

# Effect of Nursing Intervention Using P6 Acupressure and Ginger on Nausea and Vomiting during early pregnancy

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**Abstract:** Nausea and vomiting during early pregnancy (NVEP) is common medical which affecting more than 80% of mothers during pregnancy. NVP can have negative which effects on the quality of life of the pregnant woman, social and her general well-being. Therefore, treatment it is very important in this condition. Aim of the study: assess the effect of nursing intervention using P6 and ginger on nausea and vomiting during early pregnancy. Research Design: a quasi-experimental design was used (study and control group). Subjects: purposive sample of 180 women was recruited. Tools: Two tools were used for data collection. A structured interviewing questionnaire and index of nausea, vomiting and retching (INVR) according to the Rhodes index. Data were analyzed by t- test and Chi-square. Result: the result represents that there were statistically significant differences in mean difference to Rhodes index scores (vomiting, nausea, retching and total score) between the three groups ( $P < 0.00$ ) Conclusion: Ginger as well as p6 were effective in reducing nausea, vomiting and retching episodes during early pregnancy and using p6 as an alternative means that keeps the pregnant woman away from exposing her fetus to any pharmacological side effect. Recommendation: providing comprehensive training programs for nurses during routine antenatal care and follow up needed to relive nausea and vomiting using ginger and p6 acupressure technique.

**Keywords:** ginger, P6 acupressure, nausea, vomiting and pregnancy.

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## Operational definitions:

**Ginger:** Ginger is a plant that has been used in traditional medicine for the treatment of all varieties of nausea and vomiting. The root of the ginger is used to flavor food. In addition, it is used to alleviate gastric discomfort. This root is used in either fresh or dried powder form. In this study ginger is used as capsules 250 mg s prescribed by the doctor to the pregnant women.

**Acupressure** is an ancient healing art that is based on the traditional Chinese medicine practice of acupuncture. Finger pressure is used to stimulate trigger points on the body (**acupoints**). Pressing these points can help release muscle tension and promote blood circulation. Research suggests that it can also relieve many common side effects of chemotherapy.

**Nausea:** a stomach distress with distaste for food and an urge to vomit

**Vomiting:** eject part or all of the contents of the stomach through the mouth, usually in a series of involuntary spasmodic movements. To be discharged forcefully and abundantly; spew or gush: The dike burst, and the floodwaters vomited forth.

**Pregnancy:** pregnancy or gestation is the state of carrying a developing embryo or fetus within the female body lasting for 9 months. Late pregnancy is the last 3 months of gestation

I. INTRODUCTION

Nausea and vomiting during early pregnancy (NVEP) are the most prevalent and unpleasant complications during pregnancy. It is reported by 50% to 90% of women during pregnancy are affected and more common in younger primigravid women, urban areas and in Western countries (1). A recent study reported that up to 24 weeks' gestation about 63% of women suffering from nausea and vomiting. The cause is unknown for this problem; however, psychological factors and hormonal changes may play a role (2). Approximately, a quarter of most of pregnant women have to leave their work while they are suffering from this problem (3). Less than 2% of cases, hyperemesis gravidarum aggravated due to severe nausea and vomiting. Risk factors of this condition demonstrated by several studies that daughters of women who experienced the condition are at increased risks. In this condition pregnant woman may suffer from malnutrition, imbalance of water and electrolytes, and decrease of 5% of body weight. NVEP may lead to feelings of incompetence, hospitalization, depression, loss of work hours, and deteriorated to termination of this pregnancy (4). For this reason, an effective treatment is recommended during pregnancy for these cases.

NVEP is diagnosed with no defined criteria. Starting from 5 to 6 weeks of gestation the onset is known to appear and resolving by 20 weeks. About 20% of women continue to have symptoms in second and third trimesters. In contrary to traditional belief, symptoms occur throughout the day and are not limited to the morning as the term morning sickness would use (5).

Treatment goals include reducing maternal symptoms and complications and avoid any effects on the fetus. Non-pharmacological interventions such as acupressure are effective in reducing the frequency of nausea and vomiting (6). Acupressure works on the precardium (P6 or Neiguan) as acupressure point on the wrist. This point is found by measuring, with the mother's own finger, three fingers width up from the inner wrist crease where the hand joins the arm, approximately where the buckle of watchstrap might rest (7). A group of evidence-based medicine reviewers, reviewed the use of P6 for nausea and vomiting, and resulted that it is an effective method for relieving postoperative nausea. They concluded that acupressure may be a useful method for the management of nausea and vomiting in a variety of patients, but accurate trials are needed (1 and 4).

