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The Effect of Ginger Decoction Intervention on Nausea and Vomiting in First Trimester Pregnancy: A Literature Review

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Abstract

Introduction: During pregnancy, many mothers experience discomfort such as vomiting and nausea. During pregnancy, nausea and vomiting are common in Indonesia, with 50-75% of women experiencing symptoms in the first trimester or early pregnancy. Nausea and vomiting during pregnancy are caused by an increase in estrogen and human chorionic gonadotropin (HCG) hormone. Objective: To determine the effect of ginger decoction intervention on nausea and vomiting during pregnancy in the first trimester. Method: The method used is a literature review with a PRISMA protocol approach, with 6 journals found, 3 international, 3 nationals. The literature search process in this literature review uses 3 databases: PubMed, Google Scholar, and Science Direct, with a publishing period of 2019-2023. Results: Six research journals have shown that steeping ginger can reduce nausea and vomiting in pregnant women in the first trimester. Ginger has pharmacological effects as an antiemetic and can reduce the frequency of nausea and vomiting. The use of ginger can help pregnant women overcome the problem of nausea and vomiting during pregnancy. Conclusion: From the 6 studies obtained, it can be concluded that there is a significant effect of giving boiled ginger water as a nursing intervention in first-trimester pregnant women. As a complementary therapy, ginger water can effectively reduce the frequency of nausea and vomiting in pregnant women.

Keywords: Trimester first, Pregnant women, Nausea, Vomiting, Ginger drink

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1. BACKGROUND

Pregnancy is a physiological process initiated by the fertilization of an oocyte by a spermatozoon, followed by implantation of the embryo into the endometrial lining of the uterus. Clinically, gestational age is calculated from the first day of the last menstrual period and typically spans approximately 40 weeks, culminating in childbirth. This period is divided into three

trimesters: the first trimester (weeks 1–12), characterized by organogenesis and heightened vulnerability to teratogenic influences; the second trimester (weeks 13–26), marked by fetal growth and maternal physiological adaptation; and the third trimester (weeks 27–40), during which the fetus undergoes rapid development in preparation for extrauterine life (Prastika et al., 2021; Rahmawati et al., 2023). Throughout pregnancy, women experience profound physical, emotional, and social changes that extend beyond the individual to impact familial and societal dynamics. Given the complexity of these transformations, regular antenatal care is essential to monitor maternal and fetal well-being, detect complications early, and optimize pregnancy outcomes (Jennings & Mahdy, 2023).

Nausea and vomiting of pregnancy (NVP) are among the most prevalent early-pregnancy symptoms, affecting an estimated 50–70% of pregnant women, predominantly during the first trimester (Yanuaringsih et al., 2020). While often mild and self-limiting, these symptoms can significantly impair quality of life, disrupt daily functioning, and lead to dehydration and electrolyte imbalances when persistent. In primigravid women, the incidence of nausea and vomiting ranges from 60% to 80%, with nausea alone reported in 40–60% of cases (Hu et al., 2022). The etiology of NVP remains incompletely understood, though it is thought to be associated with rapidly rising levels of human chorionic gonadotropin (hCG) and estrogen and gastrointestinal motility changes induced by hormonal fluctuations.

In a subset of pregnancies, nausea and vomiting progress to a more severe and pathological condition known as hyperemesis gravidarum (HG), which affects approximately 0.3–3% of pregnancies globally. In Indonesia, the prevalence is notably higher, with recent data indicating that HG affects 14.8% of pregnant women and accounts for 12.5% of all cases of pregnancy-related vomiting (Yanuaringsih et al., 2020). HG is characterized by intractable vomiting, weight loss exceeding 5% of pre-pregnancy body weight, ketonuria, and electrolyte disturbances, often necessitating hospitalization and intravenous fluid therapy. If left untreated, it can lead to serious maternal and fetal complications, including Wernicke's encephalopathy, esophageal rupture, and adverse perinatal outcomes.

