

THE EFFECTIVENESS OF GINGER HERBAL DRINK IN REDUCING THE FREQUENCY OF NAUSEA AND VOMITING IN THE FIRST TRIMESTER PREGNANT WOMEN

Ana Yuliana¹, Tiara Fatma Kumala², Dian Karisma Putri¹, Aureo Frutalegio da Costa Freitas³, Fabiola Francisca Martins Soares³

¹Universitas Duta Bangsa Surakarta, Jl. K.H Samanhudi No.93, Sondakan, Laweyan, Kota Surakarta, Jawa Tengah 57147, Indonesia

²Akademi Kebidanan Muslimat NU Kudus, Jl. Besito Kauman, Karangsembong, Bae, Kec. Bae, Kabupaten Kudus, Jawa Tengah 59333, Indonesia

³Instituto Superior Cristal, Dili, Timor Leste

*ana_yuliana@udb.ac.id

ABSTRACT

The incidence of nausea and vomiting is often experienced by pregnant women in the first trimester pregnant women. This is due to hormonal changes in early pregnancy. Efforts to reduce frequency of nausea and vomiting can be with food or drinks containing ginger. Ginger is kind of herbs which has been known to prevent nausea and vomiting. The purpose of this study was to analyse the effectiveness of ginger herbal drink in reducing the frequency of nausea and vomiting in the first trimester pregnant women. The design of this research is Pre-Experimental Design with one group pretest-posttest. The population in this study were first trimester pregnant women. The sample in this study amounted to 32 taken using total sampling. Collecting data used using an observation sheet filled in by the respondent for 2 weeks in the form of pre-post. Analysis of the data used wilcoxon test. The result of the study was the value of the statistical test output is known as the Asymp value. Sig. (2-tailed) is worth 0.000. Asymp Value. Sig. (2-tailed) < 0.005, it can be concluded that "H_a" is accepted, which means that there is a difference between the frequency of nausea and vomiting in pregnant women before being given ginger drink and after being given ginger drink. So it can be concluded "there is an effect between drinking ginger on the frequency of nausea and vomiting in pregnant women". Expected for the pregnant women can take advantage of ginger herbal drink as an alternative treatment to reduce the frequency of nausea and vomiting in the first trimester.

Keywords: first trimester pregnant women; ginger herbal drink; nausea and vomiting

INTRODUCTION

Pregnancy is a continuous chain and consists of ovulation, migration, spermatozoa, ovum, conception, zygote growth, nidation, placenta formation and growth and development of the products of conception until term (Manuaba, 2010). Pregnancy is a gift and something that is anticipated for every woman who has been married. Every pregnancy is basically a natural process. During pregnancy, a woman experiences hormonal changes in her body. Most of the pregnant women experience discomfort during pregnancy, either at the beginning or at the end of their pregnancy. At the beginning of pregnancy, not a few pregnant women complain of experiencing nausea and vomiting in the morning or often referred to as morning sickness, therefore pregnant women must always pay attention and maintain pregnancy from various complaints that occur (Soa, U. O. M., Amelia, R., & Octaviani, 2007).

Pregnancy is a reproductive process that requires special care, so that it can take place properly. The risk of pregnancy is dynamic, therefore pregnancy that was initially normal can suddenly become high risk. Many government programs have been launched in order to reduce the occurrence of high risks during pregnancy, including Integrated ANC surveillance. ANC plays an

important role in monitoring the physical and psychological health of pregnant women so that abnormalities or risks can be detected as early as possible during pregnancy. (Kundarti, F. I., Rahayu, D. E., & Utami, R., 2017).

