



The Relationship Between Giving Lime And Honey To Reduce Nausea And Vomiting In Pregnant Women In The First Trimester At The Sarfina Sembiring Clinic In 2025

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ABSTRACT

Nausea and vomiting are obstetric problems that are common in 50-80% of pregnant women during the first trimester which begins in the morning and often continues throughout the day. According to the results of the study, the incidence of nausea and vomiting in the world is estimated to be 70-80% of the number of pregnant women. Lime contains vitamin C, flavonoids, and vitamin B6 which can help reduce nausea and vomiting in pregnant women and honey can help maintain stamina and health during pregnancy. This study aims to find out the relationship between giving lime and honey to reduce nausea and vomiting in pregnant women in the first trimester at the Pratama Sarfina clinic in 2025. The population of this study is pregnant women with nausea and vomiting at the Pratama Sarfina Clinic, the sample in this study is 15 pregnant women in the first trimester with nausea and vomiting. The sampling technique is accidental sampling. The type used is in the form of primary data, namely data obtained directly from respondents, the characteristics of respondents are age, parity, education, and occupation. The results of the Chi-Square test research have a value of $\text{Sig} \leq 0.05 = 0.000$, then H_0 is rejected and H_a is accepted, this shows that there is a relationship between giving lime and honey with a decrease in nausea and vomiting in pregnant women in the first trimester.

INTRODUCTION

Pregnancy is one of the conditions used to describe the period when the fetus develops in the womb. Usually, the pregnancy process lasts for 40 weeks or more than nine months. This time is calculated from the last menstrual period (Verury, 2022).

Emesis gravidarum is nausea and vomiting that occurs in early pregnancy until 20 weeks of age caused by changes in the endocrine system that occur during pregnancy, mainly caused by Human Chorionic Gonadotropin (HCG), Progesterone, Estrogen, and serotonin (Carolin, 2022).

During the first trimester, 50–80% of pregnant women experience nausea and vomiting, which are common obstetric problems that start in the morning and often last throughout the day. Ineffective treatment can result in pregnancy problems that affect the fetus, pregnancy, and quality of life. (Deepika, 2022).

According to the WHO (World Health Organization), the incidence rate of emesis gravidarum is at least 15% of all pregnant women. The incidence of nausea and vomiting or morning sickness in the world is 70-80% of the number of pregnant women. Of these, Hyperemesis gravidarum (HG), a more severe type that requires further medical treatment, affects about 0.3–2% of people. (Dewi, 2022).

Emesis gravidarum occurs worldwide with a diverse incidence rate, namely Sweden, 0.5% in California, 1.9% in Turkey, and in the United States the prevalence of emesis gravidarum is 0.5%-2% (Fejzo, 2023).

In Indonesia, around 50% to 75% of pregnant women experience nausea and vomiting in the first trimester of pregnancy. Nausea and vomiting occur in 60% to 80% of primigravida (first pregnancy) and 40% to 60% of multigravida (second pregnancy and so on). The prevalence of emesis gravidarum in Indonesia also varies from region to region (Pawestri, 2023).

According to the Ministry of Health of the Republic of Indonesia (Kemenkes) in general, the percentage of pregnant women who experience emesis gravidarum is estimated to be around 50% to 90% of pregnant women experience nausea and vomiting during pregnancy (Lowe, 2022).

In Indonesia, according to the Indonesian Health Demographic Survey (SDKI) Data In 2018, there were 1,864 cases of emesis gravidarum from 21,581 pregnant women (around 8.6%). This figure increased in 2019 to 1,904 cases from 25,234 pregnant women (around 7.5%). Bali Province: In 2021, the Bali Provincial Health Office recorded 21,965 cases of emesis gravidarum, which is 8.5% of the total pregnant women in the province (Filka, 2024).

According to data from North Sumatra Province, emesis gravidarum occurs in around 10% to 15% of pregnancies. 56-76% of primipara and 45-75% of multigravida experience nausea and vomiting. In North Sumatra, 7-9% of pregnant women are severely dehydrated, and 22% of episodes of nausea and vomiting last until childbirth. According to data from the Batangtoru Health Center, there were 120 pregnant women and 32 cases of emesis gravidarum in 2022; in 2023, there were 40 additional cases (Fatma, 2024).