Given the risks associated with pharmacological interventions during

pregnancy, non-pharmacological strategies are often the first-line approach for managing NVP. These include dietary modifications, acupressure, relaxation techniques, and herbal remedies such as ginger (Zingiber officinale). Ginger has been widely studied for its antiemetic properties and is recognized as a safe and effective adjunct in alleviating pregnancy-related nausea. Its therapeutic effect is attributed to bioactive compounds, including gingerols, shogaols, paradols, and zingiberene, which act on gastrointestinal motility and central serotonin (5-HT3) receptors to reduce nausea and promote gastric emptying (Ariyanti & Sari, 2021; Lazdia & Putri, 2020). Clinical evidence, including findings from the University of Maryland Medical Center, suggests that daily consumption of 1 gram of ginger extract significantly reduces the severity and frequency of morning sickness without adverse effects on maternal or fetal health.

Adequate nutrition during pregnancy is critical for fetal development and successful childbirth and postpartum recovery, including lactation. However, nausea and vomiting—particularly when severe—can compromise nutritional intake, leading to deficiencies that may exacerbate maternal morbidity and impair fetal growth. The global burden of maternal mortality, estimated at 223 deaths per 100,000 live births in 2020 by the United Nations, underscores the importance of practical, accessible, and culturally appropriate interventions to support maternal health (Abidah et al., 2022). Addressing common yet impactful conditions such as NVP through evidence-based, non-invasive strategies is vital to achieving the Sustainable Development Goal (SDG) target of reducing maternal mortality.

This background highlights the need for safe, effective, and patient-centered interventions to manage nausea and vomiting in pregnancy. Given the high prevalence of these symptoms and the limitations of pharmacological options, further research into natural remedies such as ginger is timely and clinically relevant.

2. METHODS

A comprehensive literature review was conducted to synthesize current evidence on the use of ginger-based beverages in managing nausea and vomiting during the first trimester of pregnancy. The search strategy was designed to ensure breadth and relevance by utilizing three major academic databases: Google Scholar, PubMed, and

ScienceDirect. The scope of the review was limited to publications released between January 2019 and December 2023 to ensure the inclusion of recent and contextually relevant studies.

The search employed a combination of English and Indonesian keywords to capture both international and locally relevant literature. In English, the key terms included "ginger drink," "pregnant women," "nausea and vomiting," and "first trimester," combined using Boolean operators as follows: ("ginger drink" OR "ginger") AND ("pregnant women" OR "pregnancy") AND ("nausea and vomiting") AND ("first trimester"). For the Indonesian-language search, the equivalent terms "minuman jahe," "ibu hamil," "mual muntah," and "trimester 1" were used with the same logical structure to identify regionally published studies.

The literature selection process followed a systematic approach consisting of several sequential stages. An initial search yielded 761 potentially relevant articles based on keyword matching. Titles and abstracts were then screened for relevance to the research topic, alignment with the study population, and adherence to the specified time frame, resulting in the exclusion of duplicates and off-topic publications. This screening phase reduced the pool to 373 articles. Subsequently, full-text screening was conducted to assess compliance with predefined inclusion and exclusion criteria. Articles were included if they were peer-reviewed, published in open-access format, focused on nursing or maternal health topics, and reported original research findings related to ginger consumption and pregnancy-related nausea.

Following full-text evaluation, 302 articles met the initial eligibility criteria. These were further assessed based on the quality of reporting, clarity of research design, methodological rigor, and relevance of findings. A detailed analysis of abstracts and full texts was performed to identify studies that specifically addressed the effects of ginger in the first trimester of pregnancy. This final appraisal stage prioritized experimental, quasi-experimental, and observational studies with clear outcome measures related to symptom reduction.

After rigorous screening and evaluation, a total of six articles were selected for in-depth analysis. These studies were critically appraised for methodological quality and thematic relevance before being synthesized to identify common findings, variations in outcomes, and implications for clinical practice. Data extraction focused on study design, sample characteristics,

intervention protocols, outcome measures, and key results. The synthesis was guided by thematic analysis to develop a coherent narrative on the efficacy and safety of ginger as a non-pharmacological intervention for nausea and vomiting in early pregnancy.

