

The Relationship Between the Use of Peppermint Aromatherapy in Reducing Hyperemesis During Pregnancy at Poleang Timur Public Health Center, Bombana Regency, Southeast Sulawesi

Vinny Alvionita¹, Ummul Khair², Iin Ilma Andi Kaso³

¹ Prodi Pendidikan Profesi Bidan, Fakultas Ilmu Kesehatan, Universitas Borneo Tarakan, Kalimantan Utara, Indonesia

^{2,3} Prodi S1 Kebidanan, Fakultas Kesehatan, Universitas Mega Buana Palopo, Sulawesi Selatan, Indonesia

ARTICLE INFO

Article history

Received: 01 November

2024

Revised: 25 December 2024

Accepted: 31 December

2024

Keywords:

Use of Peppermint
Aromatherapy, Hyperemesis,
Pregnancy

Kata kunci:

Pemakaian Aroma Terapi
Peppermint, Hiperemesis,
Kehamilan

ABSTRACT/ ABSTRAK

ABSTRACT. Hyperemesis gravidarum (HG) is one of the most common complaints during pregnancy, affecting approximately 70-80% of all pregnant women with symptoms of morning sickness. Around 60% of pregnant women also experience vomiting. If not properly managed, persistent nausea and vomiting can develop into severe hyperemesis gravidarum. Hyperemesis gravidarum can have adverse effects on the health of both the mother and fetus, including slowing blood circulation, reducing oxygen and nutrient supply to tissues, and potentially causing tissue damage that endangers maternal and fetal health. Objective: To determine the relationship between the use of peppermint aromatherapy in reducing hyperemesis during pregnancy at Poleang Timur Public Health Center in 2024. Method: This study used an analytical survey with a cross-sectional approach. The population in this study consisted of all pregnant women experiencing hyperemesis, with a total sample of 51 respondents obtained through total sampling. Data collection was conducted using an observation sheet with a checklist. The data were processed using SPSS 20 and analyzed with the Chi-Square Test. Results: The analysis of peppermint aromatherapy usage showed a p -value of $0.007 < 0.05$, leading to the conclusion that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. Conclusion: There is a significant relationship between the use of peppermint aromatherapy and the reduction of hyperemesis during pregnancy at Poleang Timur Public Health Center in 2024.

ABSTRAK. Hiperemesis gravidarum (HG) merupakan salah satu keluhan paling umum selama kehamilan, yang mempengaruhi sekitar 70-80% dari semua wanita hamil dengan gejala mual di pagi hari. Sekitar 60% dari wanita hamil juga mengalami muntah. Jika tidak ditangani dengan baik, mual dan muntah yang terjadi terus-menerus dapat berkembang menjadi hiperemesis gravidarum yang lebih berat. Hiperemesis gravidarum dapat memberikan efek buruk bagi kesehatan ibu dan janin, termasuk memperlambat peredaran darah, mengurangi suplai oksigen dan nutrisi ke jaringan, serta berpotensi menyebabkan kerusakan jaringan yang membahayakan kesehatan ibu dan janin. Tujuan : Mengetahui hubungan pemakaian aroma terapi peppermint dalam mengurangi hiperemesis dalam kehamilan di Puskesmas Poleang Timur Tahun 2024. Metode : Jenis penelitian yang digunakan adalah penelitian survei analitik dengan menggunakan pendekatan cross sectional. Populasi dalam penelitian ini adalah seluruh ibu hamil yang mengalami hiperemesis jumlah sampel 51 responden, dengan pengambilan sampel dengan total sampling. Pengumpulan data penelitian yang digunakan dalam penelitian ini adalah Instrumen dalam penelitian ini menggunakan lembar observasi dengan menggunakan lembar cek list, data diolah dengan menggunakan SPSS 20 dan dianalisis dengan uji Chi Square Test. Hasil pada penggunaan peppermint nilai p adalah $0.007 < 0,05$ sehingga disimpulkan bahwa H_0 di tolak dan H_a diterima. Kesimpulan terdapat hubungan pemakaian aroma terapi peppermint dalam mengurangi hiperemesis dalam kehamilan di Puskesmas Poleang Timur Tahun 2024.

