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## **EFEKTIFITAS AROMATHERAPY LAVENDER DALAM MENGURANGI EMESIS GRAVIDARUM PADA IBU HAMIL TRIMESTER I**

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### **ABSTRAK**

Ketidaknyamanan yang sering terjadi dialami ibu hamil terutama pada trimester pertama kehamilan adalah mual muntah (*Emesis Gravidarum*). Apabila emesis gravidarum terjadi terus menerus dan tidak ditangani dengan baik maka akan menimbulkan gejala mual muntah yang berat menjadi hiperemesis gravidarum yang memiliki efek buruk bagi kesehatan ibu dan janin. Emesis gravidarum selama masa kehamilan dapat dilakukan penatalaksanaan secara farmakologi maupun non farmakologi. Tindakan non farmakologis yang bisa dilakukan yaitu ibu dapat dianjurkan makan sering dalam porsi kecil, akupunktur, dan pemberian aromaterapi. Salah satu aromaterapi yang digunakan untuk mengatasi mual muntah yaitu aroma terapi lavender. Penelitian ini bertujuan untuk mengetahui bagaimanakah pengaruh aromatherapy lavender terhadap mual muntah pada ibu hamil trimester I. Jenis penelitian ini menggunakan *pre eksperiment* dengan menggunakan rancangan *one group pretest-posttest design*. Sampel dalam penelitian ini sejumlah 38 ibu hamil trimester I dengan keluhan mual muntah yang tidak menggunakan terapi farmakologi. Analisis data menggunakan uji wilcoxon didapatkan hasil nilai *p-value* =0,000 (<0,05) dapat disimpulkan bahwa *H<sub>a</sub>* diterima yang artinya ada pengaruh pemberian aromaterapi lavender dalam mengurangi *emesis gravidarum* pada ibu hamil trimester I. Saran dapat diberikan kepada ibu hamil dapat menggunakan aromaterapi lavender sebagai obat alternatif untuk mengurangi *emesis gravidarum*.

Kata Kunci : Aromaterapi, Lavender, Mual Muntah

## **THE EFFECTIVENESS OF AROMATHERAPY LAVENDER IN REDUCING EMESIS GRAVIDARUM IN FIRST TRIMESTER PREGNANT WOMEN**

### **ABSTRACT**

*The discomfort that often occurs in pregnant women, especially in the first trimester of pregnancy, is vomiting nausea (Emesis Gravidarum). If emesis gravidarum occurs continuously and is not treated properly, it will cause symptoms of severe vomiting nausea to hyperemesis gravidarum which has adverse effects on the health of the mother and fetus. Emesis gravidarum during pregnancy can be administered pharmacologically and non-pharmacologically. Non-pharmacological actions that can be done, namely mothers can be recommended to eat often in small portions, acupuncture, and aromatherapy. One of the aromatherapy used to treat vomiting nausea is lavender aroma therapy. This study aims to find out how lavender aromatherapy affects vomiting nausea in pregnant women in the I trimester. The sample in this study was 38 I trimester pregnant women with complaints of vomiting nausea who did not use pharmacological therapy. Data analysis using the Wilcoxon test obtained the results of the *p-value* = 0.000 (<0.05) it can be concluded that *H<sub>a</sub>* is accepted, which means that there is an influence of lavender aromatherapy in reducing emesis gravidarum in pregnant women in the I trimester. Advice can be given to pregnant women can use lavender aromatherapy as an alternative medicine to reduce emesis gravidarum.*

*Keywords : aromatherapy, lavender, nausea and vomiting*

## INTRODUCTION

Pregnancy is an event that occurs in a woman from fertilization (conception) to the birth of a baby. This process causes physical, mental, and social changes influenced by multiple physical, psychological, environmental, sociocultural, and economic factors. A common discomfort experienced by pregnant women, especially in early pregnancy, is vomiting and nausea (gestational vomiting) (Sarwinanti and Istiqomah AN, 2019).

According to the World Health Organization (WHO), in 2015 the incidence of vomiting during pregnancy reached the number of pregnancies worldwide (12.5%). (Dhilon and Azni, 2018).

In Indonesia, pregnant women have (50-90%) cases of *emesis gravidarum*. Although vomiting and nausea (*emesis gravidarum*) are not the main causes of maternal mortality in Indonesia, the incidence of nausea and vomiting is very high, in primiparous women (60-80%) and in multiparous women (40-60%). More severe symptoms occur in her 100 out of 1000 pregnancies (Rahayu RD and Sugita, 2017).