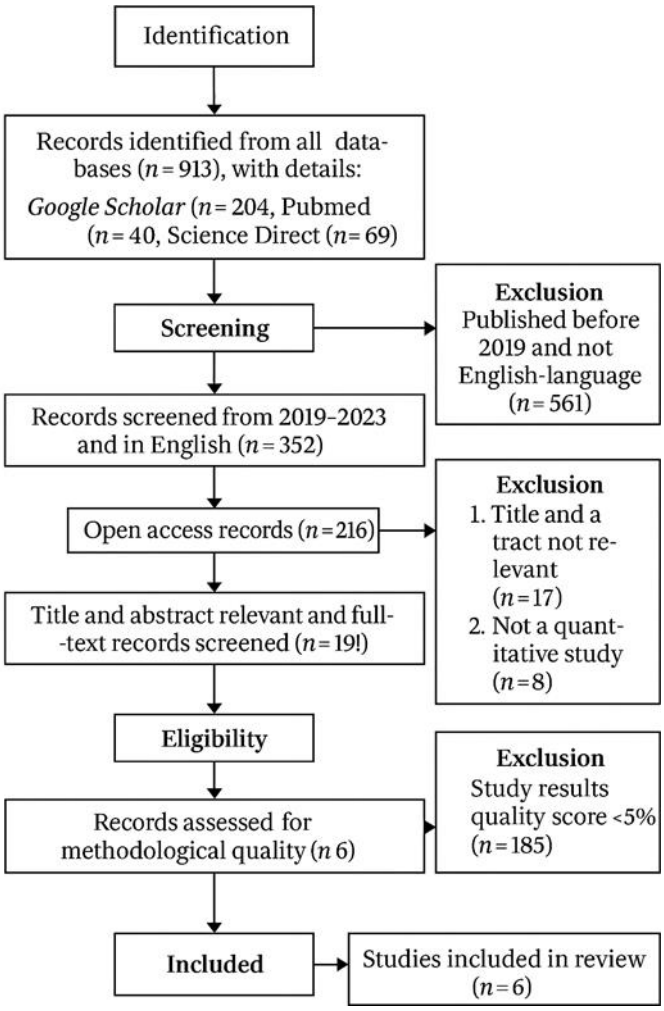

Figure 1. PRISMA flow chart

3. RESULTS

Based on the literature review that has been conducted, results related to the effectiveness of ginger decoction in overcoming nausea and vomiting in pregnant women in the first trimester were obtained. The literature search process was adjusted to the method described in the literature search scheme using relevant keywords. A total of ten journals were identified. The researcher then conducted a literature analysis by summarizing the results and discussions of each study.

Table 1. Articles results *(Continue until page 255)*

No.	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
1	Siska Knur Abidah, Eretria WI Anggraini, Yusriadi Yusriadi	The effect of ginger herbal drink on reducing the degrees of hyperemesis gravi arum in pregnant women	To determine whether administering ginger herbal drinks can help pregnant women with grade I hyperemesis gravidarum.	The population in this study was pregnant women in Kedungpring Balongpang gang Gresik Village who experienced hyperemesis gravidarum. The number of samples taken was 32 respondents.	This study is a quasi-experimental method with a pre-post control group design.	In pregnant women, consumption of ginger herbal drinks significantly increases the risk of grade 1 hyperemesis gravidarum. Ginger herbal drinks can be used safely and effectively to relieve nausea and vomiting in pregnant women.
2	Ana Yuliana, Tiara Fatma Kumala, Dian Karisma Putri, Aureo Frutalegio da Costa Freitas, Fabiola Francisca Martins Soares	The Effectiveness of Ginger Herbal Drink in Reducing the Frequency of Nausea and Vomiting in The First Trimester Pregnant Women	To analyze the effectiveness of ginger herbal drinks in reducing the frequency of nausea and vomiting in pregnant women in their first trimester.	The population in this study was pregnant women in their first trimester. The sample in this study consisted of 32 respondents.	This study used a pre-experimental research method, namely a one-group pretest-posttest design.	After being given warm ginger drink, the frequency of nausea and vomiting in respondents decreased from 13 times to 3.8 times per day. Thus, the administration of warm ginger drink is effective in reducing the frequency of nausea and vomiting in pregnant women in their first trimester.
3	Youchun Hua, Adwoa N. Amoaha, Han Zhanga, Rong Fua, Yanfang Qiua, Yuan Caoa, Yafei Suna, Huanan Chena, Yanhua Liub, dan Quanjun Lyua.	Effect of ginger in the treatment of nausea and vomiting compared with vitamin B6 and placebo during pregnancy: a meta-analysis	This study aims to compare the effects of ginger supplementation with placebo and vitamin B6, specifically focusing on its impact on eliminating nausea and reducing episodes of vomiting during early pregnancy.	The study population consisted of 13 studies involving 1,174 subjects included in this meta-analysis.	This research method involved conducting a meta-analysis to evaluate the effectiveness of ginger in treating nausea and vomiting during pregnancy compared to vitamin B6 and placebo. The study included 13 randomized controlled trials and used the Mantel-Haenszel method to combine the improvement ratios for nausea and vomiting.	The study found that ginger supplementation significantly relieved common symptoms of nausea and vomiting during pregnancy compared to a placebo. However, it had no significant effect on reducing episodes of vomiting. When compared to vitamin B6, ginger was more effective at relieving nausea, but the difference was not significant.
4	Galuh Pradian Yanuaringsi, Ade Saputra Nasution, Siti Aminah	Efek Seduhan Jahe sebagai Anti Muntah pada Perempuan Hamil Trimester Pertama	To determine the effectiveness of ginger tea as an anti-nausea remedy for pregnant women in their first trimester	This study took a population of all pregnant women in their first trimester at the Pojok Health Center in the Sukorame Community Health Center	The method used in this study was a pre-experiment using a pre-test, post-test approach.	There was a decrease in the frequency of nausea and vomiting after being given the infusion for 7 days, indicating that ginger infusion can reduce nausea and vomiting in pregnant women in their first trimester.

