

Effect of Pericardium Point Acupressure 6 on Gravidarum Emesis Trimester I Pregnant Women at the Working Area Public Health Center Koto Berapak In 2020

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ABSTRACT

Every pregnant woman experiences different degrees of nausea. Efforts to overcome it through pharmacological and non-pharmacological therapies. Non-pharmacological therapies such as herbs, acupuncture and acupressure. In pregnant women, the tendency to use non-pharmacological therapy has increased. The purpose of this study was to determine the effect of Acupressure Point Pericardium 6 on Emesis Gravidarum in 1st trimester pregnant women. This research is an experimental study using a pre and post control group design approach. The research was conducted in July - November 2020 in the work area of the Koto Berapak Health Center, Pesisir Selatan Regency. The sample in this study were 26 primigravida pregnant women who experienced emesis gravidarum in the first trimester and met the inclusion and exclusion criteria as many as 26 people who were selected by simple random sampling. The sample was divided into two groups using odd even numbers, where each 13 samples were in the experimental and control groups. Data were analyzed using Mann Whitney. The results showed that the mean score of emesis gravidarum before acupressure in the experimental group was 8.69 ± 0.48 and the control group was 7.62 ± 1.19 . The mean score of emesis gravidarum after acupressure in the experimental group was 3.31 ± 0.48 and the control group was 5.69 ± 1.75 . The mean reduction in the emesis gravidarum score of the experimental group was 5.38 ± 0.50 and the control group was 1.92 ± 1.80 . There was a significant difference in emesis gravidarum scores between the experimental and control groups ($p < 0.05$). The conclusion of this study is that there is an effect of acupressure point pericardium 6 in the form of a significant reduction in the frequency of nausea and vomiting in first trimester pregnant women who experience emesis gravidarum.

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1. Introduction

Pregnancy is a continuous process starting from ovulation, conception, nidation or implantation and development of the embryo in the uterus until term. During pregnancy, various complications can occur, including nausea and vomiting, which is known as emesis gravidarum (Manuaba, 2014). Based on data from the World Health Organization (WHO) in 2013, the incidence of emesis gravidarum reached 12.5% of the number of pregnancies in the world. Based on data from the Ministry of Health of the Republic of Indonesia in 2013, in Indonesia, 60-80% of primigravida and 40-60% of multigravida experience emesis gravidarum, 25% nausea without vomiting, 35% of women who experience emesis gravidarum feel they have lost their job or activities with their family. Excessive nausea and vomiting or hyperemesis gravidarum can threaten the life of pregnant women. According to WHO, hyperemesis gravidarum occurs all over the world, including the countries of the Americas with various incidence rates ranging from 0.5-2%, 0.3% in Sweden, 0.5% in California, 0.8% in Canada, 10.8% in China, 0.9% in

Norway, 2.2% in Pakistan, and 1.9% in Turkey. Meanwhile, the incidence of hyperemesis gravidarum in Indonesia is 1-3% of all pregnancies. The comparison of incidence in general is 4: 1000 (Atika et al, 2016)

The incidence of hyperemesis gravidarum in West Sumatra is not known with certainty, but based on previous research conducted by Meigina (2011) at Dr.M. Djamil Padang obtained data that the incidence of hyperemesis gravidarum in 2009 was 38 cases, in 2010 as many as 45 cases, and the incidence of hyperemesis gravidarum treated always occurs every month. Emesis gravidarum Usually caused by hormonal changes. The main cause is the high fluctuation of Human Chorionic Gonadotropin (HCG) levels (Manuaba, 2014). Pregnant women who continue to have nausea and vomiting will cause weight loss(>5% of pre-pregnancy weight) and can cause electrolyte and acid-base imbalances, malnutrition and even death (Husin, 2013).

Consequences that occur if excessive nausea and vomiting such as chronic lack of energy, anemia, dehydration which results in reduced blood flow to tissues, and affects liver function. In the fetus, abortion, low birth weight (LBW), and intrauterine growth restriction (IUGR) can occur (Wiknjosastro, 2014).

