

## ANALYSIS OF THE IMPLEMENTATION OF MINIMUM SERVICE STANDARDS FOR TODDLERS AT PUBLIC HEALTH CENTER

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### Abstract

According to *the World Health Organization (WHO)* the total of all pregnancies in the world is 12.5%. Discomfort that is often experienced by pregnant women is nausea, vomiting which if sustained can cause dehydration to make the body of pregnant women become weak, pale, and urinate frequently. The purpose of this study was to determine the effect of *massage* therapy with lemon and peppermint aromatherapy on nausea vomiting of 1st trimester pregnant women at Pratama Afiah Clinic Pekanbaru. This research is quantitative research with *experimental queuey design*. The population in the study with a total of 18 respondents with 30 minutes was given massage therapy with lemon aromatherapy and peppermint using observation sheets that refer to the standard operating procedure for giving massage therapy to nausea vomiting. The analysis used is univariate and bivariate analysis with statistical tests using *dependent t-tests*. The results of the study found that the average nausea vomiting in pregnant women before massage therapy *with* lemon and peppermint aromatherapy was 7.33 and after therapy was 5.44. Based on the results of bivariate tests, a *p value* of 0.000 ( $<0.05$ ) means that there is an effect of *massage* therapy with lemon and peppermint aromatherapy on nausea. Researchers recommend for future studies using diffuse as a tool with a mixture of *essential lemon oil* and peppermint.

**Keywords:** *Massage, Lemon, Peppermint, Nausea, Vomiting*

### INTRODUCTION

Pregnancy is a process that every woman experiences by having healthy reproductive organs, has experienced menstruation, and who has had sexual relations with men whose reproductive organs are healthy is likely to experience the process of pregnancy (Kartikasari, 2018). During pregnancy, the body needs food intake that is rich in nutrients to maximize the condition of pregnant women both physically and spiritually, with the hope that pregnant women must always be relaxed and not stressed. During pregnancy, the body's ability to carry out activities also decreases, so pregnant women cannot work optimally (Jayanti, 2019).

In general, 80-90% of pregnancies will proceed normally, and only 10-12% of pregnancies are accompanied by complications or develop into pathological pregnancies. One of the things that often happens to pregnant women as a direct result of pregnancy is nausea and vomiting.

Nausea and vomiting generally occur in the first months of pregnancy, sometimes along with vomiting. This condition is often called *morning sickness*. Symptoms of *morning sickness* is one of the early symptoms that occur in the first and second trimesters, but can also last up to 4 months of pregnancy (Susanto, 2021). In Indonesia, almost 50-90% of pregnant women experience nausea during the first trimester (first 3 months of pregnancy) (Siti. et al, 2021).

According to (Harahap, 2020) the total of all pregnancies in the world according to *the WHO (World Health Organization)* there are 12.5% of the number of events of *hyperemesis gravidarum*. As a result of nausea and vomiting, an imbalance occurs disrupting the fluid that kidney tissue and can liver necrosis. The total incidence of *hyperemesis gravidarum* worldwide varies from all total pregnancies in Indonesia 1-3%, of all total pregnancies in Canada 0.8%, in Sweden by 0.3%, in Norway 0.9%, in China 10.8%, in California 0.5%, in Pakistan 2.2% and in Turkey by 1.9%, 0.5-2% is the prevalence rate of *Hyperemesis Gravidarum* in the United States.

Based on survey results from the Central Statistics Agency in Riau Province, the prevalence of pregnant women in 2019 was 170 366 people, in 2020 there were 170 854 people, and in 2021 there were 143 716 people. Based on data from the Pekanbaru City Office, the prevalence of pregnant women in 2018 was 25. 478 people, in 2019 as many as 25. 554 people, in 2020 as many as 25. 615 inhabitants. Based on data from the Afyah Pratama Clinic in Pekanbaru, the number of visits by pregnant women in 2020 was 102 people, in 2021 there were 1,023 people, and in 2022 there were 848 people.