If *emesis gravidarum* occurs continuously and is not treated appropriately, it can lead to symptoms such as severe vomiting, nausea, *hyperemesis gravidarum*, and adversely

affect both maternal and fetal health, and this condition can slow blood circulation. Oxygen and nutrient supplies may also be reduced, leading to tissue damage that threatens maternal and fetal health (Sari, 2018).

Emesis gravidarum during pregnancy can be administered pharmacologically and non-pharmacologically. Pharmacology gives vitamin B6, *antihistamines*, *phenothiazines* and *metoclopramide*, *ondancetrone* and *corticosteroids*. Possible non-pharmacological that can be done such as frequent small meals, acupuncture, and aromatherapy (Yuliana, 2019).

Aromatherapy is a modality or alternative medicine that uses pure aromatherapy plant juices and other therapeutic aromatic compounds derived from plants in the form of volatile liquid plant materials. Aromatherapy provides a variety of effects for inhalers, such as calmness, freshness, and can even help pregnant women overcome nausea and vomiting. One of the aromatherapy used to overcome vomiting nausea is lavender aroma therapy (Rahayu RD, Sugita, 2018).

Lavender aromatherapy works by influencing the way the brain works, where olfactory nerves are excited in the presence of specific scents that are directly related to the hypothalamus.

Received messages are translated into actions in the form of the release of electrochemical compounds that induce relaxation or sedation (Setryaningsih of Rosalina, 2019).

A study by Rosalina (2018) demonstrated the effects of lavender aromatherapy in reducing vomiting in first trimester pregnant women.

According to IGA Prima AP (2013), lavender is one of the most popular scents. The main components of lavender flowers are *linalyl acetate* and *linalool* (C<sub>10</sub>H<sub>18</sub>O). *Linalool* is the main active ingredient responsible for the anti-anxiety (relaxing) effects of lavender. Results from several research journals have concluded that lavender flower essential oil can provide a relaxing effect (carminative), calming, reducing anxiety, and improving mood.

According to IGA Dewi P (2013), lavender oil has many potentials as it consists of several components. According to research, 100 grams of lavender flowers consist of several ingredients such as essential oil (1-3%), *alpha-pinene* (0.22%), *camphene* (0.06%), *betamyrcene* (5.33%), *p-cymene* (0.3%), *limonene* (1.06%), *cineol* (0.51%), *linalool* (26.12%), *borneol* (1.21%), *terpinen-4-ol* (4.64%), *linalyl acetate* (26.32%), *geranyl acetate* (2.14%), *caryophyllene* (7.55%). From the above data, we can conclude that the

main contents of lavender flowers are *linalyl acetate* and *linalool* (C<sub>10</sub>H<sub>18</sub>O).

Geller's Conflict Test and Vogel's Conflict Test are used to study the effects of each component of lavender flowers and to find out which substances have *anxiolytic* effects. *Cineole*, *terpinen-4-ol*, *alpha-pinene*, and *betamyrcene* did not show significant *anxiolytic* effects in the Geller test. *Borneol* and *camphene* showed significant *anxiolytic* effects in the Geller test, but not in the Vogel test. *Linalool*, which is also the main component of lavender, showed significant results in both tests. *Linalool* is the main active ingredient responsible for the anti-anxiety (relaxing) effects of lavender and can be said to relieve pain.

Against this background, this study aimed to determine the effect of lavender aromatherapy on *emesis gravidarum* in pregnant women during the first trimester.

## RESEARCH METHODS

This study uses quantitative research techniques. This type of study employs a pre-experimental procedure with a one-group pretest-post test design. This study used only one intervention group and no comparison group (control). The sample for this study were women in the first trimester of pregnancy who suffered from *emesis gravidarum* in

the working area of the Pegandan Health Center in Semarang City. A total of 38 respondents with no medication inclusion criteria. Respondents received lavender aromatherapy by placing 3 drops of lavender essential oil on a cotton swab and taking 3 deep breaths for approximately 5 minutes. The tools in this study used a questionnaire containing

the PUQE-24 scale checklist to measure the extent of emesis gravidarum in pregnant women during the first trimester of pregnancy.

