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The Effect of Lemon Oil Aromaterapy Inhalation on Emesis Gravidarum in Trimester Pregnant Women I

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Abstract

Nausea and vomiting in pregnancy causes the mother to become weak, pale, and decrease body fluids. Lemon oil is one of the herbal oils that is considered a safe drug in pregnancy, according to a study 40% of women used lemon aromatherapy to relieve nausea and vomiting and 26.5% reported being effective for controlling nausea and vomiting symptoms. This study was to determine the effect of inhalation of lemon oil aromatherapy on emesis gravidarum in first trimester pregnant women. By using the literature study method, an analysis was carried out on the results of searching journals and articles with a review of existing theories. This study revealed that there was an effect of giving inhaled lemon aromatherapy on morning sickness in pregnant women.

Keywords: *lemon aromatherapy inhalation, nausea vomiting.*

INTRODUCTION

Pregnancy is a natural and physiological process. Every woman who has healthy reproductive organs, who has experienced menstruation, and has had sexual relations with a healthy man is likely to experience pregnancy. The gestation period starts from conception until the birth of the baby with a length of 280 days or 40 weeks which is calculated from the first day of the last menstruation. (Prawirohardjo, 2014)

Nausea and vomiting in pregnancy are generally called morning sickness, experienced by about 70-80% of pregnant women and is a phenomenon that often occurs at 5-12 weeks of gestation. Nausea and vomiting in pregnancy are usually mild and can be controlled according to individual conditions. If this condition is getting worse and cannot be overcome, it is called Hyperemesis Gravidarum, which is reported to be around 0.05% -2% of all pregnancies (Runiari, 2010).

Nausea and vomiting occur in 60-80% of primigravidas and 40-60% in multigravidas. Physiologically, nausea occurs due to increased levels of estrogen and progesterone in the blood, which affects the digestive system (Prawirohardjo, 2008). The causes of nausea and vomiting during pregnancy are usually caused by hormonal changes in the endocrine system that occur during pregnancy, mainly due to high levels of HCG (Human Chorionic Gonadotrophin) (Tiran, 2009),

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Reducing nausea and vomiting in the 1st trimester by providing therapy as needed can be done through pharmacological and non-pharmacological actions. A complementary therapy that can be used to prevent and reduce nausea and vomiting is aromatherapy. The word aromatherapy means therapy using essential oils whose extracts or chemical elements are taken intact, aromatherapy is a plant oil that is fragrant and has a high concentration and is easily evaporated. The principle of aromatherapy is the use of the smell of plants or flowers to change the state of feeling, psychology, spiritual status and influencing one's physical condition through the connection of the patient's mind and body. Sources of fragrant oils used for aromatherapy include peppermit, lavender, rose, ginger, lemon (Carstens, 2010).

Lemon essential oil (Citrus Lemon) is one of the most widely used herbal oils in pregnancy and is considered a safe remedy in pregnancy. According to one study, 40% of women have used lemon scent to relieve nausea and vomiting, and (26.5%) of them have reported it as an effective way to control nausea and vomiting.
(Safajou et al., 2020).

According to Young (2011), lemon aromatherapy oil is easy to obtain and contains limonene (66-80%), geranilasetat, nerol, linalylacetate, a pinene (o, 4-15%). Terpinene 6-14%, and myrcen. Limonene is the main component in citrus chemical compounds that can inhibit prostaglandins and reduce pain, including nausea, vomiting and linalyl acetate, which functions to normalize emotional states and imbalanced body conditions and has sedative properties (Wiryowidagdo, n.d.)

RESEARCH METHODS

The literature search method in this study was in the period 2013 to 2018, and was identified using the electronic database from PubMed, database disbursement Proquest, scanning, and article screening were carried out independently by researchers. Researchers followed the requirements in fulfilling the inclusion criteria, from 832 articles, after filtering titles, abstracts, research methods, 4 articles were used.