According to (Patimah et al., 2020) The discomfort often experienced by pregnant women is nausea, vomiting, constipation or loose stools, heartburn or burning sensation in the chest, vaginal discharge, dizziness, fatigue, blood coming out of the genitals (*vagina*), frequent urination and lower abdominal pain. According to (Wijayanti et al., 2017) the incidence of nausea and vomiting resulting from increased *oestrogen* levels. This continued nausea and vomiting can lead to dehydration. Vomiting more than ten times a day or nausea 20 weeks in a row. In the end, this pregnancy will continue *Hyperemesis gravidarum* makes the body of pregnant women become weak, pale, and urinate frequently.

According to (Siti. et al, 2021) nausea is an unpleasant taste or sensation that occurs behind the throat and epigastric which can cause vomiting. While vomiting is interpreted as a subjective feeling and the desire to vomit. Physiological changes during pregnancy associated with an increase in the hormone *HCG (human chorionic gonadotropin)*. The HCG hormone is produced by cells formed in the placenta since pregnancy. This hormone functions important in the process of pregnancy in maintaining eggs that have been fertilized by sperm and attached to the uterine wall.

According (Siti. et al, 2021) Therapy that can be given to pregnant women which includes pharmacological *and non-pharmacological therapy*. Management of nausea and vomiting in pregnancy can be done *pharmacologically* / using drugs and nonpharmacologic. However, the use of drugs during pregnancy should be minimized and avoided, considering the condition of pregnant women is sensitive and risky for the foetus conceived. Nonpharmacological treatment of nausea vomiting has often been done by the community, because it is considered safer and more practical such as complementary therapies, *acupressure*, relaxation, aromatherapy *and* massage.

*Massage* or emphasis on the body in certain areas, especially in soft tissues, such as muscles, tendons or *mentum leagues* without causing movement or changes in joint position that aims to cause a *relaxing*, comfortable, blood flow and *hormonal stabilization effect so as to help reduce or reduce nausea vomiting in pregnant women* (Putri et al., 2018). The right massage approach or massage therapy and relaxation can help overcome some imbalances and relax pregnant women. According (Jayanti, 2019) *Relaxing massage using baby oil on the head temples, pregnant women feel relaxed comfortable and happy when in the relaxation footing, pregnant women feel reduced headaches shortly after a relaxing massage*.

Indonesian massage is also known as *massage and massage*. This type of therapy belongs to the group of therapies that complement the sense of touch. Massage is a method of therapeutic or traditional health practice by applying pressure to the body in a structured, unstructured, sedentary or altered position, either manually or using mechanical devices through the application of pressure, movement or vibration. Massage usually uses hands, fingers, elbows, arms, legs, or massage tools (Sari, 2022). The benefits of *massage* for 1st trimester pregnant women are to cause a relaxing, comfortable, blood flow and hormonal stabilization effect so as to help reduce or reduce nausea vomiting in pregnant women (Siti. et al, 2021).

Based on the results of interviews conducted by the author on several pregnant women at Pratama Afiyah Clinic, it was found that the average score of pregnant women had felt nausea and vomiting, in the 1st trimester. Some of them said that they had never done *massage* therapy to reduce nausea and vomiting. Based on the explanation above, the author is interested in conducting research on the effect of *massage* therapy with *lemon* and papermint aromatherapy on nausea, vomiting in early pregnancy.

## RESEARCH METHODS

This type of research is quantitative research. The research design used in this study was *experimental quasy*. The research was conducted at Pratama Afiyah Clinic. The population in this study is 1st trimester pregnant women at Pratama Afiyah Clinic in 2022 with the number

of 1st trimester pregnant women in 2022 is 233 people, with the average visit of 1st trimester pregnant women per month is 18 people. The sample in this study was 18 people with a sampling technique, namely purposive sampling with consideration of inclusion and inclusion criteria. The instrument used in this study was the Pregnancy *Unique Quantification of emesis and nausea* (PUQE)-24 sheet. The process of giving massage therapy with 3 fingers from the wrist pressing slightly and massaging towards the hour hand using 2 drops of *essential lemon oil* and papermint. The focus of the *massage* on the hand area especially the inner wrist, press the *Nei Kuan* point / P6 *acupuncture point* (meridian *point area*), press for 30 minutes to 60 minutes, then release, done on the two left and right hands alternately. This is done when the mother is feeling nauseous or vomiting and is done for 7 days (1 week). This analysis is used to determine the effect of *massage* therapy with the level of nausea vomiting in pregnant women using *a dependent t-test*.

