



COMPARATION THE EFFECTIVENESS OF BOILED GINGER AND ORANGE JUICE IN REDUCING EMESIS GRAVIDARUM IN PREGNANT MOTHER

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A B S T R A C T

Teenagers who experience dysmenorrhea are caused by uterine muscle spasms, dysmenorrhea is a normal condition that occurs in women who are experiencing menstruation, pain dysmenorrhea appears can be influenced by psychological factors and physical factors such as stress and tiredness, because teenagers are stressed, the body will produce adrenaline, estrogen, progesterone and prostaglandin hormones that are excessive. Estrogen can cause an increase in excessive uterine contractions while progesterone inhibits contraction. This excessive contraction causes pain during menstruation. One of the non-pharmacological treatments for dysmenorrhea is by giving white turmeric drink. This study aims to look at the effect of giving white turmeric juice drinks to dysmenorrhea in adolescents of class VIII at SMPN 4 Sarolangun. This type of research is an experimental study with a quasi-experimental design with a research design of one group pretest-posttest. The population was all girls in class VIII as many as 41 people. The number of samples obtained is as many as 8 people. Collection data through question and answer and pain measurement used Wong faces pain rating scale and numeral rating scale (NRS). Univariate analysis showed the average value of the Pre-test is 6.88 and the average value of the Post Test is 4.13. bivariate using Dependent t-Test obtained p-Value 0,000 ($p < 0.05$) means H_a accepted. So it was concluded that there was an effect of giving white turmeric juice drinks to dysmenorrhea in adolescent girls at Sarolangun Junior High School 4. It is expected that adolescents will apply intervention as a way to deal with the pain of dysmenorrhea during menstruation.

I. INTRODUCTION

Pregnancy is defined as fertilization or union of spermatozoa and ovum, followed by nidation or implantation (Prawirohardjo, 2016). In the process of pregnancy there is an anatomical physiological change, in addition to these changes pregnant women experience discomfort in pregnancy such as fatigue, vaginal discharge, cravings, frequent urination (emesis gravidarum). The changes above occur due to an imbalance of the hormones progesterone and estrogen which are female hormones in the mother's body since the occurrence of pregnancy. Some complaints that make mothers feel uncomfortable include nausea, vomiting, if not treated properly it will have a negative impact on the mother and baby (Dhilon, et al, 2018).

Emesis gravidarum is a common complaint made at an early pregnancy. The occurrence of pregnancy results in hormonal loss in women due to the presence of the hormone estrogen, progesterone, and the release of the human chorionic gonadotropine placenta. Clinical symptoms of emesis gravidarum are dizziness, especially in the morning, accompanied by nausea, vomiting until 4 months of pregnancy (Manuaba, 2013).

The cause of the emesis gravidarum to date cannot be known with certainty. Some say that the feeling of nausea is caused by increased levels of the hormones estrogen and HCG (Chorionic Gonadotrophine Hormone) in serum (Manuaba, 2013). Every pregnant woman will have different degrees of nausea, some do not feel anything, but there are also those who feel nauseated and some who feel very nauseous and want to vomit at any time (Manuaba, 2013).

In the United States and Canada around 400,000 and 350,000 pregnant women experience nausea and vomiting every year. In western countries and city dwellers, According to Hernawati, et al 2014 in Dhilon, et al 2018 in Cianjur, Indonesia there were 69.2% of pregnant women who experienced nausea and vomiting during pregnancy, from 52 samples taken (Dhilon, et al, 2018).

Based on the description from the background above and in accordance with the data submitted by Hasnah (2013) obtained an average of 50% of pregnant women experience nausea in early pregnancy. Nausea and vomiting in first trimester mothers in the community still occur and how to overcome some of it is still using pharmacological therapy or let it stand. This emesis gravidarum causes a decrease in appetite so that there is a change in the balance of electrolytes with potassium, calcium and sodium which causes changes in the body's metabolism (Hasnah, 2013).

The feeling of nausea in early pregnancy can be reduced by using complementary therapies such as herbal or traditional plants that can be done and easily obtained such as

peppermint leaves, lemons, ginger, bark, etc. Salak pharmacological functions one of which is antiemetic (anti-emetic) (Ira, 2012).

