



THE EFFECT OF COMBINATION OF PERINEUM MASSAGE WITH LAVENDER AROMATHERAPY ON THE DEGREE OF PERINEUM RAIN AND ANXIETY IN PREGNANT MOTHERS 34 WEEKS IN MANDIRI DYAH'S SELF PRACTICE, KALASAN SLEMAN

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ABSTRACT

Backgrounds: The prevalence of pregnant women who experience perineal ruptures in Indonesia is still high, age range is 25-30 there are 24% cases. This causes anxiety in pregnant women who will give birth. Lavender contains camphor, terpinen-4-ol, linalool, linalyl acetate, beta-ocimene and 1,8-cineole which affect the parasympathetic system so that it has the potential to reduce anxiety. **Objectives:** To determine the effect of the combination of perineal massage with lavender aromatherapy on the level of perineal rupture and anxiety levels in third-pregnant period women at PMB Dyah in 2021. **Methods:** In this quasi-experimental research, pre-post with control group design is implemented. Sampling using a saturation sampling technique. PRAQ-R2 is used for research instrument. Data analysis used paired sample t-test, Mann u-Whitney test, Wilcoxon signed rank test, and independent t-test. **Results:** There was a significant difference in the degree of perineal rupture in the experimental group and the control group with p-value = 0.000. There was no significant difference in decreasing anxiety in the experimental group and the control group with a p-value 0.176 (fear of giving birth), p-value 0.293 (fear of giving birth to physically/mentally disabled children) p-value 0.070 (worry about appearances). **Conclusion:** The combination of perineal massage with lavender aromatherapy is not significantly reducing the anxiety of pregnant women during the third trimester at PMB Dyah. The combination of perineal massage with lavender aromatherapy more reduces the degree of perineal rupture.

Keywords: Perineal Massage; Lavender Aromatherapy; Perineal rupture; Anxiety

Introduction

(Pendahuluan)

Postpartum hemorrhage can occur in the 3rd to 4th stage or during the puerperium. Some causes of postpartum hemorrhage are 4T (Tonus, Trauma, Tissue, Thrombin). The incidence rate due to trauma is 20% between tears, hematomas,

inversions and ruptures[1]. The incidence of perineal tears in the world is 50% occurs in Asia[2].

Based on the Health Profile of the Special Region of Yogyakarta, it shows that one in five maternity mothers who experience a perineal tear will die with a percentage of 21.74[3]. The perineal tear

data in the Independent Midwife Practice (PMB) in the Kalasan sub-district is 85%. The working area of PMB Dyah has the highest prevalence of 90% in 2020. This causes anxiety in pregnant women who will give birth. The anxiety felt by the mother generally revolves around the fear of bleeding, the fear of pain during childbirth and the fear of having the perineum stitched after delivery.[4].

Levels of depression and anxiety during the first trimester of pregnancy are the same as for regular anxiety. Anxiety in the second and third trimesters almost doubled in the first trimester[5]. Therefore, there are several ways to reduce anxiety as a form of midwifery care that loves mothers and children. Research by Wati Dwi Retno and Istiadah Fatmawati shows that giving lavender aromatherapy can reduce anxiety scores[6]. Aromatherapy is used to influence a person's emotions and help relieve ailments. The essential oils used in aromatherapy are efficacious to reduce stress, improve blood circulation, relieve pain, reduce swelling, get rid of toxins from the body, treat viral infections, insomnia (difficulty sleeping) and other diseases.[7].

Perineal massage with aromatherapy can reduce anxiety in pregnant women[6]. The advantages of lavender oil compared to other essential oils are its relatively very low toxic content, rarely cause allergies and one of the essential oils that can be used directly on the skin.[7]. Perineal massage is a technique of massaging the perineum during pregnancy or a few weeks before giving birth to increase hormonal changes that soften the connective tissue, so that the perineal tissue is more elastic and stretches more easily.[8]. Perineal tears can be minimized by preventive measures during pregnancy, namely by perineal massage performed on pregnant women starting at 34 weeks of pregnancy. This technique can be

done once a day for the last few weeks of pregnancy in the perineal area between the vagina and anus[9].

This study combines perineal massage and a combination of lavender aromatherapy which is different from previous studies. Previous studies have only used perineal massage or only lavender aromatherapy[7], [10]. In Meldafia's study, perineal massage was combined with Kegel exercises[11]. The purpose of this study was to determine the effect of the combination of perineal massage with lavender aromatherapy on the degree of perineal tear and anxiety levels in PMB Dyah in 2021.

