

# The Influence of Yoga to Decrease Emesis Gravidarium

Koekoeh Hardjito<sup>1</sup>, Dwi Estuning Rahayu<sup>2</sup>, Esa Putri Elysa<sup>3</sup>

<sup>1, 2, 3</sup>Politeknik Kesehatan Kemenkes Malang-Indonesia

**Abstract:** *Various changes will be experienced by a woman during pregnancy. Psychological, physiological, and hormonal changes can have a serious impact on pregnant women if not treated promptly. One of the circumstances that occur in pregnant women is the occurrence of nausea and vomiting in early pregnancy. Factors causing increased levels of nausea and vomiting are estrogen and hCG hormone in serum, factor psychologically predispose some women to experience nausea, vomiting and worsen existing problems. The purpose of this research is to find out whether yoga can decrease the influence of morning sickness in pregnancy trimester I. This study uses the Pre-experiment, one group pretest-posttest design. The population in this study were all pregnant women in the first trimester at Sukorame Puskesmas Kediri. The sample size is 14 respondents. From the test results obtained from Wilcoxon Matched Paired Test Results in  $T$  count = 16 <  $T$  table = 21 so that it can be concluded that there is influence of yoga to decrease trimester morning sickness in pregnancy I. Yoga that was done regularly and correctly can help decrease the severity of nausea and vomiting. The community can consider yoga as Non-pharmacological therapy to pregnant women who experience nausea vomiting so as to relieve the symptoms felt by pregnant women.*

**Keywords:** Nausea, Vomiting, Yoga, Pregnancy, Trimester I

## 1. Introduction

Pregnancy is a period that begins from the process of conception until the fetus is born and is a physiological state. Many of the manifestations of physiological adaptations to pregnancy are easily recognizable and an important clue to the diagnosis and evaluation of pregnancy progress. In pregnancy many changes, both physiological and psychological changes. One of the physiological changes that occur in early pregnancy is on the digestive system that is nausea vomiting. These disturbing symptoms is often called morning sickness (Christian et al, 2006).

Psychological problems can predispose some women to nausea to vomiting in pregnancy, or to aggravate existing symptoms. Inward suffering, especially anxiety conflicts of hyperemesis gravidarum, may exacerbate the sense of well-being (Tiran, 2009). Excessive vomiting causes the body fluid to decrease so that the blood becomes thick (hemoconcentration) that can slow the blood circulation, which means the consumption of oxygen to the tissue is reduced. Lack of food and oxygen to the tissues will cause tissue damage that can increase the severity of fetal and maternal conditions, rupture of capillary blood vessels in the stomach and esophagus so that vomit mixed with blood. This situation can cause pregnant women's fears and terrifying family. Although there is not much of a vomiting in the form of hyperemesis gravidarum, its handling calls serious attention (Manuaba, 2009)

This discomfort can be overcome by changing the diet. Eat small portions but often regularly, eat less-powerful snacks (like crackers and biscuits), eat fruits, and drink water (can also be mixed with a little honey) to keep your body fresh. Also, drink soft drinks or a cup of warm ginger tea to overcome the feeling of bloating and nausea (Sindhu, 2009). The condition of nausea can trigger the release of the hormone cortisol as a generator of stress, and stressful conditions will only aggravate the nausea in pregnant

women (Sari, 2012) Findings show that practicing yoga even for the first time can normalize cortisol levels that are too high or too low (Knittel, 2012)

Yoga is a subtle way to keep the body active and supple and minimize the usual pregnancy symptoms such as nausea and vomiting. Yoga can reduce stress and pressure on the body. Yoga is specifically designed for expectant mothers ie exercise by pressing proper breathing and meditation techniques to form balance and relaxation (Yuliarti, 2010).