The first trimester is a critical period, namely the early stages of the formation of fetal organs. If the fetus lacks certain nutrients it can cause organ failure. Nausea and vomiting on Pregnancy also causes psychosocial effects, worries about the economy and work, depression, anxiety, fears about pregnancy (Wills and Forster, 2008). Every pregnant woman will experience different degrees of nausea. Efforts can be made to overcome it through pharmacology and non-pharmacology. Pharmacology uses vitamin B6 (Wiknjosastro, 2014). Non-pharmacological therapies such as herbs, acupuncture and acupressure (Pratama, 2016). In pregnant women, the tendency to use non-pharmacological therapy has increased (Matthews et al, 2010). Based on research by Frawley (2014) on the majority of women are influenced by non-professional information sources when deciding to consult a complementary and alternative medicine practitioner during pregnancy, 87% of women use at least one non-pharmacological method during pregnancy. According to Abedzadeh's (2014) research on complementary and alternative medicine in midwifery, pregnant women prefer complementary medicine because of its lower side effects.

Complementary medicine that is easily applied in the community includes the pericardium 6 acupressure technique which does not require special skills (Fengge, 2012). Acupressure provides analgesic and antiemetic effects through the release and modulation of opioid neuropeptides (Stoicea et al, 2015). Acupressure points are a collection of skin and muscle nerve endings that can be stimulated. Stimulation of acupressure points activates the spinal cord, midbrain, and pituitary to release neurochemicals such as endorphins, serotonin, and norepinephrine that can block pain messages and suppress the vomiting center (Unulul, 2017).

Acupressure can be used in conjunction with conventional medical treatments prescribed by a doctor. Acupressure can help sufferers feel better and can improve their quality of life. Acupressure can also overcome the symptoms of a disease or side effects caused by the treatment of the disease (Ayuningtyas, 2019). Mady's research (2019) on the effect of acupressure on nausea and vomiting during pregnancy explains that pericardium 6 acupressure is the right method for treating nausea and vomiting without side effects.. Based on Adlan's (2017) study on acupressure as an adjunct treatment for inpatient management of nausea and vomiting in early pregnancy, there was a statistically significant increase in the pregnancy unique quantification of emesis and nausea from day 1 to day 3 in the treatment group compared to with a placebo. Acupressure used in the health sector as a support for medical care, generally in obstetric clinics. Research conducted by Rudiyaniti and Nurchairina (2020) on the effect of acupressure on emesis gravidarum for 7 days on 76 pregnant women stated that there was an effect of acupressure on emesis gravidarum with the results of the intervention analysis P value <0.05.

The data obtained from the Puskesmas regarding the number of visits by K1 pregnant women during 2020 were: Koto Apak Health Center as many as 380 visits and Asam Kumbang Health Center as many as 130 visits. Based on data from the Koto Berak Health Center in 2020 there were 40 pregnant women who experienced chronic energy deficiency and 28 pregnant women experienced anemia. A preliminary study conducted in October 2020 at the Koto Apak Health Center, out of 8 pregnant women in the first trimester who checked their womb, 2 experienced severe nausea and vomiting, 3 experienced moderate nausea and vomiting and 3 experienced mild nausea and vomiting. During These pregnant women who experience emesis gravidarum have never had acupressure, only given B6 and vitamin B complex to treat or reduce nausea and vomiting. So that researchers are interested in knowing the Effects of Pericardium 6 Point Acupressure on Emesis Gravidarum in First Trimester Pregnant Women in the working area of Koto Health Center How much in 2020.

2. Methods

2.1 Research Design

This research is an experimental study using a pre n posttest control group design approach. The research group was divided into the experimental group and the control group, starting with (pre-test) given to both groups, then being given treatment to the experimental group and then ending with (post-testing) the two groups.

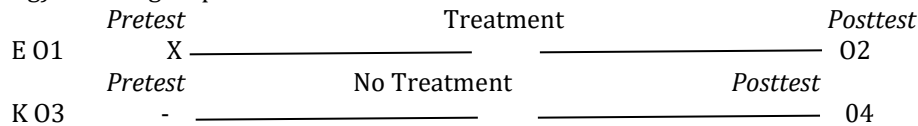


Figure 1. Schematic of the research design

Description :

- O1 : Experimental group before acupressure (Pretest)
- X : Treatment by giving acupressure pericardium point 6
- O2 : Experimental group after acupressure (Posttest)
- O3 : Control group without treatment *acupressure* (Pretest)
- : No treatment *acupressure*
- O4 : Control group without acupressure treatment (Posttest)

2.2 Place and time of research

This research was conducted in the working area of the Koto Public Health Center, Pesisir Selatan Regency in July-November 2020

2.3 Population and Sample

a Population

The population in this study were pregnant women in the first trimester with emesis gravidarum who visited the Koto Berak Health Center.

b Sample

The sample in this study was part of the population of pregnant women in the first trimester who met the inclusion criteria and there were no exclusion criteria

