

THE EFFECT OF LEMON AROMATHERAPY AGAINST VOMITING INTENSITY OF PREGNANT MOTHERS

Ratih Suryaman*, Tety Novianty, Nining Fitriyaningsih, Fitria Hari Wibawati, Dina Indayani Safitri

Wijaya Husada Health Institute

Jl. Letjend Ibrahim Adjie, No. 180, Sindang Barang, Bogor, West Java, Indonesia

*corresponding author: wijayahusada@gmail.com

ABSTRACT

The incidence of nausea and vomiting reaches 12.5% of the number of pregnancies in the world. Pregnancy nausea and vomiting or nausea and vomiting of pregnancy (NVP) are the most common complications during pregnancy of up to 85% in pregnant women. In the United States and Canada, there are around 400 and 350,000 pregnant women who are affected every year due to nausea, vomiting. Reports show that in Indonesia, almost 50-90% of pregnant women experience nausea and vomiting in the first trimester (the first 3 months of pregnancy). This situation will improve at 12-16 weeks gestational age. This situation occurs in about 60-80% of primigravida and 40-60% occurs in multigravida. This study aims to determine the effect of lemon aromatherapy on the intensity of nausea and vomiting in first trimester pregnant women at BPM Nina Marlina.S.ST Bogor district.

The method used is a pre-experimental design with One-Group pre-post test. The sample used 20 respondents in first trimester pregnant women with nausea and vomiting in BPM Nina Marlina S.ST Bogor Regency using Total observation sheet.

Of the 20 respondents (100%) it was found that the post-test results of pregnant women Sampling technique. The instrument used to an with nausea and vomiting scale decreased consisting of 16 (80%) respondents after being given lemon aromatherapy. The statistical test shows that H_0 is rejected and H_a is accepted, where the p-value obtained in this study is 0.006, which means ≤ 0.05 . So that the final conclusion of the statistical test is the effect of lemon aromatherapy on the intensity of nausea and vomiting in first trimester pregnant women at BPM Nina Marlina S.ST Bogor Regency. It is expected that lemon aromatherapy can be considered as a standard of care for pregnant women with nausea and vomiting and can be recommended as an intervention in obstetric care for pregnant women with nausea and vomit trimester I.

Keywords : nausea, vomiting, lemon aromatherapy

PRELIMINARY

Pregnancy is a physiological process that occurs in women due to fertilization between male sex cells and female sex cells. In other words, fertilization of the ovum by spermatozoa, thus undergoing nidation of the uterus and developing until the birth of the fetus.¹ Every pregnant woman will experience the process of body adjustment to pregnancy according to the trimester stage being undertaken. The first trimester is the beginning of the trimester which gives rise to various responses in pregnant women. The most influential response in pregnant women is nausea and vomiting.

According to WHO (World Health Organization) the incidence of nausea and vomiting reaches 12.5% of the total number of pregnancies in the world.³ Nausea and vomiting of pregnancy or nausea and vomiting of pregnancy (NVP) are the most common complications during pregnancy up to 85% in pregnant mother.

In the United States and Canada, around 400 and 350,000 pregnant women are affected every year due to nausea, vomiting. Reports show that in Indonesia, almost 50-90% of pregnant women experience nausea and vomiting in the first trimester (the first 3 months of pregnancy). This situation will improve at 12-16 weeks gestational age. This situation occurs in about 60-80% primigravida and 40-60% occur in multigravida.⁴

Nausea and vomiting are common discomforts experienced by 50% of pregnant women. Generally the most severe in the first trimester of pregnancy. Vomiting occurs when the vomiting center in the medulla or chemoreceptor trigger zone located in the fourth ventricular lateral wall is stimulated. However, the etiology of nausea and vomiting has not been proven. But according to estimates, this condition can be caused by high levels of hCG (Human Chorionic Gonadotropin).⁵

Nausea and vomiting during pregnancy have a significant impact on family life, the ability to perform normal daily activities can be disrupted, social functioning and the development of stressful situations. Pregnant women must be able to adapt to nausea and vomiting, if not able to adapt can cause adverse effects both for pregnant women and the fetus they contain. Pregnant women who experience nausea and vomiting really need adequate nutrition for the mother's body and nutrition for the fetus in the womb. If nutritional intake decreases it will experience weight loss and this will also adversely affect the fetus it contains.