Yoga is one type of exercise that is considered safe for pregnant women because this activity does not make heavy physical movement movement, the benefits of yoga during pregnancy can help reduce nausea, vomiting, asthma, back pain, constipation, depression, dizziness, hemorrhoids, problems in Digestive tract (Anyar, 2012)

Genesis morning sickness experienced by most pregnant women either primigravidae and multigravida. Morning sickness occurs in 60-80% and 40-60% primigravidas multigravida (Prawirohardjo, 2005). Power et al in 2001 recorded approximately 51.4% of women experience nausea and 9.2% of women experienced vomiting. Glick and Dick in 1999 Assume that about 50% of women experience symptoms. Emelianova et al in 1999 find the frequency of nausea by 67% and 22% incidence of vomiting in the group of women who numbered 193 people, while O'Brien and Naber in 1992 Said that 70% of women experienced nausea and 28% experienced vomiting. Gadsby et al in 1993 reported no incidence of 80%, which is 28% only experience symptoms of nausea and 52% experienced nausea and vomiting. A systematic review of Jewel and Young in 2000 identified nausea number between 70 and 85%, with about half of this percentage vomiting. For some women may last all day, or may not occur at all in the morning wake up. Prospective study of 160 women by Lacroix et al in 2000 found that 74% reported nausea walaupun only 1.8% mengalaminya as any a symptom h occurred in the

morning. In 80% of patients, nausea can last all day (Tiran, 2009).

In Indonesia, the incidence of nausea of vomiting is often felt by about 50% Pregnant women (MOH, 2009).

Among 10 trimester pregnant women surveyed, 6 of them experienced emesis gravidarum. So far the therapy given is pharmacological therapy with the administration of B6, other non-pharmacological treatments such as yoga have never been given, therefore the authors are interested to take the title of research influence yoga to decrease morning sickness in the first trimester of pregnancy in Puskesmas working area Sukorame of Kediri. The general objective of this study was to investigate the influence yoga to decrease morning sickness in pregnancy.

## 2. Methods

The research design used was pre-experimental, with the approach of one group pretest-posttest design. Researchers provide treatment in the study group but previously measured or tested in advance (pretest) and then given treatment after a study group measured or tested again (posttest).

The study population was all pregnant women in the first trimester at Sukorame Puskesmas Kediri. The sample used in this study were partially Trimester pregnant women I as many as 14 people. In this study using inclusion criteria: First trimester mothers who experienced nausea vomiting. Exclusion criteria: the mother is ill.

Independent variable of this research is yoga practice, dependent variable of this research is decrease emesis gravidarum.

Methods of data collection was done by:

- 1) Pregnant women who have been assigned the respondents dimint a mention of how many times experienced morning sickness within 24 hours. The data obtained is the data pre-test (before treatment).
- 2) Then given the treatment of yoga practice at Sukorame Health Center with yoga instructor.
- 3) Respondents were given yoga videos and yoga practice books as a guide to doing yoga at home.
- 4) Respondents were asked to do yoga every day for 2 weeks at home.
- 5) After 2 weeks of yoga researchers asked respondents to mention to mention how many times experienced morning sickness within 24 hours. The data obtained is the data post-test (after treatment).

To determine the pretest and posttest experimental results on whether there is influence of yoga to decrease morning sickness in the first trimester of pregnancy test conducted Wilcoxon Match Pairs Test. The state of nausea and

vomiting in the first trimester of pregnancy are classified as follows:

- 1) Light Nausea vomiting when frekuensi 1-2 times per day.
- 2) Moderate Nausea vomiting if f rekuensi nausea or vomiting 3-4 times per day.
- 3) Severe Nausea vomiting: continuous nausea and vomiting 5-6 times each day. (Runiari, 2010).

Because of the small sample of only 14 people ( $\leq 25$ ) test is based on a comparison between the value of T is calculated by the value of the T table. Testing criteria:

- a) If the price of T arithmetic  $< T$  table, with  $\alpha$  0.05 then there is the effect of yoga to decrease k ehamilan morning sickness in the first trimester.
- b) If T count  $\geq T$  table, with  $\alpha$  0.05 then there is no influence of yoga to decrease morning sickness in the first trimester of pregnancy.

## 3. Result

Research result is presented as follows

**Table 1:** The incidence of morning sickness in the first trimester pregnant women before yoga

Criteria	Number	Percentage (%)
Light Nausea and vomiting	5	35,7
Moderate Nausea and vomiting	7	50
Severe Nausea and vomiting	2	14,3
Total	14	100