Corresponding Author:

Vinny Alvionita

Prodi Pendidikan Profesi Bidan, Fakultas Ilmu Kesehatan, Universitas Borneo Tarakan, Kalimantan Utara, Indonesia

Email: vinnyalwi1992@gmail.com

INTRODUCTION

Pregnancy is a condition highly anticipated by married couples as the process of bearing a developing fetus in the mother's uterus. This process lasts approximately 40 weeks or 9 months, calculated from the first day of the last menstrual period (LMP) until the baby is born. Pregnancy is a part of the female reproductive process, marking the beginning of fetal life within the mother's womb. Pregnancy is dynamic and can evolve into a high-risk condition, even though it initially appears normal (Alvionita et al., 2022). One of the pregnancy complications that can affect the nutritional status of both the fetus and the pregnant woman is hyperemesis gravidarum. However, this condition can be detected and prevented early during the first trimester of pregnancy (Rejeki et al., 2022).

Hyperemesis gravidarum (HG) is a serious condition that often affects pregnant women, characterized by prolonged nausea and vomiting. This condition not only impacts the mother's well-being but can also threaten fetal health and daily quality of life. HG occurs in approximately 0.3% to 2% of all pregnancies and often requires intensive medical care to manage the symptoms (Sunaeni, 2022).

Hyperemesis gravidarum (HG) is one of the most common complaints during pregnancy, affecting around 70-80% of pregnant women with symptoms of morning sickness. Approximately 60% of pregnant women also experience vomiting. If not properly managed, persistent nausea and vomiting can develop into more severe hyperemesis gravidarum. HG can have adverse effects on both maternal and fetal health, including slowing blood circulation, reducing oxygen and nutrient supply to tissues, and potentially causing tissue damage that jeopardizes maternal and fetal health (Hanifa Zaini S, Elwitri Silvia, 2023).

The incidence of hyperemesis occurs worldwide with varying rates, including 1-3% of all pregnancies in Indonesia, 0.3% in Sweden, 0.5% in California, 0.8% in Canada, 0.8% in China, 0.9% in Norway, 2.2% in Pakistan, 1.9% in Turkey, and 0.5%-2% in the United States. It is estimated that 50% to 80% of pregnant women experience hyperemesis. Approximately 5% of pregnant women require management for fluid replacement and correction of electrolyte imbalances (Septiana et al., 2021).

In Indonesia, 50-90% of pregnant women experience hyperemesis. While hyperemesis is not the leading cause of maternal death in Indonesia, it is a significant issue, occurring in 60-80% of primigravida women and 40-60% of multigravida women. A hundred out of 1,000 pregnancies experience more severe symptoms (Hanifa Zaini S, Elwitri Silvia, 2023).

At Poleang Timur Public Health Center, data on pregnant women shows that in 2022, out of a total of 207 pregnant women, 60 experienced hyperemesis, with 21 of them having severe hyperemesis. In 2023, the number of pregnant women decreased to 183, with 56 experiencing hyperemesis and 28 experiencing severe hyperemesis. In 2024, out of a total of 65 pregnant women, 26 experienced mild hyperemesis, 25 experienced moderate hyperemesis, and 14 experienced severe hyperemesis.

The research conducted by Hanifa Zaini S & Elwitri Silvia (2023) found that the average score before receiving peppermint aromatherapy was 3.20, and after receiving peppermint aromatherapy, it decreased to 2.13. Based on statistical tests, there was a significant effect before and after peppermint aromatherapy was administered (p-value 0.000). Peppermint aromatherapy significantly affects nausea and vomiting in first-trimester pregnant women, and it is recommended that first-trimester pregnant women apply peppermint aromatherapy as a non-pharmacological therapy alternative for managing nausea and

vomiting. A similar study by Aryasih et al. (2022) also found a significant difference before and after peppermint aromatherapy was administered, with a p-value of 0.000. This shows that peppermint aromatherapy affects the reduction of nausea and vomiting in first-trimester pregnant women in the working area of Tampaksiring I Public Health Center.

For managing these occurrences, both pharmacological and non-pharmacological therapies are needed. Pharmacological therapies may include antiemetics, antihistamines, and vitamin B6. Non-pharmacological therapies can include psychological therapy (Hanifa Zaini S, Elwitri Silvia, 2023).

