

## **The Effect of Acupressure and Aromatherapy Therapy to Reduce Frequency Nausea Vomiting in Pregnant**

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### **Abstract**

Nausea and emesis is a symptom that often occurs in 60-80% Primigravida and 40-60% Multigravida. The general purpose of this study is to determine the effect of giving acupressure therapy and aromatherapy to reduce the frequency of vomiting nausea. This type of research is quantitative research, quasi-research design. The population in this study was all pregnant women who came to the Bina Karya Utama Putra Rumbia Health Center to perform ANC with complaints of nausea and vomiting. The number of samples was 62. The results of the independent t-test. There were differences in the frequency of nausea and vomiting in the intervention group of acupressure and aromatherapy therapy, and there was an effect of frequency of vomiting nausea in the intervention group on acupressure and aromatherapy therapy. It is hoped that this research can be a reference and therapeutic solution that is used for pregnant women who experience emesis, this study explains that the intervention of acupressure therapy and administration of aromatherapy influences reducing nausea and vomiting.

**Keyword:** Acupressure, aromatherapy therapy

### **Introduction**

Mortality and morbidity in pregnant and childbirth women is a significant problem in developing countries, around 20-50% of deaths of women of childbearing age are caused by things related to pregnancy (1,2). Pregnancy is defined as the fertilization or union of spermatozoa and ovum when calculated from the time of fertilization to the birth of a baby; a healthy pregnancy will take place within 280 days (40 weeks or 9 months seven days). The initial period of pregnancy is called the first trimester which starts from conception until the 12th week of pregnancy. In early pregnancy, many women experience nausea vomiting especially in the morning known as morning sickness or in medical terms known as emesis gravidarum (3,4).

Pregnancy is a process of a woman's life, this process will cause physical, mental, and social changes that are influenced by several physical, psychological, environmental, socio-cultural and economic factors. During pregnancy, various complications or problems occur, such as nausea and vomiting that are often experienced in pregnant women which is one of the earliest symptoms of pregnancy (5,6).

Nausea vomiting is the most common occurrence for pregnant women during pregnancy, as much as 70-85% (5,6). Nausea is a pain in the stomach, labyrinth stimuli, unpleasant memory. Vomiting is a condition in which all contents gastric discharge by mouth (7). hCG (human chorionic gonadotropin) is the same as LH (Luteinizing hormone) and is secreted by blastocyte trophoblast cells. hCG passes the control of the ovary in the pituitary and causes the corpus luteum to continue producing estrogen and progesterone (5).

Based on the Health Profile of Lampung Province in 2012 the high incidence of emesis gravidarum in pregnant women was 50-90%, whereas hyperemesis gravidarum reached 10-15% in Lampung Province from the number of pregnant women there were 182,815 in the first trimester of pregnancy. Nausea usually occurs in the morning but can occur at any time and night. These symptoms occur more or less after six weeks after the first day of the last menstruation and last for approximately ten weeks. Nausea and vomiting occur in 60 - 80% primigravida and 40-60% occur in multigravida. One among one thousand pregnancies other symptoms become severe (Lampung Provincial Health Office, 2012).

Non-handled nausea and vomiting can be hyperemesis gravidarum which results in a state of nausea vomiting in a sedentary pregnancy, which can cause malnutrition in pregnant women and fetuses in the uterus, if

the fetus is malnourished it can cause a complete failure of organ formation and fetus born with LBW, babies who experience LBW are at risk of developing diabetes, heart disease (3,8–10).

Acupressure and aromatherapy can be a solution to reduce vomiting. The use of complementary CAM therapies (Complementary and Alternative Medicine) is increasingly popular in the general public and health professionals, with incidents between 30 and 50%. Studies conducted by (11,12) concluded that 61% of pregnant women use CAM therapy. Three of the most popular CAM therapies used are ginger, vitamin B6, acupressure, and aromatherapy.

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This study concludes that pericardial acupressure and administration of citrus aromatherapy influence are decreasing nausea and vomiting in Trimester I pregnant women. Researchers want to do further research to obtain better results from previous research. The researcher will modify the study time for four days with two treatments in the morning and evening so that the effects of treatment are faster and can minimize the bias of research results that affect the decrease in nausea and vomiting. Based on data obtained from the medical record of Bina Karya Utama Putra Rumbia Health Center in Central Lampung Regency, the number of pregnant women from October to December 2017 who performed ANC from 210 pregnant women, 80 (38%) pregnant women experienced nausea and vomiting.