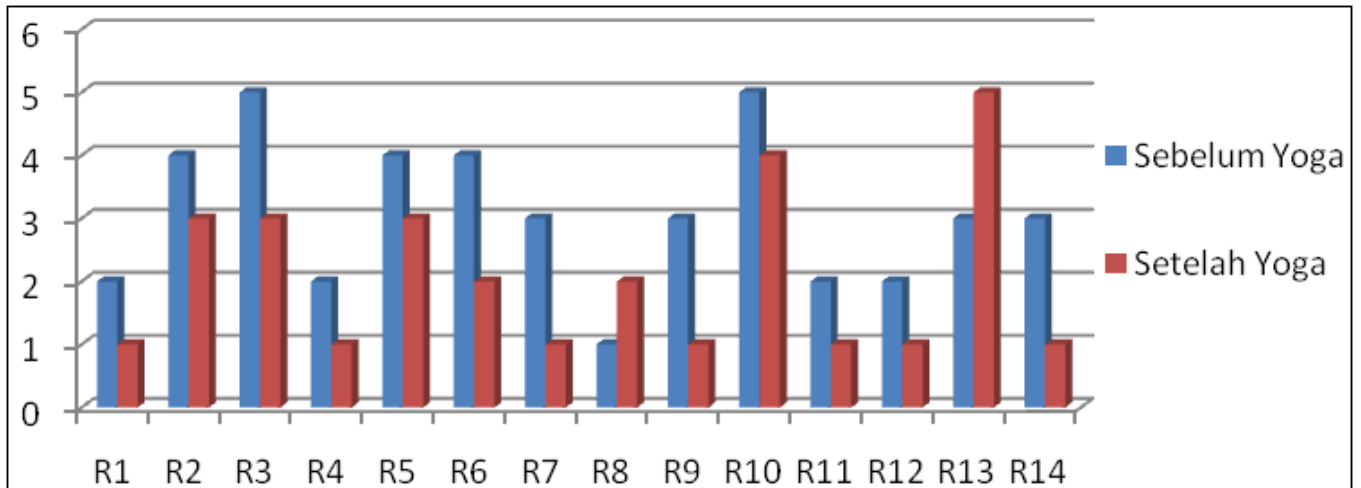
**Table 2:** Incidence of morning sickness in pregnant women after the first trimester yoga

Criteria	Number	Percentage (%)
Light Nausea and vomiting	9	64,2
Moderate Nausea and vomiting	4	28,6
Severe Nausea and vomiting	1	7,2
Total	14	100

**Table 3:** Decreased frequency of morning sickness the first trimester pregnant women before and after doing yoga exercises.

Criteria	Before and After				T
	X1 (f)	%	X2 (f)	%	
Light Nausea and vomiting	5	35,7	9	64,2	T = 16
Moderate Nausea and vomiting	7	50	4	28,6	
Severe Nausea and vomiting	2	14,3	1	7,2	

Table 3 shows the frequency of nausea and vomiting before and after practice yoga, an increase in the number of respondents in nausea vomiting is from 5 respondents into nine respondents and decrease the nausea and vomiting of moderate and severe namely nausea and vomiting being from 7 respondents into four respondents and Nausea severe vomiting from 2 respondents to 1 respondent. The decrease in the frequency of nausea of vomiting can be seen in the bar chart as follows:



**Figure 1:** Comparison of morning sickness incidence before (blue) and after (red) yoga among 14 pregnant women

Results of Wilcoxon Match Pairs Test by comparing the value of  $t$  arithmetic with  $t$  table. arithmetic value (16) < Price  $t$  table 21 then  $H_0$  is rejected so that there was no influence of yoga to decrease morning sickness in pregnancy I trimester.

#### 4. Discussion

The state of the first trimester pregnant women before doing yoga is known that half of the respondents ie 7 (50%) experienced moderate nausea and vomiting. Respondent said nausea vomiting is going on in the mornings and evenings is due to factors of psychology, as seen when the researchers communicated with respondents who complain often feel tired of having to take care of the household, taking care of children, their sound was noisy, too crowded so it was psychologically can not enjoy the pregnancy so there was morning sickness.

This feeling of nausea is caused by increased levels of the hormone estrogen and hCG in serum. The physiologic effect of this hormone uptake has not been clear, probably due to a reduced central nervous or gastric emptying (Wiknjosastro, 2005). Psychological problems can predispose some women to nausea to vomiting in pregnancy, or to aggravate existing symptoms. Inward suffering, especially anxiety conflicts of hyperemesis gravidarum, may exacerbate the sense of well-being (Tiran, 2009). According to Kolcaba and Wilson in Tiran (2009) that there are four elements of comfort, namely physical (physiological), psychospiritual, socio-cultural and environmental elements that are adapted and used as a holistic approach to causes, predisposing factors and exacerbate nausea and vomiting in pregnancy. Poor posture due to improper seating may disrupt the gastrointestinal tract by pressing the abdomen. Rarely urination may irritate urinary tract, distinguish abdomen and improve nausea symptoms (Tiran, 2009).

