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Effectiveness of ginger drink in reducing emesis gravidarum among first-trimester pregnant women

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ABSTRACT

Introduction: Emesis gravidarum is one of the most common discomforts experienced by pregnant women during the first trimester, characterized by nausea and vomiting that may disrupt daily activities and nutritional intake. Hormonal changes, particularly increased levels of estrogen, progesterone, and human chorionic gonadotropin (hCG), play a significant role in the onset of these symptoms. Ginger is widely recognized as a natural remedy with antiemetic properties, thanks to its active compounds, including gingerol, shogaol, and essential oils, which help suppress the vomiting reflex and promote gastrointestinal comfort. This study aims to determine the effectiveness of ginger drink in reducing emesis gravidarum among pregnant women in the first trimester.

Methods: This research employed a quantitative approach with a quasi-experimental one-group pretest–posttest design. The study was conducted in the working area of BLUD UPT Puskesmas Cina, involving 25 pregnant women in their first trimester who experienced emesis gravidarum. Respondents received a ginger drink intervention, and measurements of nausea and vomiting frequency and severity were collected before and after the intervention. Data were analyzed using statistical tests to determine significant differences.

Results: The findings revealed a significant reduction in nausea and vomiting after regular consumption of a ginger drink. Statistical analysis revealed a p-value of 0.000 ($p < 0.05$), indicating a statistically significant difference between pre- and post-intervention scores. The results support the alternative hypothesis that ginger drink effectively reduces symptoms of emesis gravidarum.

Conclusion: Ginger drink is proven to be an effective, safe, and accessible non-pharmacological intervention for reducing emesis gravidarum in first-trimester pregnant women. Its use can serve as an alternative therapy before pharmacological treatment, supporting maternal comfort and well-being.

Keywords: Ginger Drink, Emesis Gravidarum, First Trimester Pregnancy, Non-Pharmacological Therapy, Nausea and Vomiting.

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INTRODUCTION

Emesis gravidarum is one of the most frequent physiological disturbances experienced by women during the first trimester of pregnancy. Characterized by persistent nausea and vomiting, this condition affects approximately 50–90% of pregnant women worldwide and can substantially impair maternal comfort, nutritional intake, and daily functioning (Abidah *et al.*, 2022). Although often considered a typical manifestation of early pregnancy, unmanaged emesis gravidarum may progress to more severe complications, including dehydration, electrolyte imbalance, decreased maternal weight, and, in extreme cases, hyperemesis gravidarum (Beyene, Ayele and Kasahun, 2024). Hormonal fluctuations, particularly elevated levels of estrogen, progesterone, and human chorionic gonadotropin (hCG), are widely recognized as the primary contributors to its onset. These hormonal changes slow gastric emptying, heighten sensitivity to odors, and activate the vomiting center in the medulla oblongata, thereby triggering frequent episodes of nausea and vomiting (Efendi *et al.*, 2025).

The first trimester is a particularly vulnerable period because the physiological and psychological adjustments to pregnancy are most pronounced. Discomfort during this stage not only affects maternal well-being but may also compromise fetal development if nutritional intake is significantly reduced (Erma Retnaningtyas *et al.*, 2024). Many pregnant women seek relief using pharmacological interventions such as vitamin B6, antihistamines, or antiemetic drugs. However, some medications carry potential side effects, and concerns about fetal safety often make pregnant women hesitant to use pharmacological options. Consequently, non-pharmacological therapy has gained increasing attention as a safer and more accessible alternative (Gao, Chen and Wang, 2025).

Among natural remedies, ginger (Zingiber officinale) has been widely used across cultures for centuries due to its antiemetic, anti-inflammatory, and digestive-enhancing properties. Ginger contains bioactive compounds, including gingerol, shogaol, and zingerone, that exert anti-nausea effects by modulating gastrointestinal motility, reducing oxidative stress, and influencing serotonin receptors involved in the vomiting reflex (Gustini and Akib, 2025). Ginger drink, specifically, has emerged as a simple and practical form of consumption for pregnant women, offering rapid absorption and a soothing effect on gastric discomfort. Several studies have demonstrated ginger's potential to alleviate nausea and vomiting, yet the evidence remains varied in terms of dosage, preparation method, and frequency of intake (Handayani, 2022).