Methods

(Metode Penelitian)

This research is a quasi-experimental or quasi-experimental research. The research design used a non-randomized pretest-posttest with control group design. The experimental group was given a combination of perineal massage and lavender aromatherapy, while the control group was given normal delivery care. The population in this study were all pregnant women in the third trimester from December 2021-March 2022 at PMB Dyah as many as 26 people. The sampling technique used total sampling so that the entire population was used as a sample. The variables studied were a combination of perineal massage and lavender aromatherapy, perineal tears, and levels of anxiety. This type of data uses primary data, which is taken directly from the respondents by using a questionnaire. The data analysis performed was univariate analysis to determine the frequency distribution of the variables studied, and bivariate analysis, namely the Mann U Whitney Test, to compare the experimental group and the control group.

Results and Discussion

(Hasil dan Pembahasan)

This research was conducted on 52 pregnant women respondents who were divided into 26 respondents as the experimental group and 26 respondents as the control group. In accordance with the research objectives, the data obtained by the researchers were processed and arranged as follows:

Table 1. Frequency Distribution of Respondents by Characteristics of Parity, Age Group, Education Level, and Economic Status

Characteristics	Group				% Total	p-value
	Experiment		Control			
	n	%	n	%		
Primigravida	16	61.5	15	57.7	59.6	0.588
multigravida	10	38.5	11	42.3	40.4	
Amount	26	100	26	100	100	
< 20 years	0	0	0	0	0	*
20 – 35 years	26	100	26	100	100	
>35 years old	0	0	0	0	0	
Amount	26	100	26	100	100	0.860
Base	6	23.1	4	15.4	19.2	
Intermediate	18	69.2	17	65.4	67.3	
Tall	2	7.7	5	19.2	13.5	
Amount	26	100	26	100	100	0.119
<1,770,000	9	34.6	2	7.7	21.2	
1,770,000 – 2,069,530	13	50.0	18	69.2	59.6	
>2,069,530	4	15.4	6	23.1	19.2	
Amount	26	100	26	100	100	*
<2500	0	0	0	0	0	
2,500 – 4,000	26	100	26	100	100	
>4,000	0	0	0	0	0	
Amount	26	100	26	100	100	

*data on age group and newborn weight constant

Table 1. shows that the primigravida experimental group is 61.5 percent, with the age group 20-35 years at 100 percent, has a secondary education level of 69.2 percent and the economic status of 1,770,000 – 2,069,530 is 50 percent. Meanwhile, from the 26 control group respondents, it is known that most of the primigravida are 57.7 percent, with the age group of 20-35 years being 100 percent, having a secondary education level of 65.4 percent, and the economic status of 1,770,000 – 2,069,530 of 69.2 percent. In the experimental group and the control group, the weight of babies born

to 100 percent of the respondents was included in the 2,500-4,000 gram group.

The results of the homogeneity test for the characteristics of respondents using Levene's test, obtained p-value > 0.05, which means that the experimental group and the control group have the same characteristics so that the characteristics that have been owned by the previous respondent will not affect the results of the study, so it can be concluded that the two groups it is homogeneous.

Table 2. The distribution of the mean pretest-posttest anxiety scores in the experimental group based on anxiety items.

Anxiety Variables	Category	Fear of childbirth	Fear of giving birth to physically/mentally disabled children	Appearance worries
Pretest	mean(SD)	15.11 (3.04)	14.61 (3.63)	9.76 (3.66)
	median	15.50	15.00	11.00
	Range	9-20	6-20	3-15
Posttest 1 week treatment	mean(SD)	13.69 (2.51)	13.11 (3.01)	8.69 (2.92)
	median	14.00	13.00	10.00
	Range	9-18	6-18	3-13
Latent phase postpartum posttest	Mean (SD)	9.38 (1.55)	10.8 (2.48)	6.03 (1.94)
	median	9.00	11.00	6.00
	Range	6-12	5-15	3-10

Table 2 shows the anxiety scores in the experimental group pretest, posttest 1 week after treatment and posttest during the latent phase of labor. Anxiety scores on the fear of childbirth decreased in average from 15.11 to 13.69 at 1 week after treatment and 9.38 during the latent phase of labor. The group with the combination treatment of lavender aromatherapy and perineal massage experienced a decrease in the standard deviation of the maternity anxiety items from 3.04 to 1.55 by 1.49.

Anxiety scores on the item fear of giving birth to physically/mentally disabled children decreased in average from 14.61 to 13.11 after 1 week of treatment and 10.8 during the latent phase of labor. The decrease in the standard deviation of the item fear of giving birth to a mentally

handicapped child from 3.63 to 2.48 was 1.15.

The anxiety score on the appearance concern item decreased on average from 9.76 to 8.69 after 1 week of treatment and 6.03 during the latent phase of labor. A decrease in the standard deviation of the appearance concern item from 3.66 to 1.94 at 1.72.

