and when the opening is wide the mother must concentrate on delivering the baby.²

This is in line with previous research which said that the peak of pain starts from a 5 cm opening because contractions occur starting within 30 minutes from the first contraction to the next contraction. Factors that influence the response to labor pain are culture, emotions (anxiety and fear), birth experience, support system, and preparation for delivery. Labor pain that becomes more frequent and lasts longer can cause the mother to be anxious, afraid and tense and even stressed which results in excessive release of hormones, namely adrenaline, catecholamines and steroids. This hormone can cause smooth muscle tension and vasoconstriction of blood vessels which results in reduced blood and oxygen flow to the uterus so that it can cause uterine ischemia, fetal hypoxia and increased pain impulses. High catecholamines in the blood can cause interference with the strength of uterine contractions resulting in uterine inertia which results in prolonged labor.³

Prolonged parturition is a complication of labor that affects both the mother and the fetus. The impact on the mother is that there is an increase in the incidence of uterine atony, lacerations, bleeding, infections, maternal fatigue and shock. The impact on the fetus is asphyxia, cerebral trauma, injury, and infection, so care for reducing pain in the mother during labor is very important. Handling labor pain can be done through several efforts, namely pharmacological and non-pharmacological⁴.

Pharmacological actions can be given analgesics and anesthesia or epidural injections, as well as Intrathecal Labor Analgesic (ILA). These actions almost all have side effects on the mother and fetus. Analgesics can penetrate the placenta, causing an effect on the baby's breathing, while in the mother it

can cause nausea, dizziness, unable to rely on her stomach muscles and push when uterine contractions occur so that labor becomes longer⁵.

Non-pharmacological pain management can be given relaxation techniques, hypnobirthing, acupuncture, acupressure, water birth, massage, and aromatherapy. Non-pharmacological measures are cheaper, simpler, more effective, without adverse effects, and can increase satisfaction during labor because the mother can control her feelings and strength. Pain management using hypnobirthing, acupuncture, acupressure, and water birth techniques must be carried out by trained health workers because these maneuvers require special training and hypnobirthing must be carried out during antenatal care, while aromatherapy only requires aromatherapy ingredients, so aromatherapy is more effective in reducing pain. Aromatherapy is a complementary therapy using essential oils from fragrant plants to reduce health problems and improve quality of life. The fragrant aroma of plants can directly affect the brain like analgesic drugs⁶.

Aromatherapy has a positive effect because it is known that fresh and fragrant aromas stimulate sensory receptors and can affect other organs so that they can have a strong effect on emotions. Aromas are captured by receptors in the nose and provide further information to the brain which controls emotion and memory as well as provide information to the hypothalamus which is a regulator of the body's internal systems, including the sexuality system, body temperature, and reactions to stress⁷.

The advantages of aromatherapy compared to other non-pharmacological methods are that it can help relieve stress, increase memory and energy, anti-depressants, healing and recovery, overcome insomnia, the immune system, relieve pain, relieve digestive disorders, improve blood circulation, relieve cramps and pain relief during labour. The scent of roses has the greatest effect then lavender. Rose aromatherapy is the queen of oils. Roses smell good, maintain body balance, stimulate feelings of comfort, and reduce pain. After inhaling aromatherapy the frequency of severe pain from 1/30 people to 0, moderate pain from 21/30 people to 10/30 people, mild pain from 8/30 people to 20/30 people¹.

In primigravida pregnant women who experience labor pain, it can be interpreted that there are differences in the results of the pre-test and post-test treatment. That is, giving aromatherapy is effective in reducing pain in dealing with the first child. After inhaling aromatherapy the frequency of severe pain from 17/20 people to 1/20 people, moderate pain from 3/20 people to 2/20 people, and mild pain from 0 to 17/20 people⁸.

Preliminary studies that have been conducted at the Ciputat Fruits Hospital, South Tangerang, midwives admitted that all mothers experienced labor pain, especially in primiparas in the first stage and based on the results of direct observations on 5 primiparous mothers, all mothers stated that the pain

felt like being stabbed, heat radiates throughout the waist and lower abdomen. Based on direct observation during the delivery process, no one has ever used rose aromatherapy to treat pain during the delivery process.

Based on the background of the problem that has been presented, the researcher is interested in conducting research entitled "The Effect of Giving Rose Aromatherapy on Pain in the First Stage of Labor at the Ciputat Fruit Heart Hospital, South Tangerang, Banten Province in 2022".