Despite a growing body of literature, several research gaps remain. First, many existing studies employ different forms of ginger intervention, including capsules, candies, extracts, or powdered preparations, making it challenging to identify the most effective and practical medium for pregnant women in community settings. Second, variations in population characteristics, such as ethnicity, dietary patterns, and environmental factors, may influence the effectiveness of ginger, but these aspects are often underreported (Lee and Saha, 2011). Third, there is limited evidence focusing specifically on primary health care settings in rural or semi-urban Indonesian regions, where non-pharmacological interventions may be particularly valuable due to accessibility, cultural acceptance, and economic constraints (Khairiah *et al.*, 2024).

Additionally, most studies comparing pre- and post-intervention outcomes employ different measurement tools, resulting in inconsistent conclusions regarding the magnitude of improvement. Few studies thoroughly explore whether ginger drink meaningfully reduces not only the frequency but also the severity of emesis gravidarum, which is critical for clinical relevance. Moreover, while ginger is recognized as safe for most pregnant women, its application must consider contraindications such as bleeding disorders, extremely low blood pressure, or a

history of threatened abortion. Nevertheless, many existing studies do not integrate this safety perspective into their methodological design or interpretation.

The novelty of this research lies in its specific focus on evaluating the effectiveness of ginger drink as a practical, low-cost, and culturally acceptable intervention for first-trimester pregnant women in the BLUD UPT Puskesmas Cina working area. Unlike previous studies that utilized capsules or concentrated extracts, this study investigates ginger in its simplest and most locally applicable form ginger drink prepared using household methods. This approach enhances real-world relevance and provides evidence that can be directly implemented by healthcare providers, midwives, and pregnant women themselves. Furthermore, this study strengthens the literature by employing a quasi-experimental one-group pretest–posttest design with clearly defined outcome measures, enabling the detection of changes in both the frequency and severity of nausea and vomiting. It also addresses the contextual gap by assessing ginger's effectiveness in a specific Indonesian community setting, where the prevalence of emesis gravidarum remains high and where affordable, natural remedies are highly needed. By providing empirical data on how ginger drink affects emesis gravidarum in first-trimester pregnant women, this research contributes to expanding the evidence base for non-pharmacological interventions in maternal health. The insights gained may support healthcare providers in recommending safe, effective, and accessible solutions to improve maternal comfort and pregnancy outcomes. Ultimately, this study emphasizes the importance of integrating traditional medicinal knowledge with modern evidence-based practice, offering a practical alternative that aligns with cultural habits and promotes maternal well-being during early pregnancy.

RESEARCH METHODOLOGY

This study employed a quantitative research approach, utilizing a quasi-experimental one-group pretest–posttest design to investigate the effectiveness of ginger drink in reducing emesis gravidarum among first-trimester pregnant women. This design was selected because it allows direct observation of changes occurring within the same participant group before and after the intervention, providing a practical and ethically appropriate method for evaluating non-pharmacological therapy in a maternal health setting.

The research was carried out in the working area of BLUD UPT Puskesmas Cina in Bone Regency. In this region, the prevalence of emesis gravidarum remains relatively high during the early stages of pregnancy. Data collection was conducted in 2025 following institutional approval from the local health authorities and clearance from an accredited ethics committee. The study population consisted of all first-trimester pregnant women who experienced nausea and vomiting during the data collection period. From this population, 25 respondents were selected using purposive sampling based on their fulfillment of predefined clinical and eligibility criteria. Inclusion criteria required participants to be in the 0–12-week gestational period, experience mild to moderate emesis gravidarum, and demonstrate the ability and willingness to consume a ginger drink regularly. Women were excluded if they presented with hyperemesis gravidarum, had a history of gastric ulcer disease, GERD, or significant gastritis, or possessed medical conditions that contraindicate ginger consumption, including bleeding disorders, anticoagulant use, hypotension, or threatened miscarriage.