Table 1. Search Method

All Fields	
OR	Emesis Gravidarum
AND	*Pregnency*
OR	Aromaterapy
OR	*Trimester one*
AND	Morning sickness

RESULTS AND DISCUSSION

a. The content of lemon to reduce nausea and vomiting in pregnant women in the first trimester

In Siti's research (2019), lemon contains limonene which will inhibit the work of prostaglandins so that it can reduce pain and function to control cycooksigenase I and II, prevent prostaglandin activity and reduce pain including nausea and vomiting and the linalyl acetate content in lemon aromatherapy functions to normalize. emotional state and body condition that is not balanced and has a calming effect (Wiryowidagdo, n.d.).

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Research (Cholifah & Nuriyanah, 2019) Lemon essential oil contains 66-80% limonene, geranil acetate, nerol, linalyl acetate, β pinene 0.4-15%, α pinene 1-4%, terpinene 6-14%, and myrcen (Young, 2011). Chemical compounds such as geranil acetate, nerol, linalyl acetate, have antidepressant, antiseptic, antispasmodic, sexual arousal enhancer and mild sedative effects.(Namazi et al., 2014) Terpenene in lemon aromatherapy oil 6-14% is used as a sedative, linalyl acetate found in lemon aromatherapy is an ester compound that is useful for normalizing emotional states and imbalanced body conditions, also has properties as a sedative, tonic, especially in the nervous system (Taksikah et al, 2012).

In (Maternity et al., 2017) study, lemon contains limonene, citral, linalyl, linalool, terpineol which can stabilize the central nervous system, cause feelings of pleasure, increase appetite, improve blood circulation, and act as a sedative.

Based on the results of Vitrianingsih's (2019) study, lemon essential oil contains 66-80% limonene, geranil acetate, nerol, linalyl acetate, 0.4-15% β pinene, 1-4% α pinene, 6-14% terpinene, and myrcen. (Young, 2011). Chemical compounds such as geranil acetate, nerol, linalyl acetate, have antidepressant, antiseptic, antispasmodic, sexual arousal enhancer and mild sedative (Namazi et al., 2014).

In research (Erlinawati & Tahnia, 2018) orange peel contains limonene, myrcene, linalool, octanol, deanal, citronellal, mineral, geranial, valensen, β sential, α sinansial compounds which are useful for suppressing nausea and preventing vomiting because these compounds can have a calming effect on anyone who inhales them. .

Based on previous research, the authors concluded that the content of lemon which can reduce nausea and vomiting is limonene and linalyl acetate. This is in line with previous research, in Siti's research (2019) that lemon contains limonene which will inhibit prostaglandin action so that it can reduce pain and function to control cycooksigenase I and II, prevent prostaglandin activity and reduce pain including nausea, vomiting and linalyl acetate. in lemon aromatherapy, it functions to normalize emotional states and imbalanced body conditions and has sedative properties. And in line with theory(Wiryowidagdo, n.d.) that the content of limonene which inhibits the work of prostaglandins so as to reduce pain and reduce pain including nausea and vomiting and the content of linalyl acetate in lemon aromatherapy functions to normalize emotional states and imbalanced body conditions and has sedative properties.

b. Dose lemon to reduce nausea and vomiting in trimester I pregnant women.

Based on the research results of Rofi'ah (2019), in this study respondents were divided into 3 groups with different doses of aromatherapy. The first group was given a dose of 0.1 ml, the second group had a dose of 0.2 ml, and the third group was given a dose of 0.3 ml. Giving lemon aromatherapy is done by inhaling a tissue when experiencing nausea and vomiting for 5 minutes which has been given ± 5 drops of lemon essential oil as much as 0.1 ml / 0.2 ml / 0.3 ml mixed with 1 ml of water for 12 hour. The results of the analysis test p value = 0.0000. There was no difference in the effectiveness of lemon aromatherapy between the three groups in overcoming nausea and vomiting, but if analyzed in each group it was found that lemon aromatherapy doses of 0.2 and 0.3 were effective in overcoming emesis gravidarum.

In (Cholifah & Nuriyanah, 2019) study, the concentration of lemon aromatherapy is given by mixing 0.1 ml of lemon essential oil into 1 ml of water,

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then the mother inhales lemon aromatherapy with a distance of approximately 2 cm from the nose while breathing long for ± 5 minutes and can be repeated. if you still feel nauseous vomiting, then evaluated after 12 hours. The results of the Wilcoxon sign ranktest analysis showed a significant decrease in the rhodes index score of nausea and vomiting after pregnant women inhaled lemon aromatherapy, the results of P value = 0.0001 <α = 0.05.