In bivariate analysis, T-dependent tests (paired-sample t-tests) are used when they are normally distributed. If the data are unusually distributed, the Wilcoxon test is used.

## RESEARCH RESULTS

Some of the following tables are the results of studies conducted by researchers on the effects of aromatherapy lavender on vomiting in pregnant women during early pregnancy in the Pegandan Health Center area of Semarang City.

Table 1.

The Average Emesis Gravidarum Score in First Trimester Pregnant Women Before and After being given Lavender Aromatherapy Intervention in The Working Area of The Pegandan Health Center, Semarang City.

Score Emesis Gravidarum	N	Mean	Difference mean	Min	Max	SD
Before	38	8.61		5	12	1.794

Based on table 1 above, the average *emesis gravidarum* score in first trimester pregnant women before lavender aromatherapy intervention was (8.61).

Table 2. Data Normality Test Results

Emesis Gravidarum Levels	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Before	.262	38	.000	.880	38	.000
After	.310	38	.000	.800	38	.000

Based on data analysis using the Shapiro-Wilk normality test, a *p-value* of <0.05 was obtained, meaning that the data was abnormally distributed. This bivariate analysis uses the Wilcoxon Test.

Table 3.  
 The Effect of Giving Lavender Aromatherapy in Reducing Emesis Gravidarum in First Trimester Pregnant Women in The Working Area of the Pegandan Health Center, Semarang City.

Variable	Lavender Aromatherapy			
	N	Mean	SD	p-Value
<b>Emesis Level Gravidarum</b>				
Before	38	8.61	1.794	0.000
After	38	4.24	1.283	

Based on table 3 above, the results of the *p-value* =0.000 (<0.05) can be concluded that  $H_a$  is accepted, which means that there is an influence of lavender aromatherapy in reducing *emesis gravidarum* in pregnant women in the first trimester.

## DISCUSSION

It ranged from mild to moderate nausea based on the category of nausea felt by each respondent in the study. This is supported by Niebyl and Briggs (2017) theory that vomiting is influenced by psychological factors such as unwanted pregnancies, anger, guilt, fear, and anxiety, increasing the severity of vomiting. I'm here. Respondents reported feeling calmer and more comfortable after the lavender aromatherapy intervention. They also said they could already smell the cooking smells that had previously caused them to vomit. The results of this study showed that some respondents had a reduction in the level of nausea associated with vomiting from moderate to mild and mild to no vomiting after the respondents was given lavender

aromatherapy. This suggests that lavender aromatherapy may reduce the frequency of vomiting and nausea experienced by respondents.

Lavender aromatherapy has a soothing effect and can reduce anxiety and stress levels. Also, this aromatherapy can reduce the intensity of vomiting and nausea in pregnant women in the early stages of pregnancy. Psychological problems (stress) are conditions associated with nausea and vomiting that are aggravated in pregnant women. The mechanism by which inhaled lavender aromatherapy reduces anxiety and stress relies on the olfactory sense of essential active ingredients, linalool in lavender aromatherapy stimulates the parts of the brain that stimulate the effects produced by aromatherapy increase. When

aromatherapy is inhaled, volatile molecules from the oil are carried through the air to the "roof" of the nose, where soft cilia emerge from the receptor cells. It is transmitted to the limbic system through the bulb and olfactory senses. This stimulates memory and emotional responses.

The results of this study are consistent with those of Rahayu RD (2018), with *p-values* (0.000)  $<\alpha(0.05)$ , significant difference after lavender aromatherapy. Punca (2015) does the same and the *p-values* obtained from the data analysis results is 0.000, which means  $<\alpha(0.05)$ . Those result means that there is an effect of lavender aromatherapy on reducing vomiting nausea in pregnant women.

#### CONCLUSIONS AND SUGGESTIONS

There was a decrease in the average score of *Emesis Gravidarum* levels before and after lavender aromatherapy was given to pregnant women in the I trimester in the Pegandan Health Center Working Area, Semarang City in 2022. So it is concluded that there is an influence of lavender aromatherapy in reducing *Emesis Gravidarum* in pregnant women in the first trimester in the Pegandan Health Center Working Area, Semarang City in 2022. It is hoped that Puskesmas and Clinical Practices (PMB) can

provide alternative medicine education on lavender aromatherapy in reducing the level of *Emesis Gravidarum*.

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