1) Inclusion Criteria

- a) Primigravida pregnant women
- b) 20 to 35 years old
- c) Healthy pregnant women (no other disease/comorbid and no complications)
- d) Pregnant women with first trimester emesis gravidarum
- e) Pregnant women receiving standard therapy (Vitamin B6)
- f) Willing to be a respondent by signing the informed consent

2) Exclusion Criteria

- a) Pregnant women with a history of gastrointestinal disease
- b) Pregnant women who experience wounds, swelling, fractured or broken bones and burned skin at the point of the pericardium 6
- c) Pregnant women with a history of hyperemesis gravidarum
- d) Pregnant women who use pharmacological therapy other than vitamin B6 during the study

3) Drop out criteria: If the research subject in the experimental group does not get pericardial point 6 acupressure for 4 consecutive days

c Sample Size

The sample size used for the analysis test with the formula Lemeshow et al (1997) is:

The combined standard deviation is obtained based on the following calculations:

$$(Sg)^2 = \frac{[S_1^2 \times (n_1 - 1) + S_2^2 \times (n_2 - 1)]}{n_1 + n_2 - 2}$$

$$(Sg)^2 = \frac{[0,92^2 \times (11 - 1) + 1,4^2 \times (11 - 1)]}{11 + 11 - 2}$$

$$(Sg)^2 = \frac{[0,84 \times 10 + 1,96 \times 10]}{20}$$

$$(Sg)^2 = \frac{[8,4+19,6]}{20}$$

$$(Sg)^2 = \frac{[28]}{20}$$

$$Sg = \sqrt{1,4}$$

$$Sg = 1.18$$

The minimum sample size is calculated based on the unpaired numerical analysis test formula (Dahlan,

$$n_1 = n_2 = 2 \left(\frac{\{Z_\alpha + Z_\beta\} S}{x_1 - x_2} \right)^2$$

$$= 2 \left(\frac{\{1,96+1,282\} 1,18}{6,63-5} \right)^2$$

$$= 2 \left(\frac{3,83}{1,63} \right)^2$$

$$= 2(2,35)^2$$

$$= 11,045$$

$$= 12$$

Description :

n = Sample size

n1 = The sample size of group 1 in the previous study = 11 (Handayani, 2019)

n2 = The sample size of group 2 in the previous study = 11 (Handayani, 2019)

Z = 5% alpha standard value so $Z_\alpha = 1.96$

Z = The standard value of beta 10% so that $Z_\beta = 1.28$

X1 = The mean that is considered meaningful for group 1 = 6.63 (Handayani, 2019)

X2 = The mean that is considered meaningful for group 2 = 5 (Handayani, 2019)

S = combined standard deviation $S_1 = 0.92$, $S_2 = 1.4$ (Handayani, 2019)

Anticipating subjects who drop out, calculations are carried out as follows:ai following

(Sastroasmoro and Ishmael, 2014):

$$n = n/1 f$$

$$n = 12/(1 - 0.05)$$

$$n = 12/0.95$$

$$n = 12.63$$

$$n = 13$$

Description :

n = Calculated sample size (12)

f = Approximate dropout proportion (5%) = 0.05 (Confirmation)

Based on the above calculation, the minimum sample size required is 13 pregnant women in the 1st trimester x 2 groups = 26 pregnant women in the 1st trimester.

2.4 Research variable

The dependent variable in this study was emesis gravidarum while the independent variable was pericardial acupressure 6.

2.5 Operational Definition of Research Variables

a Pericardial acupressure 6

Definition: A form of physiotherapy by providing massage and stimulation to certain points on the body. Acupressure is performed for 4 days at point P6 for 1 minute with 40 rounds clockwise in the morning and evening

How to Measure : Observation

Measuring instrument : Questionnaire

Measurement result : 0 no acupressure therapy

1 done acupressure therapy

Measuring scale : nominal

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b Emesis gravidarum

Definition : Nausea and vomiting experienced by pregnant women in the first trimester less than 10 times a day

How to Measure : Interview observation

Measuring instrument : *Pregnancy Unique Quantification Emesis and Nausea (PUQE-24)* Scoring System (checklist)

Measurement Results : PUQE index value 1-13

Measuring Scale : Ratio

2.6 Research Tools and Materials

- a Measurement sheet
- b Explanation sheet before approval
- c *Informed consent*
- d O'clock
- e Paper and pen
- f Tissue