No.	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
				working area in Kediri City, with a sample size of 16 respondents.		
5	Lidya Ariyanti, Rachmi Fitria Sari	Pengaruh Pemberian Ekstrak Jahe Dengan Kejadian Mual Dan Muntah Pada Ibu Hamil TrimesterI Di Wilayah Kerja Puskesmas Sukarame Bandar Lampung	To determine the effect of ginger extract consumption on pregnant women in their first trimester in reducing nausea and vomiting at the Sukarame Community Health Center in Bandar Lampung.	This study took a population of all pregnant women in their first trimester in the working area of the Sukarame Community Health Center in Bandar Lampung, with a sample of 30 respondents.	This study is a quantitative study using a quasi-experimental method.	The results showed that the average frequency of nausea and vomiting before ginger extract administration was 13 times, and after ginger extract administration it became 9 times, indicating that ginger extract has an effect on reducing the frequency of nausea and vomiting.
6	Rahmaini Fitri Harahap, Lazuar Dani Rose Alamanda, Idam Lestari Haref	Pengaruh Pemberian Air Rebusan Jahe Terhadap Penurunan Mual dan Muntah Pada Ibu Hamil Trimester I	To determine the effect of ginger tea on reducing nausea and vomiting in pregnant women in their first trimester	The population in this study consisted of all pregnant women in their first trimester who experienced nausea and vomiting in July and August 2020, with a sample size of 30 respondents.	The population in this study consisted of all pregnant women in their first trimester who experienced nausea and vomiting in July and August 2020, with a sample size of 30 respondents.	The results of the study showed that there were changes in pregnant women after drinking ginger boiled water, with the frequency of emesis gravidarum decreasing from the first day to the third day
7	Cindy Eka Prastika, Risa Pitriani	Pemberian Rebusan Jahe Untuk Mengatasi Mual Muntah pada Kehamilan Trimester 1	To analyze the effectiveness of ginger tea in treating nausea and vomiting in the first trimester of pregnancy.	Ibu hamil trimester I di PMB Dince Safrina, SST, M.KM.	The writing method used was a case study conducted by providing care to pregnant women in their first trimester with ginger decoction at PMB Dince Safrina, SST, M.KM. Mrs. D consumed 100 ml twice a day in the morning and evening for 7 days of care with 3 home visits.	The care provided used the SOAP documentation approach. For Mrs. D, midwifery care was provided in the form of ginger tea during nausea and vomiting. After drinking ginger tea for 7 days during 3 visits, the mother felt
8	Sindi Amalia, Ani Triana, Berlina Irianti	Penanganan Mual Muntah dengan Pemberian Air Jahe Hangat	To analyze the effectiveness of warm ginger water in treating nausea and vomiting in the first trimester of pregnancy.	A 28-year-old woman with a history of vomiting was treated with warm ginger water at the Arabih Primary Care Clinic in 2023.	A case study with a background of care for pregnant women with nausea and vomiting who were given warm ginger water at the Arabih Primary Clinic in Pekanbaru City in 2023. In this case study, interviews, anamnesis, and observations were conducted, followed by the provision of care,	There was a change in the frequency of nausea and vomiting during the first visit, with 6-8 episodes in the morning. The mother had no appetite and could only eat fruit and bread. She was sensitive to strong odors, with 4-6 episodes, and still felt

