

GINGER CANDY CONSUMPTION AND ITS IMPACT ON FIRST TRIMESTER NAUSEA

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Received: March 22, 2024; Accepted: May 29, 2024; Published: Jun 22, 2024;

Abstract: Pregnancy brings changes to a woman's body, including in the digestive system which can cause nausea and vomiting, which generally occurs in the first trimester. Morning sickness is a common complaint in pregnancy, but there are also more severe conditions, such as hyperemesis gravidarum. Treatment for nausea and vomiting can be done with pharmacological or non-pharmacological therapy. Ginger, with its antiemetic properties, is a popular choice. Ginger candy is an effective way to consume ginger to reduce nausea and vomiting in first trimester pregnant women. Ginger steeping has also been proven effective in reducing symptoms of nausea and vomiting in first trimester pregnant women. This study aims to analyze the effect of giving ginger candy on nausea and vomiting in pregnant women. This research is a national literature review that was searched using Google Scholar with the keywords "nausea, vomiting", "ginger candy", and "pregnant women". Next, 5 national articles were selected. From all the articles it is known that there is an effect of ginger candy on reducing the level of nausea and vomiting in pregnant women.

Keywords: Pregnant Mother; Trimester 1; Pregnancy; Nauseous vomit; Ginger Candy



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Introduction

The extraordinary process in which a woman carries a developing embryo in her womb is known as pregnancy. This journey lasts the last 40 weeks, calculated from the last day of menstruation until delivery. The developing embryo is called a fetus, and the pregnant mother is called a gravida. Women who are pregnant for the first time are called primigravida. On the other hand, women who have never experienced pregnancy are referred to as gravida 0 [1]. Pregnancy occurs in three stages. The first stage begins at 13 weeks after fertilization; the second stage starts at week 14 to week 27; and the third stage begins at 28 weeks and ends at 40 weeks [2].

Many changes to the mother's body occur during pregnancy, including physical, psychological, and hormonal changes [3]. Changes in the digestive system, often characterized by nausea and vomiting, particularly in the morning, are a form of adaptation by the body of pregnant women. Morning sickness is the name of this condition [4]. About 80% of pregnant women experience vomiting and nausea [5]. During pregnancy, vomiting and nausea are usually mild and manageable. Usually, this problem improves in the first trimester [3].

When pregnant women experience hyperemesis gravidarum, they experience a lot of vomiting and nausea, different from the usual morning sickness. The vomiting experienced is much more severe and lasts longer, usually occurring in the first trimester of pregnancy [4]. Although the exact cause of Hyperemesis Gravidarum (HG) is not yet known, it is suspected that there is a relationship between increased levels of the hormones progesterone, estrogen and human chorionic gonadotropin (hCG) and the amount of vomiting and nausea in pregnant women [6].

Pregnant women can treat nausea and vomiting with pharmacological treatment, such as administering dimenhydrinate, vitamin B6 in safe doses [7]. However, many pregnant women refuse to use the drug because they are worried about its effects on the environment. As an alternative, many pregnant women choose traditional methods to treat nausea and vomiting, such as acupressure, aromatherapy, and the use of ginger [8].

Ginger, which is known as a popular medicinal plant and spice in Indonesia, has extraordinary benefits in reducing vomiting and nausea. Ginger's effectiveness stems from its ability to relax and warm the digestive tract muscles, alleviating stomach discomfort and nausea [9]. This is further enhanced by ginger's numerous active ingredients, including bitter resin, bisabolene, flandera, gingerol, zingiberol, zingiberene essential oil, curcumin, and vitamin A, which contribute to pain and nausea reduction. Additionally, serotonin, a neurotransmitter produced in both the central nervous system and the digestive tract, plays a role in lessening nausea and vomiting. [5].

Ginger candy can be a solution to overcome vomiting and nausea that occurs during the first trimester of pregnancy. Research shows that ginger has powerful antiemetic effects. This ginger candy contains ginger extract in an easy-to-consume form, is recommended to be consumed three times a day for six days, and is expected to reduce vomiting and nausea in pregnant women during the first trimester [10].

A study by Puspita et al. (2022) entitled "The Effect of Boiled Ginger Water (*Zingiber Officinale*) on Reducing Nausea and Vomiting in First Trimester Pregnant Women" investigated the efficiency of ginger tea for morning sickness. Out of 32 participants, only 15 met the criteria for the study. Initially, the mean rate of nausea and vomiting was 7.13 (considered moderate). However, after consuming ginger tea, this frequency dropped to 5.40 (considered mild). These findings suggest that ginger tea may be helpful in alleviating queasiness and retching during the initial of gestation. [11].

Methods

This investigation extensively analyzes the literature and examines how ginger candy can assist expectant mothers in the initial trimester to lessen and throwing up. This study includes journals published between 2016 and 2023 that discuss the effects of ginger candy on queasiness and retching in expectant mothers during the initial three months of pregnancy. Journals that are not open access and do not provide full text are excluded from this criterion. Research data was collected through a systematic literature review method, using Google Scholar as a data source.

Results and Discussion

"Ginger candy administration", "emesis gravidarum", and "pregnant women" were used to search for articles via Google Scholar. Of the 23 articles found, the researcher selected 5 articles that met the quasi-experimental design criteria. Of the selected articles, 2 articles were released in 2022, 2 articles were published in 2023, and 1 article was published in 2016.