Ginger is a material that is able to release gas from the stomach, this will relieve flatulence. Ginger is also a strong aromatic stimulant, besides being able to control vomiting by increasing intestinal peristalsis. About six compounds in ginger have been shown to have antiemetic activity (anti-emetic) that works. The action of these compounds is more directed at the stomach wall than the central nervous system (Budhwaar, 2006). The nutrients contained in ginger are potassium 3.4%, magnesium 3.0%, copper 3.0%, manganese 3.0%, and vitamin B6 (pyridoxine) 2.5% (Dept Nutritional Profile, 2008). One teaspoon of fresh grated ginger or 250 mg capsules of powdered ginger taken when nausea and vomiting strike can provide immediate relief (Budhwaar, 2009).

Research by Chopra found that three out of four pregnant women feel nausea reduced thanks to ginger, without any harmful side effects (Chopra, et.al 2009). If pregnant women tend to be lazy to drink steeping ginger with the reason of being lazy to make it and not like its slightly spicy taste, then you can use grapefruit juice instead. The taste of fresher oranges can be used as an alternative to reduce nausea that is common in trimester I pregnant women. Citrus fruits also contain other substances that are beneficial to the body such as pectin, lycopene, flavonoids, niacin. The content of flavonoids is what increases the production of bile, flavonoids will neutralize acid digestive fluid which can reduce nausea. It would be better if the community, especially pregnant women are able to overcome the problem of nausea in early pregnancy by using complementary non-pharmacological therapies first.

Based on preliminary survey data at the Koto Alam Health Center in Agam District from interviews with 7 pregnant women that the mother experienced trimester 1. nausea vomiting. She did not know how to handle nausea and vomiting in non-pharmacological ginger steeping with orange juice. They prefer to manage nausea and vomiting by taking Tablet Fe medicine. Based on the above problems, the authors are interested in researching "Effectiveness of Ginger Brewing with Citrus Juice Against Nausea Vomiting Complaints of Trimester I Pregnant Women in Koto Alam Health Center, Agam Regency"

II. METHODS

This type of research is experimental or experimental research, which is a study by conducting experimental activities (experiment), which aims to determine the symptoms or effects that arise as a result of the existence of certain treatments or experiments. The design of this study was a pre-experiment using a design Pretest-Posttest (Notoatmodjo, 2012).

In this design randomization is done, meaning the grouping of control group members and the experimental group is done randomly or randomly. Then a pretest (01) was conducted in both groups, and intervention (X) was followed in the experimental group. After some time posttest (02) was done in both groups.

III. RESULT

Table 1. Distribution of Average Before and After Giving steeping ginger to reducing nausea vomiting Trimester 1 pregnant women

Variabel	Mea n	SD	SE	P Value	n
Pretest	5.00	0.894	0.365	0,000	6
Posttest	2.67	0.816	0.333		

it was found that the average before giving ginger steeping to pregnant women was 5.00 with a standard deviation of 0.894. While the average after giving ginger steeping to pregnant women is 2.67 with a standard deviation of 0.816 Paired Test Ttest results obtained P value <0,000 (0,000 <0.005) shows the effectiveness of giving ginger steeping with orange juice to trimester 1 pregnant women in koto puskemas in the regency of religion in 2019.

Table 2. Distribution of Average Before and After Giving Orange Fruit Juice Against Nausea Vomiting Trimester 1 Pregnant Women

Variabel	Mean	SD	SE	P Value	n
Pretest	5.33	8.16	0.333	0,001	6
Posttest	4.17	0.753	0.307		

it is found that the average before giving ginger steeping to pregnant women is 5.33 with a standard deviation of 8.16. While the average after giving ginger steeping to pregnant women is 4.17 with a standard deviation of 0.753 results of the Paired Ttest Test obtained P value <0.001 (0.001 <0.005) indicates the effectiveness of giving ginger steeping with orange juice to trimester 1 pregnant women in koto puskemas in the regency of religion in 2019.