Nausea and vomiting during pregnancy often occurs early in the mother's pregnancy. This is due to an increase in the hormone Human Chorionic Gonadotropin (HCG) in early pregnancy. This complaint of nausea and vomiting is a physiological thing, but if it is not given effective therapy it will become a pathological thing. The incidence of nausea and vomiting in pregnant women can also cause the mother's body to experience a lack of fluids and hemoconcentration occurs which can slow blood circulation so that it affects the growth and development of the fetus. As many as 50-75% of pregnant women experience nausea and vomiting in the first trimester of pregnancy. In Central Java alone, 40-60% of pregnant women experience nausea and vomiting (Kemenkes RI, 2017). Some women experience nausea and vomiting during their pregnancy. This takes place in the first week to the 16th week (4th month) (Matthews A, 2010). Midwives can suggest to drink milk before bed, consume dry biscuits, avoid spicy food, eat small portions but often, to maintain blood sugar levels. In addition, herbal and homeopathic medicines can also minimize discomfort due to nausea and vomiting conditions (Holmes, 2011).

Several efforts are suggested to reduce the frequency of nausea and vomiting in pregnant women, including the provision of food or drinks containing ginger (Bararah, 2011). Ginger is an herb that often grows in tropical areas such as Asia, and is one of the most important herbs for consumption. This ginger is cultivated for its rootstock (rhizome). Ginger has been used since ancient times both as a spice in the kitchen and as herbal medicine to treat various diseases, especially diseases related to the gastrointestinal tract, such as nausea, vomiting (emesis), diarrhea and dyspepsia, as well as diseases, including arthritis, muscle aches and fever (Lete, I., & Allué, J, 2016).

According to Putri's research (2017), pregnant women experience frequent nausea and vomiting after consuming ginger drinks. The advantage of ginger drink is that it contains essential oils which have the effect of blocking the gag reflex, while gingerol can improve blood flow. The fragrant aroma of ginger is produced by essential oils, while oleoresin causes a spicy taste that can warm the body. Based on the above principles, the authors are motivated to conduct research on the effectiveness of giving ginger drink to reduce the frequency of nausea and vomiting in first trimester pregnant women at Puskesmas, Sukoharjo District. This study aims to analyze the effectiveness of giving ginger drink to reduce the frequency of nausea and vomiting in first trimester pregnant women at Puskesmas Bulu, Sukoharjo District.

METHOD

This research was conducted at Puskesmas Bulu, Sukoharjo District. This study uses a pre-experimental research design that is one group pretest-posttest. This design was chosen according to the purpose of this study to determine the effectiveness of giving ginger herbal drink by reducing the frequency of nausea and vomiting in first trimester pregnant women. The research instrument used in data collection was a questionnaire distributed to pregnant women containing respondent data and the frequency of nausea and vomiting of mothers in a day. Ginger which is given in the form of syrup, which must be mixed with hot water, can be added with brown sugar or rock sugar as a sweetener. This ginger drink is consumed by pregnant women in the morning. Giving ginger is given every day for 2 weeks. Then the next day pregnant women were given another

questionnaire to determine the frequency of nausea and vomiting after being given ginger herbal drink. The data obtained from the questionnaire was then processed using the Wilcoxon statistical test to determine the effect of giving ginger herbal drinks to reduce nausea and vomiting in pregnant women. The data was obtained from a questionnaire given to pregnant women to determine the frequency of nausea and vomiting of pregnant women in a day.

RESULTS AND DISCUSSION

After conducting research on respondents for 2 weeks consuming ginger drinks once a day, the following results were obtained:

Table 1.
 The Effectiveness of Giving Ginger Drink with a Decrease in the Frequency of Nausea and Vomiting in First Trimester Pregnant Women

		N	Mean	Sum of Rank
Post Test - Pre Test	Negative Ranks	30 ^a	15,50	465,00
	Positive Ranks	0 ^b	,00	,00
	Ties	2 ^c		

- a. Post Test < Pre Test
- b. Post Test > Pre Test
- c. Post Test = Pre Test

Output pertama “Ranks”

1. Negative Ranks or the negative difference between the frequency of nausea and vomiting before being given a ginger drink and after being given a ginger drink is 30, a value of 30 indicates that there are 30 pregnant women who experienced a decrease (reduction) in the frequency of nausea and vomiting before being given a ginger drink and after being given a ginger drink. The Mean Rank value or the average decrease is 15.50. While the number of negative ranks or Sum of Ranks is 465.00.
2. Positif Ranks atau selisih (positif) antara frekuensi mual muntah sebelum diberikan minuman jahe dan setelah diberikan minuman jahe adalah 0. Terdapat 0 data positif (N) yang artinya tidak ada ibu hamil yang mengalami peningkatan frekuensi mual muntah setelah diberikan minuman jahe.
3. Ties value (similarity of pre-test and post-test scores) is 2 so it can be said that there are 2 pregnant women whose scores are the same between pre-test and post-test,