In Vitrianingsih's (2019) study, the concentration of lemon aromatherapy given was 0.1 ml by means of the respondents inhaling lemon essential oil that was given when experiencing nausea and vomiting for 5 minutes with a distance of about 2 cm from the nose, after 48 hours then continued with re-inquire the degree of nausea and vomiting after the intervention. Based on the results of the paired t-test, the p-value was 0.017 <0.05, so it was concluded that there was a difference in the scores for nausea and vomiting between before and after giving lemon aromatherapy.

According to Safitri's (2018) research, respondents were given 1 ml of aromatherapy put in a small bottle then the respondent was asked to inhale the aromatherapy which was given 3 breaths and repeated 5 minutes later this activity was carried out 2 times a day, at 06:00 WIB and repeated at 18:00 WIB. There is an effect of lemon aromatherapy on the frequency of nausea (emesis gravidarum) in pregnant women (p 0.005).

According to (Faizah, 2019), aromatherapy is given 2-3 drops with a dose of 1 ml inhaled for 5 minutes for pregnant women who experience nausea and vomiting is being given when the feeling of nausea and vomiting appears. P value - 0.000 <0.05. It can be concluded that there are significant differences in respondents before and after giving aromatherapy.

Table 2. a safe dosage that can help treat nausea and vomiting

Research conducted	Dose	Result
Faizah 2018	2-3 drops (1 ml)	p0,000 <0.05
Safitri 2018	1 ml	p0.005
Rofi'ah 2019	0.2 & 0.3 ml	P0.0000
Cholifah 2018	0.1 ml	P = 0.0001 <α = 0.05.

Based on research that has been conducted by several researchers, the authors concluded that the effect of lemon aromatherapy can be consumed in 0.1-1 ml in 2 times a day with 3 suction for 5 minutes and 2-3 drops with a dose of 1 ml inhaled 3 times inhalation for 5 minutes. This is in line with previous research, namely in (Cholifah & Nuriyanah, 2019) study, the concentration of lemon aromatherapy is given by mixing 0.1 ml of lemon essential oil into 1 ml of water, then the mother inhales lemon aromatherapy with a distance of approximately 2 cm from the nose while breathing long. for ± 5 minutes and can be repeated if you still feel nauseous vomiting, then evaluated after 12 hours. This is in line with the theory (Kaviani et al, 2014), lemon aromatherapy is given by mixing 0, 1 ml of lemon essential oil into water as much as 1 ml in 2 times a day with 3 suction for 5 minutes. And in line with previous research, namely the research of Faizah (2018), giving aromatherapy is given 2-3 drops with a dose of 1 ml inhaled for 5 minutes for pregnant women who experience nausea and vomiting are being given when the feeling of nausea vomits appears. This is in line with the theory (Rachmi, 2011), giving lemon aromatherapy using 2-3 drops with a dose of 1 ml inhaled 3 times inhalation for 5 minutes for pregnant women who experience moderate nausea and vomiting when they feel like

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vomiting only, meanwhile To get a long-term effect, giving aromatherapy is still given 2-3 drops with a dose of 1 ml inhaled for 5 minutes, not only when there is a feeling of nausea and vomiting, but given it before the feeling of nausea and vomiting appears. Aromatherapy provides various effects for the inhaler, such as calmness, freshness, aromatherapy can be used as a solution to treat nausea and vomiting in first trimester pregnant women without side effects (Rahayu et al., 2018). And in line with (Laura, 2009) that lemon aromatherapy has no pharmacological side effects, is safe and can be given to pregnant women who experience nausea and vomiting.

c. The level of effect of lemon oil inhalation aromatherapy in overcoming nausea and vomiting in Trimester I pregnant women.

