

## THE EFFECT OF ROSE AROMATHERAPY ON LABOR PAIN DURING 1 ACTIVE PHASE

Dewi Yuliasari<sup>1\*</sup>, Muhammad Hatta<sup>2</sup>, Neneng Siti Lathifah<sup>3</sup>

<sup>1</sup>DIII Midwifery Study Program, Malahayati University

<sup>2</sup>Malahayati University Medical Study Program

<sup>3</sup>Profesi Midwifery Study Program, Malahayati University

\*Korespondensi E-mail : dewiys52@yahoo.co.id

### ABSTRAK : PENGARUH PEMBERIAN AROMATERAPI ROSE TERHADAP NYERI PERSALINAN SELAMA 1 FASE AKTIF

Latar Belakang: Kala I merupakan tahapan yang berlangsung dari terjadinya kontraksi uterus yang teratur sampai dengan dilatasi serviks lengkap. Kontraksi rahim pada persalinan menimbulkan kecemasan dan mengakibatkan nyeri persalinan yang sangat menakutkan bagi ibu bersalin. Di Amerika, dari National Vital Statistics Reports yang dilakukan oleh Centers for Disease Control and Prevention (CDC) proporsi operasi caesar di Amerika pada tahun 2013 sebesar 32,7% dari seluruh persalinan yang tercatat. Di Indonesia berdasarkan hasil Riskesdas 2013 menunjukkan angka kelahiran melalui operasi caesar adalah 19,9%. Salah satu tumbuhan penting yang digunakan dalam aromaterapi adalah bunga mawar. Aroma bunga mawar efektif pada sistem saraf pusat, kandungan sytrinol dan 2-phenyl ethyl alcohol, pada bunga mawar dikenal sebagai zat anti ansietas. Menggunakan minyak mawar mengurangi kecemasan hingga 71% dalam persalinan dan hanya 14% dari mereka yang membutuhkan anestesi lokal.

Tujuan: Mengetahui pengaruh pemberian aromaterapi mawar terhadap nyeri persalinan fase aktif

Metode penelitian: Jenis penelitian kuantitatif, desain pre-experimental dengan pendekatan Two Group Pre-test – Post-test Design. Populasi dan sampel dalam penelitian ini adalah seluruh ibu bersalin fase aktif di wilayah kerja Puskesmas Branti Raya Natar yang berjumlah 42 orang yang terbagi dalam 2 kelompok, 21 orang luar dan 21 orang dengan teknik pengambilan sampel acidental. Intervensi penelitian memberikan 4 tetes aromaterapi mawar ke dalam 10 cc air melalui diffuser ultrasonik pada ibu bersalin. Alat ukur penelitian ini menggunakan Skala NRS. Analisis univariat dan bivariat menggunakan uji Man Whitney. Penelitian ini dilakukan pada Juli 2022.

Hasil: Rata-rata hasil nyeri persalinan fase I aktif sebelum pemberian aromaterapi mawar rata-rata 8,14 nyeri yang berarti responden mengalami nyeri berat terkontrol. Sedangkan pada kelompok kontrol rata-rata nyeri sebesar 8,00 yang berarti responden mengalami nyeri berat terkontrol. Setelah diberikan aromaterapi dengan bunga mawar rata-rata nyeri sebesar 2,05 yang berarti responden mengalami nyeri ringan. Sedangkan pada kelompok kontrol rata-rata nyeri adalah 4,05 yang berarti responden mengalami nyeri sedang. P-value = 0,000 < 0,05 yang artinya ada pengaruh aromaterapi mawar terhadap nyeri persalinan Kala I Fase Aktif

kesimpulantambahkan

Saran : Dapat dijadikan syarat bagi klien untuk mengetahui cara mengalihkan nyeri, nyeri dapat dihilangkan tanpa harus menggunakan obat secara medis (farmakologi) nyeri dapat dikurangi dengan beberapa macam terapi komplementer seperti aromaterapi inhalasi mawar