Table 2.
 Wilcoxon Test

	Post Test-Pre Test
Z	-4,805 ^a
Asymp Sig. (2-tailed)	,000

- a. Based on positive ranks.
- b. Wilcoxon Signed Ranks Test

Based on the statistical test output value, the Asymp value is known. Sig. (2-tailed) is worth 0.000. Asymp Value. Sig. (2-tailed) < 0.005, it can be concluded that "Ha" is accepted, which means that there is a difference between the frequency of nausea and vomiting in pregnant women before

being given ginger drink and after being given ginger drink. So it can be concluded "there is an effect between drinking ginger on the frequency of nausea and vomiting in pregnant women"

The Effectiveness of Ginger Herbal Drink in Reducing the Frequency of Nausea and Vomiting in the First Trimester Pregnant Women. The consequence that is often overlooked is that in the first trimester pregnant women experience almost 50-90% nausea and vomiting. This is due to increased levels of the hormones estrogen and progesterone produced in the placental serum HCG (Human Chorionic Gonadotropin). Actions to overcome these complaints can be suggested traditional actions, namely consuming ginger can be in the form of tea, drinks, aromatherapy, sweets and relaxation techniques. This ginger therapy is very successful in reducing nausea and vomiting because ginger contains essential oils.

The results of the above study indicate a decrease in the frequency of nausea and vomiting in pregnant women after consuming ginger drinks for 2 weeks. This is shown based on the value of the statistical test output known as the Asymp value. Sig. (2-tailed) is worth 0.000. Asymp Value. Sig. (2-tailed) < 0.005, it can be concluded that "Ha" is accepted, which means that there is a difference between the frequency of nausea and vomiting in pregnant women before being given ginger drink and after being given ginger drink.

Another study also showed the effect of giving ginger with cases of emesis in pregnant women. Research conducted by Lete, I., & Allué, J. (2016) which aims to analyze the effectiveness of ginger plus honey drink in reducing the frequency of nausea and vomiting in the first trimester of pregnancy. Methods: This study was a quasi-experimental study, with a pre-post design. test control group design by assessing the frequency of nausea and vomiting before and after treatment with the control group. The results of the Friedman statistical test obtained $p = 0.000$. There is a significant difference between scores before and after treatment, the lowest Wilcoxon rank test results in the ginger drink plus honey treatment with $z = -2.232$

Another study was conducted by Maframi, R. (2022) in Air Teluk Kiri Village. The conclusion of this research is that there is an effect of ginger candy on reducing nausea and vomiting in first trimester pregnant women in Air Teluk Kiri Village. It is hoped that ginger candy can be an alternative choice in overcoming emesis gravidarum in pregnant women in 2022. The tool used to measure nausea and vomiting is an observation sheet. The data were collected by the researchers themselves and the data were analyzed univariately and bivariately using the Mann Whitney test. The results showed that there was an effect of ginger candy on emesis gravidarum in pregnant women with a p value ($p = 0.001, = 0.05$). Conclusions from this study There is an effect of ginger candy on reducing nausea and vomiting in first trimester pregnant women in Air Teluk Kiri Village.

The results of this study are also in line with research that describes the administration of ginger drink therapy showing that there is an effect of giving warm ginger drinks on emesis gravidarum in the intervention group and control group in first trimester pregnant women at the Nalumsari Health Center Jepara (Wulandari, D. A., Kustriyanti, D., & Aisyah, R. 2019). Research conducted by Putri, A. D., Haniarti, H. N. I., & Usman, U. S. N., 2017 showed that the characteristics of the respondents were found that most of the respondents aged 26-30 years were 11 people (32.4%). The majority of respondents parity who do not have children is 14 people (41.2%). 97.1% of respondents are housewives and 18 people (52.9%) have a high school education. After being given

warm ginger drink, the frequency of nausea and vomiting in respondents decreased from 13 times to 3.8 times per day. So that giving warm ginger drink is effective in reducing the frequency of nausea and vomiting in first trimester pregnant women.