Nestri research conducted in 2011 entitled Overview Genesis Emesis Gravidarum At first Trimester Pregnancy At Grace Maternity Hospital Dukuh Kupang Surabaya showed that respondents who experienced morning sickness <5 Time / day as many as 25 respondents (65.79%), emesis gravidarum > 5 Times / day as many as 18 respondents (34.21%). This study shows that there are still many first

trimester pregnant mothers tend to experience nausea and vomiting

Categorization in the study is different from this research. In this study the frequency of nausea of vomiting narrowed from range 1-2 times per day (mild emesis), 3-4 times per day (moderate emesis), 5-6 times per day (severe emesis), so we can get more specific data Because the benchmark is not too widespread. From the results of this study also obtained the results of half of the respondents (50%) 7 of 14 respondents experienced moderate emesis.

Nausea and vomiting that occurs in the first trimester pregnant women in this study had nausea level degrees different, early pregnancy mothers require adequate time to rest, the attention of people nearby, and moral support. Based on data on trimester pregnant women I after Yoga, it was found that more than half of respondents, 9 (64.3%) had mild vomiting, less than half of respondents, 4 (28.6%) had moderate vomiting and a few respondents ie 1 (7.2%) experienced severe vomiting from the number of respondents 14.

During the research, cooperative mothers receive direction from researchers, young maternal age so it is easy to be directed and disciplined to follow every movement of respondents yoga exhibited by the instructor. There are 2 respondents who have an increased frequency of nausea and vomiting. One respondent experienced an increase in frequency But still in the category of mild vomiting, from 1 to 2 times nausea vomiting in a day. Respondents said the difficulty to concentrate while performing yoga. Another respondent before doing yoga has frequency of nausea and vomiting was 3 times per day while after doing yoga was 5 times per day. So, severe nausea vomiting respondents felt exhausted before doing yoga because the mother has to take care of children, manage the household so that time to do yoga is very limited.

A decrease in the frequency of nausea and vomiting in the first trimester pregnant women is consistent with the theory that yoga is a subtle way to keep your body active and flexible and minimize the symptoms of pregnancy such as nausea and vomiting are common. Yoga can reduce stress and pressure on the body. Yoga is specially designed for

expectant mothers ie exercises by suppressing breathing techniques and proper meditation to form balance and relaxation (Yuliarti, 2010). Yoga is one type of exercise that is considered safe for pregnant women because this activity does not make heavy physical movement movement, the benefits of yoga during pregnancy can help reduce nausea, vomiting, asthma, back pain, constipation, depression, dizziness, hemorrhoids, problems in Digestive tract (Anyar, 2012)

In this study the frequency of nausea vomiting that occurs in pregnant women after the first trimester yoga is not all experienced a decrease in some mothers who actually experienced increased frequency of nausea vomiting. This is due to the age of the mother's pregnancy trimester who have varying slight levels of HCG II is getting lower and concentration of mother also varied so that the progress in reducing nausea and vomiting can not reach maximum. Implementing yoga exercises requires calm, concentration and sufficient time. When calm and concentration is impaired while doing yoga the benefits of yoga can not be felt by the mother.

The decrease morning sickness in the first trimester of pregnancy before and after doing yoga.

From the test results obtained Wilcoxon Match Pair Test Results  $T_{count} = 16 < T_{table} = 21$ , which means no influence yoga to decline trimester morning sickness in pregnancy I. Psychological factors can predispose some women to experience nausea and vomiting in pregnancy, or exacerbate existing symptoms. Inward suffering, especially anxiety conflicts of hyperemesis gravidarum, may exacerbate the sense of well-being (Tiran, 2009). The condition of nausea can trigger the release of the hormone cortisol as a generator of stress, and stressful conditions will only aggravate the nausea in pregnant women (Sari, 2012) Findings show that practicing yoga even for the first time can normalize cortisol levels that are too high or too low (Knittel, 2012). Make posture restorative yoga to rest the body and the mind and relieve discomfort, do the postures that while regulating the breath slowly and in the following order: Mudhasana, posture sitting heels glued to the knee, Supta Baddha konasana, Viparita karani (do when he is not sick), Savasana or posture resting oblique (choose one of them)

