



Giving Lemon Aroma Therapy to the Frequency of Emesis Gravidarum in First-Trimester Pregnant Women

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ABSTRACT

One of the discomforts experienced by pregnant women in the first trimester of pregnancy is feeling nausea and vomiting as one of the symptoms of Emesis Gravidarum. The World Health Organization (WHO) states that hyperemesis gravidarum occurs worldwide, with a prevalence of 78.5% of all pregnancies. One therapy that is safe and can be given to pregnant women who experience nausea and vomiting is lemon aromatherapy. This study aims to determine the effect of giving lemon aroma therapy on the frequency of emesis gravidarum (nausea and vomiting) in first trimester pregnant women. This study used a quasi-experimental method with a two-group pretest-posttest design. The population in this study were all first trimester pregnant women in the Kedawung Health Center Working Area, totaling 40 pregnant women. The sample used in this study was 38 respondents who were taken using purposive sampling technique. Data analysis techniques used in this study were univariate and bivariate analysis. The chi square test was used in this study in analyzing bivariate to test the hypothesis of this study. The results showed there was a significant decrease in the frequency of emesis gravidarum before and after the use of lemon aroma therapy with a p-value of 0.008. Giving aroma therapy to pregnant women can reduce the frequency of Emesis Gravidarum in the first trimester. It is recommended for pregnant women to use lemon aroma therapy in overcoming emesis gravidarum (nausea and vomiting).

Keywords: Emesis Gravidarum, Aromatherapy, Quasi Experiment, Complementary

ABSTRAK

Ketidaknyamanan yang dialami oleh ibu hamil pada trimester pertama kehamilan salah satunya adalah merasakan mual dan muntah sebagai salah satu gejala Emesis Gravidarum. World Health Organization (WHO) menyatakan bahwa hiperemesis gravidarum terjadi di seluruh dunia, dengan prevalensi mencapai 78,5% dari seluruh kehamilan. Salah satu terapi yang aman dan bisa diberikan pada ibu hamil yang mengalami mual muntah dengan memberikan aromaterapi lemon. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian aroma terapi lemon terhadap frekuensi emesis gravidarum (mual dan muntah) pada ibu hamil trimester I. Penelitian ini menggunakan metode quasi-eksperimen dengan rancangan *two-group pretest-posttest design*. Populasi pada penelitian ini adalah seluruh ibu hamil trimester I yang berada di Wilayah Kerja Puskesmas Kedawung yang berjumlah 40 ibu hamil. Sampel yang digunakan dalam penelitian ini sebanyak 38 responden yang diambil dengan menggunakan teknik *purposive sampling*. Teknik analisis data yang digunakan pada penelitian ini adalah dengan analisis univariat dan bivariat. Uji *chi square* digunakan dalam penelitian ini dalam menganalisis bivariat untuk menguji hipotesis penelitian ini. Hasil penelitian menunjukkan terdapat signifikansi penurunan frekuensi emesis gravidarum sebelum dan sesudah penggunaan aroma terapi lemon dengan nilai p-value 0,008. Pemberian aroma terapi pada ibu hamil dapat menurunkan frekuensi kejadian Emesis Gravidarum pada trisemester pertama. Disarankan bagi ibu hamil dapat menggunakan aroma terapi lemon dalam mengatasi emesis gravidarum (mual dan muntah).

Kata Kunci: Emesis Gravidarum, Aromaterapi, Quasi Eksperimen, Komplementer

INTRODUCTION

One of the complications of pregnancy that can cause discomfort is nausea and vomiting. The impact of Emesis Gravidarum is dehydration which causes decreased oxygen consumption, impaired liver function, jaundice, and bleeding in the liver parenchyma which disrupts the general function of vital organs and ultimately causes death. The World Health Organization (WHO) (2019) states that hyperemesis gravidarum occurs worldwide, with a prevalence of 78.5% of all pregnancies. Emesis Gravidarum can make pregnant women avoid some foods and pose a risk to her and her fetus. (Ramadhaniati et al., 2023).

Extreme nausea and vomiting can prevent adequate nutritional intake for the mother and fetus. Malnutrition in pregnant women can lead to suboptimal fetal growth and development, and increase the risk of premature birth or low birth weight babies (Retni & Damansyah, 2022). This condition can also have an impact on the mother's mental health. Persistent nausea and vomiting can cause stress, anxiety, and depression (Rufaridah et al., 2019). These emotional disturbances can affect the mother's relationship with the fetus and family, and reduce overall quality of life. Avoiding or managing hyperemesis gravidarum is essential to ensure maternal and fetal well-being during pregnancy. Early detection and appropriate treatment can help minimize the negative impact of this condition. Pregnant women with HG often require intensive medical care, including hospitalization for intravenous rehydration and parenteral nutrition supplementation (nutrients given through an IV). This not only burdens the healthcare system but also imposes high costs and emotional stress on the mother and her family (Damayanti et al., 2022).