No.	Author and Journal Identity	Journal Title	Objective	Population and Sample	Method	Summary of Results
					evaluation of the results of care, and documentation.	weak, with her appetite not yet restored. Changes also occurred during the third visit, with the frequency decreasing to 2-3 times per day. The mother's appetite improved and increased, and she was able to perform her usual activities.
9	Wiwin Renny Rahmawati, Moh Ridwan, Anita Widiastuti	Pemberian Air Rebusan Jahe meurunkan mual munta ibu hamil trimester 1	To determine the effect of ginger tea on reducing nausea and vomiting in pregnant women in their first trimester.	The research population consisted of all pregnant women in their first trimester in the working area of the Bandongan Community Health Center in Magelang Regency, using total sampling of 34 pregnant women in their first trimester	This study used a quasi-experimental design with a one-group pretest and posttest design.	The administration of ginger tea had a significant effect in reducing nausea and vomiting in pregnant women in their first trimester, with a p-value of 0.000. The results of this study suggest that the use of ginger tea can help reduce symptoms of nausea and vomiting in pregnant women in their first trimester.
10	Wenny Lazdia & Nadia Eka Putri	Pengaruh Jahe Hangat Dalam Mengurangi Mual, Muntah Ibu Hamil Dengan Hipermesis Gravidarum	To analyze the effectiveness of ginger herbal drinks in reducing the frequency of nausea and vomiting in pregnant women with Hyperemesis Gravidarum	The total population of patients with first trimester hyperemesis gravidarum in the working area of the Muaralabuh Community Health Center in South Solok Regency was 47 people. The sample in this study consisted of 32 people, divided into 16 people in the intervention group and 16 people in the control group.	This study is a quasi-experimental pre-post test control design with a pretest and posttest approach to observe the effect of warm ginger water on reducing nausea and vomiting in pregnant women with first trimester hyperemesis gravidarum.	This study shows that the administration of warm ginger intervention alongside pharmacological management is more effective in reducing the incidence of hyperemesis gravidarum in pregnant women in their first trimester. The addition of warm ginger intervention was able to reduce the intensity of hyperemesis gravidarum within 4 days.

4. DISCUSSION

Nausea and vomiting during pregnancy have a significant impact on family life, a mother's ability to perform routine daily activities, social functioning, stress levels, fatigue, malnutrition, dehydration, weakness, and weight loss. This can lead to other symptoms such as

weight loss. Persistent electrolyte imbalance, nausea, and vomiting can cause dehydration and even weight loss in pregnant women. If not promptly and adequately addressed, this can have adverse effects on the pregnant woman and the fetus, and in some cases may lead to the death of the pregnant woman and the fetus. (Rahmawati, Ridwan, & Widiastuti, 2023).

Ginger is one of the spices commonly consumed to address health issues and produce essential oils. Ginger can also expel gas from the stomach and relieve bloating. It is a potent stimulant and can help control vomiting by increasing intestinal motility. Approximately six compounds in ginger have been proven to have antiemetic properties or practical antiemetic effects. The nutrients contained in ginger include potassium (3.4%), magnesium (3.0%), and vitamin B6 (pyridoxine) (2.5%) (Fitria, 2018). Ginger has carminative properties in the digestive system, meaning it can expel gas from the stomach. Therefore, ginger relieves bloating, is a potent aromatic stimulant, and has an antiemetic effect by enhancing intestinal peristaltic movement (Lazdia & Putri, 2020).