Kata Kunci : Nyeri Persalinan, Aromaterapi Mawar, Ketika 1 Fase Aktif

### ABSTRACT

Background: Kala I is a stage that takes place from the occurrence of regular uterine contractions until complete cervical dilatation. Uterine contractions in labor cause anxiety and result in labor pain is very scary for maternity mothers. In America, from the *National Vital Statistics Reports* conducted by the *Centers for Disease Control and Prevention* (CDC) the proportion of cesarean section in America in 2013 was 32.7% of all recorded deliveries. In Indonesia, based on the results of Riskesdas 2013, it shows that the birth of cesarean section is 19.9%. One of the essential herbs used in aromatherapy is roses. The aroma of roses is effective on the central nervous system, the content of sytrinol and 2-phenyl ethyl alcohol, in roses is known as an anti-anxiety agent. Using rose oil reduced anxiety by 71% in labor and only 14% of those who needed local anesthesia.

Objective: Ditahu the effect of giving rose aromatherapy on labor pain during the Active Phase

Research methods: Types of quantitative research, *pre-experimental* design with a *Two Group Pre-test approach – Post-test Design*. The population and sample in this study were all maternity mother durings the active

phase in the branti raya natar health center working area, which was 42 people divided into 2 groups, 21 interventions and 21 controls using a convenience sampling technique. The research intervention provided 4 drops of rose aromatherapy into 10 cc of water via an ultrasonic diffuser in maternity mothers. The research measuring instrument uses the NRS Scale. Univariate and bivariate analysis using *Man Witney test*. This research was conducted in July 2022.

Results: Rata-average results of active phase I labor pain before the administration of rose aromatherapy averaged 8.14 pain which means that respondents experienced controlled severe pain. Meanwhile, in the control group, the average pain was 8.00, which means that respondents experienced controlled severe pain. After giving rose aromatherapy with, the average pain was 2.05 which means that respondents experienced mild pain. Meanwhile, in the control group, the average pain was 4.05, which means that respondents experienced moderate pain.  $P\text{-value} = 0.000 < 0.05$  which means that there is an influence of rose aromatherapy on labor pain Kala I Active Phase

Suggestion : For Future Researchers The results of this study can be used as a reference material for further research, conducting a comparative study with two inhalation interventions from other therapeutic aromas such as lemon and lavender, and still conducting a control group as a comparison.

Suggestion : Can be used as a requirement for clients to know how to divert pain, pain can be eliminated without having to use medication medically (pharmacology) pain can be reduced with several kinds of complementary therapies such as rose inhalation aromatherapy

Keywords : Labor Pain , Rose Aromatherapy, When 1 Phase Is Active

## INTRODUCTION

The World Health Organization (WHO) estimates that 800 women die every day from pregnancy complications and the birth process. About 99% of all maternal deaths occur in developing countries. About 80% of maternal deaths are the result of increased complications during pregnancy, childbirth and after childbirth (WHO, 2014).

Childbirth is the process of removing the results of conception (fetus and placenta) that has been enough months or can live outside the womb through the birth canal or through other means, with the help of or without help (own strength) (Manuaba, 2014). The delivery process itself occurs through four stages of childbirth, namely kala I, kala II, kala III and kala IV.

Kala I is a stage that lasts from the occurrence of regular uterine contractions until complete cervical dilatation. At the time of 1 delivery, uterine contractions cause cervical dilatation and push the fetus through the birth canal. Uterine contractions in labor cause anxiety and result in labor pain is very scary for maternity mothers. Relaxation is needed to treat the pain of the 1st time feeling felt by the maternity mother (Cunningham, 2011).

Childbirth during I is said to extend when it has lasted more than 24 hours in primi and 18 hours in multi. when I is an elongated latent phase, the uterus tends to be in a hypertonic state, this can result in inadequate and only mild contractions (less than 15 mm Hg on the monitor screen), therefore uterine contractions become ineffective. The active phase lengthens when the quality and duration of contractions are good but suddenly weak dilatation

occurs then contractions become rare and weak and dilatation can stop. If this occurs and is supported by hypertonic contractions then it can result in membrane rupture (Pillitteri, 2002).