Ibu hamil yang mengalami muntah dan mual selama trimester pertama kehamilan masih sering mengalaminya, dan metode untuk menghentikannya sebagian besar menggunakan terapi. Terapi untuk mual dan muntah pada kehamilan tergantung pada seberapa parah gejalanya. Baik terapi farmakologi maupun nonfarmakologi dapat digunakan (Afriyanti & Rahendza, 2020). Terapi farmakologi termasuk pemberian antiemetik, antihistamin, antikolinergik, dan kortikosteroid, tetapi ibu hamil akan lebih baik jika dapat mengatasi masalah mual mereka pada awal kehamilan dengan menggunakan terapi pelengkap nonfarmakologis. Terapi nonfarmakologis murah, sederhana, efektif, dan bebas efek samping. Pengaturan diet, dukungan emosional, akupunktur, dan aromaterapi adalah beberapa cara terapi nonfarmakologi dapat dilakukan. Aromaterapi memiliki banyak efek pada penghirupnya, seperti membuat mereka merasa lebih baik, lebih segar, dan bahkan bisa membantu ibu hamil mengatasi rasa sakitnya (Maesaroh & Putri, 2019).

Menurut Muliatul Jannah et al., (2021) salah satu terapi yang aman dan bisa diberikan pada ibu hamil yang mengalami mual muntah dengan memberikan aromaterapi lemon. Aromaterapi lemon adalah minyak esensial yang dihasilkan dari ekstrak kulit jeruk (Citrus Lemon) yang sering digunakan dalam aromaterapi. Aromaterapi lemon adalah jenis aromaterapi yang aman untuk kehamilan dan melahirkan. Aromaterapi lemon memiliki kandungan yang dapat membunuh bakteri meningokokus (*meningococcus*), bakteri tipus, memiliki efek anti jamur dan efektif untuk menetralkan bau yang tidak menyenangkan, serta menghasilkan efek anti cemas, anti depresi, anti stres, dan untuk mengangkat dan memfokuskan pikiran (Rofi'ah et al., 2019).

Minyak esensial lemon merupakan minyak herbal yang paling banyak digunakan dan dianggap sebagai obat yang aman pada kehamilan. Aromaterapi lemon terbukti memiliki efek menguntungkan pada Emesis Gravidarum. Menurut Kusuma Wardani et al., (2019) skor rata-rata Emesis Gravidarum menurun selama empat hari menggunakan aroma terapi lemon inhalasi. Hal ini juga sesuai dengan penelitian yang dilakukan oleh Erick et al dengan melakukan pengamatan penggunaan perawatan non-farmakologis pada wanita untuk menghilangkan Emesis Gravidarum. Berdasarkan hasil penelitian tersebut menunjukkan bahwa 40% wanita menggunakan aroma lemon untuk meredakan mual muntah dan lebih dari setengah dari mereka yang pernah menggunakannya mengatakan cara tersebut efektif (Harahap et al., 2022).

This study aims to determine the Administration of Aroma Lemon Therapy on the Frequency of Emesis Gravidarum (Nausea and Vomiting) in First Trimester Pregnant Women. It is hoped that this research can contribute as a scientific contribution to the development of midwifery science in providing the application of pregnancy with complementary therapies to

overcome Emesis Gravidarum in first trimester pregnant women. This research is also expected to add insight and experience in providing knowledge during pregnancy by using complementary therapy in pregnant women.

RESEARCH METHODS

This type of research uses Quasi Experiment with Two Group Pretest- Posttest design. This study was used to see the effect of lemon aromatherapy in reducing the frequency of Emesis Gravidarum in first trimester pregnant women before and after treatment. In this study, the treatment group was a group of pregnant women who were given lemon aromatherapy and the control group was a group that was not given lemon aromatherapy.

The population in this study was the total number of first trimester pregnant women in the Kedawang Health Center Working Area which amounted to 40 pregnant women. The sample in this study were first trimester pregnant women who experienced Emesis Gravidarum in the Parungponteng Health Center Working Area so the number of samples in this study taken was 38 respondents. This study used purposive sampling technique. The sample was given treatment, namely by giving lemon and lemon aromatherapy. Sampling lasted for 7 days with details of the sample totaling 38 people. The instruments used in this study were questionnaires and observation sheets to collect univariate data. Data analysis techniques used in this study were univariate and bivariate analysis. The chi square test was used in this study in analyzing bivariate to test the hypothesis of this study.

RESULTS

Table 1. Frequency of Emesis Gravidarum before the use of Lemon Aroma Therapy.

Frequency of Emesis Gravidarum	(F)	Percentage (%)
Positive	19	50
Negative	19	50
Total	38	100

Based on table 1, the incidence of Emesis Gravidarum before the use of Lemon Aroma Therapy in pregnant women in the first trimester who became research respondents was 50.0% positive for Emesis Gravidarum and 50.0% negative for not experiencing Emesis Gravidarum. The existence of the same percentage between positive and negative occurs because the research approach used is case-control

Table 2. Frequency Distributions of Emesis Gravidarum Events after the Administration of Lemon Aroma Therapy.