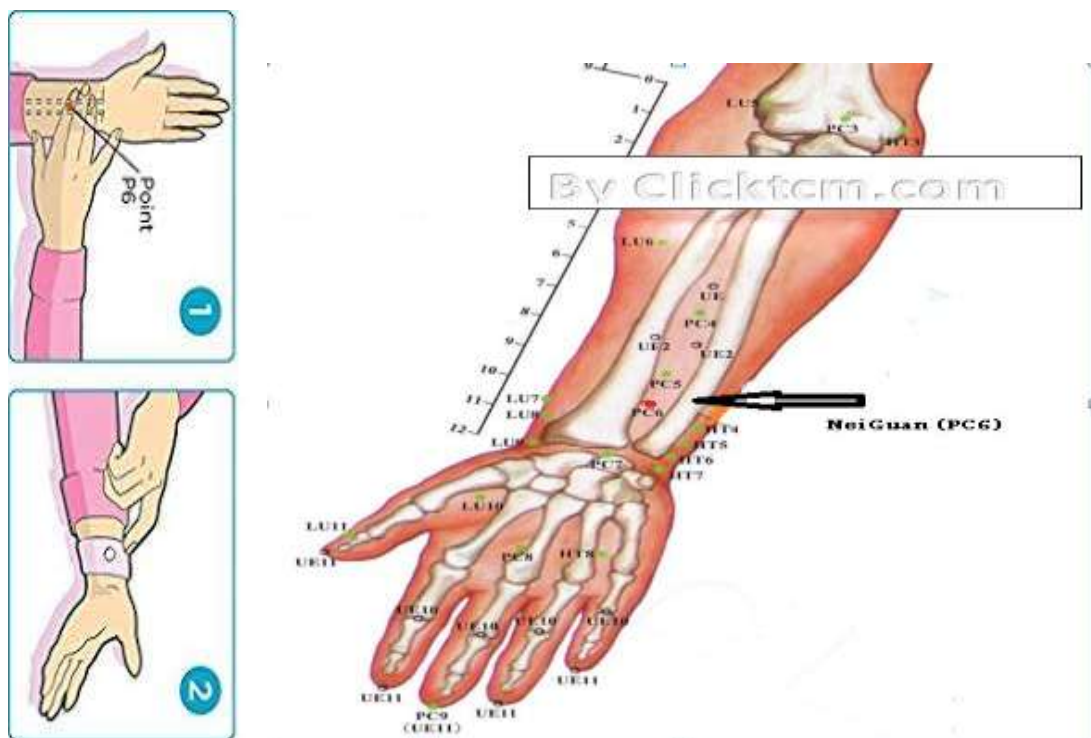


Figure 1: <http://www.mediexchange.in/product/pisix-mediexchange-motion-sickness-wrist-band-nausea-vomiting-uneasy-natural-cure-ayurvedic-treatment-home-remedy-2016/>

Traditional medicine has been used ginger as a plant that treats all varieties of vomiting and nausea, including NVP (8). This root is used in either fresh or dried powder form (9). In addition, it is used to relieve gastric discomfort. Researchers in Iran reported that ginger may be in form of capsules or biscuits (10). The anti-nausea effect of ginger is not known. Studies reported that ginger controls the digestive system by serotonin receptors at the level of it (11). Ginger analysis reveals two major classes of phytochemicals: volatile oils, which give ginger its pharmacological effects and its pleasant smell and the nonvolatile compounds (eg, gingerols and zingerones), which is responsible for its piquant taste. Side effects from ginger are not confirmed. It is very important that health care workers who recommend that using herbal medicine with their pregnant clients (12).

The frequency of vomiting and nausea is reported by many studies that have been used ginger to be reduced (13). In spite of others that conducted by Lee have reported that acute nausea and vomiting does not reduced by using of ginger during pregnancy (14). So, consensus of its use is unknown.

### **Significance of the Study:**

Two-thirds of pregnant women suffering from nausea and vomiting during early pregnancy (NVEP) which has effects on varying degrees. Complementary and alternative medicine (CAM) provide a paucity of information by the literature about the use or efficacy of the treatment of this condition as there is no evidence-based formal guidelines exist for the treatment of NVEP. In the aftermath of the thalidomide disaster, most antiemetics have been considered to be contraindicated in pregnancy, despite evidence of safety in human pregnancy. Most reviews and editorials advise that antiemetic therapy be instituted only when women are unable to maintain hydration and/or nutrition. This problem starts about the 4th week of pregnancy, and usually continues to the 16th week in a few mothers (2). So, it is very critical to treat this condition by the acupressure or ginger as methods of interventions to relieve nausea and vomiting. According to the previously mentioned data which stressed the magnitude of the problem of improving nausea and vomiting using P6 acupressure or ginger during pregnancy, the researchers were motivated to assess the effect of nursing intervention using P6 acupressure and ginger on nausea and vomiting during early pregnancy.

