

Effectiveness of Ginger and Lemon Generation on Nau, Vovoging in Trimester I Pregnant Women

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ABSTRACT

Nausea and vomiting in pregnancy if not treated properly can cause other problems, namely Hyperemesis gravidarum. Hyperemesis gravidarum and other complications of Hyperemesis gravidarum can cause birth defects and abortion. Data from the Ciomas Health Center showed that around 60-90% of pregnant women in the first trimester complain of nausea and vomiting every year. The research method used a quasi-experimental design with one group pre-posttest. The sample in this study was 30 pregnant women in the first trimester. The sampling method in this study was non-probability sampling in the form of accidental sampling. The research instrument used a questionnaire. Bivariate analysis used paired t-test. The average frequency of nausea and vomiting in the first trimester of pregnant women before consuming ginger and lemon was 6 times within 24 hours and after consuming ginger and lemon every day for 2 weeks, the average frequency of nausea and vomiting was 3 times within 24 hours. The results of statistical tests showed that giving ginger and lemon juice was effective in reducing the frequency of nausea and vomiting in the first trimester pregnant women with a p value = 0.000.

INTRODUCTION

Pregnancy is a condition in a woman's uterus where there are products of conception (the meeting of the ovum and spermatozoa). Pregnancy is a natural and physiological process. Pregnancy is an event that is always wanted by every married couple, starting from the beginning of pregnancy preparations have been made to welcome the birth of the baby. Currently pregnant women already understand how to maintain body condition for the smooth running of pregnancy and the development of the fetus in the womb. In every pregnancy there are changes in a woman's entire body, especially in the external and internal genital organs, as well as in the breasts. Pregnancy causes hormonal changes in the mother because there is an increase in the hormone estrogen, progesterone which is produced by Human Chronic Gonadotropin. These hormones are thought to cause emesis gravidarum, but every mother has a different response to these hormonal changes so not all women experience emesis gravidarum (Henukh, et al 2019).

The incidence of emesis gravidarum reaches 14% of all pregnant women in the world (WHO, 2018). Based on research conducted by (Heitmann et al., 2016) using a cross-sectional method in 9113 pregnant women in 5 European, American and Australian countries, it was stated that 73.5% of pregnant women experienced emesis during pregnancy. Based on the results of the 2017 Indonesian Demographic Health Survey (IDHS) that as many as 50% - 75% of pregnant women experience nausea and vomiting in the first trimester or early in pregnancy and women with hyperemesis gravidarum reach 14.8% of all pregnancies. Symptoms of nausea and vomiting occur approximately 6 weeks after the first day of the last menstruation and last for approximately 10 weeks, occurring 60-80% in primigravidas and 40-60% in multigravidas (RI Ministry of Health, 2019). Study Shanti et al. (2018) mentions that around 50-90% of pregnant women experience complaints of nausea and vomiting that starts at week 9 of pregnancy until week 10, gets worse at week 11 and 13, and ends at week 12 to 14. Only at 1-10 % of pregnancies continuing past 20 to 22 weeks.

Based on the results of a report from the Banten Provincial Health Office in 2020 that the incidence of emesis gravidarum is around 50-80% and hyperemesis gravidarum is 10-15%. (Banten Health Office, 2020). Meanwhile in Serang District it was reported that the incidence of nausea and vomiting in pregnant women in the first trimester was around 60-90% with cases of hyperemesis gravidarum as much as 13.8%. (Serang District Health Office, 2020). In early pregnancy, many mothers experience complaints of nausea, vomiting, especially in the morning, which is known as morning sickness or in medical language known as emesis gravidarum. Complaints of nausea and vomiting in emesis gravidarum are physiological matters, but if these complaints are not immediately resolved, they will become pathological (Henukh, et al 2019).

The causes of nausea and vomiting are related to hormonal factors, the vestibular system, digestion, psychological, genetic and evolutionary factors. In addition, the causes of nausea and vomiting are caused by psychological factors, such as unplanned, uncomfortable or unwanted pregnancies, workload

will cause mental suffering and conflict. Feelings of guilt, anger, fear and anxiety can increase the severity of nausea and vomiting (Sukarni, 2019). Emesis gravidarum usually appears at 4–9 weeks of pregnancy, reaches its peak at 9–12 weeks and often subsides at 16 weeks. If pregnant women who experience emesis gravidarum do not get proper treatment it can cause other problems, namely Hyperemesis gravidarum which results in disturbances in the body's metabolism which will increase the risk 2 times greater giving birth to preterm babies with lower body weight than women who do not experience Hyperemesis gravidarum and other complications from Hyperemesis gravidarum can cause defects in babies and abortion. Therefore it is necessary to treat emesis 3 gravidarum so that it does not continue to become Hyperemesis gravidarum (Sukarni, 2019).

