

Original Research

The Effect of Prenatal Yoga on Emesis Gravidarum in the First Trimester Pregnant Women

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Background: Increased levels of progesterone, estrogen, and HCG (chorionic gonadotropin hormone) during the first trimester of pregnancy can produce morning sickness, also known as emesis gravidarum (nausea and vomiting). To lessen the release of hormones that induce anxiety, severe nausea, and vomiting, prenatal yoga practitioners can block the stimulation of sympathetic nerves by practicing muscle relaxation. This study aims to ascertain how prenatal yoga affects first-trimester emesis gravidarum. **Method:** This study used a pre-experimental design with a pretest-posttest design in one group, involving 16 mothers who had emesis gravidarum at PMB Fatimah Bandung Rejosari, Sukun, Malang. Data collection was done using the questionnaire. **Results:** The result was that two prenatal yoga sessions over two weeks demonstrated significant benefits. Prenatal yoga affects emesis gravidarum in the first trimester of pregnancy, as indicated by the independent t-test technique (2-tailed) of 0.000 <0.005. **Discussion:** Steroid hormones can slow down stomach emptying, which causes emesis gravidarum. Excessive or low cortisol levels can be brought back to normal with yoga. Yoga offers numerous mental and physical health advantages. **Conclusion** We can conclude that the course of treatment impacts the severity of emesis gravidarum, or nausea and vomiting, during the first trimester of pregnancy.

Keywords: Prenatal yoga; emesis gravidarum; pregnant woman

1. INTRODUCTION

Pregnant women go through physiological and psychological changes throughout this time. Nausea and vomiting are two indicators of psychological changes that happen in the early stages of pregnancy. Emesis gravidarum is a common term used to describe this unsettling symptom. Symptoms of nausea and vomiting (emesis gravidarum) typically surface in the first trimester of pregnancy. Although it normally happens in the morning, nausea can strike at any moment. Six weeks following the beginning day of the last menstrual cycle, these symptoms start to appear and remain for roughly ten weeks.⁽¹⁾ The World Health Organization states that emesis gravidarum affects 12.5% of pregnancies globally.⁽²⁾ Based on subjective complaints made to health service organizations, the incidence of emesis gravidarum in the first trimester of pregnancy in Indonesia is considered to be around 70%; however, a survey conducted in the East Java Province found that the incidence was between 50 and 90 percent.

Human Chorionic Gonadotropin (HCG) hormone levels are the cause of emesis gravidarum.⁽³⁾ In addition to being brought on by the HCG hormone, this nausea disorder can also create stress by causing the hormone cortisol to

be released. Stress will only make nausea worse in pregnant women. In the event that treatment is delayed, the prevalence of hyperemesis gravidarum will rise even more.⁽⁴⁾ The impact on the mother is that the mother becomes uncomfortable because of reduced appetite, dehydration, hypokalemia, and hemoconcentration, while the fetus can lack nutrients and fluids so that it affects the growth and development of the fetus because of unfulfilled nutrition and the fetus will experience Low Birth Weight (BBLR).⁽⁵⁾

In the case of emesis gravidarum, some preventive measures and treatment can be done at home with complementary therapies such as acupressure, hypnosis, acupuncture, using aromatherapy, consuming fresh food, getting enough rest and yoga.⁽⁶⁾ Because it doesn't need heavy physical exertion, prenatal yoga is regarded as a safe kind of exercise for expectant mothers. Its advantages also include a potential reduction in nausea and vomiting.⁽⁷⁾ Yoga movements start from the breathing process to increase awareness and facilitate the body system.⁽⁸⁾ Yoga movements start from the breathing process to increase awareness and facilitate the body system.⁽⁸⁾ Muscle relaxation movements in prenatal yoga can inhibit the increase of sympathetic nerves, and decrease the production of hormones that cause anxiety and nausea, nausea, and excessive vomiting. The study finding⁽⁹⁾ shows that there is a change in the emesis gravidarum scale before and after prenatal yoga, obtaining a p-value of 0.001 on the pretest and 0.002 on the post test, this means that there is an influence of prenatal yoga in reducing emesis gravidarum.

The reason for selecting this study is the prevalent lack of public awareness regarding the potential of prenatal yoga in alleviating emesis gravidarum, despite it being a common affliction among pregnant women during their first trimester. The primary aim of this study is to investigate the impact of prenatal yoga on emesis gravidarum among women in their first trimester. Additionally, we seek to explore the prospective benefits of prenatal yoga as an informative tool for devising effective obstetric interventions to reduce the incidence of emesis gravidarum.

2. METHODS

2.1. Study Design

This research method namely with one group pretest-posttest design. This study consisted of one group, the intervention group, which was given prenatal therapy, yoga, breathing movements, and meditation

2.2 Study Location and Participants

This research was conducted at the Midwife Independent Practice (PMB) Fatimah Bandung Rejosari, Sukun District, Malang City. Participants in this study were 16 pregnant women who experienced emesis gravidarum.

2.3 Questionnaire

The questionnaires used in this study were a demographic data questionnaire and a Pregnancy Unique Quantification of Emesis and Nausea (PUQE)-24 scoring system.⁽¹⁰⁾

2.4 Data analysis

2.4.1. Univariate Analysis

Data analysis was performed using univariate analysis. Univariate analysis aims to explain or describe the characteristics of each variable. This data analysis process uses the help of SPSS software version 25.

2.4.2. Bivariate Analysis

To determine the statistical test, it must be adjusted to the research type's measurement scale. Parametric is used, namely the paired T-test. P-value $\leq \alpha$ (0.05): Prenatal yoga influences the incidence of emesis gravidarum in 1st-trimester pregnant women.