### **Aim of the Study:**

Assess the effect of nursing intervention using P6 acupressure and ginger to relieve nausea and vomiting during early pregnancy.

### **Research Hypothesis:**

1. Ginger will improve nausea and vomiting during early pregnancy
2. P6 acupressure will improve nausea and vomiting during early pregnancy.

## **2. SUBJECTS AND METHODS**

### **Technical design**

#### **a) Research design:**

A quasi experimental design was used in this study.

#### **b) Setting:**

The study was conducted in two maternal and child health centers at Shebin Elkoom city and University Hospital-Menofya governorate. These settings were selected as the mentioned city is the governorate capital and known to have the highest population.

#### **c) Sample**

The study sample was assigned to 3 groups, comprised of 180 pregnant women. Participants were recruited according to the following inclusion criteria:

- 1) Gestational age less than 16 weeks; 2) singleton pregnancy; 3) low-risk pregnancy; 4) no history of infertility; 5) without any other pregnancy problem or complications.

The sample size was determined through the following procedure flow rate in the study setting: the sample size was calculated to be 180 (60 for each group), considering CI=95% and power=90% (10% dropout).

#### d) Tools of Data Collection Tool

**Tool I Structured Interviewing Questionnaire:** It was designed by the researchers after reviewing related literatures to be filled from each pregnant woman diagnosed morning sickness closed ended questions. It consisted of 14 questions it consisted of two parts:

**Part 1: Socio-Demographic Characteristics** (Name, age, address, educational level, residence and occupation).

**Part 2: Obstetrical History** such as (Number of gravidity, parity, abortions, number of living children, outcomes of previous deliveries if present: (Number of normal vaginal deliveries, cesarean sections, Gestational age/weeks, and intended pregnancy).

#### Validity of the tool

Tool I used in the study were developed and adopted by the researchers after reviewing the current national and international related literatures using books, article and scientific journals and developed the questionnaire from previously used tools and reviewing pertinent review. The questionnaire formulated and cross checked for its content validity by three experts in maternity nursing and medicine field-tested the content validity.

#### Reliability of the tool

Reliability of the tool applied by the researcher for testing the internal consistency of the tool, using test retest reliability by administrating the same tool to the same subjects under similar conditions on one or more occasions.

#### Tool II: Index of Nausea, Vomiting and Retching (INVR) (Rhodes et al, 1996)

It was developed by Rhodes to evaluate nausea, vomiting and retching. The INVR is self-report tool consisted of an eight-item. Every item was allocated a digit based on a predefined scoring algorithm. A numeric value to each answer was ranged from 0, the least amount of distress, to 4, the most/worst distress. Total symptoms occurrence from nausea, vomiting and retching was calculated by summing the patient's responses to each of the 8 items on the INVR. Likert scale consisted of three subscales: nausea (range, 0–12), vomiting (range, 0–12), and retching (range, 0–8), provide a total range of 0– 32. The range of scores was ranged from 0 to 32. The score of 0 indicated none NVR, 1-8 indicated mild NVR, 9-16 indicated moderate NVR, 17-24 indicated severe NVR, and 24-32 indicated worst NVR. Rhode's score was used five times in the present study, on the baseline day and across the four assessment days of intervention. The item scores were summed for a total score with a range of 0 to 32. Patients were asked to evaluate the syndrome every 12 hours on a 5-point scale (28).

#### Validity

Tool II was adapted and translated into Arabic and reviewed by jury of 5 experts in the field of the study to test its contents and face validity.

#### Reliability

Test-retest reliability was applied by the researcher for testing the internal consistency of the instruments. It is the administration of the same instruments to the same participants under similar conditions on two or more occasions. Tool reliability were tested using Cronbach's Alpha coefficient test which revealed that that reliability of tool II (INVR) 0.881. It was also calculated and confirmed by Cronbach's alpha (0.0898, 0.77, and 0.929 in Iran, United Kingdom and USA respectively (Saber, et al, 2013).

#### Operational design:

Verbal informed consent was obtained then a routine pregnancy checkup was completed. The participants were divided into three groups (ginger, acupressure and control group) by using block randomization.

**A pilot study:**

A Piloting was conducted on eighteen women to test the applicability of the instruments and to estimate the time needed for data collection. On the basis of the piloting results the researcher determined the feasibility of data collection procedures, developed an interview schedule. The results of the piloting help in refining the interview questionnaire.

