



## **A study to evaluate the effectiveness of ginger tea on management of pregnancy induced nausea and vomiting among antenatal mothers at selected Villages, Nellore, A.P**

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### **Abstract**

**Background:** One of the most common unpleasant discomfort of pregnancy is pregnancy induced nausea and vomiting, also called nausea gravidarum and emesis gravidarum. Although nausea and vomiting tend to be worse in the morning, thus erroneously termed morning sickness, they frequently continue throughout the day. These symptoms are frequently experienced by women in the first trimester of pregnancy; affecting 50-80% of pregnant women.

**Objectives:** 1. To assess the severity of nausea and vomiting among antenatal mothers. 2. To evaluate the effectiveness of ginger tea on management of pregnancy induced nausea and vomiting. 3. To find the association between the effectiveness of ginger tea on pregnancy induced nausea and vomiting among antenatal mothers with selected socio demographic variables.

**Methods:** Experimental design was used and 30 antenatal mothers were selected from NMCH, Nellore.

**Results:** The study concluded that there was a significant reduction pregnancy induced nausea and vomiting among antenatal mothers in experimental group as compared to the control group. This shows that the ginger tea was very effective in reducing the vomiting symptoms associated with pregnancy.

**Keywords:** Ginger tea, pregnancy induced nausea and vomiting, antenatal mothers

### **Introduction**

Pregnancy, is a state where there is rapid rise of hormones like oestrogen, progesterone and human chorionic gonadotropin (HCG) change the maternal body into a suitable environment for the foetus and may cause some symptoms and discomforts in the mother. One of the most common unpleasant discomfort of pregnancy is pregnancy induced nausea and vomiting, also called nausea gravidarum and emesis gravidarum. Although nausea and vomiting tend to be worse in the morning, thus erroneously termed morning sickness, they frequently continue throughout the day. These symptoms are frequently experienced by women in the first trimester of pregnancy; affecting 50-80% of pregnant women.

A prospective study to estimate the prevalence and severity of nausea and vomiting of pregnancy among 367 mothers of age  $\geq 18$  years and  $\leq 16$  weeks of gestation who were attending the center. Self administered questionnaire were used to collect the data. Of the 367 women included in the study, 81.2% were Caucasians, 10.1% blacks, 4.6% Asians. Multivariate analysis showed that race/ethnicity was significantly associated with a decreased likelihood of reporting nausea and vomiting of pregnancy i.e Asians vs. Caucasians OR: 0.13; 95% CI 0.02-0.73; and Blacks vs. Caucasians OR:0.29; 95% CI 0.09-0.99.

### **Need for the study**

A clinical trial to determine the effects of ginger in treating nausea and vomiting of pregnancy. The study was conducted in a selected prenatal care clinic of Isfahan City hospitals. The subjects included 67 pregnant women who complained of nausea and vomiting from Isfahan city hospital, were randomly assigned to an experimental group and a control group. The experimental group received ginger 250 mg capsules for 4 days, and the control group received placebo with the same prescription form. Effects of treatment of nausea were evaluated twice daily for 4 days by a before-and-after treatment questionnaire. The mean ages of the experimental and control groups were 24.1 +/- 4.8 and 23.3 +/- 5 years, respectively. The mean gestational age was 13 +/- 3 weeks, and the mean parity was 1.6 +/- 0.8. The ginger users demonstrated a higher rate of improvement than the placebo users did (85% versus 56%;  $p < 0.01$ ). The decrease in vomiting times among ginger users was also significantly greater than among the women who received the placebo (50% versus 9%;  $P < 0.05$ ).

An experimental study conducted to assess the efficacy of ginger extract on the symptoms of morning sickness among 40 antenatal mothers enrolled for the study by convenience sampling technique. Severity of morning sickness symptoms was assessed by '5 point' Likert scale.