In medical science, treatments that can reduce nausea and vomiting in pregnant women include pharmacological therapy and non-pharmacological therapy. Pharmacological therapy is performed by administering antihistamines, corticosteroids, antiemetics, and anticholinergics. And non-pharmacological therapy which is done by way of regulating the diet (eat a little but often, avoid foods that smell pungent and sharp like spicy food, fatty foods, bersantan, and oily, immediately after waking up eating a cookie before starting the activity), and finally Non-pharmacological therapies that are often used to reduce nausea and vomiting are complementary therapies (ie lemon aromatherapy, ginger and peppermint).⁷

Because aromatherapy is recognized as an effective herbal treatment for treating nausea and vomiting. Aromatherapy means the use of essential perfume oils for therapeutic or medical purposes. It is effective for relaxation, reduce pain and stress, improve coping mechanisms and improve fitness.

Of the various types of aromatherapy that are often used to treat nausea and vomiting, namely lemon aromatherapy, which is one of the alternative methods that provides a sense of relax and calm by stimulating the limbic system of the brain. Lemon aromatherapy also plays a role in refreshing the mind, reducing depression, and reducing emotions. The juice of the citrus family has a refreshing aroma and has antiseptic, stimulant and tonic properties with a significant effect on the entire digestive tract. Stimulant aromas such as the smell of citrus limon oil will affect the locus ceruleus which then releases serotonin and endorphins.⁹ So that the nausea of vomiting can decrease due to a sense of relax and stable emotions. Smell can have a negative or positive influence on mood or natural feelings and well-being sensations, and the aroma of certain essential oils has been shown to affect neurological function.

Lemon essential oil (citrus lemon) is one of the most widely used herbal oils in pregnancy which is considered a safe drug in pregnancy. According to a study 40% of women have used the scent of lemon to relieve nausea and vomiting, and 26.5% of them have been reported as effective ways to control the symptoms of nausea and vomiting.¹¹

One of the effectiveness of the chemical content in lemon essential oil is that it can affect the activity of the functioning of the brain through the nervous system associated with the sense of smell. This response will stimulate an increase in neurotransmitter activity, which is related to the recovery of psychological conditions such as emotions, feelings, thoughts, and desires.

When essential oils are inhaled, they enter the nasal cavity and stimulate the limbic system in the brain. The limbic system is an area that affects emotions and memory and is directly related to the adrenal, hypothalamic pituitary gland, parts of the body that regulate heart units, blood pressure, stress, memory, hormonal balance, and breathing. Lemon itself is one type of other herbs, especially for pregnant women who are experiencing nausea, vomiting.

According to research conducted by Astriana (2015) shows differences in the frequency of nausea before and after the administration of lemon aromatherapy at BPS Varia Mega Lestari, S.ST., M.Kes. This study looked at the effect of the treatment given that the total mean before administration of lemon aromatherapy was obtained 4.53 times the frequency of nausea and vomiting, then obtained the mean after administration of lemon aromatherapy frequency of nausea 3.13 times a day with a p-value of 0.000. These results indicate that the frequency of nausea and vomiting of respondents average before and after administration of lemon aromatherapy has a significant difference because the p-value obtained p-value <0.05, which means that the administration of lemon aromatherapy can reduce the frequency of nausea and vomiting in pregnancy.¹²

Nursing actions taken at BPM Nina Marlina.S.ST to reduce nausea and vomiting in pregnant women so far are still using nursing measures with pharmacological management, namely the administration of nausea and vomiting, namely with vitamin B6 and Metocloropamide.