Pregnancy-related nausea and vomiting are caused by increased levels of the hormone HCG, which usually begins in the 6th–8th week, peaks in the 12th–14th week, and subsides in the 22nd week so that the pregnant woman's body has time to adjust to the increased production of the hormone. Nausea and vomiting often worsen in the morning on an empty stomach or if the pregnant woman has not eaten enough. In the first trimester, this usually occurs in 80–85% of pregnancies (Grace, 2024).

Controlling portion sizes is one strategy to prevent nausea and vomiting during the first trimester of pregnancy (Lowa, 2022). Eating small portions and more often is one of the strategies to overcome nausea during pregnancy. In between meals, you can also eat nutritious snacks. It is important to remember that vomiting during pregnancy can be caused by feeling too full or hungry. How to Prevent Stomach Ulcers: One of the common causes of nausea and vomiting during pregnancy is GERD, or peptic ulcers. Pregnant women, even those who have never had stomach ulcers before, are more prone to developing them due to general changes in the body. To prevent an increase in stomach acid, avoid spicy foods and take antacids as directed. Using Medications and Supplements: Ginger and vitamin B6 are two nutritional solutions that some pregnant women find can help with their nausea. Drink Enough Water: During pregnancy, mothers should make sure they get enough water. It is excellent for preventing constipation, managing dehydration, and lowering the risk of high blood pressure. Eight to twelve glasses of water should be consumed daily by pregnant women.

Management of nausea and vomiting includes pharmacological and non-pharmacological treatments. Pharmacological treatment can be in the form of administering medications such as vitamin B6, antiemetic, antihistamines, or steroids. Meanwhile, non-pharmacological treatment can be in the form of dietary counseling (eating little but often, avoiding smells that stimulate nausea), herbal therapy (ginger), or complementary therapy (acupuncture, yoga, aromatherapy). Non-pharmacological treatment for emesis gravidarum (nausea and vomiting during pregnancy) includes various methods that do not involve medications. These methods can include emotional support, acupuncture, aromatherapy, and lime and honey (Yuniati, 2020).

There are several ways to deal with nausea and vomiting, and medications that are easy to get are usually among the easiest to get. However, it is important to remember that these medications may have teratogenic side effects that can interfere with the development of the fetus in early pregnancy. Many pregnant women seek alternative treatments, such as alternative or traditional medicines, due to the possible teratogenic effects of such medications. Ginger, chamomile, raspberry leaves, peppermint, and lime extract are some of the plants that have been suggested in the literature as plants that have the ability to reduce nausea and vomiting during pregnancy (Melly, 2022).

Saliva production can be stimulated by acidic fruits such as limes, which help the digestive system break down food. The flavonoids in lime can help increase peristaltic activity in the stomach, which makes digestion easier (Mutiah, 2022).

Handling nausea and vomiting in pregnant women in the first trimester can be done traditionally by giving honey lime juice (Astri, 2023).

Citric acid contained in lime can stimulate saliva production, which can help reduce sour taste and nausea in the mouth. In addition, citric acid helps balance the pH in the digestive system, which can prevent stomach irritation and relieve nausea symptoms, lime contains essential oils, such as limonen and citral, which have soothing and antioxidant properties. Aromatherapy with essential oils from lime can help relieve stress and anxiety, which sometimes trigger or worsen nausea in pregnant women (Restu, 2023).

Pregnant women can benefit from lime. In addition to flavonoids such as poncirin, hesperidin, rhoifolin, maringin, synephrin, and N-methylamine, limes also contain important limonin and linalool. Limonene, linalyl acetate, geranyl acetate, citral phellandrene, and citric acid are some of the beneficial chemicals contained in limes. By increasing bile synthesis, the flavonoids in lime help neutralize digestive fluids and reduce nausea. Warm lime juice is a good treatment alternative before taking medication because studies have shown that lime juice can reduce emesis gravidarum (Damayanti 2022).