The causes of kala I extend psychologically, namely: fear, anxiety, solitude, stress or excessive anger can cause the formation of catecholamines (stress hormones) and give rise to slowing progress of labor, fatigue and despair are the result of a long predelivery (Simkin, 2015). Because when I extends is the state of his, the state of the birth canal, the state of the fetus, which is often encountered in the old I period, namely his abnormality (Ministry of Health, 1999). His inefficient or adequate will result in placental vasoconstriction, with impaired placental function will result in a reduced supply of  $O_2$  to the fetus, as well as the development and growth of the fetus in the uterus is abnormal, subsequently can experience fetal distress, then the well-being of the fetus will be disturbed (Manuaba, 2014). According to David (2007) due to the lengthening of the I in the fetus there will be trauma, hypoxic damage, asphyxia and an increase in mortality and perinatal morbidity. In the mother, it results in decreased vigor, fatigue, infection and the risk of uterine rupture.

The World Health Organization (WHO) in 1985 once proposed a percentage standard that applies to developing and developed countries related to the average *sectio caesarea*, which ranges from 5-15% per 1000 live births (Sumelung, 2014). However, the current phenomenon based on the WHO report from data obtained in May 2012, the rate of cesarean section per 1000 live births in almost all European countries has increased, both developing

and developed countries. The increase that occurred in developing countries in Europe up to 7.88% was found in Azerbaijan, Georgia, Serbia, Uzbekistan and Tajikistan, while developed countries increased by about 2.36% such as in Finland and Canada (Katikireddi, et al 2013). In America, from the *National Vital Statistics Reports* conducted by the *Centers for Disease Control and Prevention* (CDC) the proportion of cesarean section in America in 2013 was 32.7% of all recorded deliveries. In Indonesia, based on the results of Riskesdas 2013, it shows that cesarean section births are 19.9% (Martin, et al 2015).

In Indonesia, the incidence of sectio caesarea also continues to increase both in teaching hospitals and in private hospitals. Based on research conducted by Basalamah and Galuardi in 2012, 64 hospitals in Jakarta recorded 17,665 births, from the birth rate as many as 35.7-55.3% gave birth with sectio caesarea. Meanwhile, other data from Cipto Mangunkusumo Hospital Jakarta stated that from 404 deliveries per month, 30% of deliveries were found with sectio caesarea. And of the sectio caesarea deliveries about 13.9% were requests for sectio caesarea performed without medical considerations (Kasdu, 2013).

According to a WHO report that was published in 2014, the Maternal Mortality Rate (MMR) in the world reached 289,000 people. Where divided into several countries, including the United States reaching 9300 inhabitants, North Africa 179,000 inhabitants and Southeast Asia 16,000 inhabitants. For MMR in Southeast Asian countries including Indonesia reaching 214 per 100,000 live births, the Philippines 170 per 100,000 live births, Vietnam 160 per 100,000 live births, Thailand 44 per 100,000 live births, Brunei 60 per 100,000 live births, and Malaysia 39 per 100,000 live births (WHO, 2014).

Based on the 2012 Indonesian Demographic and Health Survey (SDKI), the maternal mortality rate (related to pregnancy, childbirth, and puerperium) is 359 per 100,000 live births. This kamatian number is still quite high, especially when compared to neighboring countries (SDKI, 2012).

Pain is an unpleasant emotional and sensory experience that arises from actual or potential tissue damage or indicates the presence of damage. There are various non-pharmacological and pharmacological methods that can be used to help mothers cope with labor pains. The method chosen depends on the situation, the availability and choice of the mother and her childbirth helper (Maryunani, 2010).

Pain in childbirth is uterine contraction pain that can result in increased activity of the sympathetic nervous system, changes in blood pressure, heart rate, breathing with skin color and if not treated immediately it will increase worry, tension, fear and stress (Maryunani, 2010).