METHOD

This type of research is quasi-experimental with a pretest and posttest one group design. The study was conducted at Ciputat Fruits Hospital, South Tangerang, from July to early August 2022. The population of all physiological birth mothers at Ciputat Fruits Hospital, South Tangerang, Banten Province in July 2022, the total sample was 30 people. The sampling technique is purposive sampling. Data were analyzed using univariate and bivariate with the Wilcoxon test. Data were processed using a computer with the SPSS program.

RESULT

Table 1

Frequency Distribution of Respondent Characteristic Based on Age and Parity

Characteristics of Respondents	f	%
Age		
< 20 years	3	10,0
20– 35 years	15	50,0
> 35 years	12	40,0
Paritas		
Primigravida	7	23,3
Multigravida	23	76,7
Total	15	100

Table 2

The Intensity of the First Stage of Labor Pain Before and After Being Given Rose Aromatherapy

Pain Intensity	Provision of rose aromatherapy			
	Pretest		Posttest	
	f	%	f	%
No pain	0	0	0	0
Mild pain	1	3,3	9	30,0
Moderate pain	16	53,3	20	66,7
Severe pain	13	43,3	1	3,3
Total	30	100	30	100

Table 3
The Effect of Giving Rose Aromatherapy to the First Stage of Labor Pain

Pain Intensity	N	Mean	SD	MD	P value
Pretest	30	6,10	1,447	1,53	0,000
Posttest	30	4,57	1,251		

Based on table 1, 2, 3, before being given rose aromatherapy, the intensity of labor pain in the first stage of labor was obtained, namely 1 person experienced mild pain (3.3%), moderate pain 16 people (53.3%) and severe pain 13 people (43, 3%). Whereas after being given rose aromatherapy, the intensity of labor pain in the first stage of labor was obtained, namely 9 people experienced mild pain (30.0%), moderate pain 20 people (66.7%) and 1 person (3.3%) severe pain. There is an effect of giving rose aromatherapy to labor pain in the first stage at the Ciputat Fruits Hospital, South Tangerang, Banten Province in 2022 with a p value of 0.000 ($p > 0.05$).

DISCUSSION

The results showed that before being given rose aromatherapy, the intensity of labor pain in the first stage of labor was obtained, namely 1 person experienced mild pain (3.3%), moderate pain 16 people (53.3%) and severe pain 13 people (43.3%). Whereas after being given rose aromatherapy, the intensity of labor pain in the first stage of labor was obtained, namely 9 people experienced mild pain (30.0%), moderate pain 20 people (66.7%) and 1 person (3.3%) severe pain. From the results of the study it can be concluded that there was a decrease in the intensity of labor pain in the 1st stage before and after being given rose aromatherapy.

This study is in line with research in Rafsanjan Iran which showed results that aromatherapy with rose water can reduce labor pain, the average pain intensity after intervention decreased at 8-10 cm opening. From the results of the study, it was stated that before being given the rosewater intervention, 48% of respondents experienced severe pain, whereas after being given the rosewater intervention, only 8.1% of respondents experienced severe pain⁹.

This study is also in line with research on the effect of maternity aromatherapy on reducing the intensity of labor pain at BPM Mutiara Bunda. It was found that before the intervention, the majority of respondents, namely 60%, experienced severe pain, while after the intervention, the majority of respondents experienced mild pain as much as 75%¹⁰

According to the theory of childbirth is a physiological event in the life cycle of a woman. Labor and delivery are happy events but often cause pain. Labor pain is caused by stretching of the perineum and vulva, vertical uterine pressure during contractions and progressive pressure on the lower part of

the fetus on the lumbosacral plexus, bladder, and other sensitive pelvic structures. Labor pain can occur in all birthing mothers, both primi and multi

This labor pain is caused by a stretch in the lower uterine segment. The intensity of pain is proportional to the strength of the contractions and the pressure that occurs, the pain increases when the cervix is fully dilated due to the baby's pressure on the pelvic structures followed by stretching and tearing of the birth canal. One of the effects caused by labor pain is psychological effects such as anxiety and stress where if the mother is unable to overcome the anxiety she experiences, the pain she feels will also increase.¹¹

One effort to reduce labor pain so that mothers feel comfortable in facing labor is by giving aromatherapy. One of the aromatherapy that can be used is rose aromatherapy. This is consistent with the theory that rose essential oil aromatherapy is one method that can be used to reduce the causes of pain¹⁰ Giving aromatherapy to women in labor is able to release neuromodulators, namely endorphins and enkaphalins which function as natural pain relievers and produce feelings of calm so that they affect pain intensity. delivery¹²