Efforts to reduce the frequency of vomiting can be given several pharmacological and non-pharmacological actions. Pharmacologically, given vitamin B6, vitamin B Complex, and others. In non-pharmacological terms, it is by taking preventive measures and using traditional medicine or using complementary therapies, including herbal or traditional plants that can be done and easily obtained, such as ginger, peppermint leaves, lemon and so on (Wulandari, et al 2019). Ginger is a herbal plant, pseudo-trunked with a length of 30-75cm. Ginger is spread almost throughout the wet tropics, including Indonesia. The content in ginger contains the essential oil of Zingiberene (zingirona), zingiberol, bisabilena, kurkumen, gingerol, flandrena, vitamin A and bitter resin which can block serotonin, a neurotransmitter that is synthesized in serotonergic neurons in the central nervous system and brain cells. enterochromaffin in the digestive tract so that it is believed to be able to give a feeling of comfort in the stomach so that it is believed to be a feeling of comfort in the stomach so that it can overcome nausea and vomiting (Afriyanti, 2017).

Ginger as a type of herbal plant has many advantages compared to other herbal plants, especially for pregnant women who are experiencing nausea and vomiting. The first advantage of ginger is that it contains flying oil (essential oil) which is refreshing and blocks moderate vomiting reflexes, so that gingerol can improve blood circulation and the nerves work properly. Apart from ginger, which has known benefits for treating nausea and vomiting, oranges can be used as an alternative option because oranges have various variants and also contain other substances that are beneficial to the body such as pectin, lycopene, flavonoids, niacin. The content of these flavonoids increases the production of bile, flavonoids will neutralize digestive juices which can reduce nausea. (Dalimartha and Adrian, 2013).

Based on data obtained from the Ciomas Health Center, Serang Regency, it shows that around 60-90% of pregnant women in the first trimester complain of nausea and vomiting every year, while the incidence of *hyperemesis gravidarum* in the last 3 years it has increased, namely in 2019 there were 46 (13.03%) of 353 pregnancies and in 2020 there were 53 (15.18%) of 349 pregnancies, in 2021 there will be 61 (15.88%) of 384 pregnancies. The coverage of pregnant women aged 0-12 weeks who visited the Ciomas Health Center for

the January-October 2022 period reached 327 people and 82.6% of pregnant women complained of nausea to vomiting with incidents of *hyperemesis gravidarum* as much as 12.53% (Ciomas Health Center, 2022). Based on the description above, the authors are interested in conducting research on the Effectiveness of Giving Ginger and Lemon Oranges Against Nausea, Vomiting in First Trimester Pregnant Women at the Ciomas Health Center in 2022.

IMPLEMENTATION AND METHODS

This study used a quasi-experimental method with a one group pre-posttest design approach, in this design the researcher only intervened in one group without a comparison. The effectiveness of the treatment was assessed by comparing the posttest and pretest values (Sugiyono, 2014). The basic calculation in determining the effectiveness of the treatment is by differentiating the average value between O1 and O2. In the early stages, researchers will examine the average frequency of nausea and vomiting in first trimester pregnant women before consuming ginger and lemon juice (pretest). In the final stage the researchers reviewed the average frequency of nausea and vomiting in first trimester pregnant women after consuming ginger and lemon (posttest).