## RESEARCH RESULT

The results of the study can be seen in the table below :

### 1. Characteristics Responden

**Table 1. Distribution of Respondents Based on the Age of Pregnant Women at Pratama Afiyah Clinic**

No	Age	Frequency (n)	Percentage %
1	<30th	13	72.3
2	≥30 th	5	27.9
Sum		18	100.0%

Based on table 1. It can be seen that some respondents aged < 30 years as many as 13 people with a percentage of 72.3% and ≤ 30 years as many as 5 people with a percentage of 27.9%.

**Table 2. Distribution of Respondents Based on Education of Pregnant Women at Pratama Afiyah Clinic**

N o	Educatio n	Frequency (n)	Percentage %
1	S1	2	11.1
2	D3	1	5.6
3	SMA	10	55.6
4	SMK	2	11.1
5	SMP	3	16.7
Jumlah		18	100.0%

Based on table 2. It can be seen that half of respondents at the high school education level are 10 (55.6%).

**Table 3. Distribution of Respondents Based on the Work of Pregnant Women at Pratama Afiyah Clinic**

No	Work	(n)	%
1	PNS	12	11.1
2	Private Employees	1	5.6
3	IRT	5	83.3
Sum		18	100.0%

Based on table 3. It can be seen that half of respondents IRT employment rate is 15 (83.3%)

**Table 4. Distribution of Respondents Based on the Number of Pregnancies (Parity) of Pregnant Women at Pratama Afiyah Clinic**

No	Paritas	(n)	%
1	1	9	50.0
2	2	2	11.1
3	3	3	16.7
4	4	3	16.7
5	5	1	5.6
Sum		18	100.0

Based on table 4. It can be seen that some respondents with the number of pregnancies 1 as many as 9 people (50.0%).

**Table 5. Average Distribution of Nausea Frequency of Vomiting Before Massage Therapy Intervention with Lemon and Papermint Aromatherapy for Pregnant Women at Pratama Clinic**

BEFORE					
N	Mean	SD	SE	Min	Max
18	7.33	1.57	.37048	4.00	10.00

Based on table 5. It is known that for massage therapy treatment, in *the pre-test* the average frequency of nausea vomiting pregnant women was 7.33, with a standard deviation of 1.57, standard error 0.37048, lowest frequency 4 and highest frequency 10.

**Table 6. Average Daily Distribution of Nausea Frequency of Vomiting After Massage Therapy Intervention with Lemon and Papermint Aromatherapy to Pregnant Women at Pratama Afiyah Clinic**

AFTER					
N	Mean	SD	SE	Min	Max
18	5.44	1.46	.3451	4.0	9.00

Based on table 6. It is known that for massage therapy treatment, in *the post-test* the average frequency of nausea vomiting pregnant women was 5.44, with a standard deviation of 1.46, standard error 0.3451, lowest frequency 4 and highest frequency 9 .

**Table 7. The Effect of *Massage Therapy* with Lemon and Papermint Aromatherapy on Nausea Vomiting in 1st Trimester Pregnant Women at Pratama Afiyah Clinic.**

		95% Confidence Interval Of The Difference					
Mean	SD	SE	Lower	Upper	t	df	P Value
1.889	1.811	.427	.988	2.790	4.424	17	.000

Based on table 7. above can be seen paired sample correlations mean 1.889, SD 1.811, SE .427, Lower .988, Upper 2.790, t 4.424, DF 17 with p value 0.000 (<0.05) It can be concluded that there is an effect of *massage therapy* with lemon aromatherapy and peppermint on nausea vomiting pregnant women trimester 1 At Pratama Afiyah Clinic.