Bees extract plant nectar to produce honey, which is then stored in the honeycomb cells. Food, health, and beauty are just a few of the many benefits of honey. Honey is often used as a beverage additive, natural sweetener, and flavor enhancer. In addition, honey is often used in traditional medicine. Honey is a food source that contains protein, carbohydrates, amino acids, and various vitamins and minerals that have been absorbed by the body's cells (Susiloningtyas, 2023).

Fructose monosaccharides and glucose, which are more beneficial than sugar, give honey a unique sweet taste. Honey is very effective at absorbing fat when mixed with warm water. The combination of glucose (31%) and fructose (38.5%) forms honey. There are many advantages to using complementary therapies to treat diseases or health problems (Widowati, 2021).

In a study titled "Counseling and Utilization of Lime Honey (JEMU) to Overcome Hyperemesis Gravidarum (Excessive Nausea and Vomiting in Pregnancy) in 2022", Melly Damayanti and Rawdatul Jannah found that consuming 30 milliliters of lime juice mixed with a tablespoon of honey for three consecutive days can help reduce these complaints. Complaints of vomiting were evaluated before and after consuming JEMU for three days. The average maternal knowledge about emesis gravidarum increased after community service activities, as shown by a questionnaire score of 5.3. In addition, the PUQE score showed a decrease in nausea and vomiting symptoms, which was 3.1.

The findings of the analysis and discussion presented in this study are in line with the research of Astri Yulia Sari Lubis and Ashar Abilowo, whose study is entitled "Giving Honey Lime Water in Overcoming Emesis Gravidarum in Pregnant Women in 2023", found that the frequency of emesis gravidarum in pregnant women differs before and after the administration of honey lime water. Therefore, giving honey lime juice to pregnant women can be an additional treatment to reduce nausea and vomiting.

According to research by Ratih Septiana Arpen and Silvia Marniati, "The Effect of Giving Warm Lime and Honey Water on the Reduction of Emesis Gravidarum in Pregnant Women in the First Trimester in the Working Area of the Sungai Tutung Kerinci Health Center in 2025," the administration of warm lime juice and honey to pregnant women in the first trimester in the working area of the Sungai Tutung Health Center can reduce the incidence of emesis gravidarum. Before the administration of warm lime juice and honey, pregnant women experienced nausea and vomiting with a ratio of 7.7 with a standard deviation of 1.72, with a minimum of 5 cases and a maximum of 11 cases. After the administration of warm lime juice and honey to pregnant women, the ratio of nausea and vomiting was 4.2 with a standard deviation of 1.72, with a minimum of two cases and a maximum of ten cases. A p value of $0.000 < 0.05$ indicates that the administration of warm lime juice and honey to pregnant women during the first trimester significantly reduces their nausea and vomiting. It is hoped that this study will serve as a basis for creating an action plan or strategy to help pregnant women who experience nausea and vomiting.

Based on an initial survey from February 5 to February 23, 2025 at the Sarfina Sembiring Clinic, there were 19 pregnant women in the first trimester, from the results of interviews that had been conducted, 8 of them experienced nausea and vomiting without taking medication to reduce nausea and vomiting, they said they were uncomfortable, felt disturbed when nausea occurred and sometimes reduced appetite and mothers did not like to smell the striking smell of food that caused nausea. The pregnant woman said that they had never tried to drink herbal drinks to reduce nausea and vomiting such as lime and honey to reduce nausea and vomiting.

Based on the above background, the author is interested in conducting a study with the title "The relationship between giving lime and honey to reduce nausea and vomiting in pregnant women in the first trimester at the Sarfina Primary Clinic in 2025"

RESEARCH METHODS

The type of research used in this study is the pretest and posttest of research which is carried out by providing an initial assessment or pretest first before being given an intervention, then it can be given through the administration of lime and honey drinks after the posttest is carried out (Sugyono 2020). Used to find out "The relationship between giving lime and honey to reduce nausea and vomiting in pregnant women in the first trimester at the Sarfina Sembiring Primary Clinic in 2025"

RESEARCH RESULTS

Univariate Analysis

The distribution of respondents based on the characteristics of the respondents, obtained from the results of what was done to the respondents can be seen from table 1 as follows:

Yes	Characteristics	F	%
1	Age		
	20 – 25 years old	8	53,3 %
	26 - 30 years old	4	26,7 %
	31 - 35 years old	3	20,0 %
	Quantity	15	100,0
2	Parity		
	Primigravida	7	46,7 %

	Skundigravida	5	33,3 %
	Multigravity	3	20,0 %
	Quantity	15	100,0
3	Education		
	Junior High School	1	6,7 %
	High School	10	66,7 %
	College	4	26,7 %
	Quantity	15	100,0
4	Employment		
	PNS	1	6,7 %
	Self-employed	6	53,3 %
	IRT	8	53,3 %
	Quantity	15	100,0

Based on table 1, it is known that the majority of respondents aged 20-25 years are 8 people (53.3%), respondents aged 26-30 years are 4 people (26.7%) and minorities aged 31-35 years (20.0%). Based on the parity of the majority of primigravida as many as 7 people (46.7%), skundigravida parity as many as 5 people (33.3%) and multigravida minority as many as 3 people (20.0%). Based on education, the majority of junior high school is 1 person (6.7%), high school education is 10 people (66.7%), and the minority of universities is 4 people (26.7%). Based on the work of the majority of civil servants as many as 1 person (6.7%), IRT work as many as 8 people (53.3%) and the minority of Entrepreneurs as many as 6 people (40.0%).

Univariate Analysis

Table 2. Distribution of Nausea and Vomiting in Pregnant Women Before Being Given Lime and Honey at Sarfina Sembiring Clinic in 2025

Yes	Categories	Frequency	%
1	Lightweight	8	53,3%
2	Medium	6	40,0%
3	Weight	1	6,7%
	Quantity	15	100,0

Based on table 2, it is known that the majority of pregnant women experience mild nausea vomiting as many as 8 people (53.3%), pregnant women experience moderate nausea vomiting as many as 6 people (40.0%) and a minority of pregnant women experience severe nausea vomiting as much as 1 person (6.7%).

Table 3. Distribution of Nausea and Vomiting in Pregnant Women After Being Given Lime and Honey at Sarfina Sembiring Clinic in 2025

Yes	Categories	Frequency	%
1	Lightweight	11	73,3%
2	Medium	3	20,0%
3	Weight	1	6,7%
	Quantity	15	100,0

Based on table 3, the majority of pregnant women experienced mild nausea vomiting as many as 11 people (73.3%), pregnant women experienced moderate nausea vomiting as many as 3 people (20.0%), and a minority of pregnant women experienced severe nausea vomiting as many as 1 person (6.7%).

Table 4. Bivariate Table of Nausea and Vomiting in Pregnant Women Before and After the Administration of Lime and Honey

Yes	Categories	Before		After		P. Value
		F % F		%		
1	Lightweight	8	53,3%	11	73,3%	0, ,000
2	Medium	6	40,0%	3	20,0%	
3	Weight	1	6,7 %	1	6,7 %	

Based on table 4, it is known that the majority of nausea and vomiting of pregnant women before being given lime and honey in the light category were 8 people (53.3%), the medium category was 6 people (40.0%) and the minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%). The majority of nausea and vomiting of pregnant women after being given lime and honey in the light category were 11 people (73.3%), the medium category was 3 people (20.0%), and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%). The results of the Chi-square test showed that the value of Sig $\leq 0.05 = 0.000$ was rejected and H_a was accepted. This shows that there is a relationship between giving lime and honey and a decrease in nausea and vomiting in pregnant women.

DISCUSSION

Frequency of Nausea and Vomiting Before Giving Lime and Honey at Pratama Sarfina Sembiring Clinic in 2025

Based on table 1, the results of the study on nausea and vomiting in pregnant women before being given lime and honey are the majority of pregnant women experience mild nausea and vomiting as many as 8 people (53.3%), pregnant women experience moderate nausea and vomiting as many as 6 people (40.0%) and a minority of pregnant women experience severe nausea and vomiting as many as 1 person (6.7%).