RESULTS AND DISCUSSIONS

Univariate Analysis

Table 1. Frequency Distribution of Characteristics of First Trimester Pregnant Women in the Work Area of the Ciomas Health Center, Serang Regency

Characteristics of Respondents	Frequency (f)	Percentage (%)
Age		
< 20 yrs / > 35 yrs	14	46.7
20 - 35 years	16	53.3
Total	30	100
Parity		
Primipara	17	56.7
Multipara	13	43.3
Total	30	100
Profession		
IRT	18	60
Working	12	40
Total	30	100
Gestational Age		
1 week	0	0
2 weeks	0	0

3 weeks	0	0
4 weeks	0	0
5 weeks	0	0
6 weeks	2	6.7
7 weeks	3	10
8 weeks	7	23.3
9 weeks	5	16.7
10 weeks	6	20
11 weeks	3	10
12 weeks	4	13.3
13 weeks	0	0
Total	30	100

Based on Table 5.1 it can be concluded that, the characteristics of the respondents seen from the age variable showed that most were aged 20 years - 35 years, namely 53.3%, at parity most of the respondents were primiparas or first pregnant by 56.7%, while most of the jobs respondents did not work or were only housewives by 60%, then at gestational age most of the respondents had an 8 week gestational age of 23.3%.

Table 2. Distribution of the Use of Ginger and Lemon on Nausea and Vomiting in First Trimester Pregnant Women at the Ciomas Health Center, Serang District

Use of Ginger and Lemon	Frequency (f)	Percentage (%)
Regular	3	10
Irregular	27	90
Total	30	100

Based on Table 5.2 it shows that most pregnant women consume ginger and lemon regularly, namely 90%

Table 3. Average Frequency of Nausea and Vomiting in First Trimester Pregnant Women Before and After Consuming Ginger and Lemon Oranges in the Work Area of the Ciomas Health Center, Serang Regency

Frequency of Nausea and Vomiting	N	M	SD	Min	Max
Pre-test	30	6,47	1.38	4	9
Post-test Week 1		4.90	1.02	3	7
Post-test Week 2		3,33	0.54	3	5

Based on Table 5.3 it shows that, the average frequency of nausea and vomiting in pregnant women in the first trimester before consuming ginger and lemon is 6 times within 24 hours and after consuming ginger and lemon juice

every day for the first week, the average frequency of nausea and vomiting decreased to 4 times within 24 hours, and after consuming ginger and lemon juice every day for the second week, the average frequency of nausea and vomiting decreased to 3 times within 24 hours.

Bivariate Analysis

Table 4. The Effectiveness of Giving Ginger and Lemon Orange Nausea and Vomiting to First Trimester Pregnant Women in the Work Area of the Ciomas Health Center, Serang Regency

Variable	Pre-test		Post-test		M-Df	Q	P-value
	M	SD	M	SD			
Nausea and Vomiting in Pregnant Women	6,47	1.38	3,33	0.54	3,133	15,099	0.000

*M = Mean; SD = Standard Deviation; M-Df = Mean-Differences

Based on the data from Table 5.4 above, it shows that there is a decrease in the frequency of nausea and vomiting in pregnant women in the first trimester after consuming ginger drink (\pm 250 mg ginger + 50 ml hot water + 1 tablespoon of sugar) twice a day in the morning and evening and consuming orange juice lemon (1 lemon + 1 cup warm water + 1 tablespoon sugar) once a day every day for 2 weeks. With the average frequency of nausea and vomiting before treatment is 6 times and after treatment is 3 times within 24 hours. The results of the statistical test analysis obtained p-value = 0.000 ($< \alpha$ 0.05), meaning that consumption of ginger and lemon is effective in reducing the frequency of nausea and vomiting in first trimester pregnant women in the Ciomas Health Center Work Area, Serang District.

Respondents' awareness at the Ciomas Health Center regarding safe pregnancies was high, judging by the age of the majority of respondents who were at a safe age for pregnancy (20 years-35 years) of 53,3%. These results are in accordance with Manuaba (2005) that a high-risk pregnancy is less than 20 years and above 35 years. The average gestational age of the respondents was 8 weeks, which was 23.3%. During the early trimester of pregnancy, serum hCG levels increase, with a sudden rise in hormone levels it can cause a painful effect on the stomach in the form of nausea (Tiran, 2017). As many as 56.7% of pregnant women in the respondents were primiparas greater than multivaras. This is in accordance with Solikhah (2015) that emesis gravidarum occurs around 60-80% in primigravidas and 40-60% occurs in multigravidas.