## DISCUSSION

### 1. Characteristics Responden

#### a) Age of Pregnant Women

The results showed that the age of respondents was mostly over 35 years old as many as 2 people with a percentage of 11.1%. According (Wahyuni, 2019) Nausea and vomiting that occur over the age of 35 years are caused by psychological factors, where the mother is not ready to get pregnant or even does not want to get pregnant again so that she will feel so depressed and cause stress to the mother as well as lack of family or husband support and changes in the role and body image of the mother, allegedly can be a factor in the incidence of hyperemesis gravidarum.

According to research assumptions, this study proves that the age of pregnant women is closely related to the incidence of nausea vomiting planned there are some respondents obtained aged over 35 years as many as 2 people with a percentage of 11.1%. Age 35 years and over has an impact on decreasing body resistance and easily contracting the disease so that it triggers more disruption of the balance of hormone production which affects the occurrence of complications in young pregnancy such as dizziness, nausea, vomiting in the morning.

#### b) Education for Pregnant Women

The results showed that the respondents' education was mostly high school as many as 10 people (55.6%) and higher education minorities as many as 2 people (11.1%). According to (Sumijatun, 2010) Education is a predisposing factor is a factor that exists in individuals such as knowledge, attitudes towards health and education level. Where to behave health, for example (health checks for pregnant women), knowledge is needed about the benefits of pregnancy checks, both for the health of the mother herself and for the fetus. Most who experience hyperemesis gravidarum pregnant women who have a



high school education. In this study is in accordance with the theory, lack of knowledge can affect the incidence of hyperemesis, and lack of information from health workers about the prevention of hyperemesis can also be another factor that causes hyperemesis gravidarum. And the higher a person's education, the easier it is to receive information so that more knowledge is possessed. Highly educated respondents will more easily absorb information so that more knowledge than those with less education will experience obstacles in receiving new information.

According to (Khayati, 2022) The results showed that based on education, the most high school graduates were 17 (70.8%) and the least education was Bachelor as many as 1 respondent (4.2%). The lack of insight, limited association, limited information about health makes individuals less able to accept facts based on 235 scientific / science-based analyses, but more receptive to myths rather than reasoning. The strong myth of nausea-vomiting that commonly occurs in young pregnant women can trigger the emergence of emesis gravidarum. According to research assumptions, this study proves that pendiace is associated with the incidence of nausea vomiting in pregnant women. The number of high school graduates (SMA) as many as 10 people with a percentage of 55.6% can be concluded that they experience obstacles in receiving new information and lack of understanding of the absorption of the information.

c) Pregnant Women's Work

The results showed that most of the jobs of IRT respondents (housewives) were 15 people (83.3%) and the minority of civil servant jobs were 2 (11.1%). According to (Munisah, 2022) mothers who do not work or become housewives have narrower social associations, the information obtained is also little and there are no friends to share experiences, so that if there is a problem about pregnancy, they cannot handle it and cause mental stress, which will trigger nausea and vomiting.

According to (Khayati, 2022) emesis gravidarum is mostly experienced by housewives or pregnant women who do not work formally because respondents have more time to think about the condition of their pregnancy, more time to get information and experience from friends, neighbours than from health workers or accurate sources of information. This condition will add to anxiety. Other anxieties can occur due to the absence of health insurance, savings for pregnancy care and financing the delivery process, postpartum costs also weigh on the minds of respondents. Economic limitations have an impact on the inability to meet quality nutrition with balanced nutrition so that the nutrition of pregnant women is inadequate, health problems often occur due to low immunity, susceptible to disease. This condition can cause decreased appetite, physical weakness and continue to be a balance disorder causing nausea vomiting. According to research assumptions, this study proves that work is related to hyperemesis gravidarum in pregnant women. The number of housewives plays the largest role as many as 15 people with a percentage of 83.3% so it can be concluded that heperemesis can increase if non-

working mothers or housewives have narrow insight and lack of socialization between the surrounding environment.

d) Number of Pregnancies (Parity) of Pregnant Women

The results showed that half of the respondents were undergoing their first pregnancy or primigravida, amounting to 9 people with a percentage of 50%. According to (Sumai, 2014) which states that Hyperemesis gravidarum is more common in primigravida pregnant women when compared to multigravida, this is because primigravida has higher levels of estrogen than multigravida. First-time pregnant women (primigravida) have not been able to adapt to the increase in human chorionic gonadotropin (hCG) and estrogen hormones that are thought to be the cause of hyperemesis gravidarum.