Frequency of Emesis Gravidarum	(F)	Percentage (%)
Positive	8	21,1
Negative	30	78,9
Total	38	100.0

Based on table 2, it is known that the incidence of Emesis Gravidarum of pregnant women in the first trimester who became research respondents was 21.1% positive had experienced Emesis Gravidarum and 78.9% negative did not experience Emesis Gravidarum.

Table 3. Chi-Square Test Results

Incidence of Emesis Gravidarum After the Use of Aroma Therapy Lemon	Before Use				Total		p-value
	Positive		Negative		n	%	
	n	%	n	%			
Positive (yes)	6	75,0	2	25,0	8	100	0,008
Negative (no)	13	43,3	17	66,7	30	100	
Total	19	50	19	50	38	100	

$$\chi^2 = 23.221 \text{ OR} = 6,2$$

Based on table 3 above, it is known that the Chi-Square value calculated = 23.221 with a p-value of 0.008. Because the p-value of $0.008 < \alpha 0.05$, it can be concluded that H_0 is rejected and H_a is accepted, so it is proven that there is a significant relationship between the incidence of Emesis Gravidarum and the incidence of Emesis Gravidarum before the use of Lemon Aroma Therapy.

Based on the table above, the OR value is 6.8. Because the OR value is $6.8 > 1.0$, it can be concluded that the occurrence of Emesis Gravidarum is a risk factor for the occurrence of Emesis Gravidarum before the use of Aroma Lemon Therapy. This means that pregnant women in the first trimester who are positive for Emesis Gravidarum have a 6.8 times risk of experiencing the occurrence of Emesis Gravidarum before the use of Aroma Lemon Therapy compared to pregnant women in the first trimester who are negative (do not have Emesis Gravidarum).

DISCUSSION

Based on the results obtained, it is known that the administration of lemon aromatherapy can reduce the level of Emesis Gravidarum in first trimester pregnant women. Aromatherapy provides a variety of effects for inhalers, such as calmness, freshness, and can even be used to help pregnant women overcome nausea. Aromatherapy can be used as a solution to overcome nausea and vomiting in first trimester pregnant women without side effects (Fitria et al., 2021). The use of plant essential oils in aromatherapy is not considered a foreign body in the body, so it does not burden the work of the body's organs. Aromatherapy is a therapeutic action using essential oils that are useful for improving physical and psychological conditions so that they become better. Each essential oil has unique pharmacological effects, such as antibacterial, antiviral, diuretic, vasodilator, sedative, and adrenal stimulating. When essential oils are inhaled, the molecules enter the nasal cavity and stimulate the limbic system in the brain. The limbic system is an area that affects emotions and memory and is directly linked to the adrenals, pituitary gland, hypothalamus, parts of the body that regulate heart rate, blood pressure, stress, memory, hormone balance, and breathing (Putri & Situmorang, 2020)

Lemon aromatherapy is one of the aromatherapy with the main content of Limonene which can reduce pain (analgesic) including nausea. The content of Linalyl Acetate found in lemon aromatherapy is an ester compound formed through the combination of organic acids and alcohol. Esters are useful for normalizing emotional states and unbalanced body conditions and have properties as sedatives and tonics, especially in the nervous system. The content of these substances can be used as a basis for health workers, especially midwives, to provide care to pregnant women who experience nausea and vomiting to use lemon aromatherapy complementary therapy to overcome the complaints experienced. This can reduce the side effects of pharmacological therapy which is still a mainstay therapy in overcoming Emesis Gravidarum (Dewi & Safitri, 2018).

Nausea and vomiting during pregnancy can be caused by changes in the endocrine system that occur during pregnancy, mainly caused by high fluctuations in hCG levels, especially because the most common period of gestational nausea or vomiting is in the first 12-16 weeks, when hCG is at its highest levels. secreted by trophoblast cells of blastocytes. hCG can be secreted in a woman's blood from around three weeks gestation (i.e. one week after fertilization), and an increase in the amount of placental tissue also increases the total hours of nausea in early pregnancy. hCG is responsible for the decrease in TSH (thyroid stimulating hormone) that many women with hyperemesis gravidarum have been shown to have increased thyroid function, with a small number having gestational thyrotoxicosis with serum hCG exceeding 200 IU/m. Various studies are in line with the results of this study, that lemon aromatherapy, especially doses of 0.2 and 0.3 are quite effective in overcoming emesis gravidarum (Rufaridah et al., 2019).

CONCLUSION

Based on the research that has been done, it can be concluded that there is a significance of giving lemon aroma therapy to the frequency of Emesis Gravidarum in first trimester pregnant women. The provision of aroma therapy in pregnant women can reduce the frequency of occurrence of Emesis Gravidarum in the first trimester I. The provision of lemon aroma therapy

can be used as an application method for the development of midwifery science in providing treatment during pregnancy with complementary therapies to overcome Emesis Gravidarum in first trimester pregnant women.

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