Aromatherapy is a therapeutic technique that uses scents, typically through essential oils. It is important for relaxation, pain reduction, stress relief, improving coping mechanisms, and enhancing overall wellness. Aromatherapy is believed to help alleviate psychological issues and discomfort, such as anxiety, depression, pain, and others (Haniyah & Hadriani, 2021).

Peppermint (*Mentha piperita*) aromatherapy is commonly used to manage emesis gravidarum. A study on peppermint oil as a treatment for postoperative nausea showed that inhaling peppermint oil vapor significantly reduced postoperative nausea and acts as an antiemetic in gynecological surgeries. The administration of peppermint aromatherapy also showed significant effects in reducing viral activity and plaque formation, with a 99% reduction (Sunaeni, 2022).

Research at the Poleang Timur Public Health Center has become important due to the increasing cases of hyperemesis, especially severe cases, in pregnant women in recent years. Although the number of pregnant women has decreased, the number of severe hyperemesis cases continues to rise, indicating that hyperemesis remains a significant health issue in this region. Peppermint aromatherapy has been proven to significantly reduce nausea, as shown in previous research on nausea. Aromatherapy also provides benefits in relaxation, pain relief, and improved coping mechanisms, all of which are important for pregnant women experiencing hyperemesis.

Based on the above problem description, the researcher conducted a study on "The Relationship Between the Use of Peppermint Aromatherapy in Reducing Hyperemesis During Pregnancy at Poleang Timur Public Health Center in 2024.

RESEARCH METHOD

The type of research used is an analytical survey with a cross-sectional approach. The primary aim is to describe the characteristics of the population at the time of the study and to analyze the relationships between the observed variables. This study was conducted at Poleang Timur Public Health Center in Bombana Regency, Southeast Sulawesi, in September 2024. The population in this study consists of all pregnant women experiencing hyperemesis at Poleang Timur Public Health Center in 2024, totaling 51 individuals. A total sampling method was used, so the sample size for this study was 51 participants.

RESULTS

Respondent Characteristics

Table 1. Respondent Characteristics

Characteristic	Frequency (f)	Percentage (%)
Age		
20-30 years	23	45,09
31-40 years	28	54,90
Education		
Elementary School	2	3,92
Junior High School	11	21,56
Senior High School	38	74,50
Occupation		
Housewife	36	70,58
Entrepreneur	9	17,64
Private Sector Employee	6	11,76

Source: Primary Data

Table 1 shows that among the 51 respondents, 23 respondents (45.09%) are in the 20-30 age group and 28 respondents (54.90%) are in the 31-40 age group. Regarding education, 2 respondents (3.92%) have an elementary school education, 11 respondents (21.56%) have a junior high school education, and 38 respondents (74.50%) have a senior high school education. Regarding occupation, 36 respondents (70.58%) are housewives, 9 respondents (17.64%) are entrepreneurs, and 6 respondents (11.76%) are employed in the private sector.

Univariate Analysis

Table 2. Frequency Distribution of Hyperemesis in Pregnancy at Puskesmas Poleang Timur 2024

Hyperemesis	Frequency (f)	Percentage (%)
Moderate	12	23,5
Mild	39	76,5
Total	51	100%

Source: Primary Data

Table 2 shows that out of 51 respondents, 12 respondents (23.5%) experienced moderate hyperemesis, while 39 respondents (76.5%) experienced mild hyperemesis.

Table 3. Frequency Distribution of Peppermint Aromatherapy Usage at Puskesmas Poleang Timur 2024

Aromatherapy Usage	Frequency (f)	Percentage (%)
Ya	25	49,0
Tidak	26	51,0
Total	51	100%

Source: Primary Data

Table 3 shows that among 51 respondents, 25 respondents (49.0%) used aromatherapy, while 26 respondents (51.0%) did not.

Bivariate Analysis

Table 4. Relationship Between the Use of Peppermint Aromatherapy and Reduction of Hyperemesis in Pregnancy at Puskesmas Poleang Timur, 2024

Peppermint Aromatherapy		Hyperemesis				Total		<i>p-value</i>
		Moderate		Mild				
		N	%	N	%	N	%	
Yes	10	19,6	15	29,4	25	49,0	<i>P = ,007</i>	
No	2	3,9	24	47,1	26	51,0		
Total	12	23,5	39	76,5	51	100		

Source: Chi-square test results, 2024

Table 4 illustrates that out of 51 respondents, 25 respondents (49.0%) used peppermint aromatherapy, with 10 respondents (19.6%) experiencing moderate hyperemesis and 15 respondents (29.4%) experiencing mild hyperemesis. Meanwhile, among the 26 respondents (51.0%) who did not use peppermint aromatherapy, 2 respondents (3.9%) experienced moderate hyperemesis, and 24 respondents (47.1%) experienced mild hyperemesis.