## **Material and Methods**

This research is quantitative research. The research design used was quasi-experimental, quasi-experimental research design with a design that did not have strict limits on randomization (17). The research population is the whole research subject if someone wants to examine all the elements in the research area, then the research is population research. The study or research is also called population study or census study. The population in this study were all pregnant women who came to the Bina Karya Utama Putra Rumbia Health Center to perform ANC with complaints of nausea and vomiting. The sampling technique in this study, researchers used sampling techniques. The sampling technique in this study was accidentally carried out by taking cases or respondents who happened to exist or were available somewhere according to the research context(17,18). Samples were taken from the Central Lampung Bina Karya Utama Putra Rumbia Health Center Working Area, the number of samples was 62 respondents divided into two groups of acupressure therapy interventions and the intervention group giving aromatherapy. The research population is the whole research subject if someone wants to examine all the elements in the research area, then the research is population research. His studies or research are also called population studies or census studies. The population in this study were all pregnant women who came to the Bina Karya Utama Putra Rumbia Health Center to perform ANC with complaints of nausea and vomiting of 210 people.

## **Result and discussion**

Based on the results of the analysis of the study of 31 respondents in the intervention group of acupressure therapy before and after treatment, the average nausea vomiting in the group of acupressure therapy before

treatment averaged an average of 5.29. The average nausea vomiting in the acupressure therapy intervention group after being treated with an average acupressure therapy of 1.81. Nausea vomiting is a sign of early pregnancy according to Tiran's theory (2009) that nausea vomiting is one of the earliest symptoms, and most stressful is experienced, pregnant mother. Although nausea and vomiting are physiological, nausea and vomiting are not a mild disorder, can occur in 85% of pregnant women, can last throughout the day, and can remain during pregnancy. Nausea vomiting causes discomfort in pregnancy. The intervention of acupressure therapy after Akuprsur treatment can be used as a solution to reduce nausea and vomiting in pregnancy. This is by the Endorphin Theory which is a body-produced pain killer. Endorphin controls the activity of the endocrine glands where the molecules are stored. The release of endorphins is controlled by the nervous system (19). Neural networks are sensitive to pain and external stimulation if triggered by using acupressure techniques can launch Qi and blood flow and instruct the endocrine system to release some endorphins according to the body's need to provide a sense of calm. The average value of nausea and vomiting before acupressure therapy was higher with an average of 8.48. the average value of nausea and vomiting after acupressure therapy on average for nausea and vomiting in the intervention group was lower with an average of 1.2 (14,20)

Associated with parity in the intervention group of acupressure therapy there were primipara mother 22 multipara seven grand multiparas 2. Related to the history of pregnant women in the intervention group of acupressure therapy none had a history of hyperemesis gravidarum. Related to the age of pregnant women in the intervention group, acupressure therapy, there were 20 pregnant women aged 20 years (64.51%). Pregnant women aged 26-34 years were 11 people (35.48%). In the aromatherapy intervention group, there were pregnant women aged 18-25 years as many as 16 people (51.61%). Pregnant women aged 26-34 years as many as 15 people (48.38%).

Regarding gestational age, there were 16 pregnant women with a gestational age of 16 people (51.61%). In the intervention group, acupressure therapy, there were 16 pregnant women with a gestational age of 16 people (51.61%). Pregnant women with 10-12 weeks gestational age were 15 people (48.38%) In the aromatherapy intervention group there were 20 pregnant women with 10-12 weeks gestational age (64.51%). Pregnant women with 10-12 weeks gestational age are 11 people (35.48%).

Based on the results of the study analysis of 31 respondents in the intervention group giving aromatherapy before treatment, the average nausea vomiting in the intervention group giving aromatherapy before the standard treatment was 5.42. The average nausea vomiting in the intervention group giving aromatherapy after being given the treatment of giving aromatherapy on average was 2.45. The lemon essential oil has the benefit of reviving and rejuvenating the level of mental emotion. Indian tribes use citrus essential oil as an anti-fever, anti-infection, insecticide and as a sleeping pill, which is very helpful in skin care and reduces muscle tension, stress, and anxiety. According to lemon oil, necessary research is used because it is considered a safe drug for pregnancy, this study is by the theory that essential oil, oil that can overcome nausea and vomiting is lemon, lime, tangerine, orange (5,6). Administration of aromatherapy after treatment is obtained. According to (16,21) relaxation is a technique to achieve a relaxed state. Relaxation methods will be advantageous during the pregnancy process. (15,16) says that factors that can also reduce vomiting nausea such as the use of aromatherapy are given by inhaling vapors that enter through the nose, pharynx, larynx, trachea, bronchi, and bronchioles. The use of aromatherapy by breathing steam requires good relaxation so that the expected results can be achieved to reduce nausea and vomiting in pregnancy.

This is by the research conducted by (16) in getting a decrease in the frequency of nausea and vomiting before administration of lemon inhalation which is usually given to nausea and vomiting. 15.68. The results of a decrease in the frequency of nausea and vomiting after inhalation in a day decreased to 7.96.