In a study conducted by Safitri et al (2018), the average frequency of nausea in pregnant women before being given aromatherapy was 25 times with the lowest / at least 11 times nausea and 41 times the average value was 24.67. The average frequency of nausea in pregnant women after being given aromatherapy was 7 times with the lowest / least frequency of nausea was 0 times, and the most was 11 times. The results of this study explained that the frequency of nausea after aromatherapy intervention was 17.87 times7. If seen per day, the average pregnant woman experiences nausea from 0 to 2 times a day, whereas when viewed for 7 days, the average respondent experiences nausea 7 times a week once a day.

According to the study of (Maternity et al., 2017), of 28 respondents the average score for the frequency of morning sickness before being given intervention was 15.68 in a day (SD: 5,285) (SE: 0.999). Meanwhile, the average score for the frequency of morning sickness after intervention was 7.96 in a day (SD: 5.777) (SE: 1.092), with a P value = 0.000 (<0.05). Based on the results of these statistical tests, it can be concluded that there is an effect of giving lemon aromatherapy inhalation on reducing morning sickness in pregnant women.

In (Maesaroh & Putri, 2019), study, the average frequency of nausea and vomiting in pregnant women before and after being given lemon aromatherapy inhalation was 17.12 times (SD ± 1.764) and 12.16 times (SD ± 1.908), respectively, with a P value of 0.000. It shows that there is a significant effect of lemon aromatherapy inhalation on reducing the frequency of nausea and vomiting in pregnant women. Giving lemon aromatherapy inhalation can reduce the average frequency of nausea and vomiting in pregnant women 4.86 times. The results of this study are in line with research conducted by Maternity (2016), it was found that there were differences in the frequency of nausea and vomiting in pregnant women before and after being given lemon aromatherapy intervention only for the duration of time given in this study for 6 days.

It can be concluded that the incidence of nausea and vomiting has decreased on average on day 4, with a p-value = 0.000. p-value - (0.000) <α value (0.05) which means that H0 is rejected. These results indicate that the average frequency score of nausea and vomiting of 15 respondents before and after giving lemon inhalation has a significant difference, so it can be concluded that there is an effect of lemon inhalation to reduce nausea and vomiting in pregnant women in the first trimester. conducted by Mahnaz (2014), there was a significant difference between the two

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groups in the mean scores of nausea to vomiting on the second and fourth days (P = 0.017 and P = 0.039 respectively) (Maternity et al., 2017).

In (Vitrianingsih & Khadijah, 2019) research , it is known that the nausea and vomiting scores of 20 pregnant women respondents before being given lemon aromatherapy are based on an average rhodes index of 22.1 while the nausea and vomiting scores of 20 pregnant women respondents after being given lemon are based on the average rhodes index (SD: 3,328) (Min: 13) (Max: 26). The decrease in nausea and vomiting scores can also be seen from the maximum and minimum values between before and after giving aromatherapy, based on the results of the paired t-test, the p-value is 0.017 <0.05, so it can be concluded that there is a difference in the nausea and vomiting score between before and after giving lemon aromatherapy.

According to research by (Cholifah & Nuriyanah, 2019), based on the results of the study the rhodes index score for nausea and vomiting before being given lemon aromatherapy Mean ± SD 23.33 ± 3.91, after being given lemon aromatherapy Mean ± SD 13.67 ± 4.071 cores of the rhodes index from the category of nausea to moderate to mild The results of the Wilcoxon sign rank test analysis showed a significant decrease in the rhodes index score of nausea and vomiting after pregnant women inhaled lemon aromatherapy, the results of p value = 0.0001 <α = 0.05. The results of this study were supported by research by (Safajou et al., 2020), with a value of p = 0.0001 which can reduce nausea and vomiting in pregnant women. In addition, Santi's research (2013) showed that p = 0.0001, giving aromatherapy can reduce nausea and vomiting in pregnant women.

In Siti's (2019) study, the results of this study indicate that in each group the average score of nausea and vomiting is 5.29; 6.13; and 3.71. the number of respondents with a nausea and vomiting score above the average in each group were 5 people; 7 people and 5 people from a total of 46 respondents. Based on this analysis, it can be explained that the doses 0.2 and 0.3 are quite effective in overcoming emesis gravidarum, although together the three groups showed no difference in effectiveness in overcoming emesis gravidarum. The results of this study are in line with (Setiowati & Arianti, 2019) research, which shows that there is a significant difference between the average frequency of nausea and vomiting before and after being given lemon aromatherapy inhalation to pregnant women who experience hyperemesis gravidarum with p value = 0.0000.