Table 3. Comparison of Average Administration of Ginger Brewing and Citrus Juice for Vomiting Nausea in First Trimester Pregnant Women

Variable	Mean	P-Value
Reducing of nausea by ginger	2,3333	0,001
Reducing of nausea by orange juice	1,0000	

P value obtained 0.001 less than 0.05 means that there is a significant comparison between the brewing of ginger and orange juice on complaints of nausea and vomiting in first trimester pregnant women in the working area of Koto Alam Health Center, Agam Regency

IV. DISCUSSION

Emesis gravidarum is vomiting in pregnant women. This situation is usually preceded by nausea (Manuaba, 2013). Bayerley O'Brien (O'Brien & Naber, 1995) found that 70-90% of all pregnant women experience nausea, while 50% experience vomiting at least once. Both of these are natural symptoms and are often found in most pregnant women. Most of the nausea, vomiting occurs in the morning or commonly called morning sickness, but can also occur during the day or even at night. Nausea and vomiting occur in the 6th week after the first day of the last menstrual period and last for approximately 12 first weeks of pregnancy (Fitria, 2013).

The results of this study are in line with research conducted by (Parwitasari et al., 2009) on "Comparison of the Effectiveness of Ginger Stew and Mint Leaves for Nausea Vomiting in Pregnant Women in the Work Area of Gararudadari Public Health Center" results show that the average intensity of nausea and vomiting before it is given ginger stew is 2.40 with a standard deviation of 0.632. The results of this study are also in line with the results of the study (Hasanah et al., 2014) about the effectiveness of giving ginger (*zingiber officinale*) to the reduction of emesis gravidarum in the first trimester with the results of the study. The average emesis gravidarum in pregnant women before giving ginger wedang as much as 3, 71 times/day and decreased to 2.24 times / day after administration of ginger.

The results of this study compared the effectiveness of ginger and mint leaves decoction against nausea and vomiting in pregnant women with the results of ginger decoction research more effective against nausea vomiting (9.76) compared to the mint leaf decomposition group (6.66), so it can be concluded that the administration of stew ginger is more effective than mint leaves. The results of this study are in line with research conducted (Putri, Andiani, Health, Parepare, & South, 2017) states that before being given an intervention the average respondent experienced a frequency of nausea and vomiting 13 times a day, after being given an intervention of warm ginger drinks on average the frequency of nausea and vomiting decreased to 3.18 times a day with a value of $P = 0,000$.

The results of this study are in line with research conducted by (Parwitasari et al., 2009) on "Comparison of the Effectiveness of Ginger Stew and Mint Leaves for Nausea Vomiting in Pregnant Women in the Work Area of Gararudadari Public Health Center" results show that the average intensity of nausea and vomiting before it is given ginger stew is 2.40 with a standard deviation of 0.632. The results of this study are also in line with the results of the study (Hasanah et al., 2014) about the effectiveness of giving ginger (*zingiber officinale*) to the reduction of emesis gravidarum in the first trimester with the results of the study. The average emesis

gravidarum in pregnant women before giving ginger wedang as much as 3, 71 times/day and decreased to 2.24 times / day after administration of ginger.

This study is in line with the results of the study (Hajj, Javadi, Salehi, & Mashrabi, 2013) comparing the effectiveness of vitamin B6 (40 mg twice daily) and ginger (250 mg four times daily) in treating nausea and vomiting in the early trimester of pregnancy. The clinical trial was conducted at the Qazvin University of Medical Sciences health service center on 47 mothers (ginger) and 48 mothers (vitamin B6). The results showed that vitamin B6 and ginger were equally effective in reducing the incidence of emesis and duration of nausea. No side effects were found in both groups.

According to the researchers' assumptions there was a reduction in steeping ginger with orange juice. Because, Ginger is effective for reducing the pain of nausea and vomiting. Ginger users to treat nausea and vomiting will not increase the negative risk to the fetus. Several studies published in the last 20 years explain the traditional claim in the use of ginger as a vomiting and disease-carrying agent. And the orange juice is one type of fruit that contains vitamin C in sufficient amounts. This orange fruit is also good to be consumed directly or can also be used as juice. And generally these oranges are also preferred by pregnant women, because oranges have a slightly sweet sour taste that can refresh the body of pregnant women, even oranges can also overcome morning sickness that is commonly experienced by pregnant women.

V. CONCLUSION

The effectiveness of offering steeping ginger with orange fruit juice against nausea and vomiting in 1st trimester pregnant women. It can be advised to pregnant women to consume orange juice as one of treatment to reducing nausea in first trimester of pregnancy.

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