**Ethical Consideration:**

Official steps were taken to obtain a permission to conduct the study, with explanation of the aim and the importance of the study to the centers authorities. An informed verbal consent was obtained from all women before participation in the study. Woman were assure that their information were confidential and only used for study process.

**1-The preparatory phase****Written Approval**

A written letter clarifying the title and the aim of the study was directed to the head of the two maternal and child health centers (Kebly, Bahry ) and university hospital at Shebin Elkoom city, Menoufia governorate. These settings were selected as the mentioned city is the governorate capital and known to have the highest flow rate from urban and rural population. Then the approval was obtained for data collection. The aim and the method of data collection were explained to all women before the study to gain their confidence and cooperation. Witten consent was obtained from each woman to participate in the study, after ensuring that data collected will be treated confidentially. The researchers clarified all ethical considerations to each woman before explaining the nature of the study. The benefits; risks and effectiveness of new intervention were described. The researchers explained that the privacy of women and the personal information would be protected. In addition, at the end of the study, the women would be informed about the results.

**Maneuver of Intervention****Preparatory Phase****First steps**

All the subjects fill a questionnaire containing demographic information. The participants were asked to stop any type of medication except for the one prescribed that by the researchers. All the women were on this regimen for five days. They were guided to follow the usual nursing care by diet instructions such as small frequent meals with less volume, reduce high fat in diet and increase foods contains carbohydrate, avoid foods that trigger nausea and vomiting, avoid empty stomach, avoid negative or positive smoking, have a piece of dried bread before rising from bed, avoid fried, odorous and spicy foods, avoid gas forming drinks, and keep upright position after meal by one hour.

**Intended learning outcomes of sessions:** By the end of the educational session the woman should be able to:

**Knowledge and understanding**

- List the importance acupressure and ginger to reduce nausea and vomiting during early pregnancy
- Summarize the role acupressure and ginger to reduce nausea and vomiting during early pregnancy
- value the importance acupressure and ginger reduce nausea and vomiting during early pregnancy

**Intellectual**

- Differentiate between benefits of acupressure and ginger to reduce nausea and vomiting during early pregnancy.

**Practical**

- Demonstrate usual nursing management for nausea and vomiting during early pregnancy
- Apply acupressure wristband

**Attitude**

- Communicate effectively with the researchers to correctly practice acupressure and ginger to improve nausea and vomiting in pregnancy



**Session outline:**

- Pregnancy and minor discomfort and usual nursing care
- Non-pharmacological interventions to improve nausea and vomiting during pregnancy
- Ginger and acupressure : technique and benefits/ to reduce nausea and vomiting during early pregnancy

**Second step**

- **The first three days:** All women in the three groups were instructed to go on the usual nursing diet instructions. Interventions were performed for the acupressure and ginger groups for the next four days. They were asked to start a medication if the advised treatment failed and excluded from the study. All eligible women received a package containing 14 copies of Rhodes index of nausea and vomiting. In addition, we instructed to evaluate their symptoms every 12 hours (twice daily for seven consecutive days).
- **At a 7-day follow-up:** women reported the severity of their symptoms by the Rhodes index form. The Rhodes index was expanded to eight items. Eight 5-point self-report items measure the patient's perception of duration of nausea, frequency of nausea, distress from nausea, frequency of vomiting, amount of vomiting, distress from vomiting, frequency of retching, and distress from retching. This form arranges the eight items, which describes the level of symptoms. The likert- type scale for each item was scored from zero (indicating minimal or no symptom) to four (representing the worst symptom).
- Each women in acupressure group was given a pair of sea band (acupressure wristband) and trained to use it continuously (remove only when bathing) for four days (From the fourth to seventh day) in the appropriate place in both hands. Sea band is a buttoned elastic wristband which is used to pressure on the Neiguan point. Each woman in ginger group received 12 ginger capsules 250 mg for 4 days (during the four to seven days) and daily 3 capsules. No intervention more than usual nursing instructions were performed for the control group during 7 days.

**Evaluation phase**

- **The women were called twice:** once in the fourth and another in the eighth day. On the fourth day, we answered the women's questions in three groups; also, we reminded the use of ginger capsules and wristbands in the intervention groups.
- **On the eighth day:** the researchers thanked the women for their participation in this study and requested to hand over the Rhodes forms for evaluation of their responses to the advised methods of treatment. **NVP was evaluated by the Rhodes index score.**

**Statistical Data Analysis:**

The data collected were tabulated & analyzed by SPSS (statistical package for the social science) software, statistical package version 20 on IBM compatible computer. Quantitative data were expressed as mean & standard deviation ( $X \pm SD$ ) and analyzed by applying t test for the comparison of two groups of normally distributed variables and two groups not normally distributed variables.. In the descriptive analysis were represented as means and standard deviation, while the categorical variables were represented as frequency and percentages. Chi-square and T- tests were used. The hypothesis tested whether ginger and acupressure were different in reduce nausea, vomiting and retching symptoms. It was calculated by mean Rhodes index scores in four days after the intervention (post intervention) minus in three days before the intervention (pre intervention).