The independent variable in this study was the administration of a ginger drink, while the dependent variables consisted of the frequency and severity of emesis gravidarum. Maternal age, parity, education level, occupation, and dietary patterns were considered contextual variables during interpretation. Operational definitions were established to ensure consistency and reliability. The ginger drink intervention consisted of 1 gram of freshly crushed ginger infused in

250 ml of hot water, prepared according to a standardized protocol. Participants consumed one serving daily in the morning for a predetermined number of consecutive days. The frequency and severity of nausea and vomiting were assessed using a validated observation sheet and a standardized nausea and vomiting scoring instrument. Gestational age was confirmed through maternal health records.

Data collection proceeded through several phases. Initially, eligible respondents were identified and briefed about the study objectives, procedures, and potential risks. Written informed consent was obtained before participation. Baseline (pretest) measurements were conducted to document the initial frequency and severity of emesis gravidarum. Following the pretest, participants received a daily ginger drink prepared under standardized instructions. The research team monitored compliance, recorded any adverse reactions, and ensured that respondents refrained from using antiemetic medications unless medically required. After the intervention period concluded, posttest measurements were conducted using the same instruments employed at baseline to maintain methodological consistency and enhance the reliability of comparative analysis. The collected data underwent several processing stages, including editing for accuracy, coding for categorization, and tabulation for descriptive presentation. Statistical analyses were performed to determine the effectiveness of the intervention. Univariate analysis was used to summarize respondent characteristics and distribution patterns. Bivariate analysis, using the paired sample t-test for normally distributed data or the Wilcoxon signed-rank test for non-normally distributed data, was conducted to evaluate differences between pretest and posttest measurements. Statistical significance was determined at a p-value < 0.05.

The ethical principles of research involving human subjects were strictly adhered to. Confidentiality of participant data was protected throughout the study, and anonymity was ensured by using coded identifiers. Respondents were guaranteed the right to withdraw at any stage without consequences. The study adhered to the ethical principles of beneficence, non-maleficence, justice, and respect for autonomy. Approval was obtained from the institutional ethics review board and the management of BLUD UPT Puskesmas Cina before data collection.

RESULT

This study employed a quasi-experimental one-group pretest–posttest design to evaluate the effectiveness of a ginger drink in reducing emesis gravidarum among pregnant women in their first trimester. A total of 25 respondents were assessed before and after the intervention. The results presented below include the demographic characteristics of participants, pretest and posttest frequencies of emesis gravidarum, mean score comparisons, and statistical significance testing. These findings illustrate the measurable impact of ginger drink as a non-pharmacological therapy for nausea and vomiting in early pregnancy.

Table 1. Distribution of Respondent Characteristics (n = 25)