Ten ml ginger extract in 2 divided doses for 4 days was administered after the assessment of severity of symptoms of morning sickness. After the gap of 2 days, follow up for 2 days was done to assess the severity of symptoms of morning sickness. The study revealed that severity of symptoms of morning sickness was more in the form of nausea followed by vomiting and retching among the antenatal mothers. Significant difference was found in the pre and post interventional severity of nausea which decreased from mean score of 8.15 to 2.0 ( $P=0.001$ ), followed by mean score of vomiting from 5.1 to 0.62 ( $P=0.01$ ) and of retching from 3.35 to 0.6 ( $P=0.01$ ). Furthermore, no adverse effects were reported by study participants during study.

**Statement of the problem**

A study to evaluate the effectiveness of ginger tea on management of pregnancy induced nausea and vomiting among antenatal mothers at selected villages, Nellore.

**Objectives of the study**

1. To assess the severity of nausea and vomiting among antenatal mothers.
2. To evaluate the effectiveness of ginger tea on management of pregnancy induced nausea and vomiting.
3. To find the association between the effectiveness of ginger tea on pregnancy induced nausea and vomiting among antenatal mothers with selected socio demographic variables.

**Hypothesis**

**Null hypothesis**

**H<sub>01</sub>:** There will not be a statistically significant effectiveness of ginger tea on management of pregnancy induced nausea and vomiting among antenatal mothers.

**H<sub>02</sub>:** There will not be a statistically significant association between the effectiveness of ginger tea on pregnancy induced nausea and vomiting with the selected socio demographic variables.

**Delimitations**

The study is delimited to antenatal mothers;

- Living in Selected villages, Nellore.
- Data collection period is 4 weeks

**Materials and Methods**

**Research Approach:** Quantitative Research Approach  
**Research Design:** Experimental, pre test- post test design was adopted.

Group	Pre Test	Intervention	Post Test
Experimental group	O <sub>1</sub>	X	O <sub>2</sub>
Control group	O <sub>1</sub>	-	O <sub>2</sub>

**Setting of the Study**

The study was conducted in Saraswathi Nagar, Nellore.

**Population**

**Target population**

The target population includes all the antenatal mothers with pregnancy induced nausea and vomiting.

**Accessible population**

The accessible population includes all the antenatal mothers with pregnancy induced nausea and vomiting who are residing at Saraswathi Nagar.

**Sampling technique**

The convenience sampling technique was adopted to select the subjects for the study.

**Sample size**

The sample size of the study was 30 antenatal mothers with pregnancy induced nausea and vomiting in Saraswathi Nagar, Nellore.

**Criteria for sample selection**

**Inclusion criteria**

**Antenatal mothers**

- Who have pregnancy induced nausea and vomiting.
- Who are willing to participate in the study.
- Who are residing at Saraswathi Nagar.

**Exclusion criteria**

- Who have hyperemesis Gravidarum.
- Who are taking any Ayurvedic and herbal treatment.
- Who have nausea and vomiting associated with other medical conditions.

**Variables**

- Independent Variable: Ginger tea
- Dependent Variable: Pregnancy induced nausea and vomiting
- Demographic Variables: Age, educational qualification, Gravida, gestational age, religion, occupation and income.
- Extraneous Variable: Medication, Ayurvedic and herbal treatment.

**Description of tool**

The tool is divided into two parts.

- **Part I-** Deals with the socio-demographic variables.
- **Part II-** Deals with the Rhodes index scale to assess the pregnancy induced nausea and vomiting. It consists of 8 items, each item is comprised of 5 options.