Table 3. Distribution of the mean pretest-posttest anxiety scores in the control group based on anxiety items.

Anxiety Variables	Category	Fear of childbirth	Fear of giving birth to physically/mentally disabled children	Appearance worries
Pretest	mean(SD)	17.00 (1.81)	18.46 (2.02)	12.84 (1.59)
	median	17.00	19.00	13.00
	Range	10-19	12-20	9-15
Latent phase postpartum posttest	Mean (SD)	13.00 (2.33)	15.73 (1.48)	9.53 (1.88)
	median	13.00	15.50	9.50
	Range	9-18	14-19	7-14

Table 3 shows the mean anxiety scores in the pretest and posttest control groups during the latent phase of labor. Anxiety scores on the fear of childbirth decreased in average from 17.00 to 13.00 during the latent phase of labor. However, the standard deviation of the fear of childbirth increased from 1.81 to 2.33 by 0.52.

The average anxiety score on the fear of giving birth to a child with physical/mental disabilities at the pretest was 18.46 to 15.73 in the latent phase of labor. The standard deviation decreased by 0.54 from 2.02 to 1.48. The average anxiety score on the appearance concern item also decreased by 3.31. However, an increase in the standard deviation of 0.29 also occurred in the appearance concern item from 1.59 to 1.88.

The results of the bivariate analysis are as follows:

Table 4. The results of the bivariate test of pretest and posttest anxiety scores of

latent parturition in the experimental group

Anxiety Score Variable	Group Experiment			p-value
	Mean (SD)	□	median Range	
1. Fear of childbirth	15.11 (3.04)	5.73	15.50 9-20	0.000*
Pretest posttest	9.38 (1.55)		9.00 6-12	
2. Fear of giving birth to physical/mental disabilities	14.61 (3.63)	3.80	15.00 6-20	0.000*
Pretest posttest	10.80 (2.48)		11.00 5-15	
3. Appearance Worries	9.76 (3.66)	3.73	11.00 3-15	0.000*
Pretest Posttest	6.03 (1.94)		6.00 3-10	

*significant p value <0.05

Table 4 shows the variable test of anxiety scores per pretest and posttest items during the latent phase of labor. The statistical test used in items 2, 3, namely the Wilcoxon sign rank test and item 1 using a paired t-test so that the p-value <0.05, which means H0 is rejected. There was a significant difference in anxiety after being given a combination of lavender aromatherapy and perineal massage.

Table 5. Bivariate test results of pretest and posttest anxiety scores of latent parturition in the control group

Anxiety Score Variable	Group Control			p-value
	Mean (SD)	□	median Range	
1. Fear of childbirth	17.00 (1.81)	4.00	17.00 10-19	0.000*
Pretest posttest	13.00 (2.33)		13.00 9-18	
2. Fear of giving birth to physical/mental disabilities	18.46 (2.02)	2.73	19.00 12-20	0.000*
Pretest posttest	15.73 (1.48)		15.50 14-19	
3. Appearance Worries	12.94 (1.59)	3.30	13.00 9-15	0.000*
Pretest Posttest	9.53 (1.88)		9.50 7-14	

*significant p-value <0.05

Table 5. shows the variable test of anxiety scores per pretest and posttest items

during the latent phase of labor in the control group. The statistical test used in item 1 is Paired T-test and item 2,3 using Wilcoxon sign rank-test so that p-value <0.05 means H0 is rejected. There is a significant difference in anxiety in the control group.

Table 6. Differences in anxiety scores per item in the experimental group and the control group

Anxiety Variables	Category	Fear of childbirth	p-value	Fear of giving birth to physically/mentally disabled children	p-value	Appearance worries	p-value
Experiment	mean (SD)	-5.73 (1.97)		-3.80 (2.66)		-3.73 (3.24)	
	median	-5.50		-3.50		-3.50	
	Range	-10- (-2)	0.176	-10- 0	0.293	-11 - 0	0.912
Control	Mean (SD)	-4.00 (2.57)	*	-2.73 (2.30)	**	-3.30 (2.20)	**
	median	-4.00		-2.50		-4.00	
	Range	-9- 0		-6 - 3		-6 - 1	

*Test independent sample t-test, significant p-value <0.05 ** Mann U-Whitney test, significant p-value <0.05

Table 6 shows the two-group unpaired test between the experimental group and the control group on the variable difference in anxiety scores per item in the pretest and posttest in the latent phase of parturition. The results of the independent t-test on item 1 showed a p-value > 0.05, which means that H0 is accepted. Same with item 2,3 with Mann U-Whitney test showing p-value > 0.05 which means H0 is accepted. The conclusion is that there is no difference in anxiety items 1,2,3 after being given a combination treatment of lavender aromatherapy and perineal massage compared to the control group.