Through observation before the intervention was carried out, the 8 respondents experienced mild nausea and vomiting where the mother felt nausea 1-5 times in 24 hours while vomiting 1-3 times in 24 hours, did not significantly interfere with daily activities, did not cause dehydration or electrolyte balance disorders. In mothers with nausea vomiting were moderately intervened, 6 respondents, mothers felt nausea and vomiting more frequently, especially in the morning more than 5 times a day. Meanwhile, in mothers with severe nausea and vomiting, 1 respondent was intervened, the mother felt nausea and vomiting could not be controlled more than 10 times a day, even almost every hour.

Factors that affect the occurrence of nausea and vomiting in pregnant women are, Hormonal factors Increased hcg, hcg levels increase dramatically in the 6th to 12th week of pregnancy Increase estrogen, increase olfactory sensitivity and facilitate digestion Increase in progesterone, relax the smooth muscles of the gastrointestinal tract, slow down gastric emptying and nausea. Psychological factors Anxiety and stress, can trigger or aggravate nausea and vomiting and changes in the atmosphere. Physiological factors Changes in the body's metabolism, the body is adapting to pregnancy.

Based on the results of a study conducted by Rafiq Nur Indriani and Rani Safitri², with the title "The Effect of Giving Lime Honey on Emesis Gravidarum in Pregnant Women in the 1st Trimester at PMB INA Tjahjanti in 2025" stated that before being given lime juice and honey, the respondents experienced severe nausea, namely 19 people (63.3%). Nausea was experienced by 8 individuals (26.7% of the total), and only 3 people (10.0%) experienced mild nausea. Thus, before the intervention, the majority of pregnant women were in the category of severe nausea, indicating a high severity of emesis gravidarum in the respondent group.

Based on the researcher's assumption that nausea and vomiting is a physiological process experienced by the mother during the pregnancy process, nausea and vomiting can cause dehydration or electrolyte balance disorders, moderate nausea and vomiting cause nausea and vomiting more frequently, especially in the morning more than 5 times a day and severe nausea and vomiting cause uncontrollable nausea and vomiting more than 10 times a day, even almost every hour. According to the researchers' assumption, 1 pregnant woman with severe nausea and vomiting did not change when giving lime was influenced by several factors, namely the severity of emesis gravidarum in the mother so that the body's response to natural interventions became slower. In addition, from the psychological side, physical fatigue, due to household chores and lack of rest time that can affect the body's ability to adapt less to the administration of lime and honey.

Frequency of Nausea and Vomiting After Lime and Honey Giving at Pratama Sarfina Sembiring Clinic in 2025

Based on the results of the study on nausea and vomiting in pregnant women after being given lime and honey, the results were obtained that the majority of pregnant women experienced mild nausea and vomiting as many as 11 people (73.3%), pregnant women experienced moderate nausea and vomiting as many as 3 people (20.0%), and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%).

The effect of giving lime and honey on nausea and vomiting in the first trimester showed that the consumption of lime and honey was effective in reducing the symptoms of morning sickness or nausea and vomiting in pregnant women in the first trimester. In this study, respondents were given the mixture for several days, and the results showed a significant reduction in the frequency of nausea and vomiting after the intervention. Lime contains acid, has the ability to stimulate the production of saliva or saliva, which is beneficial in decomposing nutrients in the digestive system. However, by adding honey, this effect can be neutralized. The combination of lime and honey, both of which contain B6 (pyridoxine) as a serotonin receptor antagonist to reduce nausea and vomiting in pregnancy so that this honey lime juice can effectively overcome the problem of nausea (emesis gravidarum) experienced by pregnant women (Aulia, 2024).

Based on the results of a study conducted by Rafiq Nur Indriani and Rani Safitri², entitled "The Effect of Honey Lime Juice on Gravidarum Emesis in Pregnant Women in the 1st Trimester at PMB INA Tjahjanti in 2025" stated that the results of the analysis of the frequency of emesis after the administration of lime juice and then honey, it was known that most of the respondents no longer experienced nausea, namely 18 people (60.0%). In addition, there were 10 respondents (33.3%) who still felt nausea in the mild category, and only 2 respondents (6.7%) experienced moderate nausea. Thus, after the intervention, the majority of respondents showed improvement in emesis symptoms, as seen from the increase in the number of respondents who no longer felt nausea and the decrease in the number of respondents with moderate nausea.