2.7 How Research Works

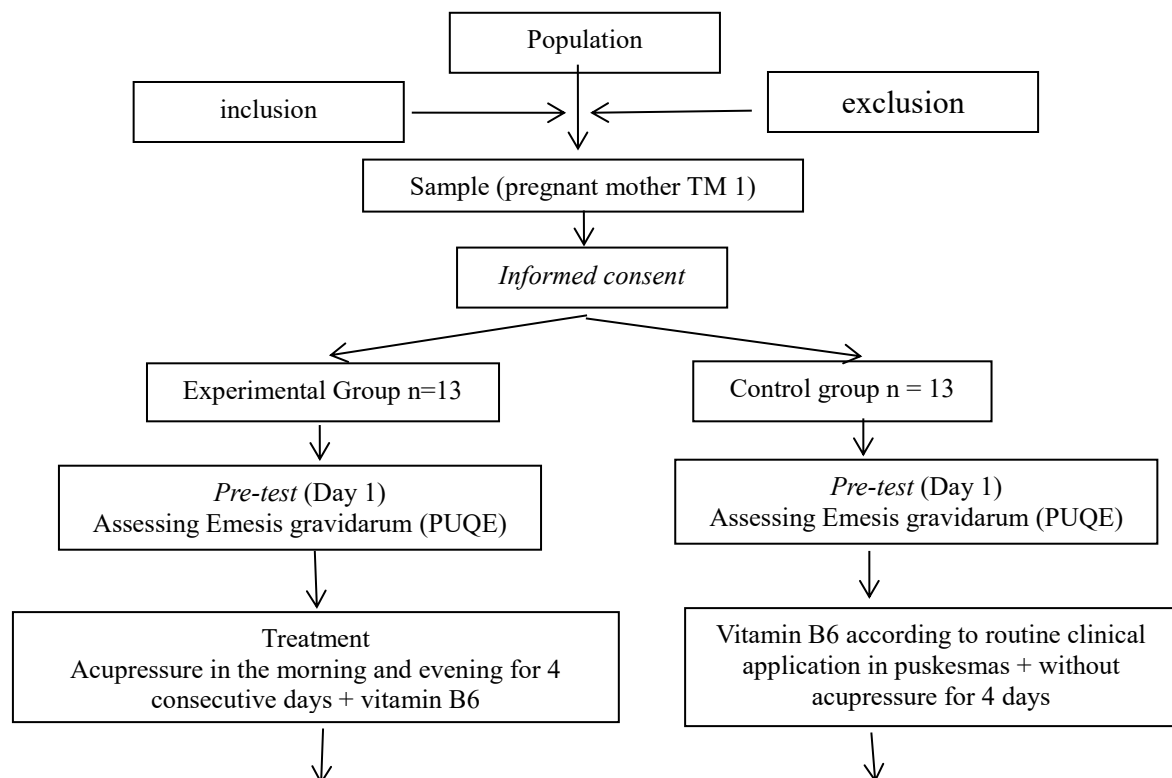
The workings of this research are as follows:

- a At the beginning of the study, a pre test was carried out using the measurement sheet (Appendix)
- b The experimental group carried out acupressure by researchers for 4 days at the point of pericardium 6 for 1 minute with 40 rounds clockwise in the morning and evening.
- c The control group was visited every day to assess the degree of emesis gravidarum but no acupressure was performed for 4 days

The way acupressure is done is as follows:

1. Ensure that the mother is not hungry, relaxed, comfortable and that she is willing to do acupressure
2. Researchers wash hands according to WHO before taking action
3. Check that there are no wounds or swelling in the area where the pressure is applied
4. Determine the point to be emphasized, namely the pericardium, this point is on the midline of the forearm
5. Apply gentle pressure on the pericardial point for 1 minute
6. Evaluate actions such as whether the mother feels pain when doing acupressure