The appearance of pain is closely related to receptors and the presence of stimuli. The pain receptor in question is the nociceptor, which is a very free nerve endings that have or even myelin that is scattered on the skin and mucosa, specifically in the visceral organs, joints, arterial walls, liver and gallbladder. Pain receptors can provide prescriptions due to stimulation or stimulation. The stimulation can be in the form of chemical substances such as histamine, brakidini, prostaglandins, and various acids that are released if there is other damage can be thermal, electrical or mechanical (Maryunani, 2010).

Pain seems to be a necessity that accompanies childbirth. Pain in the first contractions is a sign in the mother that she is about to give birth. If the mother does not feel all, then it is likely that the baby is in the wrong place. The increase in pain, little by little, signals the extent to which labor is in stages. How to Overcome Non-Pharmacological Pain Treatments include looking for ways to be comfortable, don't stand still, massage, take a deep breath, use water and Relaxation (Nolan, 2010).

One of the essential herbs used in aromatherapy is roses. The aroma of roses is effective on the central nervous system. Two ingredients of rose aromatherapy, sytrinol and 2-phenyl ethyl alcohol, in roses are known as anti-anxiety agents. Using rose oil reduced anxiety by 71% in labor and only 14% of those who needed local anesthesia (Kheirkhah, et al, 2014).

## RESEARCH METHODS

Type of quantitative research, *pre-experimental* design with *Two Group Pre-test approach – Post-test Design*. The population and samples in this study were all maternity mothers during the active phase I in the Branti Raya Natar Health Center Working Area, which was 42 people divided into 2 groups, 21 interventions and 21 controls, *accidental sampling* techniques. The research intervention provided 4 drops of rose aromatherapy into 10 cc of water via an ultrasonic diffuser in maternity mothers. The research measuring instrument uses the NRS Scale. Univariate and bivariate analysis using *Man Witney test*. This research was conducted in July 2022.

## RESULT

## Characteristics of Respondents

**Table 1**  
**Characteristics of Respondents in the Working Area**

Characteristic	Intervention		Mean		p-value
	f	P (%)	Pretests	Postes	
Age					
Age at Risk < 20 and >35	1	4,8	7,85	3,08	0,000
Age Not at Risk 20-35	20	95,2	7,00	2,00	
Gestational Age					
38 Weeks	5	23,8	8,17	2,83	0,000
39 Weeks	9	42,9	7,14	3,00	
40 Weeks	7	33,3	8,00	3,50	
Parity					
Multipara	12	57,1	8,17	2,83	0,000
Primipara	9	42,9	7,14	3,00	
Education					
D3	1	4,8	8,00	2,50	0,079
S1	2	9,5	7,33	3,33	
Junior	5	23,8	7,43	2,71	
Sma	13	61,9	8,33	3,67	
Work					
Trade	2	9,5	8,00	4,00	0,002
Laborer	4	19,0	7,40	2,60	
Housewives	11	52,4	8,50	3,50	
Store Cashier	1	4,8	3,778	1,889	
Civil servants	3	14,3	2,882	1,647	
Self employed	-	-	2,375	0,929	
Body Mass Index					
BMI 18.6-24.9	15	71,4	2,733	1,333	0,001
BMI > 25	6	28,6	3,700	2,300	
Baby's Birth Weight					
Usual	12	57,1	7,10	1,83	0,000
Abnormal	9	42,9	6,45	2,00	

**Table 2**  
**Characteristics of Respondents in the Working Area**

Characteristic	Control		Mean		p-value
	f	P (%)	Pretests	Postes	
Age					
Age at Risk < 20 and >35	6	28,6	7,66	2,28	0,000
Age Not at Risk 20-35	15	71,4	7,12	2,11	
Gestational Age					
38 Weeks	7	33,3	8,17	2,83	0,000
39 Weeks	6	28,6	7,14	3,00	
40 Weeks	8	38,1	8,00	3,50	
Parity					
Multipara	15	71,4	6,33	2,12	0,000
Primipara	6	28,6	7,89	2,96	
Education					