Based on the researchers' assumption that in the results of the study after being given lime and honey, there were still 11 mothers with mild nausea and vomiting (80.0%), moderate nausea vomiting 2 people (13.3%) and severe nausea vomiting 1 person (6.7%). Nausea and vomiting occur due to an increase in hcg, an increase in estrogen, increase in olfactory sensitivity and facilitate digestion Increased progesterone, eleelate the smooth muscles of the gastrointestinal tract, slow down gastric emptying and nausea. Lime and honey have a significant relationship with a significant relationship with a decrease in nausea and vomiting symptoms in pregnant women, especially in the first trimester.

The Relationship between Lime and Honey to Reduce Nausea and Vomiting in Pregnant Women in the First Trimester at Pratama Sarfina Clinic in 2025

Before the administration of lime and honey, the majority of pregnant women experienced mild nausea and vomiting as many as 8 people (53.3%), pregnant women experienced moderate nausea and vomiting as many as 6 people (40.0%) and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%). After the administration of lime and honey, the majority of pregnant women experienced mild nausea and vomiting as many as 11 people (73.3%), pregnant women experienced moderate nausea and vomiting as many as 3 people (20.0%), and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%).

After conducting the Chi-Square test on the relationship between the administration of lime and honey with nausea and vomiting in pregnant women in the first trimester, the Chi-Square test results were obtained with a Sig value of $\leq 0.05 = 0.000$, then H_0 was rejected and H_a was accepted. This shows that there is a relationship between the administration of lime and honey with a decrease in nausea and vomiting in pregnant women in the first trimester at the Sarfina Sembiring Primary Clinic 2025.

After conducting the Chi-Square test on the relationship between the administration of lime and honey with nausea and vomiting in pregnant women in the first trimester, the Chi-Square test results were obtained with a Sig value of $\leq 0.05 = 0.000$, then H_0 was rejected and H_a was accepted. This shows that there is a relationship between the administration of lime and honey with a decrease in nausea and vomiting in pregnant women in the first trimester at the Sarfina Sembiring Primary Clinic 2025.

These results are also in line with the research (Mariyah, Hernawati, and Liawati 2022) on the analysis of the administration of lime and honey on nausea and vomiting in pregnant women in the first trimester before and after administration, a value of nausea frequency with p-value = 0.002 which is less than $\alpha = 0.05$. Therefore, it can be concluded that there is a significant difference between before and after the administration of lime and honey on nausea in pregnant women in the first trimester.

According to the author's assumption, the administration of lime and honey has a significant relationship with the reduction of nausea and vomiting symptoms in pregnant women, especially in the first trimester. This is based on the content of lime and honey, both of which contain B6 (pyridoxine) as a serotonin receptor antagonist to reduce nausea and vomiting in pregnancy so that this honey lime juice can effectively overcome the nausea and

vomiting problems experienced by pregnant women, while supporting the maintenance and improvement of maternal and fetal health.

CONCLUSION

From the results of research and discussions that have been carried out regarding "The Relationship between Lime and Honey to Reduce Nausea and Vomiting in Pregnant Women in the First Trimester at Pratama Sarfina Clinic in 2025". Based on the level of nausea and vomiting experienced by 15 pregnant women before being given lime and honey, the majority of mild vomiting nausea was 8 people (53.3%), moderate vomiting nausea was 6 people (40.0%) and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%). The results of the study were that the majority of pregnant women experienced nausea and vomiting in pregnant women after being given lime and honey, 11 people (73.3%), pregnant women experienced moderate nausea and vomiting as many as 3 people (20.0%), and a minority of pregnant women experienced severe nausea and vomiting as many as 1 person (6.7%). The results of the Chi-Square test have a Sig value of $\leq 0.05 = 0.000$, then H_0 is rejected and H_a is accepted. This shows that there is a relationship between the administration of lime and honey with a decrease in nausea and vomiting in pregnant women in the first trimester at the Sarfina Sembiring Primary Clinic 2025.

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