**III. RESULTS**

**Table (1) Sociodemographic characteristics of study and control groups**

Sociodemographic characteristics			Group			X2 and P.value
			Ginger	P6	Control	
Age	>20	No	4	6	2	X2=9.03 P =0.06
		%	13.3%	20.0%	6.7%	
	20-30	No	18	23	19	

		%	60.0%	76.7%	63.3%			
	<b>30-40</b>	No	8	1	9			
		%	26.7%	3.3%	30.0%			
<b>Educational level</b>	<b>Illiterate</b>	No	3	2	5	X <sup>2</sup> =5.42 P=0.025		
		%	10.0%	6.7%	16.7%			
	<b>Secondary</b>	No	20	14	17			
		%	66.7%	46.7%	56.7%			
	<b>University</b>	No	7	14	8			
		%	23.3%	46.7%	26.7%			
<b>Occupation</b>	<b>house wife</b>	No	10	14	6	X <sup>2</sup> =4.8 P=0.091		
		%	33.3%	46.7%	20.0%			
	<b>Working</b>	No	20	16	24			
		%	66.7%	53.3%	80.0%			
	<b>Residence</b>	<b>Rural</b>	No	5	3		2	X <sup>2</sup> =1.58 P=0.455
			%	16.7%	10.0%		6.7%	
<b>Urban</b>		No	25	27	28			
		%	83.3%	90.0%	93.3%			

This table represents that most of women were working reaching to 80% in control group. About 90% of cases were from urban and about 10% from rural settings there were no statistically significance difference regarding sociodemographical data.

**Table 2: Difference between p6 acupressure study group and control group regarding nausea, vomiting and retching**

	<b>P6</b>	<b>Control</b>	<b>X<sup>2</sup></b>	<b>P value</b>
<b>Nausea baseline</b>	28	28	0.00	1.00
	93.3%	93.3%		
<b>1<sup>st</sup></b>	25	26	7.08	0.029
	83.3%	86.7%		
<b>2<sup>nd</sup></b>	20	26	0.13	0.00
	66.7. %	86.7%		
<b>3<sup>rd</sup></b>	12	23	26.7	0.00
	40%	76.7%		
<b>4<sup>th</sup></b>	7	25	39.1	0.000
	23.3%	83.3%		
<b>Vomiting baseline</b>	22	25	0.88	0.33
	73.3%	83.3%		
<b>1<sup>st</sup></b>	13	22	5.6	0.002
	43.3%	73.3%		
<b>2<sup>nd</sup></b>	10	22	13.1	0.00
	33.3%	73.3%		
<b>3<sup>rd</sup></b>	9	22	21.9	0.000
	30%	73.3%		
<b>4<sup>th</sup></b>	8	17	6.67	0.03
	26.7%	56%		
<b>Retching baseline</b>	18	16	0.27	0.39
	60.0%	53.3%		
<b>1<sup>st</sup></b>	18	16	0.27	0.39
	60.0%	53.3%		
<b>2<sup>nd</sup></b>	9	15	2.6	0.28
	30.0%	50.0%		
<b>3<sup>rd</sup></b>	4	11	4.8	0.09
	13.3%	36.7%		
<b>4<sup>th</sup></b>	2	15	13.9	0.000
	6.7%	50.0%		

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The table reveals that the study group had no statistically significance difference between base line and first day regarding nausea, vomiting and retching. In contrary there was wide significant change in average score between baseline and first day to forth day by about 70%, 56%, 53% regarding nausea, vomiting and retching. Compared to average in control group was about 10%, 33%, 3%.that indicates improvement for cases using p6 in reliving nausea and vomiting.