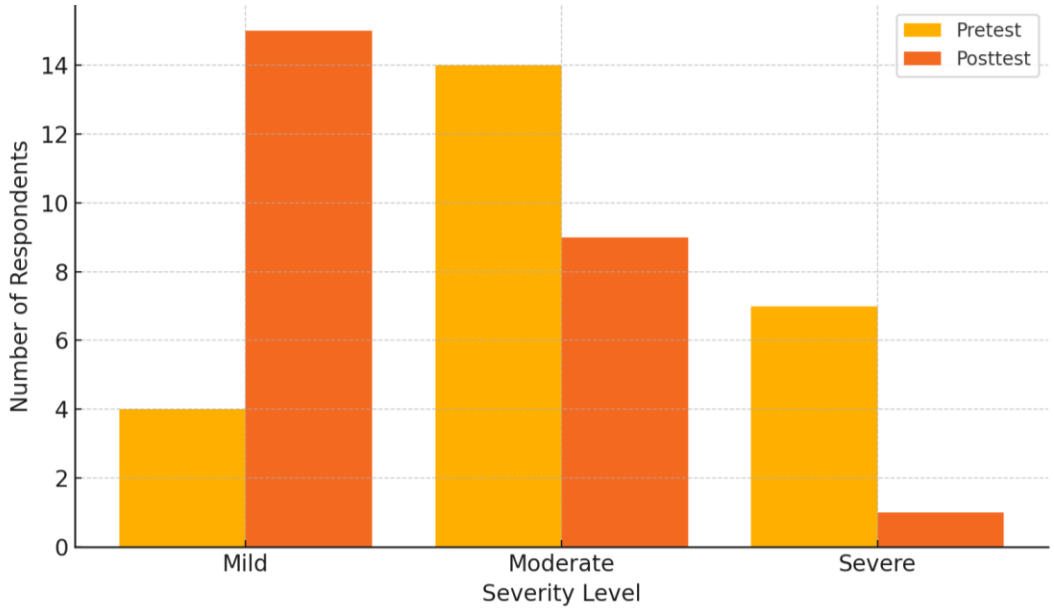
Characteristics	Category	n	%
Age	<20 years	3	12%
	20–35 years	19	76%
	>35 years	3	12%
Education	Primary	7	28%
	Secondary	12	48%
	Higher education	6	24%
Parity	Primigravida	14	56%
	Multigravida	11	44%
Occupation	Housewife	17	68%
	Employed	8	32%

Most participants were within the 20–35 age range (76%), and the majority were primigravida (56%), which aligns with populations commonly experiencing higher emesis gravidarum prevalence due to physiological and psychological adaptation during early pregnancy.

Table 2. Frequency Distribution of Emesis Gravidarum (n = 25)

Category	Pretest n (%)	Posttest n (%)
Mild (1–2×/day)	4 (16%)	15 (60%)
Moderate (3–5×/day)	14 (56%)	9 (36%)
Severe (≥6×/day)	7 (28%)	1 (4%)

Before the intervention, most respondents experienced moderate to severe symptoms. After consuming a ginger drink daily, a significant shift occurred, with 60% categorized as mild and only 4% remaining in the severe category. This redistribution suggests a clinically meaningful reduction in symptom frequency.



Grafik Bar Chart 1. Comparison of Pretest and Posttest Severity Levels of Emesis Gravidarum

The bar chart illustrates a notable decrease in the severity of emesis gravidarum following the ginger drink intervention. Before the intervention, most respondents experienced moderate to severe symptoms, with only a small proportion classified as having mild symptoms. After the intervention, the distribution shifted significantly: the majority moved into the mild category, while severe cases nearly disappeared. This pattern indicates a strong therapeutic effect of ginger drink, showing that it effectively reduces both the frequency and severity of nausea and vomiting in first-trimester pregnant women. The findings confirm that ginger drink is an effective non-pharmacological therapy for managing emesis gravidarum during the first trimester. The substantial decrease in moderate and severe cases, along with the significant rise in mild cases, highlights ginger's role as a safe, accessible, and practical intervention to alleviate early-pregnancy nausea and vomiting.

DISCUSSION

The findings of this study demonstrate that ginger drink is an effective non-pharmacological intervention for reducing the frequency and severity of emesis gravidarum among pregnant women in the first trimester. The significant decrease in both mean nausea and

vomiting scores, as well as the severity categories, after the intervention highlights ginger's therapeutic potential. These results align with a growing body of literature supporting the antiemetic properties of ginger, which are attributed to its bioactive compounds, including gingerol, shogaol, zingerone, and essential oils. These compounds are known to modulate gastric motility, enhance gastrointestinal emptying, and influence central and peripheral serotonergic pathways associated with nausea and vomiting. The reduction in severity from 28% severe cases in the pretest to only 4% in the posttest is particularly noteworthy. This shift indicates not only statistical significance but also clinically meaningful improvement. Many pregnant women who initially experienced moderate to severe symptoms transitioned to the mild category after receiving the ginger drink intervention. This improvement is consistent with the physiological mechanism by which ginger reduces nausea, specifically by antagonizing serotonin receptors in the gastrointestinal tract, which play a role in triggering the vomiting reflex. Moreover, ginger's warming properties and impact on digestion may help alleviate gastric discomfort, a common symptom reported during early pregnancy (Mahira *et al.*, 2022).