D3	2	9,5	6,23	1,23	
S1	1	4,8	7,55	2,37	0,000
Junior	14	66,7	6,34	1,45	
Sma	4	19,0	6,77	3,23	
Work					
Trade	2	9,5	6,52	2,06	
Laborer	2	9,5	5,23	2,33	
Housewives	12	57,1	5,66	2,10	0,002
Store Cashier	1	4,8	5,34	1,32	
Civil servants	3	14,3	4,55	2,11	
Self employed	1	4,8	6,32	1,35	
Body Mass Index					
BMI 18.6-24.9	13	61,9	2,450	4,750	0,060
BMI > 25	8	38,1	2,800	5,000	
Baby's Birth Weight					
Usual	15	71,4	6,14	1,16	0,000
Abnormal	6	28,6	5,79	3,43	

Based on table 1 above, it is known that the highest characteristic in the most age intervention group was not at risk of 20-35 years as many as 20 respondents (95.2%) with a p-value of 0.000. The most gestational age was 39 weeks 9 respondents (42.9%) p-value 0.000. The most parity was multipara 12 respondents (57.1%) p-value 0.000. The highest education high school 13 respondents (61.9%) p-value 0.079. The most employment of housewives was 11 respondents (52.4%) p-value 0.002. The ideal body mass index of 15 respondents (71.4%) p-value is 0.000. The birth weight of a normal baby was 12 respondents (57.1%) with a p-value of 0.000.

It is known that the highest characteristic in the most age control group was not at risk of 20-35 years as many as 15 respondents (71.4%) p-value value 0.000. The most gestational age was 40 weeks gestational age 8 respondents (38.1%) p-value 0.000. The highest parity was multipara 15

respondents (71.4%) p-value 0.000. The most junior high school education was 14 respondents (66.7%) with a p-value of 0.0. The most employment of housewives was 12 respondents (57.1%). The ideal body mass index of 13 respondents (61.9%) p-value was 0.060. The birth weight of a normal baby was 15 respondents (71.4%) with a p-value of 0.000.

#### Univariate Analysis

Based on table 3 then can the average result of Active Phase I Childbirth Pain before giving rose aromatherapy in the Working Area of the Branti Raya Natar Health Center in South Lampung 2022, the average pain is 8.14 which means that respondents experienced controlled severe pain with the lowest pain score of 7 and pain highest 9. While in the control group the average pain was 8.00, which means that respondents experienced controlled severe pain with the lowest pain score of 7 and the highest pain of 9

**Table 3**  
**Average Results of Childbirth Pain During the Active Phase I Before Giving Rose Aromatherapy in the Working Area**

Variable	N	Mean	Sd	One	Min-Max
Intervention Pretests	21	8,14	0,793	0,173	7-9
Control Pretests		8,00	0,632	0,138	7-9

**Table 4**  
**Average Results of Labor Pain During the Active Phase I After Giving Rose Aromatherapy** in the Working Area of the Branti Raya Health Center Working Area

Variable	N	Mean	Sd	One	Min-Max
Postes Intervention	21	2,05	0,498	0,109	1-3
Postes Control		4,05	0,805	0,176	3-5

Based on table 4 then it can be seen the average result of childbirth pain Kala I Active Phase after giving rose aromatherapy in the Working Area of Puskesmas Branti Raya Puskesmas Branti Raya Natar Lampung Selatan Working Area202 2 with , average pain 2.05 which means that respondents experienced mild pain with the lowest pain score of 1 and highest pain 3. Meanwhile, in the control group, the average pain was 4.05, which means that respondents experienced moderate pain with the lowest pain score of 3 and the highest pain of 5..

#### Bivariate Analysis

The results of measuring labor pain during the active phase I by comparing pain after being given rose aromatherapy interventions in the intervention and control groups. The mean value of 2.05 in the intervention group means that the responden is in the mild pain category, and the *mean* value is 4.05 in the control group, which means that the responden is in the moderate pain category. The *mean rank* score was 11.43-31.57, which means that there was a significant difference in pain between the intervention and control groups.