**Table 3: Difference between ginger study group and control group regarding nausea, vomiting and retching**

	Ginger	Control	X2	P value
<b>Nausea baseline</b>	28	28	0.00	069
	93.3%	93.3%		
<b>1<sup>st</sup></b>	18	26	5.5	0.02
	60.0%	86.7%		
<b>2<sup>nd</sup></b>	11	26	5.9	0.00
	36.7%	86.7%		
<b>3<sup>rd</sup></b>	5	25	26.7	0.00
	16.7%	83.3%		
<b>4<sup>th</sup></b>	3	25	42.98	0.000
	10.0%	83.3%		
<b>Vomiting baseline</b>	23	25	2.2	0.12
	76.7%	83.3%		
<b>1<sup>st</sup></b>	19	22	0.69	0.3
	63.3%	73.3%		
<b>2<sup>nd</sup></b>	10	22	9.6	0.002
	33.3%	73.3%		
<b>3<sup>rd</sup></b>	6	22	17.1	0.00
	20.0%	73.3%		
<b>4<sup>th</sup></b>	3	22	24.8	0.00
	10.0%	73.3%		
<b>Retching baseline</b>	18	16	0.27	0.39
	60.0%	53.3%		
<b>1<sup>st</sup></b>	13	15	0.27	0.39
	43.3%	50.0%		
<b>2<sup>nd</sup></b>	10	15	1.7	0.15
	33.3%	50.0%		
<b>3<sup>rd</sup></b>	6	15	5.9	0.02
	20.0%	50.0%		
<b>4<sup>th</sup></b>	3	14	9.9	0.002
	10.0%	46.7%		

Distribution of experimental group using ginger and control group in reliving nausea and vomiting was compared in table 3. Comparing average score between baseline and first day to forth day by about 80%, 66%, 50% in experimental group to average in control group was about 17%, 27%, 3%. Those indicate improvement for cases using p6 in reliving nausea and vomiting.



Table 4: Comparison between ginger, P6 acupressure and control group regarding nausea vomiting and retching

	Group			F.test	P.value
	Ginger	P6	Control		
<b>Nausea baseline</b>	11.89±0.41	11.92±0.41	11.93±0.39	122	0.082
<b>1<sup>st</sup></b>	11.7±0.8	11.82±0.39	11.9±0.61	511	0.03
<b>2<sup>nd</sup></b>	9.8±1.1	10.8±1.2	11.1±0.95	484	0.01
<b>3<sup>rd</sup></b>	7.4±1.2	8.99±1.04	10.8±1.2	612	0.00
<b>4<sup>th</sup></b>	3.5±1.06	5.4±1.4	9.4±1.4	554	0.00
<b>F. test</b>	772	654	663		
<b>P.value</b>	0.00	0.00	0.00		
<b>Vomiting baseline</b>	11.9±1.31	11.82±1.51	11.91±0.41	231	0.081
<b>1<sup>st</sup></b>	10.7±1.2	10.2±1.4	11.81±0.81	422	0.031
<b>2<sup>nd</sup></b>	8.8±1.2	9.8±1.2	10.7±1.05	526	0.008
<b>3<sup>rd</sup></b>	5.4±1.3	6.9±1.14	8.8±1.3	621	0.00
<b>4<sup>th</sup></b>	2.5±1.2	3.2±1.6	6.4±1.5	723	0.00
<b>F. test</b>	668	721	823		
<b>P.value</b>	0.00	0.00	0.00		
<b>Retching baseline</b>	8.2±1.1	8.09±0.6	8.1±0.2	177	0.09
<b>1<sup>st</sup></b>	7.8±0.8	7.4±0.9	7.9±0.5	189	0.045
<b>2<sup>nd</sup></b>	6.6±0.66	6.8±0.5	7.8±0.91	211	0.006
<b>3<sup>rd</sup></b>	4.6±0.4	5.2±0.45	7.42±1.1	354	0.00
<b>4<sup>th</sup></b>	3.3±1.2	4.2±0.55	6.5±1.3	206	0.00
<b>F. test</b>	322	276	311		
<b>P.value</b>	0.00	0.00	0.00		

This table represents comparison between ginger, P6 acupressure and control group regarding nausea vomiting and retching as there were high statistically significance difference regarding nausea, vomiting, and retching between P6, ginger and control group (P=0.00).