The first article discusses the use of ginger herbal drinks to reduce the frequency of excessive vomiting during pregnancy, known as hyperemesis gravidarum. This condition involves prolonged vomiting, which can lead to weight loss, decreased body volume, and ketonuria and/or ketonemia. Although there is no consensus on specific diagnostic criteria, it generally refers to the severity of nausea and vomiting during pregnancy (Jennings & Mahdy, 2023).

The population in this study included pregnant women with grade 1 hyperemesis gravidarum in Kedungpring Balongpanggang Village, Gresik. The sample consisted of 32 respondents selected randomly using simple random sampling, divided into two groups. The first group was given a ginger herbal drink, while the second group was given water and a sugar drink for 4 days. The study results showed that there was no significant difference in the frequency of hyperemesis gravidarum before and after treatment in the group that drank water and sugar. However, in the group that consumed ginger herbal tea, there was a significant difference in the effectiveness of reducing the frequency of hyperemesis gravidarum. In conclusion, the administration of ginger herbal tea affects hyperemesis gravidarum of degree I in pregnant women. (Abidah et al., 2022).

In severe cases of hyperemesis, complications such as vitamin deficiency,

dehydration, and malnutrition may occur if not properly managed. Therefore, an interprofessional team is needed to prevent and manage hyperemesis gravidarum, one of which is by using ginger tea. Pregnant women experiencing grade 1 hyperemesis gravidarum are advised to consume ginger herbal tea as a safe and effective herbal remedy (Abidah et al., 2022).

Research by Yuliana et al. (2022) generally explains the effectiveness of giving ginger tea to pregnant women with nausea and vomiting symptoms in the first trimester of pregnancy. This study involved 32 pregnant women in their first trimester at the Bulu Health Center in Sukoharjo District. First, the participants were given a questionnaire regarding the frequency of daily nausea and vomiting. Then, the participants were given ginger herbal tea daily for two weeks. After that, the participants were given a post-test regarding the frequency of nausea and vomiting after being given the ginger herbal tea. The study results showed that after being given warm ginger tea, the frequency of nausea and vomiting among the respondents decreased from 13 to 3.8 times per day. Thus, the administration of warm ginger tea is effective in reducing the frequency of nausea and vomiting in pregnant women in the first trimester (Yuliana et al., 2022).

A study by Hu et al. (2022) compared several interventions for nausea and vomiting in pregnant women, namely ginger herbal intervention, placebo, and vitamin B6. The study population consisted of 13 studies involving 1,174 pregnant women who experienced nausea and vomiting in early pregnancy. The comparison between ginger supplementation and placebo, as reported in 5 studies, showed a significant reduction in the frequency of nausea with ginger supplementation compared to placebo. In contrast, no significant reduction in the frequency of vomiting was observed between the two. Furthermore, the comparison between ginger and vitamin B6 interventions showed a significant reduction in the frequency of nausea and vomiting in the ginger intervention compared to vitamin B6. It can be concluded that ginger supplementation significantly alleviates common symptoms of nausea and vomiting during pregnancy compared to a placebo. However, it does not significantly reduce vomiting. Compared to vitamin B6, ginger is more effective in alleviating nausea (Hu et al., 2022).

Based on a research journal by Yanuaringsih et al. (2020), it was found that there was a decrease in the frequency of nausea and vomiting in pregnant women

in their first trimester after being given an infusion for 7 days. Pregnant women who vomit more than five times a day can endanger their fetus, as they need a balanced nutritional intake. Nausea and vomiting, also known as hyperemesis gravidarum, can cause electrolyte and fluid imbalances, thickening of the blood, and impairment of blood circulation to all tissues. As a result, oxygen consumption and nutrient distribution to all tissues are hindered, causing tissue damage that affects the woman's health and the development of the fetus. During excessive pregnancy, vomiting in pregnant women can affect their daily activities and cause side effects on the fetus, such as low birth weight (LBW), miscarriage, premature birth, and delayed fetal development. Pregnant women may benefit from ginger tea to reduce their vomiting and nausea. Ginger has pharmacological functions as an antiemetic, or anti-vomiting agent, which can reduce vomiting by increasing peristaltic flow. Ginger contains zingerone and zingiberol compounds, which can inhibit serotonin receptors and have antiemetic effects on the gastrointestinal system, reducing vomiting and nausea (Yanuaringsih et al., 2020).