3. RESULTS

Based on the Tables 1, it is known that the general data of this study includes the age, education level of respondents, respondents' employment status, and gravida. Of the 16 respondents in this study who experienced emesis gravidarum, most were aged 21-30, namely 12 people (75%). Of the 16 respondents in this study who experienced emesis gravidarum, most had a high school education level, as many as ten people (62.5%). Sixteen people had non-working employment status or IRT (100%). Most of them are primigravida, and as many as 12 people (75%) are primigravida.

Based on the Table 2, it is known that of the 16 people who were respondents in this study before the prenatal yoga intervention, all mothers experienced emesis gravidarum as many as 16 people with a mean or average value (6.63) and after being given prenatal yoga therapy experienced a decrease in the mean or average value (4.75).

Table 1. Frequency distribution based on age, education level, employment status, and gravida

No.	Characteristic	Sum	Percentage
1.	Age 21 - 30	12	75.0 %
2.	High School Education	10	62.5 %
3.	IRT Jobs	16	100.0
4.	Gravida Primigravida	12	75.0 %

Table 2. Frequency of emesis gravidarum before and after prenatal yoga therapy in 1st-trimester pregnant women

Yoga Therapy	Mean
Emesis before prenatal yoga therapy	6.63
Emesis After prenatal yoga therapy	4.75

Following two weeks of prenatal yoga intervention, pair 1's output showed a Sig. (2-tailed) value of $0.000 < 0.005$. A significance value of $0.000 < 0.05$ was found in the bivariate analysis using the Paired T-Test, indicating that prenatal yoga impacts emesis gravidarum in first-trimester pregnant women (Table 3).

Table 3. Interpretation of paired T-test

Yoga	Mean	SD	t	df	Sig (2-tailed)
Before	1.875	0.718	10.434	15	0.000
After					

4. DISCUSSION

According to a study done on 16 participants who had emesis gravidarum and received prenatal yoga therapy, the severity of their nausea and vomiting decreased. Having a mean value or average of 6.63 before the intervention and a drop of 4.75% following the intervention. Prenatal yoga appears to impact emesis gravidarum, as indicated by the significant value of $0.000 < 0.05$ obtained from the Bivariate analysis with the Paired T-test. It suggests that the course of treatment has an impact on the degree of nausea and vomiting experienced by first-trimester pregnant women.

The usual discomfort in first-trimester pregnant women that is most often experienced is nausea, vomiting, or emesis gravidarum. Emesis gravidarum or nausea accompanied by vomiting is called morning sickness, and it not only occurs in the morning but can occur at any time and night. Every pregnant woman will have a different degree of nausea, some do not feel anything some feel nauseous and some feel very nauseous and want to vomit at all times.⁽¹¹⁾ Based on the research above, age, education, employment status, and gravida can affect emesis gravidarum. Pregnant women TM I often experience complaints of nausea, vomiting, and emesis, also experienced by mothers until childbirth. The presence of occupational factors causes first-trimester pregnancy mothers to cause nausea. Age 20-35 years is reproductive age and good in women in undergoing pregnancy, but in this study pregnant women in reproduction still many who experience emesis gravidarum.⁽¹²⁾ In addition, based on the results of the survey above, most pregnant women, 62.5% have a secondary or high school education. This education dramatically affects the mindset of pregnant women. The higher the education of pregnant women, the more rational their mindset. Pregnant women who are sensible in mindset will quickly act and find solutions if they experience problems in their pregnancy. In addition, based on the results of research, all pregnant women with no work or IRT. Pregnant women who do not work socioeconomically middle to lower can also affect their pregnancy. In the study of Handayani and Contesa,⁽¹³⁾ addresses how yoga during pregnancy can lessen the symptoms of emesis gravidarum. A p-value of 0.001 was achieved on the pretest and 0.002 on the posttest. Data evaluated using a homogeneity test and paired sample t-test showed changes in the emesis gravidarum scale before and after prenatal yoga. This means prenatal yoga influences reducing emesis gravidarum. Prenatal yoga is part of non-pharmacological therapy that can reduce emesis gravidarum. Yoga programs that are specifically for pregnancy with techniques and intensities that are adjusted to the psychological and physical needs of pregnant women and their fetuses, prenatal yoga itself emphasizes yoga posture techniques, breathing, relaxation, visualization, and meditation techniques.⁽¹²⁾

Muscle relaxation movements in prenatal yoga can inhibit the increase of sympathetic nerves and reduce the production of hormones that cause anxiety, nausea, and vomiting.⁽¹⁵⁾ Stress conditions only

make nausea worse in pregnant women, and they can also cause the release of the stress hormone cortisol. Researchers from PMB Fatimah Keluran Bandung Rejosari in Sukun District, Malang City, have undertaken research that supports this. Up to 16 first-trimester pregnant women who had emesis gravidarum reported that their nausea and vomiting lessened after doing prenatal yoga for two weeks straight—a total of two meetings. This is because muscle relaxation movements in prenatal yoga can inhibit the increase of sympathetic nerves and reduce the production of hormones that cause anxiety, nausea, and vomiting.

5. CONCLUSION

According to the study's findings, prenatal yoga has been shown to impact emesis gravidarum in first-trimester pregnant women. Thus, emesis can reduce the severity and frequency of nausea and vomiting. The findings demonstrated a significant impact of prenatal yoga treatment on emesis gravidarum in first-trimester pregnant women. To improve outcomes, the author suggests 50 more intensive counseling programs, such as increasing socialization with first-trimester pregnant moms to help them manage and lessen the severity of nausea and vomiting.

Conflict of Interest

The authors declare no conflict of interest.

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