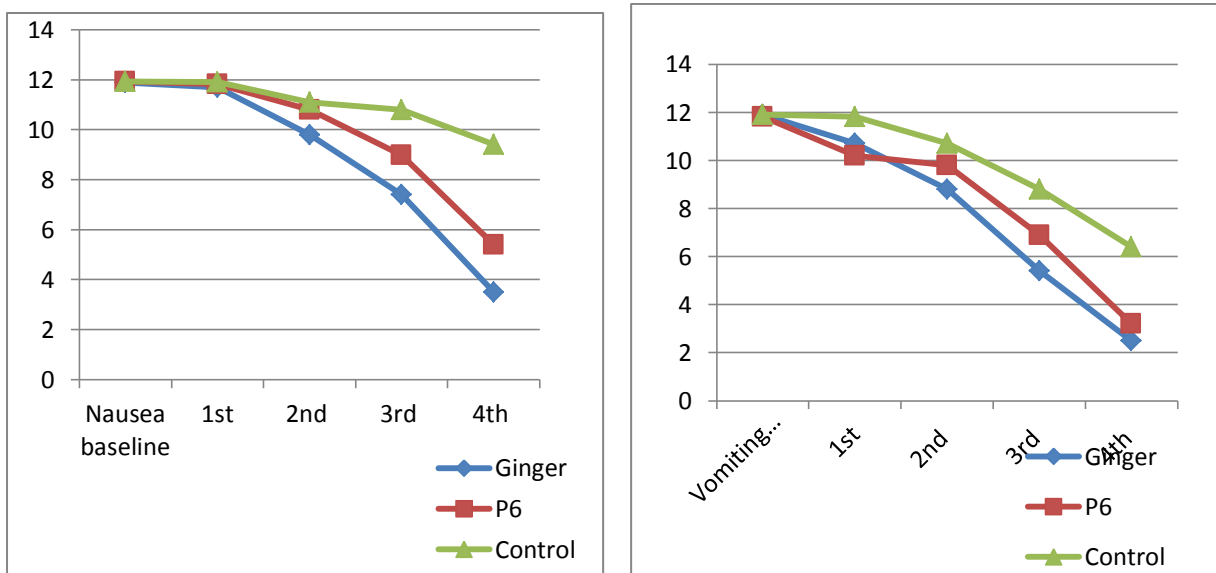
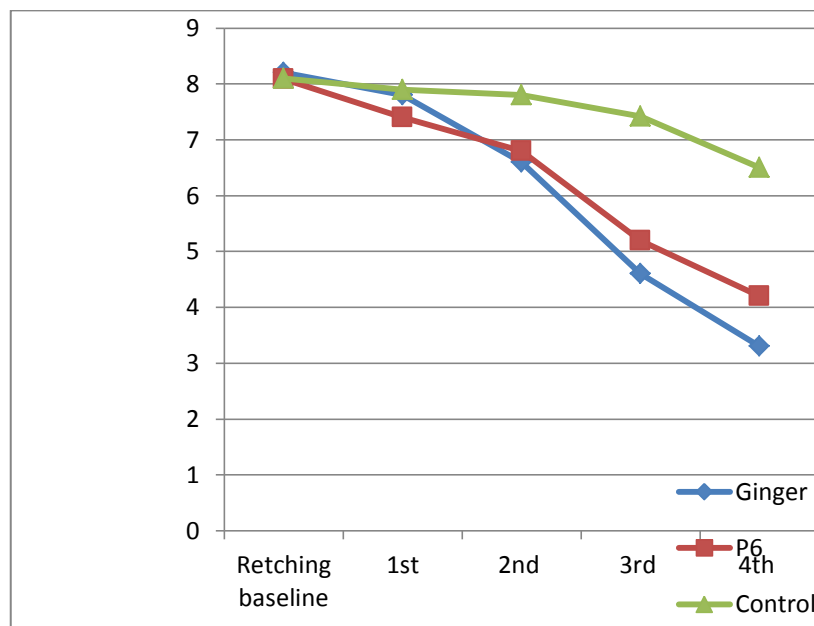


Figure 2: Difference in improvement rate between gingers P6 acupressure and control group



This figure shows difference in improvement rate between P6 acupressure, ginger and control group regarding nausea, vomiting, and retching at baseline and 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup>. P6 acupressure and ginger have higher improvement rate than control group but ginger is slightly better than P6 acupressure.

#### IV. DISCUSSION

The discussion and interpretation of the findings are presented as the following: One hundred and ninety pregnant women, meeting the inclusion criteria were enrolled to the study sample. Out of 60 women were assigned to the control group where the routine management was applied for them, 60 to ginger group and 60 to P6 acupressure group. In general, the study results illustrate no statistical significant difference. Regarding the age, educational level, occupation and residence this result is in agreement with Suzan et al, 2015 at Mansoura University, Egypt. The researcher study the effect of nurses using for P6 acupressure on nausea, vomiting and retching in women with hyperemesis gravidarum. The study sample was 80 participant and the researchers reported that women were between ages 20–24 years and there were no significant difference between the women most of socio-demographic data (women age group, occupation and residence except in education level. This result was also congruent with Saberi, 2013(1), at Naghvi hospital, Kashan, Iran in a randomized controlled trial of ginger to treat nausea and vomiting in pregnancy a randomized, controlled equivalence trial involving 291 women less than 16 weeks pregnant were undertaken at a teaching hospital in Australia that to estimate whether the use of ginger to treat nausea or vomiting in pregnancy is equivalent to pyridoxine hydrochloride (vitamin B6).