2.8 Research Flow



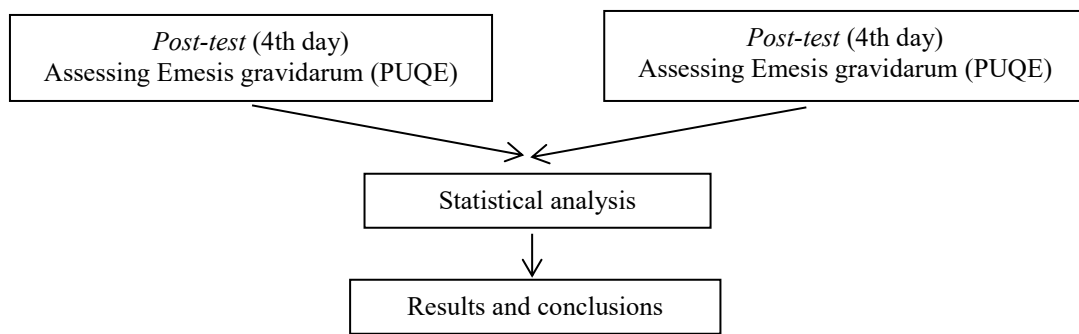


Figure 2. Research Flow

3. Results and Analysis

This study is an experimental study using a pre and post control group design approach. The research group was divided into two groups, namely the experimental and control groups. This research was carried out in July - November 2020 in the Koto Apak Health Center Work area, Pesisir Selatan Regency. The sample in this study were primigravida pregnant women who experienced first trimester emesis gravidarum and met the inclusion criteria with a total sample of 26 samples and 13 samples in the experimental and control groups respectively. During the study there were no samples that dropped out.

3.1 Univariate Analysis

a Characteristics of Research Respondents

Table 1
Characteristics of Research Respondents

Characteristics of Respondents	Experiment (n = 13)		Control (n= 13)	
	f	%	f	%
Education				
SD	0	0	0	0
junior high school	1	7.7	0	0
senior High School	11	84.6	11	84.6
PT	1	7.7	2	15.4
Work				
IRT	9	69.2	10	76.9
PRIVATE	3	23.1	3	23.1
civil servant	1	7.7	0	0
Mother's Age (Years) (Mean ± SD)	24.31 ± 2.86		26.54 ± 4.15	

In Table 1 It can be seen that the most respondents' education was at the high school level with the same percentage, namely 84.6% between the experimental and control groups, then for the most occupations, namely housewives with a percentage of 69.2% from the experimental group and 76.9% from the control group and the average age respondents from the experimental group were (24.31 ± 2.86) years and (26.54 ± 4.15) years from the control group.

b Mean Emesis Gravidarum Score in the Pre-Post Experiment and Control Group in First Trimester Pregnant Women

Table 2
Mean Pre-Post Experiment-Control Emesis Gravidarum Score

Degree of Gravidarum (PUQE)	Group	
	Experiment Score (Mean ± SD)	Control Score (Mean ± SD)
Pre-test	8.69±0.48	7.62±1.19
Post-test	3.31±0.48	5.69±1.75

In Table 2, it can be seen that the average score of emesis gravidarum before acupressure is almost the same, namely in the experimental group (8.69 ± 0.48) and control (7.62 ± 1.19) with a difference (1.07 ± 0.71). While the average score of emesis gravidarum after being given acupressure decreased, namely (3.31 ± 0.48) and control (5.69 ± 1.75) with a difference (2.38 ± 1.27).

3.2 Bivariate Analysis

Before conducting the bivariate analysis, the data normality test was carried out using the Saphiro Wilk

test. Based on the results of the normality test, the data in the pre-experimental and post-experimental groups were not normally distributed with a p value <0.05 . Furthermore, the data transformation test was carried out, after the transformation test was carried out, the results were that the data had not been normally distributed. Then proceed by using the Mann-Whitney test.

a **Effects of Pericardium 6 Point Acupressure on Emesis Gravidarum in First Trimester Pregnant Women**

Table 3

The difference in the score of emesis gravidarum in the experimental and control groups

Difference Emesis gravidarum score	n	PUQE degree score Mean \pm SD	<i>p</i> value
ExperimentControl	13	5.38 \pm 0.50	0.000
	13	1.92 \pm 1.80	

In Table 3, it can be seen that the average decrease in the degree of emesis gravidarum in the experimental group occurred on average (5.38 \pm 0.50) and the decrease in the degree of emesis gravidarum in the control group occurred on average (1.92 \pm 1.80). The results of the Mann Whitney statistical test showed that there was a significant effect between the groups that were given acupressure treatment and those not given with ($p < 0.05$).

3.3 Discussion

This study is an experimental study using a pre and post control group design approach. The research group was divided into two groups, namely the experimental and control groups. This research was carried out in July - November 2020 in the working area of the Koto Apak Health Center, Pesisir Selatan Regency. The sample in this study were primigravida pregnant women who experienced emesis gravidarum in the first trimester and met the inclusion criteria with a total sample of 26 samples and 13 samples in the experimental and control groups respectively.

a **Characteristics of Research Respondents**

This study shows that the majority of respondents' education is at the high school level with the same percentage in the experimental and control groups (84.6%). According to the results of field observations, in general, mothers who are in the working area of the Koto Apak Health Center have completed their high school education level and some have even completed college. Education can affect one's knowledge, including one's behavior. In general, the higher a person's education, the easier it is to receive information. Likewise, with pregnant women who experience emesis gravidarum, the higher the education obtained by the mother, the higher the possibility of preventing it. Emesis gravidarum is a natural thing that occurs due to hormonal changes during pregnancy, but the symptoms experienced can be reduced if the mother has sufficient knowledge about emesis gravidarum so that the mother is more prepared and easier to deal with the symptoms caused.