According to Chittuma (2007) emesis gravidarum often occurs in pregnant women who are among the family or in work routines. This is in accordance with this study that the majority of pregnant women work as housewives, namely 60%. Based on the results of this study showed that there was a decrease in the frequency of nausea and vomiting in the first trimester pregnant women after treatment, where in the first trimester pregnant women before consuming ginger and lemon, the average frequency of nausea and

vomiting was 6 times within 24 hours and after consuming ginger drink (\pm 250 mg of ginger + 50 ml of hot water + 1 tablespoon of sugar) twice a day morning and evening and consuming lemon juice (1 lemon + 1 glass of warm water + 1 tablespoon of sugar) once a day every day for 2 weeks is 3 times within 24 hours. The results of bivariate analysis showed that the consumption of ginger and lemon was effective in reducing the frequency of nausea and vomiting in first trimester pregnant women in the Working Area of the Ciomas Health Center, Serang Regency.

Based on the results of filling out the questionnaire by the respondents related to the frequency of nausea and vomiting before the (pre-test) intervention was carried out giving ginger and lemon, respondents filled out three questions in the questionnaire with the answers that the average frequency of nausea and vomiting for 24 hours was 6-7 times. Researchers again gave the same questionnaire after 14 days of intervention with ginger and lemon (post-test) with the results of the answers obtained were the average frequency of nausea and vomiting 3-4 times for 24 hours. In accordance with the results of Novitasari and Kusmiyanti's research (2021) results were obtained with students' self-concepts in the positive category both academically, socially, emotionally, family, and physically. Amalia (2019) in her research obtained results with self-concept in the positive category of 55.3%. The results of further research conducted by Tunnisa (2019) found that the majority of orphanages had a moderate level of self-concept, namely 33 (68.7%). Likewise with research results Yunalia (2019) it can be interpreted that almost all respondents have a positive self-concept, namely as many as 39 respondents (86.7%). Octarina (2022) in her research the self-concept of young women felt by teenagers in the village of Pongkai Istiqomah, District XIII Koto Kampar, Kampar Regency, which they experienced were generally in the moderate category.

The researcher assumes that the self-concept of young women is in the positive category, this is because they have an optimistic attitude, have self-confidence, are able to accept with pleasure the physical changes that occur, act based on judgments about good things, have confidence and ability to overcome various problems experienced. This can be seen from the results of the research that they strongly agree if they are able to overcome all the problems they face, like to help others, feel lucky like everyone else, and have the same advantages as other people. This condition occurs because while at school they have a group of friends who agree in their thoughts so they feel they need each other and care for each other..

Frequency Distribution of Acceptance of Physical Changes in Young Girls during Puberty at SMP 103 Jakarta in 2022

Based on the results of the study in table 5.1, it is known that of the 78 respondents, the majority of young women's self-concept was positive, as many as 41 people (52.6%), and acceptance of physical changes for young women was high, as many as 43 people (55.1%).

According to Santrock (2019) During the rapid growth of puberty, four important physical changes occur where the child's body changes body size,

changes in body proportions, development of primary and secondary sex characteristics. Acceptance of physical changes is an individual's attitude in accepting physical changes in himself and feeling satisfied with what he has, not rejecting his own condition and believing in his appearance without anxiety. (Hurlock, 2020). Sheerer uses aspects of self-acceptance that have been modified by Berger in Fitri et al., (2017) including having beliefs according to one's capacity to deal with one's life, being responsible and accepting the consequences of one's behavior, receiving praise or criticism from others objectively, does not try to deny or deceive his own feelings, motives, limitations, abilities or qualifications, but he accepts himself without self-condemnation, assuming that he is also in the same position as others. According to Hurlock (2020) the factors that influence self-acceptance are family and peer relationships.

In accordance with the results of Amalia's research (2019) the results of good self-acceptance were 54.3%. Tunnisa (2019) in his research, the majority of Bukesra orphanage youth have a moderate level of self-acceptance, namely 30 (62.5%). Likewise with research results Yunalia (2019) almost all respondents had a good acceptance of physical changes, namely as many as 38 respondents (84.4%). The same conditions are carried out by Octarina (2022) in his research the self-acceptance of young women felt by adolescents in the village of Pongkai Istiqomah, District XIII Koto Kampar, Kampar Regency, which they experienced were generally in the good category.