**Table 5**  
**Effect of Rose Aromatherapy On Labor Pain During I Active Phase**

Variable	N	Mean	Sd	Mean Rank	P-Value
Postes Intervention	21	2,05	0,498	11,43-31,57	0,000
Control	21	4,05	0,805		

After conducting the statisticaltest k *t-test*, the results of *p-value* = 0.0 00<0.05 were obtained, which means that there is an influence of giving rose aromatherapy on labor pain Kala I Active Phase in the , Work Area of the Branti Raya Natar Health Center, South Lampung in 2022.

## RESEARCH DISCUSSION

### Univariate Analysis

Average Results of Childbirth Pain During the Active Phase I Before Giving Rose Aromatherapy

The results of the study obtained the average results of active phase I labor pain before giving rose aromatherapy in the Working Area of the Branti Raya Natar Health Center in South Lampung in 2022, an average pain of 8.14 which means that respondents experienced controlled severe pain with the lowest pain score of 7 and the highest pain 9. While in the control group the average pain was 8.00, which means that respondents experienced controlled severe pain with the lowest pain score of 7 and the highest pain of 9.

In line with the opinion expressed by the *International Associationfor study ofpain* (IASP; Maryunani, 2010), Pain as an unpleasant sensory or emotional experience, related to the presence or

potential presence of tissue lesions. Pain can be further explained as a complex, individual, and multi-factor phenomenon, which is influenced by several factors, namely physiological, biological, sociocultural and economic.

In line with the research conducted by Dinda (2017) on the difference in Pain Intensity Techniques for Giving Warm Water Compresses And Aroma Therapy Roses In Maternity Mothers When I Active Phase . The highest pain intensity before being given rose therapy aroma at BPM Patmi Hartati, Kediri Regency was the 8th pain scale and the lowest pain scale 4. The highest pain intensity after being given rose therapy aroma at BPM Patmi Hartati, Kediri Regency, decreased to a pain scale of 7 and the lowest pain scale of 3.

According to researchers, labor pain is a physiological thing that occurs in every delivery.

In accordance with the opinion of Zakiyah (2015) which states that pain management can be pharmacological and non-pharmacological, and one of them is distraction or transfer of response. In the group that was given lemon inhalation intervention, experienced the lowest pain score of 4 and the highest pain of 8 and an average of 5.72 which

means that the average respondent experienced pain with a moderate pain category

#### Average Results of Labor Pain During the Active Phase I After Giving Rose Aromatherapy

The results of the study obtained the average results of childbirth pain Kala I Active Phase after giving rose aromatherapy in the Working Area of the Branti Raya Health Center Working Area of the Branti Raya Health Center Natar Lampung Selatan in 2022 with , an average pain of 2.05 which means that respondents experienced mild pain with the lowest pain score of 1 and pain highest 3. Meanwhile, in the control group, the average pain was 4.05, which means that respondents experienced moderate pain with the lowest pain score of 3 and the highest pain of 5.

In line with the opinion expressed by Mc. Caffery, 1979; Zakiyah, 2015) Pain is an elusive, complex and mystery phenomenon that affects a person and his existence is known when someone experiences it. Pain is a very unpleasant experience that a person feels towards a certain stimulus and cannot be shared with others. pain is an unpleasant sensory and emotional experience resulting from real and potential tissue damage (IAFSP, 2010; Zakiyah, 2015).

In line with research conducted by Sholehah (2020) The Effect of Rose Essential Oil Aromatherapy on the Intensity of Labor Pain During the 1st Active Phase at the Pangalengan Health Center, Bandung Regency. The average labor pain scale based on the Numeric Rating Scale (NRS) before the intervention was 5.43 with a standard deviation of 1.516. After the intervention of aromatherapy administration of rose essential oil, the average labor pain scale was 4.50 with a standard deviation of 1.85. It can be seen that the average value of the difference between before and after the intervention is 0.93 with a standard deviation of 0.33.