The results of this study are in line with what was done by Umboh (2014) education with the incidence of Hyperemesis Gravidarum in pregnant women showing the most, namely 56.2% or 45 respondents with higher education and hyperemesis gravidarum in the high category. The results of the Chi Square statistical test showed that there was a relationship between the two variables, with p value = 0.000 (<0.05). The level of education will affect knowledge, because with education a person will be easier to receive more and diverse information, besides that it can also change the mindset to be more open, so it will be easier to develop themselves, especially to maintain and improve their own health and understand how treat emesis gravidarum every day.

According to the results of the study, the most occupations were housewives with a higher percentage in the control group. Work is something that is important in life by working to meet needs (Winknjosastro, 2014). A respondent's job in the study is divided into two, namely the respondent is working and not working. Definition of work the respondent carries out activities at home or elsewhere on a regular or periodic basis with the aim of earning money. The workload will cause inner suffering and conflict. Women who are exposed to odors, chemicals in their work environment can increase their nausea and cause vomiting. Traveling to work makes them meet a lot of people and are surrounded by various kinds of smells that can affect the severity of their nausea (Winknjosastro, 2014)

According to research results from age characteristics, the average age of respondents from the experimental and control groups is not much different and is still in the category of productive age range. According to the results found in the field, this emesis gravidarum can be influenced by the age of the mother who is classified as young age 24 years and 26 years, which means that the mother does not have

much experience during pregnancy, according to the parity status of the mother, namely G1P0A0 the mother has never given birth before, and is the first pregnancy, at the age of 10 weeks, where according to the opinion expressed by Wiknjastro (2014) nausea (nausea) and vomiting (emesis) are normal symptoms and are often found in the first trimester of pregnancy. In a healthy reproductive period it is known that the age is safe for pregnancy and childbirth is 20 years to 35 years. Pregnancy at the age of less than 20 years, the pelvis and uterus are still small, the development of the reproductive organs is not optimal, so it can cause nausea and vomiting. Nausea and vomiting occur at the age of under 20 years due to insufficient physical maturity, mental and social functions of the mother-to-be. At the age of over 35 years, reproductive organs and physiological functions decreased compared to those at the age of 20-35 years. Early studies suggest that women over 35 years of age are at higher risk of developing obstetric complications and perinatal morbidity and mortality (Manuaba, 2014). Nausea and vomiting occur at the age of under 20 years due to insufficient physical maturity, mental and social functions of the mother-to-be. At the age of over 35 years, reproductive organs and physiological functions decreased compared to those at the age of 20-35 years. Early studies suggest that women over 35 years of age are at higher risk of developing obstetric complications and perinatal morbidity and mortality (Manuaba, 2014). Nausea and vomiting occur at the age of under 20 years due to insufficient physical maturity, mental and social functions of the mother-to-be. At the age of over 35 years, reproductive organs and physiological functions decreased compared to those at the age of 20-35 years. Early studies suggest that women over 35 years of age are at higher risk of developing obstetric complications and perinatal morbidity and mortality (Manuaba, 2014).

According to the researcher's assumption, the incidence of nausea and vomiting is more frequent, the level of stress and the mother's age at the time of her first pregnancy, and is related to the mother's experience of being pregnant. When a new mother is pregnant for the first time, the mother is still difficult to adapt to the changes that occur during pregnancy, while for mothers who have been pregnant, these changes can be better managed by themselves. Pregnant women have not been able to adapt to the hormone estrogen and chorionic gonadotropin. The increase in this hormone makes gastric acid levels increase, causing complaints of nausea. This complaint usually appears in the morning when the mother's stomach is empty and there is an increase in stomach acid. Research conducted by Shin (2007) on 66 pregnant women in South Korea who experienced hyperemesis gravidarum and was given Nei-Guan acupressure treatment with the most age being 27-40 years. This study is in line with research conducted by charity (2018) in Menoufia to pregnant women who received acupressure, the average age of the respondents was 20-30 years with a frequency of 76.7%. Pregnancy at the age of less than 20 years and over 35 years can cause nausea and vomiting to hyperemesis because at the age of pregnancy less than 20 years, biologically they have emotions that are not optimal and tend to be unstable, and mentally immature so they are easily shaken which results in a lack of attention to meeting the needs of substances. nutrients during pregnancy,

b Mean Emesis Gravidarum Score in Experimental and Control Groups Before Pericardium Point 6 Acupressure was Performed in First Trimester Pregnant Women