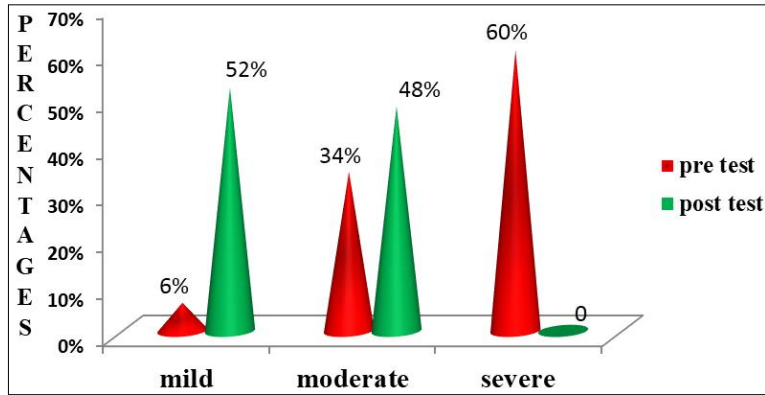
**Interventional protocol**

1. The study subjects are randomly assigned into experimental and control group.
2. The participants are informed about the purpose and procedure of the study.
3. Severity of nausea and vomiting is assessed for both the groups by using Rhodes index scale.
4. The experimental group was provided with a cup of ginger tea twice a day for three days.
5. No intervention was provided for the control group.
6. Post test was conducted for both the groups.

**Results & Discussion**

**Table 1:** Frequency and percentage distribution of pregnancy induced nausea and vomiting among antenatal mothers in experimental group. (N=15)

S. No	Level of nausea and vomiting	Pretest		Post test	
		F	%	F	%
1.	Mild symptoms	1	6	8	52
2.	Moderate symptoms	5	34	7	48
3.	Severe symptoms	9	60	-	-



**Fig 1:** Percentage distribution of pregnancy induced nausea and vomiting among antenatal mothers in experimental group.

**Table 2:** Frequency and percentage distribution of pregnancy induced nausea and vomiting among antenatal mothers in control group. (N=15)

S. No	Level of nausea and vomiting	Pretest		Post test	
		F	%	F	%
1.	Mild symptoms	1	6	1	6
2.	Moderate symptoms	9	60	9	60
3.	Severe symptoms	5	34	5	34

**Table 3:** Comparison of pretest and post test scores of pregnancy induced nausea and vomiting among antenatal mothers in experimental group and control group. (N=30)

Group	Criteria	Mean	Standard deviation	Paired t- test
Experimental	Pretest	26.2	4.34	C= 25.03, t=23.69, S*
	Post test	18.2	5.47	
Control	Pretest	23.6	6.23	C=21.34, t=23.69, NS
	Post test	23.6	6.23	

**Table 4:** Association between pregnancy induced nausea and vomiting with socio demographic variables among antenatal mothers. (N=30)

S. No	Demographic variables	Mild		Moderate		Severe		Chi square (x <sup>2</sup> )
		F	%	F	%	F	%	
1.	<b>Age in years</b>							C= 7.825 T = 6.78 df=4 P<0.05, S*
	a. 16-20years	3	20	2	13	1	7	
	b. 21-25 years	3	20	5	33	-	-	
2.	<b>Gravida</b>							C=8.665 T=7.78 df=4 P<0.05, S*
	a. Primi	6	40	3	20	0	-	
	b. Multi	2	13	3	20	1	7	
3.	<b>Gestational week</b>							C= 6.425 T= 5.59 df=2, S*
	a. 1-12 weeks	6	40	6	40	1	7	
	b. 13-24 weeks	-	-	2	13	-	-	

**Major findings of the study**

- Among experimental group, In pretest 1(3%) had mild symptoms, 5(17%) had moderate symptoms and 9(30%) had severe symptoms. In post test 8(26%) had mild symptoms and 7(24%) had moderate symptoms. Among control group, In pretest 1(3%) had mild

symptoms, 9(30) had moderate symptoms and 5(17) had severe symptoms. In the post test 1(3%) had mild symptoms, 9(30%) had moderate symptoms and 5(17%) had severe symptoms.

- In experimental group, the pre test mean is 26.2 and standard deviation is 4.34, whereas in the post test

mean is 18.2 and standard deviation 5.47. The calculated value is greater than the tabulated value. Hence, there is a significant difference in the post test then the pretest, the null hypothesis is ( $H_0$ ) is rejected.

- Among all the demographic variables age, gravida and gestational week had significant association with level of vomiting at  $P < 0.05$  level.

### Conclusion

The study concluded that that there was a significant reduction pregnancy induced nausea and vomiting among antenatal mothers in experimental group as compared to the control group. This shows that the ginger tea was very effective in reducing the vomiting symptoms associated with pregnancy.

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