In this study, it had pain with a controlled severe pain category and after being given the intervention decreased to mild pain. This is due to the fact that labor pains are physiological. Childbirth during 1 active phase, the mother will experience recurrent hiss which causes uterine contractions to increase then stimulate pain to the pain receptors that send signals to the spinal cord, pain signals from the spinal cord will be sent to the hypothalamus which conveys sensory information on the body so that the mother will feel pain.

After being given rose aromatherapy, the pain decreases to mild, this is due to the content of rose essential oil which can stimulate the hypothalamus nerve to secrete endorphine substances so that

respondents can feel relaxed, and result in a decrease in pain.

In the opinion of researchers, aromatherapy affects the limbic system in the brain that affects emotions, mood and memory, to produce neurohormonesin endorphins and encephalins that serve to relieve pain and serotonin that serves to relieve stress and anxiety when facing childbirth.

#### Bivariate Analysis

Effect of Rose Aromatherapy On Labor Pain During I Active Phase in the Working Area of Puskesmas Branti Raya Natar Lampung Selatan 2022

The results of measuring labor pain during the active phase I by comparing pain before and after rose aromatherapy were given, an average pain of 8.14 which means that respondents experienced controlled severe pain with the lowest pain score of 7 and the highest pain of 9. Furthermore, in the second measurement, the average pain was 3.62, which means that respondents experienced mild pain with the lowest pain score of 2 and the highest pain of 6.

After conducting the statistical test *k t-test*, a *p-value* = 0.0 , <0.05 was obtained, which means that there is an influence of rose aromatherapy on labor pain Kala I Active Phase in the Working Area of the Branti Raya Natar Health Center, South Lampung in 202 2

In line with the opinions expressed by Kheirkhah et al. (2014) One of the essential herbs used in aromatherapy is roses. The aroma of roses is effective on the central nervous system. Two ingredients of rose aromatherapy, sytrinol and 2-phenyl ethyl alcohol, in roses are known as anti-anxiety agents. Using rose oil reduced anxiety by 71% in labor and only 14% of those who needed local anesthesia.

In line with research conducted by Sholehah (2020) The Effect of Rose Essential Oil Aromatherapy on the Intensity of Labor Pain During the 1st Active Phase at the Pangalengan Health Center, Bandung Regency. The results of the statistical test obtained a value of  $P = 0.0001$  with a significant level of  $p < 0.05$  value, so it can be concluded that based on the Numeric Rating Scale (NRS) pain scale instrument, there is an effect of aromatherapy of rose essential oil on reducing the intensity of labor pain during the active phase I.

In this study, labor pain was obtained when viewed from the highest characteristics in the intervention group the most age was not at risk of 20-35 years as many as 20 respondents (95.2%) with a *p-value* of 0.000. The most gestational age was 39 weeks 9 respondents (42.9%) *p-value* 0.000. The most parity was multipara 12 respondents (57.1%) *p-*

value 0.000. The most employment of housewives was 11 respondents (52.4%) p-value 0.002. The ideal body mass index of 15 respondents (71.4%) p-value is 0.000. The birth weight of a normal baby was 12 respondents (57.1%) with a p-value of 0.000.

The highest characteristic in the most age control group was not at risk of 20-35 years as many as 15 respondents (71.4%) p-value value 0.000. The most gestational age was 40 weeks gestational age 8 respondents (38.1%) p-value 0.000. The highest parity was multipara 15 respondents (71.4%) p-value 0.000. The most junior high school education was 14 respondents (66.7%) with a p-value of 0.000. The most employment of housewives was 12 respondents (57.1%). The birth weight of a normal baby was 15 respondents (71.4%) with a p-value of 0.000.

Other factors that can affect the intensity of labor pain are age and parity factors. Younger mothers have more intense pain sensory than older mothers. Young age tends to be associated with a psychological condition that is still unstable which triggers anxiety so that the pain felt is stronger. Age is also used as a factor in determining tolerance to pain. In primiparous maternal parity, the intensity of uterine contractions is stronger than in multipara mothers and multipara mothers who have previous labor experiences will be easier to adapt to pain compared to mothers who have never had experience in this case..