Ginger preparations have been shown to reduce nausea and vomiting among pregnant women significantly. The present study, however, strengthens the evidence by using a simple, culturally accepted preparation of fresh ginger infused in warm water, which enhances real-world applicability in low-resource or community health settings (Masruroh *et al.*, 2020). Unlike capsule or candy forms used in other studies, the ginger drink is easily accessible, affordable, and likely to be adopted by pregnant women due to its familiarity in daily Indonesian households (Medved *et al.*, 2023). The demographic characteristics of respondents may also help explain the observed outcomes. Most participants were primigravida, a group known to experience higher rates of emesis gravidarum due to physiological and hormonal adjustments during their first pregnancy. The significant improvement observed in this group suggests that ginger drink may be especially beneficial for women experiencing pregnancy for the first time. Moreover, most respondents belonged to the 20–35 age group, an age range typically associated with better adaptation to non-pharmacological interventions due to stronger immune and digestive system stability (Nurherliyany *et al.*, 2023).

Despite these encouraging results, several factors may influence the effectiveness of ginger. Individual tolerance levels, dietary habits, psychological state, and responses to sensory triggers vary across pregnant women and can affect intervention outcomes (Nurmasyithah, Ariyanti, 2025). Ginger's effectiveness may also depend on adherence to the preparation method and consistency in daily consumption. In this study, compliance was monitored directly, which may have contributed to the high level of symptom reduction. The significant p-value ($p = 0.000$) obtained from the statistical test further reinforces the intervention's impact. A p-value below 0.05 indicates that the improvements observed after the intervention are unlikely to have occurred by chance (Putri, Bachtiar, and Suprapto, 2025). This is strong evidence for recommending ginger drink as a first-line non-pharmacological option for managing mild to moderate emesis gravidarum. Given ginger's safety profile, minimal side effects, and cultural acceptability, it represents a suitable alternative for pregnant women who are hesitant to use pharmacological treatments due to concerns regarding fetal safety (Ramadhanu, 2022).

However, it is essential to consider that ginger is not without contraindications. Women with a history of bleeding disorders, hypotension, gastric ulcers, or those taking anticoagulant medications should exercise caution (Rismayanti and Ratnaningsih, 2024). In this study, such respondents were excluded, ensuring that the intervention was administered only to individuals for whom ginger was appropriate (Tasripin, 2024). Future research may explore dosage

variations, long-term effects, and comparisons with standard pharmacological treatments, such as vitamin B6, to determine optimal guidelines for clinical practice. Additionally, the absence of a control group limits the ability to compare the effectiveness of the ginger drink with other interventions or natural symptom progression. A randomized controlled trial (RCT) would help strengthen causal inferences (Tri Wijayanti, Khair and Gustini, 2025). Nevertheless, the pretest–posttest design used in this study remains appropriate for preliminary or community-based research, providing valuable insights into ginger's potential benefits (Sylvia Bawiling and Suprapto, 2025).

The study provides strong evidence that a ginger drink significantly reduces emesis gravidarum among first-trimester pregnant women. The intervention is safe, natural, inexpensive, and practical for application in primary healthcare settings, particularly in communities where access to pharmacological options is limited. These findings support the integration of ginger drink education into maternal health counseling to improve comfort, nutritional intake, and overall well-being during early pregnancy.