Based on the results of research by (Astriana, Ratna Dewi Putri, 2015) it shows that the results of measuring the frequency of nausea in pregnancy of 15 respondents before being given lemon aromatherapy inhalation are known to be 4.53 times a day on average (SD: 1,846) (SE: 0.477), while the frequency of nausea in pregnancy from 15 respondents after being given lemon aromatherapy inhalation are known to average 3.13 times a day (SD: 1.727) (SE: 0.446). Based on these statistical tests, it can be concluded that there is a significant difference in the average reduction in the frequency of nausea in pregnancy from 15 respondents before and after being given intervention with (P-value 0.000 <0.05). This is in accordance with the opinion of Puspita (2012), giving lemon aromatherapy can significantly reduce nausea and vomiting in pregnancy with a P-value of 0.0001 (p <0.

According to (Yuliana, 2020), from 30 respondents, it was found that first trimester mothers who experienced nausea and vomiting before taking lemon essential were seen using (INVR) a minimum value of 10 (moderate nausea and

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vomiting) and a maximum of 25 in the bad nausea and vomiting category and an average INVR value. amounted to 17.67 in the severe nausea and vomiting category, while of the 30 respondents, it was found that mothers who experienced nausea and vomiting after lemon essential were seen using (INVR) a minimum value of 7 (mild nausea vomiting) and a maximum of 17 in the moderate and average category of nausea and vomiting. The average INVR value was 11.53 in the category of moderate nausea and vomiting. There is an essential effect of lemon on emesis gravidarum in pregnant women in the first trimester with a p-value of 0.000 (α≤ 0,

According to (Child & Care, 2020), the average score of emesis gravidarum in pretest first trimester pregnant women in the intervention group was 10.13 and posttest was 7.38 in the moderate emesis gravidarum category. The mean score of emesis gravidarum in pregnant women in the first trimester of pretest in the control group was 9.06 and posttest was 8.81 in the moderate emesis gravidarum category. There is an effect of lemon aromatherapy on emesis gravidarum in the first trimester of pregnant women (p value 0.03 <0.05), which statistically decreases emesis gravidarum significantly.

Based on the results of (Setiowati & Arianti, 2019), the distribution of the frequency of nausea and vomiting before being given lemon aromatherapy (citrus lemon) most (70%) experienced moderate nausea and vomiting. Most of the frequency distribution after being given lemon aromatherapy (citrus lemon) (65%) experienced mild nausea and vomiting. The test used was the Wilcoxon test, which obtained a P value (Exact. Sig / 2 tailed) of 0.001 (<0.05), meaning that there was a difference in decreasing nausea and vomiting before and after being given lemon aromatherapy (citrus lemon). Therefore H0 is rejected and H1 is accepted, which means that there is an effect of lemon aromatherapy (citrus lemon) on nausea and vomiting of pregnant women in trimester I.

In (Maternity et al., 2017) in this study, the results obtained from 20 respondents of pregnant women who experienced nausea and vomiting, the average intensity of nausea and vomiting before giving aromatherapy was 5.25 (SD: 1.58) (SE: 0.35), while From 20 respondents of pregnant women who experienced nausea and vomiting after being given aromatherapy, the average intensity of nausea and vomiting was 2.60 (SD: 0.99) (SE: 0.22). The results of this study obtained p value <0.05 (0.000), so it can be concluded that there is an effect of aromatherapy on the intensity of nausea and vomiting in pregnant women, the intensity of nausea and vomiting before treatment is in the moderate category and after treatment is in the mild category.

According to (Sari et al., 2019), the measurement of the frequency of nausea and vomiting uses the prenancy unique quantification scale of emesis scale (PUQE), statistical analysis uses the paired sample T-test, independent T-test, and normalized gain (N-Gain). The SD posttest score in the intervention group was 1.19, the SD posttest score in the control group was 1.61. The results of the independent T-test obtained a p value of 0.004 <0.05, meaning that there are differences between the two groups, the results of the N-Gain test for vitamin B6 users obtained an average value of 0.59 in the moderate category, while the use of lemon aromatherapy inhalation results was obtained. the mean value was 0.71 in the high category. The conclusion is that lemon aromatherapy inhalation can reduce the frequency of emesis gravidarum better than vitamin B6.