The researchers' assumption was based on the results of the study that there was a decrease in the intensity of labor pain during the first active phase of the respondents because during the research all respondents really liked the aromatherapy scent of rose essential oil given by the researchers through inhalation. so that when inhaling the smell the respondent becomes calm, not anxious and can reduce labor pain. Provision of rose aromatherapy inhalation was carried out when the respondent began to enter the opening of 4-10 cm. At the time of the study, the respondents were very cooperative and did not complain about the smell of aromatherapy spreading in the delivery room and the respondents continuously inhaled the aroma of rose aromatherapy. A decrease in the intensity of labor pain in the first active phase of labor began to be seen after being given rose aromatherapy and the respondents also seemed calmer in the face of labour¹³.

The effect of giving rose aromatherapy to labor pain in the first stage at the Ciputat Fruit Heart Hospital, South Tangerang, Banten Province in 2022. Based on table 4 the results of an analysis of the effect of giving rose aromatherapy to the first stage of labor pain at Ciputat Fruits Hospital, South Tangerang, Banten Province in 2022 using the Wilcoxon test stated that there was an effect of giving rose aromatherapy to the first stage of labor pain at Ciputat Fruits Hospital, South Tangerang, Banten Province in 2022 with a p value of 0.000 ($p < 0.05$).

The results of a study in Taiwan, which showed the results that rose aromatherapy had an effect on the pain intensity of the active primiparous phase of labour. Statistical test results obtained $p = 0.001$.

In his research, it was explained that the decrease in pain intensity was because respondents benefited from rose aromatherapy which functions to provide calm and reduce anxiety.¹²

This is supported by research in India, where there was an effect of giving rose aromatherapy to the intensity of labor pain, where the statistical test results were obtained by Sig. (2-tailed) = 0.006. Furthermore, in his research it was explained that clinically aromatherapy through inhalation can provide beneficial fragrance effects, one of which can reduce the intensity of labor pain.¹⁴

According to the theory, one of the efforts given to help mothers reduce labor pain so that mothers feel comfortable in going through labor is to give rose aromatherapy. Roses are anti-depressants so they can make the soul calm. Appropriate and soothing aromatherapy relieves pain or pain during labour. Types of aromatherapy that are safe to use for pregnancy and childbirth, one of which is rose aromatherapy.¹⁵

When the aromatherapy of rose essential oil is inhaled, the volatile molecules will carry the aromatic elements contained therein such as geraniol (which has a percentage of 14.2% of the total chemical compounds in roses) and linalol to the apex of the nose, cilia emerge from the cells receptor cells¹⁵ When the molecule attaches to the hairs, an electrochemical message will be transmitted through the olfactory tract into the limbic system. This will stimulate memory and emotional response. The hypothalamus, which acts as a regulator, raises messages that must be conveyed to the brain. The messages received are then converted into actions in the form of electrochemical compounds which cause feelings of calm and relaxation and can improve blood flow¹⁶

Rose flower essential oil used by inhalation can be useful for increasing alertness, improving memory, increasing speed in counting and relaxing muscles and mind. Roses are efficacious as cell rejuvenators which make cells young again, antiseptic and anti-inflammatory. The smell is anti-depressant, sedative and relieves stress. Giving aromatherapy to women in labor is able to release neuromodulators, namely endorphins and enkaphalins which function as natural pain relievers and produce feelings of calm so that they can affect the intensity of labor pain¹⁷.

Researchers assume that there is an effect of giving rose aromatherapy to reducing the intensity of labor pain in the first active phase of labor can occur because respondents feel comfortable when inhaling rose aromatherapy caused by inhalation in the delivery room. As the researchers explained earlier, all respondents during the study really liked rose aromatherapy. Although all respondents liked the aromatherapy smell of roses, there were respondents whose pain scale decreased slightly, even those whose pain scale remained the same after the intervention. This happens because of differences in pain characteristics and this reaction is only felt by primigravida respondents or mothers who have just given

birth for the first time. Pain is influenced by past experience, whereas primigravida respondents have no previous childbirth experience. However, often a person who is more experienced with labor pain, the more afraid that person is of the painful events that will result. Other factors that may have influenced the decrease in the intensity of labor pain among respondents were age, parity, place of delivery, birth attendant and support from the respondent's family who always accompanied them during childbirth.

CONCLUSION

Aromatherapy of roses is good in helping to reduce the intensity of labor pain during the first active phase. It is hoped that health workers can implement this intervention in maternity clinics to help mothers reduce the intensity of labor pain.

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