The control group in this study was given treatment in the form of normal delivery care with several aspects of 5 common threads. One of them is maternal care where delivery services make the mother the center of attention. Calling the mother's name, respecting, listening, supporting according to the needs of the mother in the labor process[12]. From the

results of the study, it was found that there was a decrease in anxiety scores from before and after care, namely 4 (fear of giving birth), 2.73 (fear of giving birth defects) 3.30 (worrying about appearance). These results are significant p-value 0.000 (table 11) affect the decrease in anxiety scores in the control group given normal delivery care.

The experimental group in this study was given an intervention in the form of a combination of perineal massage and lavender aromatherapy. The massage is given with a duration of 10 minutes for 5 consecutive days in 1 week. At the time of the massage given lavender aromatherapy. This aromatherapy was not continued by the respondent at home or at birth, so the total exposure time to lavender aromatherapy was 50 minutes. In giving the intervention for 1 week and then being given an assessment of the anxiety score, the anxiety score decreased, namely 1.42 (fear of giving birth), 1.50 (fear of giving birth defects), 1.07 (worrying appearance). These results are significant in reducing anxiety scores. Coupled with the posttest results at the time of delivery, the anxiety score dropped to 5.73 (fear of giving birth), 3.80 (fear of giving birth defects), 3, 73 (appearance concerns). The results showed a significant decrease with a p-value of 0.000 from the score before the intervention to the score after the intervention.

Although in each aspect of the anxiety item, both the control group and the experimental group experienced a decrease in scores, the results were not significant if the anxiety scores of the two groups were compared and tested. This can be explained in Salsabila's research[13]where lavender aromatherapy was given to the experimental group as much as 0.2 ml of lavender oil with 2 ml of distilled water for 60 minutes. The results showed a significant effect.[13]When

compared with this study, the short time of massage and distillation of oil was not statistically different from giving normal delivery care. However, the effect of perineal massage with lavender aromatherapy affected the number of respondents who experienced perineal tears, where the experimental group had more respondents without perineal tears (30.8 percent) while in the control group there was only one person with no tears (3.8 percent).

The results of this study are in line with the results of research conducted by Meldafia[11]by giving perineal massage can reduce the incidence of perineal tears. The control group that was given normal delivery care had more tears than the experimental group who was given a combination of lavender aromatherapy and perineal massage. The decrease in the number of respondents who experienced a perineal tear between the experimental group and the control group showed that the method given to the respondent was able to reduce the incidence of tearing and significantly lower incidence of aromatherapy and lavender massage (30.8 percent) compared to the control group (96.2 percent).

It is like in Suralaga's research[14]where the experimental group of primiparous pregnant women given perineal massage was statistically proven to prevent perineal tears in normal delivery with $p\text{-value} = 0.009$. Massage on the perineum a few weeks before delivery can increase blood circulation in the perineum and increase the elasticity of the perineum.[14]The results of this study are in line with Setiati's research[7]where the decrease in anxiety in the experimental group was greater than the control group when viewed from the difference before and after the intervention was given. However, statistically the analysis of the effectiveness

of the treatment to the experimental group and the control group was not different, indicated that the $p\text{-value}$ for each anxiety item was more than 0.05, which means that the combination of lavender aromatherapy and perineal massage was not effective enough to reduce anxiety in children. third trimester pregnant women.

Research by Elly[10]by giving perineal massage the anxiety level of primigravida pregnant women in the experimental group contained 90% of respondents with low anxiety while in the control group there were 40% with low anxiety. Questionnaires were given to respondents after 6 massages with a duration of 3 minutes in the first week and 5 minutes in the second week. Similar to this study, by univariate analysis the number of decreases in anxiety scores decreased in the experimental group, but the decrease in value was not proven to be significantly different from the control group. Prasetyorini and Sukesi . Research[16]shows that giving perineal massage to the experimental group can reduce anxiety from mild anxiety levels as much as 4 to 0. While in moderate anxiety as much as 11 decreases to mild anxiety as much as 3.[16]In this study, the decrease in anxiety scores was studied univariately with the result that there was no significant difference between the experimental group and the control group. This means that the administration of a combination of lavender aromatherapy and perineal massage decreased the same as the care action in the control group.

Based on these studies, the combination of lavender aromatherapy and perineal massage can reduce the incidence of perineal tears and reduce anxiety in pregnant women. However, the combination of lavender aromatherapy and perineal

massage did not reduce anxiety more than the care in the control group.

Conclusion *(Simpulan)*

There was no significant difference in decreasing anxiety in the experimental group and the control group with p-value 0.176 (fear of giving birth), p-value 0.293 (fear of giving birth to a physically/mentally disabled child) p-value 0.912 (worry about appearance).

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