Perform all postures in order or select only one that feels most comfortable doing so. It is advisable to breathe sitkari and sitali to give coolness into the body cavity and relieve nausea, and do Light Meditation to deal with other uncomfortable feelings. (Sindhu, 2009) yoga made as a necessity. D ilakukan daily yoga regularly (Hajir, 2010). Research conducted by Sushil Gawande et.al. year 2011. On progressive muscle relaxation is effective in hyperemesis gravidarum. Progressive muscle relaxation is effective in hyperemesis gravidarum and when combined with antiemetics, reduces the amount of antiemetics necessary to treat hyperemesis gravidarum. Patients also showed early response to treatment, less recurrence and better improvement when combined with antiemetics.

Equation yoga techniques with progressive muscle relaxation is the same as a method of relaxation to reduce stress, relaxation techniques provide other health benefits such as reduced muscle tension, improve concentration, reduce anger and frustration and increased confidence. The difference is relaxation progres when focuses on the tension and then relax the muscle groups in the body. Tense each muscle for five seconds then relax for 30 seconds. While yoga unification between atma (self) and Brahman (the Almighty). In essence, through yoga one will better know his body, know the mind, and know his soul. Based on the test results and the above theory is obtained yoga can be influential in minimizing the occurrence of nausea and vomiting experienced by pregnant women the first trimester.

## 5. Conclusion

Half of the respondents first trimester pregnant mother before doing yoga experience moderate nausea and vomiting. More than half of respondents Trimester pregnant women I after doing yoga experience light nausea vomiting. There was no yoga influence to decrease morning sickness in the first trimester of pregnancy. Implementation of yoga with a calm, concentration, comfortable environment, physical condition free from fatigue can be useful in reducing emesis gravidarum.

## References

- [1] Anyar. (2012). *Manfaat Yoga Bagi Ibu Hamil*. Diakses dari. [caramencegah.com/manfaat-yoga-bagi-ibu-hamil#.UVH1mUpoqgs](http://caramencegah.com/manfaat-yoga-bagi-ibu-hamil#.UVH1mUpoqgs)
- [2] Christian, M; Yusron, Narulita. (2006). *1001 tentang kehamilan : perfect edition*. Bandung PT.TriExz Media
- [3] Depkes RI. (2009). *Pedoman Pelaksanaan Kelas Ibu Hamil*. Jakarta.
- [4] Hajir, Redha. (2010) *Easy Yoga*. Jakarta : Bukune
- [5] Knittel, Linda(2012). *Beginner's Bliss*. dari. <http://www.yogajournal.com/health/1064>
- [6] Manuaba, IGB. 2009. *Buku Ajar Patologi Obstetri*. Jakarta : EGC
- [7] Prawirohardjo, S. (2005). *Ilmu Kebidanan*. Jakarta : Yayasan Bina Pustaka Sarwono Prawirohardjo.
- [8] Runiari, Nengah.(2010). *Asuhan Keperawatan Pada Klien Dengan Hiperemesis Gravidarum*. Jakarta : Penerbit Salemba Medika
- [9] Sari, Puspita. *Tips Mengatasi mual selama kehamilan*. Diakses dari. <http://informatipps.com/tips-mengatasi-mual-selama-kehamilan>
- [10] Sindhu, Pujiastuti. 2009. *Yoga untuk kehamilan : sehat, bahagia, dan penuh makna*. Bandung : Qanita PT Mizan Pustaka.
- [11] Sushil Gawande, et al (2011) *Progressive Muscle Relaxation in Hyperemesis Gravidarum*. Diakses dari [www.jayjournals.com/eJournal/](http://www.jayjournals.com/eJournal/)
- [12] Tiran, Denise. (2009). *Mual dan muntah kehamilan*, Jakarta : EGC
- [13] Wiknjastro, Hanifa. (2005). *Ilmu Kebidanan*. Jakarta ; Yayasan Bina Pustaka Sarwono Prawirohardjo
- [14] Yuliarti, Nurheti. (2010). *Panduan Lengkap Olahraga bagi Wanita Hamil & Menyusui*. Yogyakarta : Andi offset