The results of this study were seen in the pre-experimental group before the acupressure was carried out, the average score obtained was (8.69 ± 0.48) , while in the pre-control group the average score was (7.62 ± 1.19) . According to preliminary information obtained from research respondents in the field, nausea usually occurs in the morning, but can also occur at any time and at night. These symptoms are approximately 6 weeks after the first day of the last menstruation and last for approximately 10 weeks.

The management of nausea and vomiting that is most often done is by giving warm and refreshing drinks, but not a few mothers also refuse, one non-pharmacological approach that can be given is acupressure (Arviana, 2017). Acupressure is a method of treatment from ancient China by stimulating special points on the body by using needles for acupuncture and using fingertips in acupressure because it is an emphasis on certain body points. Acupressure and acupuncture sessions should be done 2-3 times a week, acupressure and acupuncture stimulate the regulatory system and activate endocrine and neurological mechanisms, which are physiological mechanisms in maintaining balance, This study was conducted for 4 consecutive days in the morning and evening, but the early and late control groups were not given acupressure treatment, but were still given midwifery care in the treatment of emesis gravidarum. As well as an assessment of the degree of emesis gravidarum at the beginning and end of the study in the control group.

According to the researcher's assumption, various non-pharmacological and pharmacological treatments can be carried out by the mother to overcome the discomfort that arises due to emesis

gravidarum, apart from this acupressure technique, including herbal and vitamin B6 therapy that has been applied by mothers with emesis gravidarum from the control group. However, in general, respondents do not know the further benefits of giving this acupressure technique in preventing emesis gravidarum. The acupressure treatment given in this study was to press the P6 or Neiguan point which is believed to be the main point for relieving nausea and vomiting. This point is located on the volar aspect of the forearm, which is about 3 cm above the wrist crease and between the two tendons. This study is in line with research conducted by Ozlem (2008) on 24 respondents (pregnant women) in the treatment group and 24 in the control group in Istanbul. This study was conducted for 9 days by giving acupressure therapy to the treatment group. According to the results of the study, it was found that the administration of acupressure had an effect in controlling symptoms and reducing the effects of nausea and vomiting that occurred during pregnancy.

c Mean Emesis Gravidarum Score in Experimental and Control Groups After Pericardium Point 6 Acupressure was Performed in First Trimester Pregnant Women

The results of this study showed that in the post-experimental group after being given acupressure treatment, the average score obtained was (3.31 ± 0.48), while in the post-control group the average score was (5.69 ± 1.75). According to the results of the study, the average score of the degree of emesis gravidarum in the control group decreased but was not significant, with a frequency of 5 respondents who still experienced moderate degree of emesis gravidarum, although they were not given acupressure therapy, they were still given vitamin B6 therapy from the puskesmas. According to the researcher's assumption, the control group that was not given any intervention could experience a decrease in score because there are external variables that can affect emesis gravidarum other than acupressure measures, such as psychological, social, hormonal and environmental.

The treatment given to the experimental group was the administration of acupressure therapy at the pericardium 6 point, which is the point on the midline of the forearm, two thumbs to the elbow from the wrist crease. At that point, press or massage with 3 fingers, forming a circle above the wrist gently for 2 minutes (Denise, 2009). Researchers conducted acupressure therapy for 4 consecutive days in the morning and evening at the same time every day for the experimental group respondents. Based on the results of the study, all respondents in the experimental group after being given acupressure therapy experienced a significant decrease in the degree of emesis gravidarum as many as 13 people (100%).

According to a study conducted by Mady (2019) on 100 women who were divided into two groups, namely the group given the effect of acupressure therapy and the control group at the El-Shatby maternity hospital in Egypt with a gestational age of less than 15 weeks were included in the study for 7 consecutive days. The study group received acupressure on pericardial point 6 (P6) bilaterally for about 60 minutes per day for 7 consecutive days. While the control group only received touch P6 with the same step and period. The results showed that the severity and frequency of nausea and vomiting were significantly reduced after starting treatment compared to the control group.

d Effects of Pericardium 6 Point Acupressure on Emesis Gravidarum in First Trimester Pregnant Women

The results of this study showed that the average decrease in the degree of emesis gravidarum in the experimental group occurred on average (5.38 ± 0.50) and the decrease in the degree of emesis gravidarum in the control group occurred on average (1.92 ± 1.80). The results of the Mann Whitney statistical test showed that there was a significant effect between the groups that were given acupressure treatment and those not given with ($p < 0.05$).