Statistical analysis using the Chi-square test yielded a p-value of 0.007, which is less than the significance level of 0.05. This indicates that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, meaning there is a significant relationship between the use of peppermint aromatherapy and the reduction of hyperemesis in pregnancy at Puskesmas Poleang Timur in 2024.

DISCUSSION

The statistical test results using the chi-square test showed a p-value of 0.007, which is smaller than 0.05. Thus, it can be concluded that the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. This indicates a significant relationship between the use of peppermint aromatherapy and the reduction of hyperemesis symptoms in pregnant women at Puskesmas Poleang Timur. The use of peppermint aromatherapy is believed to provide a relaxing effect and alleviate nausea, thereby helping to reduce the severity of hyperemesis.

This finding aligns with previous research by Rusniawati et al. (2024), which stated that the administration of peppermint to first-trimester pregnant women can alleviate nausea and vomiting without the need for medication. Similarly, another study by Rifzian (2020) found that peppermint aroma effectively reduces the intensity of nausea and vomiting in first-trimester pregnant women.

However, it is important to consider why most respondents who did not use peppermint aromatherapy experienced moderate hyperemesis. One possible reason is a lack of knowledge and understanding about the benefits and proper use of aromatherapy among pregnant women. Respondents may not be aware that peppermint aromatherapy can be a safe and effective alternative treatment for relieving nausea and vomiting symptoms. Additionally, psychological factors may also play a role; pregnant women who do not feel supported or are anxious about their pregnancy condition may experience higher stress levels, which can exacerbate hyperemesis symptoms.

In addition, environmental factors and the availability of peppermint aromatherapy at the health center (Puskesmas) or at home can also influence its usage. If aromatherapy is not readily available or difficult to access, pregnant women may be less likely to use it. Therefore, efforts to increase knowledge and access to aromatherapy as a complementary therapy need to be encouraged to ensure that more pregnant women can utilize this method to alleviate hyperemesis symptoms during pregnancy.

This aligns with the theory that peppermint, with its refreshing and pleasant aroma, is suitable for stimulating and strengthening the body's internal systems. It is commonly used to treat headaches, migraines, skin issues, coughs, fatigue, bloating, itching, bad breath, and muscle and joint pain. Peppermint is known for its effectiveness in alleviating nausea and vomiting in pregnant women due to its high menthol content (50%) and methone (10-30%). Peppermint has long been recognized for its carminative and antispasmodic effects, specifically acting on the smooth muscles of the gastrointestinal and bile duct systems. Additionally, peppermint contains essential oils with pharmacological effects (Muntianah, S., Meldawati, M., & Ulfa, 2023).

These findings are consistent with research by Hanifa Zaini S. and Elwitri Silvia (2023), which revealed that the average nausea and vomiting score before using peppermint aromatherapy was 3.20, and after using it, the score decreased to 2.13. The statistical analysis indicated a significant difference before and after using peppermint aromatherapy, with a p-value of 0.000. This suggests that peppermint aromatherapy effectively reduces nausea and vomiting in first-trimester pregnant women, and it is recommended as a non-pharmacological alternative therapy.

Similarly, a study conducted by Aryasih et al. (2022) found significant differences before and after the use of peppermint aromatherapy in reducing nausea and vomiting among first-trimester pregnant women, with a p-value of 0.000. Their research concluded that peppermint aromatherapy has a positive effect in alleviating nausea and vomiting in pregnant women in the working area of UPTD Puskesmas Tampaksiring I.

CONCLUSION

Based on the results of the study and discussion, the following conclusions can be drawn: There is a significant relationship between the use of peppermint aromatherapy and the reduction of hyperemesis symptoms in pregnancy at Poleang Timur Health Center in 2024, with a p-value of $0.007 < 0.05$, indicating that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted.