CONCLUSION

This study demonstrated that a ginger drink is an effective non-pharmacological intervention for reducing the frequency and severity of emesis gravidarum among pregnant women in the first trimester. The significant reduction in nausea and vomiting scores between pretest and posttest measurements, supported by a p-value of 0.000, confirms that the regular consumption of ginger drink provides meaningful clinical benefits. The findings highlight ginger's therapeutic potential, derived from its bioactive compounds, such as gingerol and shogaol, in stabilizing gastrointestinal function and modulating the vomiting reflex. These outcomes reinforce the relevance of ginger as a safe, simple, and accessible alternative therapy, especially in community-based maternal health settings.

Based on the results, healthcare providers, particularly midwives and primary care practitioners, are encouraged to integrate ginger drink as a complementary intervention for managing mild to moderate emesis gravidarum during early pregnancy. Educational counseling should be provided to pregnant women regarding the proper preparation, dosage, and potential contraindications of ginger consumption to ensure safe and effective use. Future research is recommended to include larger sample sizes, control groups, and multi-center designs to strengthen the generalizability of findings and explore the long-term benefits of ginger-based interventions across diverse populations.

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Conflict of Interest

There are no potential conflicts of interest relevant to this article.

References

Abidah, S. N. *et al.* (2022) 'The effect of ginger herbal drink on hyperemesis gravidarum in the first trimester pregnant women', *Open Access Macedonian Journal of Medical Sciences*, 10(G), pp. 64–68. doi: https://dx.doi.org/10.3889/oamjms.2022.7955.

Beyene, G. A., Ayele, N. D. and Kasahun, A. W. (2024) 'Prevalence and determinants of hyperemesis gravidarum among pregnant women in Ethiopia: A systematic review and