The cause of nausea and vomiting in pregnancy is not known with certainty, but in general the causes are associated with hormonal changes associated with pregnancy, namely increased concentrations of human chorionic gonadotropin, physiological changes in the digestive tract and genetic predisposition (Lacasse, 2009). Changes in carbohydrate and lipid metabolism cause hypoglycemia, especially upon awakening, which stimulates morning sickness (Denise, 2009). It is suspected that the cause of nausea and vomiting in pregnancy is a multifactorial problem involving hormone theory, parity, increased placental weight, maternal age, vestibular system, digestion, psychology and a history of hyperemesis gravidarum (Neda, 2010).

At the beginning of the study on pregnant women respondents in the working area of the Koto Apak Health Center, an assessment of emesis gravidarum was carried out in the experimental and control pre-test groups using the PUQE standard. The results showed that there was no difference between the experimental and control groups before being given treatment, which means that the initial data in this study were homogeneous. After that, the experimental group was given acupressure treatment in the

morning and evening for 4 consecutive days plus vitamin B6 therapy, while the control group was not given acupressure, but only given vitamin B6 therapy according to routine application by the puskesmas. After being given acupressure treatment and re-assessed with PUQE,

In line with research conducted explaining that acupressure at the point of pericardium 6 can reduce nausea for pregnancy. In this study emesis gravidarum before being given acupressure treatment in the experimental group had a minimum score of 8 and a maximum score of 9 (moderate category) and a minimum score of 5 (mild category) and a maximum score of 9 (moderate category) in the control group, the frequency of nausea and vomiting was can be caused by the body's response to objects, smells, or food consumed, in addition to the handling and management of nausea and vomiting is very necessary for pregnant women, such as providing warm food, snacks or crackers, as well as non-pharmacological management (herbal medicine) in the hope of nausea and vomiting. vomiting can be resolved, and does not interfere with maternal nutritional intake (Denise, 2009).

Prevention of emesis gravidarum by handling acupressure massage at the point pericardium 6, it is very effective, the mother only needs to press the 3 fingers below the wrist, the mother is recommended to sit, or lie down in a position as comfortable as possible, the mother can repeat if the mother feel comfortable and relaxed. This study is in line with that conducted by Mobarakabadi (2020) on Iranian women against 3 different groups, each consisting of 25 samples with moderate to severe symptoms of nausea in early pregnancy, and treated with sea-band acupressure. Nausea and vomiting frequency and severity were recorded for six days, twice daily, with the intervention starting on the fourth day. The results showed there was a significant reduction in the frequency, duration, and severity of nausea and also in the frequency of vomiting in the acupressure and placebo groups but not in the control group after three days of intervention. Significant differences were observed between the acupressure and placebo groups in terms of frequency and severity of nausea but not duration or frequency of vomiting after the intervention.

In contrast to the results of research that has been carried out, a study conducted by Rebecca (2016) in the United States on three groups of pregnant women (n = 13) who were not given treatment, pregnant women who were given P6 acupressure therapy, and pregnant women who were given acupressure therapy with electrical stimulation. Results This meta-analysis showed that acupressure and ETS had a greater impact (RR = 0.63, 95% CI: 0.39-1.02, P = 0.0001) than the acupuncture method alone (RR = 0.47, 95% CI: 0.35-0.62, P = 0.0779) in the treatment of nausea and vomiting in pregnant women. The number of trials of acupuncture is limited for pregnant women, perhaps because acupuncture is not possible to do alone and is therefore uncomfortable for women who experience nausea and vomiting as chronic symptoms.

e Research limitations

The limitation of this study is that some respondents did not experience significant changes in the degree of emesis gravidarum due to other factors that affect emesis gravidarum such as hormonal and maternal psychosocial.

4. Conclusion

- a RThe average emesis gravidarum score of the experimental group before being given acupressure was higher than the control group
- b SAfter being given acupressure, the experimental group experienced a significant decrease in the mean score of emesis gravidarum compared to the control group.
- c There is an effect of pericardium 6 acupressure point in the form of a significant decrease in the frequency of nausea and vomiting in first trimester pregnant women who experience emesis gravidarum.

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