Researcher assumes that the acceptance of physical changes in young women is in the good category, this is due to the support from various parties both from family, peers and from teachers as educators and mentors for their students while at school. this can be seen from the results of the questionnaire, almost all of them agreed that they felt their friends enjoyed playing with them even though there was a physical change in him, seeing all his friends were kind to him, teachers at school did not compare one student to another, his family was happy to her, and happy to be home. It can be seen that the presence of solid peers, a supportive family and good and fair teachers are able to increase one's self-confidence and are able to influence individual behavior patterns in everyday life.

Relationship between Self-Concept and Acceptance of Physical Changes in Young Women during Puberty at SMP 103 Jakarta in 2022

The results of the Chi-Square test obtained a value of $p = 0.000 < 0.05$, which means that there is a significant relationship between self-concept and acceptance of physical changes in female adolescents during puberty in JUNIOR HIGH SCHOOL 103 Jakarta in 2022. The OR value is 6.458, so that it can be stated that young women with a positive self-concept have 6.458 times the chance to accept physical changes in the high category compared to young women with a negative self-concept. Anderson deep Hernianingsih & Astutik (2019) states that self-acceptance of physical changes means that individuals have succeeded in accepting their strengths and weaknesses as they are. One of the factors related to self-acceptance is self-concept obtained from experience and the learning process. Changes in physical condition affect self-concept as

the main cause low self-esteem and self-confidence (Niven, 2019). Self-acceptance is the basis for a person in setting goals that are considered important as a way of obtaining happiness in the short and long term (Laura, 2020).

In accordance with the results of Novitasari and Kusmiyanti's research (2021), it was found that there is a relationship between self-concept and self-acceptance with a p value of 0.000. If the correlation is positive, then the explanation is that the higher a person's value in self-conceptualization, the higher the value in one's self-acceptance, this applies to the opposite. Amalia (2019) found that there is a relationship between concepts self with self-acceptance with a p value of 0.000. The correlation is positive, so the explanation is that the higher a person's value in self-conceptualization, the higher the value in one's self-acceptance, this applies to the opposite. Tunnisa (2019) the results of the analysis of this study also show a significance value of $p=0.000$ ($p<0.05$). This shows that the hypothesis put forward in this study is accepted, namely that there is a significant relationship between self-concept and self-acceptance in adolescents with disabilities at Bukesra Ulee Kareng in Banda Aceh City.

This positive relationship indicates that high self-concept in adolescents with disabilities will increase self-acceptance. Conversely, low self-concept in adolescents with disabilities will reduce self-acceptance. Yunalia (2019) regarding the relationship between self-concept and acceptance of physical changes in young women during puberty shows that the majority of respondents who have a positive self-concept have good acceptance of physical changes (60%). Based on the results of the Spearman Rank analysis test, the P-value was $0.000 < 0.05$ with a correlation coefficient of 0.585 so that H_0 was rejected and H_1 was accepted. This indicates that there is a relationship between self-concept and acceptance of the physical changes of adolescents during puberty. Octarina (2022) In her research, the self-concept and self-acceptance of young women felt by adolescents in Pongkai Istiqomah Village, XIII Koto Kampar District, Kampar Regency, were generally experienced in the moderate category. Obtained a significance value of 0.000. This means that there is a positive relationship between self-concept and self-acceptance in young women in Pongkai Istiqomah Village. The higher the self-concept, the better self-acceptance in young women.

Researchers assume that there is a relationship between self-concept and self-acceptance in young women in physical changes, this is caused by teenagers with good self-acceptance they will feel happy wherever they are, able to develop themselves even though there are limitations in living their life. They will see themselves from a positive perspective without looking at negative things because of acceptance from outsiders towards themselves without feeling inferior. Young women also will not see themselves as individuals who are different from other people because they feel that they are the same as other people. Conditions like this can increase the self-esteem of young women and can reduce feelings of inadequacy in them.

CONCLUSIONS AND RECOMMENDATIONS

1. The average frequency of nausea and vomiting in first trimester pregnant women before consuming ginger and lemon is 6 times within 24 hours.
2. The average frequency of nausea and vomiting in first trimester pregnant women after consuming ginger and lemon every day for 2 weeks, is 3 times within 24 hours.
3. Statistical test results showed that giving ginger and lemon juice was effective in reducing the frequency of nausea and vomiting in first trimester pregnant women in the Working Area of the Ciomas Health Center, Serang Regency.

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