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In (Faizah, 2019), the average intensity of nausea and vomiting before being given aromatherapy was 12.80 and after being given aromatherapy, the average value of nausea and vomiting decreased by 3.07, it can be seen that the difference in the average value between before and after is 9,733 with a standard deviation of 4.061. Obtained p value = 0.000 <0.05, it can be concluded that there are significant differences in respondents before and after giving lemon inhalation aromatherapy.

Based on the results of research by (Nuryanti et al., 2015) before being given lemon aromatherapy, the average nausea intensity was 6.56, the lowest intensity was 4 and the highest intensity was 9.After being given lemon aromatherapy, the average nausea intensity was 2.81, the lowest intensity was 1 and the highest intensity was 5. There is a difference before and after being given lemon aromatherapy to reduce nausea in first trimester pregnant women with a p value of 0.000.

According to research by (Syafri, Edi; Endrizal, 2013), the level of nausea and vomiting before being given lemon aromatherapy to pregnant women in the first trimester was mostly in the moderate category as many as 13 people (86.7%). Meanwhile, the level of nausea and vomiting after being given lemon aromatherapy to pregnant women in the first trimester was mostly in the mild category as many as 13 people (86.7%). The results of statistical calculations using the Wilxocon sign rank test obtained a p-value of 0.001 <a (0.05), meaning that there is an effect of lemon aromatherapy on nausea and vomiting in mothers.

According to (Publikasi, 2018), it is known that the score of nausea and vomiting of respondents in the lemon aromatherapy group before the intervention (pre-test) was an average of 13.81 and after the intervention (post-test) an average of 5.81. In the pre-test category of nausea and vomiting in the lemon aromatherapy group the majority were in severe nausea and vomiting as many as 7 people (43.8%) and the majority in the post-test category were mild nausea and vomiting as many as 11 people (68.8%), it can be seen that p value = 0.000 (p <0.05) means that there is an effect of lemon aromatherapy on nausea and vomiting of first trimester pregnant women.

In (Inhalasi et al., 2020) study, it was found that pregnant women with nausea and vomiting found that the respondents with the most age were the 20-35 year old 28 people (93.3%) with a mean value of 27.40 and a minimum age of 19 years and a maximum of 35 years. Most parity is in the multiparous group as many as 20 people (63.7%), respondents with high school education are 15 people (50%), 20 people do not work (63.7%) and most of their ethnic groups are Sumatran as many as 26 people (86 , 7%). Wilcoxon test results showed a comparison of the frequency of nausea and vomiting in the lemon aromatherapy inhalation intervention group before and after the intervention obtained a significant value of 0.042 (p <0.05).

Based on the results of (Velasquez-Valencia et al., 2018) study, the average intensity of nausea and vomiting before being given aromatherapy was 5.07 with a standard deviation of 1.486 and 2.80, the average intensity of nausea and vomiting after aromatherapy was given to pregnant women with a standard deviation of 1.014, the analysis was that p (0.0001) <α (0.05).

Whereas in (Sexton et al., 2018) research the frequency of nausea and vomiting in pregnant women in the first trimester before the intervention was included in the category of mild nausea and vomiting, 53% or 8 of 15 respondents and the remaining 47% or 7 respondents in the moderate nausea and vomiting category, with an average the frequency of nausea and vomiting before intervention was 3.80 with a standard

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deviation of 0.862. While the frequency of nausea and vomiting after the intervention was mostly in the category of mild nausea and vomiting, with 80% or 12 of 15 respondents and the remaining 20% or 3 of 15 respondents included in the nausea and vomiting category of 2.67 and the standard deviation was 0.900 so that the difference in the frequency of nausea and vomiting before and after intervention was 1.13. there is a difference in the frequency of nausea and vomiting in pregnant women in the first trimester after being given the intervention,