Based on the results of a preliminary study conducted in July - August 2018 at BPM Nina Marlina.S.ST, the average number of visits of first trimester to third trimester pregnant women was 118 pregnant women. In August, K1 (first trimester) visit data showed that pregnant women with nausea and vomiting consisted of 20 pregnant women. Pregnant women say that nausea, vomiting is felt in the morning until sometimes it interferes with daily activities, some say nausea and vomiting are felt when they smell bad or even food odor. Pregnant women who were questioned by researchers said that they did not yet know an alternative way to relieve or relieve nausea and vomiting apart from using drugs taken from midwives, or there were even some pregnant women who only silenced them.

Based on the background of the problems above, researchers were interested in conducting research with the title "Effect of Lemon Aromatherapy on the Intensity of Nausea and Vomiting in Trimester I pregnant women in BPM Nina Marlina.S.ST Bogor Regency in 2019 until the feeling of nausea and vomiting are felt gone.

RESEARCH METHODS

The type used in this study is experimental or experimental research. Experimental research is a study by conducting experimental activities (experiments), which aim to find out the symptoms or effects that arise, as a result of the existence of certain treatments or experiments.¹³

This study uses a Pre-experimental research design. While the design of this research design uses One-Group pre-posttest design, because pre-experimental does not require control.

This research was conducted on September 4, 2019 at BPM Nina Marlina S.ST Bogor Regency. The population in this study was pregnant women with nausea and trimester I.

The variables of this study consisted of independent variables, namely the treatment of lemon aromatherapy in BPM Nina Marlina S.ST Bogor Regency. The dependent variable in this study was pregnant women with first trimester nausea and vomiting in BPM Nina Marlina S.ST. The analysis consists of prerequisite tests and hypothesis tests, where the prerequisite test techniques consist of normality tests and homogeneity tests. Normality test is to find out whether the data is normally distributed so that it can be used in parametric statistics, if the data is not normally distributed, non-parametric statistics can be used. In this normality test using the Shapiro-Wilk test. Homogeneity test is to test the similarity of some parts of the sample, so that the generalization of the population can be done. Homogeneity test uses the formula of Levene's test. Influence or not on the administration of lemon aromatherapy to the intensity of nausea and vomiting in first trimester pregnant women at BPM Nina Marlina S.ST Bogor Regency.

RESULT

Based on the frequency distribution of nausea intensity of vomiting in first trimester pregnant women, it is known that most of the intensity scale of nausea and vomiting before lemon aromatherapy is given (scale 7-9) controlled severe nausea, namely as many as 10 people (50%). Based on the frequency distribution of the nausea intensity of vomiting in first trimester pregnant women it is known that most of the intensity scale of nausea and vomiting after lemon aromatherapy is given (scale 1-3) mild nausea and vomiting as many as 9 people (45%). Based on the analysis of the results of the intensity of nausea and vomiting before and after treatment, a significant value of 0.000 is known.

Based on the analysis of the Effect of Lemon Aromatherapy on the Intensity of Vomiting Nausea in Trimester I Pregnant Women in BPM Nina Marlina S.ST Bogor Regency, it is known that the post-test results of pregnant women with permanent nausea and vomiting are 4 (20%) respondents, and pregnant women with nausea and vomiting decreased consisting of 16 (80%) respondents. With a significant value of 0.006.

DISCUSSION

1. Interpretation

a. Characteristics of Intensity of Nausea and Vomiting Before Lemon Aromatherapy is Given

Based on table 4.2 shows that pregnant women who experience mild nausea and vomiting (scale 1-3) are 4 respondents, moderate nausea and vomiting (scale 4-6) are 6 respondents, and controlled severe nausea and vomiting (scale 7-9) are 10 respondents.