Regarding to baseline characteristics of nausea, vomiting and dry retching scores between three groups there were no statistically significant difference was found in both group. In contrary there were statistically significant difference regarding reduction in the rate of severity of Rhodes Index scores among both groups from sever to mild. There were observed changes from the baseline to fourth day after intervention using P6 acupressure by the study group as improvement rate were by about 70%, 56%, 53% respectively regarding nausea, vomiting and retching compared to average in control group was about 10%, 33%, 3%. This finding is consistent with Saberi, et al, 2013, Sinha, 2010 A randomised, double-blinded, placebo-controlled study of acupressure wristbands for the prevention of nausea and vomiting during labour and delivery Can Gurkan O, Arslan H. 2008 Effect of acupressure on nausea and vomiting during pregnancy(12). Lee EJ, Frazier SK. The efficacy of acupressure for symptom management: a systematic review(6).

Ginger group improvement rate were 80%, 66%, 50% respectively regarding nausea, vomiting and retching according to Rhodes Index scores from the baseline to the fourth day after intervention compared to average in control group was about 17%, 27%, 3% respectively. The present study indicated that, ginger was effective in reducing nausea, vomiting and retching during pregnancy. This result is supported by Ozgoli et al, 2009 the experimental group received 750 mg capsules of ginger, 2 times a day for 4 days. They found that ginger was an effective herbal therapy for relieving nausea

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and vomiting, and an improvement in nausea symptoms during pregnancy was reported by the most of pregnant women in the ginger group (14-15). In a randomized controlled study, intervention group took 1.5 g/day for 4 days. Smith et al 2004 by The American College of Obstetricians and Gynecologists.)Ginger Equivalence Trial to estimate whether the use of ginger to treat nausea or vomiting in pregnancy is equivalent to pyridoxine hydrochloride (vitamin B6). Ginger was equivalent to vitamin B6 in reducing nausea (16).

The current study was conducted with aim of comparing the effect of acupressure and ginger to reduce nausea and vomiting during early pregnancy. The researcher found that both the acupressure and ginger effective in relieving nausea and vomiting during pregnancy; however, ginger was moderate high effect than p6 acupressure group participants.

This finding is consistent with the results of Jamingorn study; however, is inconsistent with the findings of Sinha et al. study(7). In their trial, the frequency of nausea and vomiting during labor and delivery did not reduce when the acupressure wristbands were applied bilaterally on women hands. It is possible because there was no control group in their study and two groups revied intervention, one group in the P6 point and the other one in the sham point. Then, there was a placebo effect in both the intervention and placebo groups.

The results in the present study showed that vomiting and nausea in the ginger group decreased by 51% and 46%, respectively. Total percentage reduction of Rhodes Index scores in the present study were 48%, 13%, and 10%, in the ginger, placebo, and control groups, respectively. These findings indicate that ginger is more effective in treating nausea and vomiting than a placebo. This finding has been found also by Ozgoli that was reported that ginger was effective in reducing nausea and vomiting. As most of the women using ginger reported reduction in the degree of nausea and vomiting during early pregnancy. This study confirms the presence of control effect in the reduction of nausea, but it still detected some benefits of ginger in improving NVEP. Retching was also affected by the ginger extract, although to a lesser extent. No significant effect was observed on vomiting. The reason might be due to the low dose of ginger used in the study, which was 500 mg compare to the 750 mg that was used in our study.

Firm evidence on the safety of ginger during pregnancy is essential and further systematic research on the risks and benefits of ginger during pregnancy would be of great clinical relevance. Nausea and vomiting in early pregnancy remain a significant health problem that has physiological, emotional, social, and economic consequences to women, their families, and society. P6 acupressure has no side effect as a non-pharmacological intervention for women looking for a reduction from their nausea, dry retching, and vomiting. From our point of view the use of ginger in early pregnancy will reduce the severity of their symptoms and presents those with an alternative choice of treatment for the management of their symptoms such as P6 acupressure.

Based on the result of the present study, it can be concluded P6 acupressure and ginger are effective in reducing nausea and vomiting during early pregnancy.as this end results that answer the research hypothesis

**V. CONCLUSION**

Ginger a well as p6 were effective in reducing nausea, vomiting and retching episodes during early pregnancy and using p6 as an alternative means that keeps the pregnant woman away from exposing her fetus to any pharmacological side effect.

**VI. RECOMMENDATIONS**

Based on the finding of the present study the following were recommended:

Using of P6 acupressure as non-pharmacological nursing intervention for reducing nausea, vomiting and retching episode used as routine management during pregnancy.

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