Although in this study there was no relationship between parity and labor pain, the intensity of labor pain, one of which was influenced by the history of childbirth. A mother who has experienced childbirth will understand how the pain will be felt during childbirth. Meanwhile, mothers who have never given birth do not know how the pain will be felt for the first time in the delivery process, especially in primipara. The cervix in primiparous requires more energy to stretch it, thus causing greater intensity of contractions during the I time of labor. Research states that most multipara experience moderate levels of pain, while in primiparous they tend to experience severe pain levels. However, in this study, respondents experienced more severe pain in multipara, this is because the number of multiparas in this study was more than in primipara.

According to researchers acute pain in childbirth when 1 is active can be controlled with nonpharmacology techniques, aromatherapy is one of the nonpharmacological methods that can reduce pain in childbirth during 1 active phase, one of the techniques that can be applied is lemon inhalation aromatherapy to reduce the intensity of client pain in

childbirth during 1 active phase, this technique is very easy and effective to reduce the intensity of pain in clients during the active phase because of the aroma rose therapy.

Rose essential oil contains several components with varying concentrations that can stimulate the central nervous system especially the locus cereleus to secrete noradrenaline which is a stimulant so that it can affect a person's cognitive abilities. Other literature also reports that the impact of rose essential oil can stimulate and control sympathetic work in the central nervous system so that it can affect concentration and memory. In other studies it was also mentioned that rose aromatherapy has the potential to affect the limbic system especially the amygdala.

Aromatherapy according to Purwandari, Rahmalia, & Sabrian (2014) has a mechanism of action on the human body that takes place through two systems, namely the body circulation and the olfactory system. Psychic conditions can be influenced by fragrances. In accordance with Balkam's theory (2015) Proper and soothing aromatherapy can reduce pain or pain during labor. One type of aromatherapy that is safe to use for pregnancy and childbirth is rose aromatherapy. Roses are anti-depressant so they can calm the soul. Aromatherapy of roses inhaled will influence the emotional reaction to pain through manipulation of the limbic system which is set to produce a feeling of relaxation, pleasure and calm adding that relaxation has shown a change in the client's perception of pain.

In this study, there was 1 respondent who matched a very good decrease in pain from a score of pretest 9 and postes 2 with a difference of 7 decreases, a 24-year-old mother, and a housewife. The age of 20-35 years is a healthy age to get pregnant and give birth. Age determines a mother's health, mothers are said to be at high risk if pregnant women are under 20 years old and over 35 years old. Furthermore, in addition to the age of the mother who is still in the prime category during childbirth, the mother's work is also a cause of labor pain. Mothers who give birth to housewives' work do more physical activity than mothers who don't work. Good physical activity will improve body fitness, mopping in a squatting position or washing clothes in a sitting position, will help the mother relax the pelvic area, thus helping the dilatation of the mother's pelvis.

## CONCLUSION

The results of the study obtained the average results of active phase I labor pain before giving rose aromatherapy with an average pain of 8.14, which means that respondents experienced controlled



severe pain. Meanwhile, in the control group, the average pain was 8.00, which means that respondents experienced controlled severe pain. Active Phase I labor pain after rose aromatherapy administration with, an average pain of 2.05 which means that respondents experienced mild pain. Meanwhile, in the control group, the average pain was 4.05, which means that respondents experienced moderate pain.  $P\text{-value} = 0.0, <0.05$  which means that there is an influence of rose aromatherapy on labor pain Kala I Active Phase in the Working Area of the Branti Raya Natar Health Center in South Lampung 2022.

### SUGGESTION

For Science It is hoped that the results of this research can provide insight as well as knowledge for the development of obstetrics and as reference material in subsequent research.

For Families and Families The results of this research can be used as a client input in order to know how to divert pain, through complementary therapies such as rose inhalation aromatherapy

For Future Researchers The results of this study can be used as a reference material for further research, conducting a comparative study with two inhalation interventions from other therapeutic aromas such as lemon and lavender, and still conducting a control group as a comparison.

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