CONCLUSION

There is an effect of giving ginger herbal drink with a decrease in the frequency of nausea and vomiting in pregnant women in the first trimester at Puskesmas Bulu, Sukoharjo District.

REFERENCES

- Bararah, V.F. (2011). Jahe Kurangi Gejala Mual Muntah Ibu Hamil di Pagi Hari (<http://health.detik.com/read/2011/05/14/100514/1639685/jahe-kurangi-gejala-mual-muntah-ibu-hamil-di-pagi-hari>)
- Campbell, K., Rowe, H., Azzam, H., & Lane, C. A. (2016). The management of nausea and vomiting of pregnancy. *Journal of Obstetrics and Gynaecology Canada*, 38(12), 1127-1137.
- Handayani, E., Td, H., Pujiastuti, W., Muis, F., Suherni, T., & Astuti, A. Effectiveness of Ginger Plus Honey Drink to Reduce the Frequency of Nausea and Vomiting in the First Trimester Pregnancy.
- Kundarti, F. I., Rahayu, D. E., & Utami, R. (2017). Efektifitas pemberian serbuk jahe (*Zingiber Officinale*) terhadap tingkatan mual muntah pada ibu hamil. *Jurnal Ilmu Kesehatan*, 4(1), 18-30.
- Lete, I., & Allué, J. (2016). The effectiveness of ginger in the prevention of nausea and vomiting during pregnancy and chemotherapy. *Integrative medicine insights*, 11, IMI-S36273.
- Maframi, R. (2022). The Effectiveness Of Ginging Ginger Candy Towards Nausea And Vomiting In Pregnant Women In Air Teluk Ki Village In 2022. *Science Midwifery*, 10(2), 636-641.
- Manuaba, I.A.C. (2008). *Buku Ajar Patologi Obstetri Untuk Mahasiswa Kebidanan*. Jakarta : EGC
- Matthews A, Dowswell T, Haas DM, Doyle M, O'Mathuna DP.(2010).Intervension For Nausea and Vomiting in Early Pregnancy (Review). *The Cochrane Collaboration* : John Wiley&Sons,Ltd.
- Mayoclinic Staff. (2011). Working during pregnancy: do's and Don'ts.accesed 24thFebruary 2013 (<http://www.mayoclinic.com/health/pregnancy/WL00035>)
- Nordeng, H., Bayne, K., Havnen, G. C., & Paulsen, B. S. (2011). Use of herbal drugs during pregnancy among 600 Norwegian women in relation to concurrent use of conventional drugs and pregnancy outcome. *Complementary therapies in clinical practice*, 17(3), 147-151.
- Putri, A. D., Haniarti, H. N. I., & Usman, U. S. N. (2017). Efektifitas pemberian jahe hangat dalam mengurangi frekuensi mual muntah pada ibu hamil trimester i. In *Prosiding Seminar Nasional*

IKAKESMADA “Peran Tenaga Kesehatan dalam Pelaksanaan SDGs” (pp. 99-105). Fakultas Kesehatan Masyarakat Universitas Ahmad Dahlan.

Soa, U. O. M., Amelia, R., & Octaviani, D. A. (2018). Perbandingan Efektivitas Pemberian Rebusan Jahe Merah Dan Daun Mint Dengan Jeruk Nipis Dan Madu Terhadap Mual Muntah Pada Ibu Hamil Trimester I Di Puskesmas Waepana, Ngada, NTT. *Jurnal Kebidanan*, 8(2), 157-167.

Wulandari, D. A., Kustriyanti, D., & Aisyah, R. (2019). Minuman Jahe Hangat Untuk Mengurangi Emesis Gravidarum Pada Ibu Hamil Di Puskesmas Nalumsari Jepara. *Jurnal SMART Kebidanan*, 6(1), 42-47.