In accordance with research conducted by Melinda Susanti (2017) with the title "granting lemon inhalation aromatherapy to reduce nausea and vomiting in the first trimester of pregnancy in BPM Istiantul Kebumen Regency" to determine the scale of nausea and vomiting before lemon aromatherapy given, the majority in the controlled weight category (scale 7- 9) done using the NRS (Numeric Rating Scale) observation sheet.

In medical science, treatments that can reduce nausea and vomiting in pregnant women include pharmacological therapy and non-farmakologis therapy. Pharmacological therapy is performed by administering antihistamines, corticosteroids, antimetics, and anticholinergics. And non-pharmacological therapy which is done by way of regulating the diet (eat a little but often, avoid foods that smell pungent and sharp like spicy food, fatty foods, bersantan, and oily, immediately after waking up eating a cookie before starting the activity), and finally Non-pharmacological therapies that are often used to reduce nausea and vomiting are complementary therapies (ie lemon aromatherapy, ginger and peppermint) .7 Because aromatherapy is recognized as an effective herbal treatment for treating nausea and vomiting.

The intensity of nausea and vomiting in each pregnant woman is different. In this study, before lemon aromatherapy was given to first trimester pregnant women, pre-test was performed first. The pre-test results showed that the mean total of the intensity of the nausea scale of vomiting in first trimester pregnant women was 3.30 (SD = 0.801). This is in accordance with the provision of lemon aromatherapy to 20 respondents who experienced nausea, vomiting, from the results of interviews with using the observation sheet to the most respondents contained nausea and vomiting with controlled weight (scale 7-9).

b. Characteristics of Intensity of Nausea and Vomiting after Lemon Aromatherapy.

Based on table 4.3 shows the results of the research on the nausea scale of vomiting of pregnant women trimester I overcome the decline. Before given aromatherapy lemon pregnant women who released mild nausea, vomiting as many as 4 (20%) respondents, moderate nausea and vomiting as many as 6 (30%) respondents, and controlled severe nausea and vomiting as many as 10(50%) respondents.

In accordance with research conducted by Melinda Susanti (2017) with the title "granting lemon inhalation aromatherapy to reduce nausea and vomiting in the first trimester of pregnancy at BPM Istiantul Kebumen Regency" to study the nausea scale given by lemon aromatherapy given in the mild category (scale 1-3) done using the NRS (Numeric Rating Scale) observation sheet.

Lemon essential oil (lemon) is one of the most widely used herbal oils in pregnancy which is considered a safe drug in pregnancy. According to a studio, 40% of women have used the scent of lemon to relieve nausea and vomiting, and 26.5% of them have agreed as an effective way to regulate it.

One of the chemical reserves in lemon essential oil can affect the work activities of the brain through the nervous system associated with the sense of smell. This response will encourage an increase in neurotransmitter activity, namely regarding psychological recovery such as emotions, feelings, thoughts, and desires.

When essential oils are inhaled, they enter the nasal cavity and stimulate the limbic system in the brain. The limbic system is an area that deals with memory and memory and is directly related to the adrenal, pituitary-hypothalamus, body parts related to the heart unit, blood pressure, stress, memory, balance hormones, and breathing. Lemon itself is one of the other types of herbal plants, specifically for pregnant women who are being improved with nausea and vomiting.

In this study after being given aromatherapy lemon pregnant women who were asked to nausea vomiting with a scale of Nausea Vomiting as much as 1 (5%) respondents, Light Nausea Vomiting as many as 9 (45%) respondents, Medium Nausea Vomiting as many as 8 (40%) respondents, Vomiting Nausea Controlled Weight of 2 (10%) respondents. In the post-test results obtained results are the average total results of the scale of pregnancy in first trimester pregnant women is 2.55 (SD = 0.759).

c. Analysis of the Effect of Lemon Aromatherapy on the Intensity of Vomiting in First Trimester Pregnant Women in BPM Nina Marlina S.STBogor Regency.