According to research conducted by Ariyanti & Sari (2020), the average frequency of nausea and vomiting before ginger extract administration was 13 times, and after ginger extract administration, it decreased to 9 times, indicating that ginger extract has an effect in reducing the frequency of nausea and vomiting. Pregnant women experience slow wave dysrhythmias, including tachygastria and bradygastria, as well as unstable fasting activity and impaired direct responses in food digestion, leading to nausea and vomiting. According to the researchers, the study results indicate that ginger extract significantly affects nausea and vomiting in the group of mothers who used it. Therefore, it is recommended that healthcare providers, especially those caring for pregnant women in the first trimester, advise pregnant women to consume ginger extract to reduce nausea and vomiting. A pregnant woman's ability to manage nausea and vomiting during pregnancy can be influenced by her personality and attitude toward the condition, family commitment, work, overall health, and availability of supportive resources. By providing this information, it is hoped that women will be more aware of the importance of following the recommendations (Ariyanti & Sari, 2021).

Nausea and vomiting are physiological symptoms of emesis gravidarum, and this condition can become

dangerous if not addressed promptly. According to the results of a study (Harahap, Alamanda, & Harefa, 2020), changes were observed in pregnant women after consuming ginger tea, with the frequency of emesis gravidarum decreasing from the first day to the third day. The results of this study are consistent with those of another study (Yanuaringsih, Nasution, & Aminah, 2020), which showed the effect of warm ginger tea on reducing emesis gravidarum by measuring the frequency of emesis gravidarum during ginger tea consumption. Pregnant women in the first trimester can reduce vomiting and nausea by drinking ginger tea. Before the intervention, most pregnant women experienced emesis gravidarum up to 13 times a day. After consuming ginger tea, nausea and vomiting decreased on average. Pregnant women can use ginger to alleviate morning sickness, as it reduces the levels of metoclopramide, a substance that causes vomiting and nausea. Pyridoxine (vitamin B6), antihistamines, phenothiazines, metoclopramide, ondansetron, and corticosteroids can treat nausea and vomiting. Additionally, non-pharmacological treatments such as acupuncture and acupressure can reduce or prevent nausea, and adopting a regular lifestyle and eating patterns can also help (Riska Yanti Harahap et al., 2022).

5. CONCLUSION

From the 10 studies obtained, it can be concluded that there is a significant effect of administering ginger tea as a nursing intervention in pregnant women in their first trimester. As a complementary therapy, ginger tea can effectively reduce the frequency of nausea and vomiting in pregnant women.

Nausea and vomiting during pregnancy, particularly when severe as in hyperemesis gravidarum, significantly impair maternal well-being and pose risks to fetal development, including dehydration, malnutrition, weight loss, and adverse pregnancy outcomes. Evidence from multiple studies demonstrates that ginger, in various forms such as herbal tea or extract, is a safe and effective non-pharmacological intervention for alleviating these symptoms, particularly in reducing the frequency of nausea and, to a lesser extent, vomiting. Its antiemetic properties are attributed to bioactive compounds like gingerols and zingerone, which influence gastrointestinal motility and serotonin receptor activity. Clinical trials and systematic comparisons have shown that ginger supplementation is more effective than placebo and vitamin B6 in managing early-pregnancy nausea, with notable reductions in symptom frequency when administered over several days.

Given its accessibility, low cost, and minimal side effects, ginger represents a valuable adjunct in prenatal care, and healthcare providers are encouraged to recommend it as part of a comprehensive strategy to improve maternal comfort and pregnancy outcomes.

AUTHOR CONTRIBUTIONS

Melani Adelia Efendi, Adelia Bunga, and Adinda Nasywa Ramadhani: Research conceptualization, data collection and analysis, writing the initial draft, discussion strengthening, and reference management. Fitrio Deviantony, and Fahruddin Kurdi: Methodological guidance, data validation, data analysis supervision.

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CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest in this research.

DATA AVAILABILITY STATEMENT

The data are available from the corresponding author upon reasonable request.

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