The findings, which demonstrate a significant correlation between peppermint aromatherapy usage and the reduction of hyperemesis symptoms, suggest the need for further research to explore the underlying mechanisms of aromatherapy in alleviating nausea and vomiting in pregnant women. Future studies should adopt a more comprehensive research design, such as longitudinal studies or randomized controlled trials, to provide stronger evidence on the effectiveness of peppermint aromatherapy and determine the optimal dosage. Additionally, researchers should consider other influencing variables, such as psychological and environmental factors, that may affect the response to this therapy.

REFERENCES

- Alvionita, V., Manapa, E. S., Ahmad, M., Nontji, W., Riu, D. S., Usman, A. N., Manay, R. H., & Ahmad, M. (2022). Pengembangan Modul Deteksi Risiko Perdarahan Pada Kehamilan Efektif Meningkatkan Pengetahuan Ibu Hamil. *Oksitosin : Jurnal Ilmiah Kebidanan*, 6(2), 134–148. <https://doi.org/10.30651/jkm.v6i3.8600>
- Aryasih, I. G. A. P. S., Udayani, N. P. M. Y., & Sumawati, N. M. R. (2022). Pemberian Aromaterapi Peppermint Untuk Mengurangi Mual Muntah Pada Ibu Hamil Trimester I. *Jurnal Riset Kesehatan Nasional*, 6(2), 139–145. <https://doi.org/10.37294/jrkn.v6i2.367>
- Hanifa Zaini S, Elwitri Silvia, D. F. (2023). Pengaruh Pemberian Aromaterapi Peppermint terhadap Mual Muntah pada Ibu Hamil di Kota Pekanbaru. *Ensiklopedia of Journal*, 5(2), 370–375.
- Haniyah, S., & Hadriani, P. (2021). Pengaruh Pemberian Aromaterapi Lavender Terhadap Hiperemesis Gravidarum Trimester I: Literatur Review. *Jurnal Kesehatan Pena Medika*, 11(1), 75–81.
- Muntianah, S., Meldawati, M., & Ulfa, I. M. (2023). Peppermint Terhadap Mual Muntah Pada Ibu Hamil Trimester I Di Wilayah Kerja Puskesmas Salam Babaris. *Jurnal Ilmu Kedokteran Dan Kesehatan Indonesia*, 3(3), 67–8.
- Rejeki, S., Khayati, N., Fitriyani, R., Hidayati, E., Keperawatan, F., & Kesehatan, D. (2022). Faktor-Faktor Yang Mempengaruhi Hiperemesis Gravidarum Pada Ibu Hamil Trimester 1 : Literature Review. *Jurnal Keperawatan BSI*, 10(2), 226–233.
- Rifzian, M. R. D. (2020). Pemberian Aromaterapi Lemon Dan Peppermint Terhadap Penurunan Intensitas Mual Dan Muntah Pada Ibu Hamil Trimester Pertama: Literature Review. *Jurnal Bagus*, 02(01), 402–406. <http://jurnalmedikahutama.com>
- Rusniawati, I., Hidayani, H., & Darmi, S. (2024). Pengaruh Aromaterapi Peppermint Dan Konsumsi Pisang Kepok Pada Ibu Hamil Trimester 1 Terhadap Pengurangan Emesis Di PMB R Tahun 2023. *Innovative: Journal Of Social ...*, 4, 1615–1627. <http://j-innovative.org/index.php/Innovative/article/view/13103%0Ahttp://j-innovative.org/index.php/Innovative/article/download/13103/8778>
- Septiana, N., Desni Sagita, Y., Puspita, L., Sanjaya, R., Studi Kebidanaan Program Sarjana Terapan Fakultas Kesehatan Universitas Aisyah Pringsewu Jl Yani No, P. A., & Tambahrejo Kecamatan Gadingrejo Kabupaten Pringsewu Lampung, A. (2021). Kesehatan Ibu Hamil Saat Berpuasa. *Jurnal Maternitas Aisyah (JAMAN AISYAH)*, 194–202.
- Sunaeni, S. (2022). Pengaruh Pemberian Aromaterapi Peppermint Terhadap Kejadian Emesis Gravidarum. *Jurnal Kebidanan Sorong*, 2(1), 1–10. <https://doi.org/10.36741/jks.v2i1.163>