Based on table 4.7 the results of the analysis of researchers obtained respondents who use lemon aromatherapy to the intensity of nausea and vomiting in pregnant women after given nausea vomiting training decreased by 16 (80%) respondents, while those who used nausea and vomiting remained as many as 4 (20%) respondents. The significant value obtained is 0.006, which means that the $p\text{-value} \leq 0.05$, then H_a is accepted H_0 is rejected. Need additional assistance in the administration of lemon aromatherapy to the intensity of the release of nausea in trimester I pregnant women.

This study discusses the research conducted by Siti Cholifah namely "the influence of lemon aromatherapy to reduce nausea and vomiting in first trimester pregnant women" with the results before giving aromatherapy Means \pm SD 23.33 \pm 3.913, then after aromatherapy assistance means \pm SD 13.67 \pm 4.071. Wicoxon Sign Rank Test results with significance level $\alpha = 0.05$ obtained $p = 0.001$ ($P \leq 0.05$) then H_a is accepted and H_0 is rejected, which means there is aromatherapy nausea and vomiting in first trimester pregnant women I.

Most of primigravida has not been able to replace with the hormones estrogen and human chorionic gonadotropin (hCG) so that it is more common in nausea, vomiting. In primigravida usually choose information and poor communication and provide care to help affect the perception of women with nausea and throwing variations.

While the multigravida already has experience, information and knowledge about the problem of sagging nausea able to overcome the symptoms. 10 requires nausea, vomiting needed by primigravida pregnant women is more increased than in multigravida pregnant women.

Nausea and vomiting are common discomforts experienced by 50% of pregnant women. Nausea and vomiting during pregnancy have a significant importance on family life, the ability to perform reliable daily activities, social functions and stress development. In medical science, treatment that can reduce nausea and vomiting in pregnant women is given pharmacological therapy and non-pharmacological therapy.

Reducing the intensity of nausea slows the effects of lemon aromatherapy, lemon aromatherapy also eliminates thoughts, decreases depression, and reduce emotions. Lemon juice contains aroma and has antiseptic, stimulant and tonic properties with beneficial effects on the entire digestive tract. A stimulating aroma like limon orange oil will affect the locus ceruleus which then releases serotonin and endorphins. 9. Sense of nausea can turn into a stable and stable sense of stability. Smell can give a negative or positive impression on mood or feelings and well-being, and the aroma of certain essential oils has been shown to affect neurological function.

RESEARCH IMPLICATIONS

The results showed that there was an influence of lemon aromatherapy on the intensity of nausea and vomiting in first trimester pregnant women at BPM Nina Marlina S.ST Bogor Regency in 2019. Thus as a health worker, handling nausea in first trimester pregnant women as an alternative in midwifery care is expected to be recommended as a nurse's intervention in her nursing care. Care or care for trimester pregnant women I am very important in health care, professional and satisfying services do not have to be expensive. However, lemon aromatherapy to reduce nausea and vomiting can be done in a simple way, relatively inexpensive, and can be done independently by nurses or patients.

The effects of lemon aromatherapy not only reduce the intensity of nausea and have no side effects, but can also provide calm, relax, reduce pain and stress, and can also improve fitness.

CONCLUSION

Based on the discussion previously described, the conclusions from this study can be drawn as follows:

1. Before given lemon aromatherapy intervention during pre-test a small portion of respondents (20%) relied on mild throwing nausea, a small portion of respondents (30%) controlled severe vomiting.
2. After the lemon aromatherapy intervention was given during the post-test most of the respondents (45%) relied on mild nausea throwing, a small portion of respondents (5%) had no difficulty in nausea and vomiting, a small portion of respondents (50%) used nausea moderate vomiting, a small proportion of respondents (10%) are lower controlled.