This study concluded that there was a difference in the decrease in nausea and vomiting before and after being given acupressure therapy that it was known that before being given acupressure therapy 5.29 and after being treated with acupressure 1.81. The test results get a p-value of 0,000 which means  $p\text{-value} < (0,05)$ , then  $H_a$  is accepted, and  $H_o$  is rejected, which means that there is a difference in the decrease in the frequency of nausea and vomiting against the provision of acupressure therapy.

This is by the research conducted by (20) Acupressure therapy in Trimester, I pregnant women with an average value of nausea and vomiting before acupressure therapy is the average after being given acupressure therapy was 3.89. the result is  $p\text{-value} = 0,000$ . The results of this study indicate that there are differences in nausea and vomiting before and after being given acupressure therapy in trimester I pregnant women. After the

administration of acupressure therapy vomiting nausea has decreased because acupressure therapy is a therapy carried out with the aim of relaxing, providing comfort and calm so that nausea and vomiting can be reduced.

This study concluded that there was a difference in the decrease in nausea and vomiting before and after being given aromatherapy, it was known that before being given aromatherapy 5.42 and after being given aromatherapy 2.45. The test results in getting a value of 0,000 which means  $p\text{-value} < (0,05)$ , then  $H_a$  is accepted, and  $H_o$  is rejected, which means there is a difference in the decrease in the frequency of nausea and vomiting against the provision of aromatherapy.

This is by the research conducted by (4,22) the effect of inhalation of lemon aromatherapy on morning sickness in pregnant women in the working area of onion bone health center in Banjar Agung regency onion bone. , 68 in a day and the frequency of morning sickness after being given inhalation of lemon aromatherapy obtained an average value of 7.96 in a day. There are differences in the effect of inhalation of lemon aromatherapy on morning sickness in pregnant women after being given aromatherapy with  $P\text{-value} = 0,000$ . After the administration of aromatherapy, nausea and vomiting have decreased because the administration of aromatherapy is a therapy carried out with the aim of relaxing, providing comfort and calm so that nausea and vomiting can be reduced.

The results of the analysis showed that there was an effect of decreasing the frequency of nausea and vomiting in the intervention group after being treated with acupressure and aromatherapy. The test results get a  $p\text{-value}$  of 0,000 which means  $p\text{-value} < (0,05)$ , then  $H_a$  is accepted, and  $H_o$  is rejected, which means that there is an effect of frequency of vomiting nausea in the intervention group on acupressure and aromatherapy therapy.

Acupressure therapy can be a solution to reduce; nausea, vomiting, acupressure therapy is a complementary treatment that is well received, with a relatively low incidence of adverse effects. The use of acupressure therapy in pregnancy to relieve nausea and vomiting has been extensively studied with many positive results. This is consistent with research conducted by (14) that there is an effect of decreasing the frequency of vomiting after being given acupressure therapy at the pericardium point 6 can reduce nausea and vomiting. The results showed a significant decrease in the frequency of vomiting in the respondents after acupressure at the pericardium 6 points with  $P\text{-value} < 0,05$ , which meant that there was influence after being given acupressure therapy.

Lemon aromatherapy can reduce complaints of nausea and vomiting in pregnancy according to the theory from (23,24) that lemon can reduce complaints of nausea and vomiting, headaches, and increase appetite. Also, essential oils contained in orange peel emit a distinctive aroma, so that the odor or aroma response produced will stimulate the work of neurochemical brain cells and can stabilize the nervous system, then cause a calming effect on first-trimester pregnant women who experience nausea and vomiting.

The results of this study explain that the intervention of acupressure therapy and administration of aromatherapy influences reducing nausea and vomiting. This explains that pregnant women can choose alternative preventive therapy for nausea and vomiting by the ability and availability of natural resources in the surrounding environment. Pregnant women who experience mild nausea and vomiting. This study recommends further research related to the addition of therapy time in reducing moderate and severe nausea and vomiting in pregnant women, side effects and uses in the condition of respondents who experience nausea and vomiting in respondents with more severe problems. According to researchers, the decrease in the frequency of nausea and vomiting is caused due to the treatment given by acupressure and aromatherapy therapy, respondents who were given therapy will cause endorphins so that mothers who experience nausea and vomiting will decrease.

## **Conclusion**

There was an effect of decreasing the frequency of nausea and vomiting in the intervention group after being treated with acupressure and administration, become a reference and therapeutic solution that is used for pregnant women who experience emesis gravidarum, this study explains that the intervention of acupressure therapy and administration of aromatherapy has an influence in reducing nausea and vomiting. This explains that pregnant women can choose alternative therapies for acupressure and aromatherapy to prevent nausea and vomiting that can be done and applied alone at home

## **Conflict of interest**

No potential conflict of interest was reported by the authors.

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### Ethical clearance-

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