After analyzing the level of the effect of lemon oil inhalation aromatherapy in overcoming nausea and vomiting in trimester I pregnant women, I can conclude that aromatherapy can reduce the frequency of nausea in pregnancy because of its fresh smell and can help improve or maintain health, arouse enthusiasm, refresh and calm the soul. and stimulate the healing process. And the benefits of the lemon content itself contained in lemonene which inhibits the work of prostaglandins so that it can reduce pain including nausea and vomiting and the linalyl acetate content in lemon aromatherapy functions to normalize emotional states and unbalanced body conditions and has calming properties. So that there is an effect of lemon aromatherapy inhalation on reducing nausea and vomiting in pregnant women, and there is a difference in the score of nausea and vomiting between before and after giving lemon aromatherapy. This is in line with (Maternity et al., 2017) research, in which the results of 20 pregnant women who experienced nausea and vomiting had an average intensity of nausea and vomiting before giving aromatherapy was 5.25 (SD: 1.58) (SE: 0.35)), while from 20 respondents of pregnant women who experienced nausea and vomiting after being given aromatherapy, the average intensity of nausea and vomiting was 2.60 (SD: 0.99) (SE: 0.22). The results of this study obtained p value <0.05 (0.000), so it can be concluded that there is an effect of aromatherapy on the intensity of nausea and vomiting in pregnant women, the intensity of nausea and vomiting before treatment is in the moderate category and after treatment is in the mild category. This is in line with the theory according to Puspita (2012) that aromatherapy can significantly reduce nausea and vomiting in pregnancy with a p-value of 0.0001 (p <0.05) after using aromatherapy. And according to Kia (2013), the average score of emesis gravidarum decreased for four days using aromatherapy, this is in line with research conducted by Erick et al showing that 40% of women have used aromatherapy to relieve nausea and vomiting. Of these, 26.5% reported that lemon aromatherapy is an effective way to control symptoms of nausea and vomiting (Kia et al, 2014). And according to Kia (2013), the average score of emesis gravidarum decreased for four days using aromatherapy, this is in line with research conducted by Erick et al showing that 40% of women have used aromatherapy to relieve nausea and vomiting. Of these, 26.5% reported that lemon aromatherapy is an effective way to control symptoms of nausea and vomiting (Kia et al, 2014). And according to Kia (2013), the average score of emesis gravidarum decreased for four days using aromatherapy, this is in line with research conducted by Erick et al showing that 40% of women have used aromatherapy to relieve nausea and vomiting. Of these, 26.5% reported that lemon aromatherapy is an effective way to control symptoms of nausea and vomiting (Safajou et al., 2020).

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CONCLUSION

After analyzing 20 journals and linking them to theoretical purposes, it can be concluded that there is an effect of lemon aromatherapy inhalation on reducing nausea and vomiting in pregnant women. This can be seen from:

The content of lemon which is effective in reducing nausea and vomiting is limonene which inhibits the work of prostaglandins so that it can reduce pain and reduce pain including nausea and vomiting and the content of linalyl acetate in lemon aromatherapy functions to normalize emotional states and unbalanced body conditions and has sedative properties.

The dose of lemon which is effective for reducing nausea and vomiting is 0.1-1 ml. Lemon aromatherapy is given by mixing 0.1 ml of lemon essential oil into 1 ml of water in 2 times a day with 3 suction for 5 minutes. While lemon aromatherapy uses 2-3 drops with a dose of 1 ml inhaled for 5 minutes for pregnant women who experience moderate nausea and vomiting when they feel like vomiting only.

The level of influence of lemon aromatherapy to reduce nausea and vomiting is that it can be concluded that aromatherapy can reduce the frequency of nausea in pregnancy because of its fresh smell and can help improve or maintain health, arouse enthusiasm, refresh and calm the soul, and stimulate the healing process. giving aromatherapy was able to significantly reduce nausea and vomiting in pregnancy with a p-value of 0.0001 ($p < 0.05$) after using aromatherapy. So there is an effect of lemon aromatherapy inhalation on reducing nausea and vomiting in pregnant women. And there is a difference in the score of nausea and vomiting between before and after giving lemon aromatherapy.

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