3. It is known that the post-test results of pregnant women with permanent nausea and vomiting are 4 (20%) respondents, and pregnant women with nausea and vomiting decreased consisting of 16 (80%) respondents. It is undeniable that there are benefits of lemon aromatherapy to intensive nausea and vomiting in first trimester pregnant women with a significant value of 0.006 or a P value of 5 0.05.

SUGGESTION

In connection with the above conclusions, there are several things that can be supported for the development of the results of this study of the intensity of the release of trimester I pregnant women.

1. For Institutions

It is hoped that lemon aromatherapy can be considered as a permanent treatment for pregnant women with nausea and vomiting and can be recommended as an intervention in obstetric care for pregnant women with nausea and vomit trimester I.

2. For pregnant women Trimester I

It is expected for first trimester pregnant women who experience nausea to vomit during pregnancy to use lemon aromatherapy in dealing with nausea and vomiting.

3. For Other Researchers

It is expected to be a reference material in conducting further research that is better related to lemon aromatherapy and nausea and vomiting in first trimester pregnant women.

REFERENCES

1. Pratiwi A.M, S.ST., M.Kes, dan Fatimah, S.SiT., M.Kes. 2019. Memahami Berbagai Penyakit dan Komplikasi Kehamilan. Didalam : *Patologi Kehamilan*. Yogyakarta : Pustaka Baru Press
2. Sulistyawti, A. 2012. Perubahan Anatomi dan Fisiologis Ibu Hamil Didalam : *Asuhan Kebidanan Pada Masa Kehamilan*. Jakarta : Edsa
3. Claudia Wijaya. 2017. *Hubungan antara Status Gravida dan Ibu Hamil dengan Kejadian Emesis Gravidarum di Rumah Sakit Gotong Royong Surabaya*. Irepository.wima.ac.id Diunduh pada tanggal 09 juli 2019, 17:35:06
4. Umu Faizah. 2018. *Pengaruh Pemberian Aromaterapi Inhalasi Lemon Terhadap Emesis Gravidarum*. digilib.unisayaogya.ac.id Diunduh pada tanggal 09 juli 2019, 17:45:02
5. Holmes, D dan Philip N.B. 2011. *Buku Ajar Ilmu Kebidanan*. Jakarta : EGC
6. Saridewi W, Erni Yulia. 2018. *Pengaruh Aromaterapi Lemon terhadap Emesis Gravidarum di Praktik Mandiri Bidan Wanti Mardiwati Kota Cimahi*. Tersedia di journals.stikim.ac.id Diunduh pada tanggal 09 Juli 2019, 18:15:34
7. Rahmawati, N. 2010. *Ilmu Praktis Kebidanan*. Jakarta : Victory Inti Cipta
8. Jaelani. 2009. *Aromaterapi*. Jakarta : Pustaka Populer Obor
9. Sharma, S. 2009. *Aromaterapi*. Tangerang : Kharisma
10. Tiran, D. 2009. *Mual dan Muntah Kehamilan : Seri Asuhan Kebidanan*. Jakarta : Kedokteran EGC.

11. Susanti, Melinda. 2017. *Pemberian Lemon Inhalasi Aromaterapi untuk Mengurangi Mual Muntah pada Kehamilan Trimester I*. elib.stikesmuhgombong.ac.id. Diunduh pada tanggal 28 Juli 2019 18:25:10
12. Astriana. 2015. *Pengaruh Lemon Inhalasi Aromaterapi terhadap Mual Muntah pada Kehamilan di BPS Varia Mega Lestari*. S.ST., M.kes Batupuru Kec. Natar Kabupaten Lampung Selatan. Malahayati.ac.id Diunduh tanggal 10 Juli 2019, 15:30:10
13. Notoatmodjo. 2010. *Metodologi Penelitian Kesehatan*. Jakarta : PT Rineka Cipta
14. Sugiono. 2016. *Metode Penelitian Kuantitatif Dan Kualitatif Dan Kombinasi (Mixed Methods)*. Bandung : Alfabeta