meta-analysis', *PLOS ONE*. Edited by I. S. Bello, 19(12), p. e0314783. doi: https://doi.org/10.1371/journal.pone.0314783.
Efendi, M. A. *et al.* (2025) 'The Effect of Ginger Decoction Intervention on Nausea and Vomiting in First Trimester Pregnancy: A Literature Review', *Jurnal Kesehatan Komunitas Indonesia*, 5(2), pp. 248–261. doi: https://dx.doi.org/10.58545/jkki.v5i2.386.
Erma Retnaningtyas *et al.* (2024) 'Optimization of Pregnant Women's Knowledge about Nausea, Vomiting and the Use of Ginger Honey Drink to Reduce Nausea, Vomiting', *Journal of Community Engagement in Health*, 7(1), pp. 76–83. doi: https://dx.doi.org/10.30994/jceh.v7i1.580.
Gao, P., Chen, B. and Wang, L. (2025) 'Effectiveness of ginger supplementation in alleviating hyperemesis gravidarum: a systematic review and meta-analysis', *American Journal of Translational Research*, 17(3), p. 1568. doi: https://dx.doi.org/10.62347/txkv6669.
Gustini, G. and Akib, A. (2025) 'Increasing Pregnant Women's Knowledge of Pregnancy Care through Community Based Health Education', *Jurnal Pengabdian Masyarakat Edukasi Indonesia*, 2(2), pp. 86–92. doi: https://doi.org/10.61099/jpmei.v2i2.97.
Handayani, T. R. (2022) 'Complementary Therapies in Reducing of Emesis Gravidarum', *Science Midwifery*, 10(5), pp. 3934–3939. doi: https://dx.doi.org/10.35335/midwifery.v10i5.876.
Khairiah, R. *et al.* (2024) 'Effectiveness of Ginger and Honey in Massage Acupressure Point P6 (Nei Guan) to Emesis Gravidarum in First Trimester Pregnant Women in Indonesia 2024', *Jurnal Penelitian Pendidikan IPA*, 10(11), pp. 8679–8685. doi: https://dx.doi.org/10.29303/jppipa.v10i11.8814.
Lee, N. M. and Saha, S. (2011) 'Nausea and Vomiting of Pregnancy', *Gastroenterology Clinics of North America*, 40(2), pp. 309–334. doi: https://doi.org/10.1016/j.gtc.2011.03.009.
Mahira, V. K. *et al.* (2022) 'The Effect Of Ginger Drinking And Acupressure Therapy On Morning Sickness In Pregnant Mother Trimester I', *Journal of Maternal and Child Health Sciences (JMCHS)*, 2(1), pp. 170–177. doi: https://dx.doi.org/10.36086/maternalandchild.v2i1.1253.
Masruroh, N. *et al.* (2020) 'The effectiveness of giving ginger and mint leaves to the incidence of emesis gravidarum', *International Journal of Psychosocial Rehabilitation*, 24(9), pp. 1003–1010. doi: https://dx.doi.org/10.37200/IJPR/V24I9/PR290124.
Medved, V. I. *et al.* (2023) 'The evidence bases of etiopathophysiology and preventive clinical management of nausea and vomiting in pregnancy', *Reproductive health of woman*, 4(4), pp. 13–28. doi: https://dx.doi.org/10.30841/2708-8731.4.2023.285760.
Nurherliyany, M. *et al.* (2023) 'Literature Review: Herbs to Prevent Nausea and Vomiting in Pregnant Women', *Nurul Ilmi : Journal of Health Sciences and Midwifery*, 1(1), pp. 37–44. doi: https://dx.doi.org/10.52221/nuri.v1i1.209.
Nurmasyithah, N., Ariyanti, R. and Eka Permatasari, A. (2025) 'The Effectiveness of Ginger, Lemon, and Honey Decoction in Reducing Nausea and Vomiting in Pregnant Women with Emesis Gravidarum: A Quasi-Experimental Study', *Tropical Health and Medical Research*, 7(1), pp. 25–31. doi: https://dx.doi.org/10.35916/thmr.v7i1.115.
Putri, S. Z., Bachtiar, S. M. and Suprapto, S. (2025) 'A Descriptive Case Series on Combined Education, Breast Care, and Oxytocin Massage for Lactation Support in Indonesia', *Journal of Public Health Sciences*, 4(02), pp. 165–179. doi: https://doi.org/10.56741/IISTR.jphs.001030.
Ramadhanu, A. (2022) 'Effectiveness of Ginger in Treating Nausea and Vomiting of Pregnancy', *Eureka Herba Indonesia*, 3(1), pp. 111–115. doi: https://dx.doi.org/10.37275/ehi.v3i1.46.
Rismayanti, T. and Ratnaningsih, R. (2024) 'Effectiveness Of Warm Ginger Milk Consumption In Reduce Emesis Gravidarum In 1st Trimester Pregnant Women In Pmb Karawang City Year 2023', *International Journal of Health and Pharmaceutical (IJHP)*, 4(2), pp. 340–345. doi: https://dx.doi.org/10.51601/ijhp.v4i2.278.
Sylvia Bawiling, N. and Suprapto, S. (2025) 'Influence of social media influencers on adolescents' confidence and emotions in health education', *Jurnal Edukasi Ilmiah Kesehatan*, 3(3 SE-Articles), pp. 87–94. doi: https://doi.org/10.61099/junedik.v3i3.143.

Tasripin, M. W. (2024) 'The Effectiveness of Giving Ginger Drink in Reducing Emesis Gravidarum in Pregnant Women (Case Study)', *Nursing Case Insight Journal*, 2(2), pp. 33–36. doi: https://dx.doi.org/10.63166/16rtpv28.

Tri Wijayanti, Y., Khair, U. and Gustini, G. (2025) 'Increasing the role of husbands in supporting the mental health of pregnant women in the third trimester through childbirth preparation education', *Jurnal Pengabdian Masyarakat Edukasi Indonesia*, 2(3 SE-Articles), pp. 112–120. doi: https://doi.org/10.61099/jpmei.v2i3.126.