According to (Susilawati & Erlyna, 2017) the incidence of hyperemesis gravidarum is more often experienced by primigravida than multigravida, this is related to the level of stress and age of the mother when experiencing the first pregnancy. In primigravida mothers psychological factors play an important role in this disease, fear of pregnancy and childbirth, fear of responsibilities as a mother can cause mental conflicts that can aggravate nausea and vomiting as an unconscious expression of reluctance to become pregnant or as an escape from life's difficulties. According to the study's assumptions, this study proves that parity is associated with hyperemesis gravidarum in pregnant women. The amount of maternal parity is in line with the gravida, because in this study there were no mothers who had twins so if gravida 1 means nullipara parity, gravida 2 means primiparous parity, and so on. In mothers with primiparous parity, psychological factors play an important role in this disease, fear of pregnancy and childbirth, fear of responsibilities as a mother can cause mental conflicts that can aggravate nausea and vomiting.

2. The Effect of *Massage Therapy* with Lemon and Peppermint Aromatherapy on Nausea and Vomiting in Early Pregnant

Based on the results of *the dependent sample t test* massage therapy with lemon aromatherapy and peppermint it can be seen that *the post-test* ( $M = 7.33$ ,  $SD = 1.572$ ). While *post-test* ( $M = 5.44$ ,  $SD = 1.464$ ). The results of the statistical test showed a *p value* of 0.000 ( $<0.05$ ), thus  $H_0$  is accepted meaning that there is an effect of *massage therapy* with lemon aromatherapy and peppermint on vomiting nausea of 1st trimester pregnant women at Pratama Afiyah Clinic. According to (Tanjung, 2021) *Acupressure* is one of the non-pharmacological handling efforts. Acupressure treatment method from ancient Chinese in specific body acupuncture needle points using acupressur finger point specific body points. *Acupressure* and acupuncture stimulate the regulatory system and activate endocrine and neurological mechanisms which are physiological mechanisms in maintaining balance, manually pressing P6 in the wrist area which is 3 fingers from the wrist area or two tendons. Acupressure is useful for strengthening or activating the affected organ and increasing blood flow in the body.



According to (Hasibuan Hasanah, 2021), peppermint has properties to overcome nausea and vomiting in pregnant women, this is due to the high content of menthol (50%) and methane (10-30%). In addition, peppermint has long been known to exert carminative and antispasmodic effects, specifically working in the smooth muscles of the gastrointestinal tract and biliary tract, while it also contains aromatherapy and essential oils that have pharmacological effects.

According to (Wati Kresna, 2021) lemon aromatherapy derived from the extraction of lemon peel (Citrus Lemon) is one type of aromatherapy that is safe for pregnancy and childbirth. Lemon essential oil (Citrus lemon) is one of the most widely used as an herbal oil in pregnancy and is considered a safe remedy in pregnancy. According to one study, 40% of women have used lemon scent to relieve nausea and vomiting, and 26.5% of them have successfully controlled the symptoms of nausea and vomiting experienced during pregnancy.

Peppermint also has properties to overcome nausea and vomiting in pregnant women. This is due to the high content of menthol (50%) and methane (10-30%). According to the researchers' assumption that there is an effect of massage therapy with lemon and peppermint aromatherapy on vomiting nausea of pregnant women at Pratama Afiah Clinic *because of the results of the dependent sample t test p value value of 0.000 (<0.05), thus H0 is accepted meaning that there is an effect of massage therapy with lemon and peppermint aromatherapy on vomiting nausea of pregnant women at Pratama Afiah Clinic.*

## CONCLUSION

The results showed the effect of *massage* therapy with lemon and peppermint aromatherapy on nausea vomiting in early pregnancy.

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