Table 1. Review Results Table

No	Writer	Article Title	Literature Analysis
1	Lasria Yolivia Aruan dkk., 2022	"The Effect of Giving Ginger Candy on Hyperemesis Gravidarum in Pregnant Women at Misniarti Midwives in 2022" <i>"Pengaruh Pemberian Permen Jahe Terhadap Hiperemesis Gravidarum Pada Ibu Hamil Di Bidan Misniarti Tahun 2022"</i>	According to this research, ginger extract can help pregnant women reduce hyperemesis gravidarum infected with H. pylori. Ginger also possesses anti-inflammatory characteristics that aid in decreasing inflammation caused by H. Pylori infection.
2	Bahrah & Wigunarti, 2022	"The Effect of Ginger Candy on the Frequency of Nausea and Vomiting in First Trimester Pregnant Women" <i>"Pengaruh Permen Jahe terhadap Frekuensi Mual dan Muntah pada Ibu Hamil Trimester I"</i>	Studies indicate that consuming ginger candy alongside vitamin B6 for a week may assist in reducing nausea and vomiting experienced by expectant mothers in the initial trimester. Ginger candy offers a safe and convenient option for managing these symptoms.
3	Erna et al., 2023	"The Effect of Ginger Candy in Overcoming Complaints of Nausea and Vomiting in Pregnant Women" <i>"Pengaruh Permen Jahe dalam Mengatasi Keluhan Mual dan Muntah pada Ibu Hamil"</i>	During the initial trimester of pregnancy, ginger candy can help reduce vomiting and nausea.
4	Sumiati et al., 2023	"The Effect of Giving Ginger Candy (<i>Zingiber officinale</i>) on Emesis Gravidarum in Pregnant Women in the Working Area of the Sukaresmi	This study shows that ginger candy (<i>Zingiber officinale</i>) can help pregnant women reduce vomiting and nausea safely.

		Community Health Center, Cianjur Regency in 2023" "Pengaruh Pemberian Permen Jahe (Zingiber officinale) Terhadap Emesis Gravidarum Pada Ibu Hamil Di Wilayah Kerja Puskesmas Sukaresmi Kabupaten Cianjur Tahun 2023"	
5	Marlina & Astina, 2016	"The Benefits of Ginger Candy and Mint Candy in Overcoming Hyperemesis Gravidarum in Pregnant Women in the Working Area of the Sidomulyo Community Health Center, Pekanbaru" "Manfaat Permen Jahe dan Permen Mint dalam Mengatasi Hiperemesis Gravidarum pada Ibu Hamil di Wilayah Kerja Puskesmas Sidomulyo Pekanbaru"	Studies show that consuming both mint and ginger candies may aid in decreasing the occurrence of Ginger candy appears to be more effective, with an average reduction of 2.6 episodes compared to 1.67 episodes for mint candy.

Research by Lasria Yolivia Aruan et al., 2022 found that ginger candy significantly reduced hyperemesis gravidarum in pregnant women, based on a review of literature analysis tables. According to this study, 70% of people who consumed ginger candy experienced mild hyperemesis gravidarum. Ginger works by inhibiting serotonin receptors, which provides antiemetic effects, contains anti-inflammatory essential oils, improves gastrointestinal transport, and stops tumor necrosis factor (TNF) activity and cyclo-oxygenase 2 expression [12].

A study by Bahrah & Wigunarti (2022) investigated the effects of ginger candy on pregnant women in their first trimester. The study involved dividing twenty pregnant women into two groups. One group received both ginger candy and vitamin B6 for seven days, while the other group only received vitamin B6 for seven days. The results showed that the group that received a combination of ginger candy and vitamin B6 experienced less vomiting and nausea during the first trimester of pregnancy [8].

Erna et al. (2023) a research study was carried out to investigate whether ginger sweets could alleviate nausea and vomiting in expecting mothers. They gave 20 expectant mothers ginger candy to eat twice a day for four days. The study found that the ginger candy was safe and seemed to reduce queasiness and throwing up during the initial trimester. This is because the women scored an average

of 5.60 (with a standard deviation of 0.83) on a survey (PUQE) that measures how bad their nausea and vomiting were [13].

A research by Sumiati et al. (2023) showed ginger candy to be a safe and useful treatment for emesis gravidarum (morning sickness) expectant mothers in the initial trimester. The study included 62 participants divided into two groups. One group received ginger candy, while the other received regular candy. The results showed a clear difference between the groups, with an average of 1.55 episodes of emesis gravidarum in the ginger candy group compared to 2.26 episodes in the non-ginger candy group[10].

Marlina and Astina (2016) conducted research on the efficiency of ginger and mint candies in alleviating hyperemesis gravidarum in expectant mothers during the first trimester. This study involved thirty pregnant women who were separated into two categories. The initial group received ginger candy, while the latter group received mint candy. The results showed that both types of candy both reduced the level of hyperemesis gravidarum [6].

An additional study conducted by Franchisca Sihombing and Marzila Fahnawal (2021) at Raja Ahmad Tabib Hospital Tanjungpinang found that consuming two grams of ginger candy twice a day for four days could help pregnant women avoid vomiting and nausea. Gingerol provides these benefits because it blocks serotonin, increases digestive motility, increases saliva and bile secretion, and relaxes digestive muscles [14].

Numerous expectant mothers experience queasiness and throwing up, particularly in the initial months. For these symptoms, non-drug treatments like ginger can be a safer and more helpful choice than medications. Ginger can help expel gas from the stomach, alleviate bloating, enhance intestinal peristalsis, and has antiemetic properties supported by various scientific studies. Ginger is also rich in important nutrients such as potassium, magnesium and vitamin B6 which are beneficial for the health of pregnant women [15].

Conclusion

A review of research suggests ginger candy may be beneficial in alleviating nausea and vomiting, typical pregnancy signs particularly during the widespread initial Research shows that ginger candy alleviates nausea and vomiting in expectant mothers in the early stages of pregnancy. Additionally, ginger candy is considered safe and convenient to consume. Therefore, supported by strong scientific evidence, ginger candy can serve as a beneficial aid for expectant mothers in the stage to alleviate symptoms of queasiness and retching.

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