

## Effect of Benson Relaxation Techniques on Nausea and Vomiting among Primigravida Women in The First Trimester of Pregnancy

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### Abstract:

**Background:** Nausea and vomiting of pregnancy are the most common symptoms that happen early in pregnancy especially in the 1st trimester. **Aim:** The present study aimed to study effect of Benson relaxation technique on nausea and vomiting among primigravida women in the first trimester of pregnancy. **Design:** A Quasi-experimental design. **Setting:** Outpatient clinic of Obstetrics and Gynecology at Benha university hospital. **Sample:** A Purposive sample consists of 108 primigravida women with nausea and vomiting. **Tools:** Data was collected through three main tools; I-A structured interviewing questionnaire, II-Modified 24-hour Pregnancy-Unique Quantification of Emesis scale, III-Women's Satisfaction Sheet. **Results:** The present study showed highly statistically significant differences between study and control groups regarding mean score of Pregnancy-Unique Quantification of Emesis index after application of Benson relaxation technique and most women in study group and were satisfied with Benson's relaxation technique application. **Conclusion:** Application of Benson's relaxation technique has a positive effect in reducing nausea and vomiting during pregnancy and most women in study group and were satisfied with Benson's relaxation technique application. **Recommendation:** Application of Benson relaxation technique on larger sample size in different settings for generalization.

**Key words:** Benson Relaxation Techniques, First Trimester of Pregnancy, Nausea and Vomiting, Primigravida.

### Introduction:

Pregnancy is one kind of reviving as well as jovial time in a women's life, as it characterizes the women's most imaginative plus supporting powers while giving an expansion to what's to come. It is the most significant event in a woman's life, which requires unique care from the time of conception to the postpartum period. (Panuccio et al., 2022)

Pregnancy for the first time is a special period in a woman's life characterized by rapid physiological, psychological and

social changes during a relatively short period as a result of hormonal effect and adaptation to the gestational process (Thatal et al., 2020).

During pregnancy the body undergoes various anatomical and physiological changes and these changes mainly occur due to the huge hormonal alteration that occurs during antenatal and intra-natal period (Parmar & Tiwari, 2021). These changes cause symptoms called minor ailments like nausea, vomiting, heartburn, and constipation that appear normal for any pregnant woman.

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However, late diagnosis and management can develop these minor discomforts into major problems. **(Devkate et al., 2022).**

Nausea and vomiting are experienced by pregnant women in early pregnancy between the fourth and seventh week of pregnancy in 80 percent of pregnant women and resolves by the 20th week of gestation. These symptoms can have a reflective impact on women's general sense of well-being and day-to-day lives **(Bottone-Post, 2022).**

The management of nausea and regurgitation of gestation depends on the severity of the symptoms. Common complementary and nonpharmacological interventions that are simple, effective, inexpensive methods to nausea and vomiting discomforts include music therapy, yoga, biofeedback, mind distraction techniques, relaxation, lifestyle changes, time control, guided imagery and cognitive restructuring **(Anggraini et al., 2021).**

Relaxation has several methods, but the method introduced by Herbert Benson in 1970 is more desirable for others because of its easy learning and training. Benson's relaxation is one of the methods of focusing on the senses that affect a wide range of physical and psychological symptoms such as anxiety, pain, depression, mood and self-confidence and reduces stress **(Arezou et al., 2019).**

Benson's Relaxation Technique (BRT) is one of the best muscular relaxation techniques. which are better tolerated by pregnant women suffering from nausea and vomiting. This technique was introduced by Herbert Benson (1975), who has mentioned that this method can induce a relaxation response by reducing autonomic nervous system activity. It is the most effective and easy nursing intervention method to use **(Mansour & Saadoon, 2022).** It includes mindfulness techniques that are

affected on wide range of physical and psychological symptoms in pregnant women through its effect of complete relaxation of all the muscles **(Belchamber, 2021).**

Benson relaxation therapy gives rise to a state of calm and relaxation, where the brain waves begin to slow down which will eventually make a person able to rest quietly. This happens when the individual begins to lie down and follow the relaxation instructions that is the stage of muscle relaxation of the head to the legs Furthermore, in a relaxed state began to close his eyes, at this stage individuals begin to feel relaxed and passively followed the situation so as to suppress the feeling of tension **(Hidayati et al., 2019).**

Benson's relaxation Technique is completely non-invasive and may reduce the need for patients to use anti-vomiting drugs. This method has less side effects and it saves the cost of hospitalization **(Zahra et al., 2019).** Since muscle relaxation can reduce heart rate, decrease blood pressure and increase vasovagal blood flow and reduce the activity of the sympathetic system, it is expected to reduce severity of nausea and vomiting in pregnancy **(Shayan et al., 2021).**

### **Significance of the study**

. Nausea and vomiting of pregnancy (NVP) affect a high proportion of the pregnant population **(Wang et al., 2020).** Nausea and vomiting occur in 60-80% of primigravida and 40-60% occur in multigravida **(Putri et al., 2020).**

Nausea and vomiting during pregnancy (NVP) in 50%–90% of pregnant women typically begin by the 4th week after the last menstrual period and often limited by the 20th week of pregnancy **(Gadsby al., 2021).**

### **Aim of the study:**

Evaluate effect of Benson relaxation technique on nausea and vomiting among

primigravida women in the first trimester of pregnancy.

**Research Hypothesis:**

**I:** Application of Benson relaxation techniques will have a positive effect on reducing nausea and vomiting among primigravida women in the first trimester of pregnancy.

**II:** Primigravida women in the first trimester of pregnancy who applied Benson relaxation techniques would be expected to be more satisfied than those who didn't apply.

**Subjects and Method:**

**Research design:**

A quasi experimental (pre- and post- test intervention) study was utilized to fulfill the aim of this study.

**Setting:**

The study was conducted at Obstetrics and Gynecological out-patient clinic in Benha University hospital.

**Sampling:**

- **Sample type:** A Purposive sample.

-**Sample size:** The total sample was 108 women who were chosen among those attending previous mentioned setting during period of (6) months.

**-Inclusion criteria:**

1-All pregnant women with nausea & vomiting in the first trimester of pregnancy.

2-Women free any medical and gynecological disorders (normal).

3- Women age (20 - 35 years).

4- Active participation in the study.

**-Exclusion criteria:**

women with Hyperemesis gravidarum.

**Tools for data collection:**

four main tools were utilized for data collection: -

**Tool (I): A structured interviewing Questionnaire:**

The investigator designed it after reviewing related literatures under guidance

of supervisors. It was written in simple Arabic language in the form of close and open- ended questions. It consisted of Women Sociodemographic data as (age, place of residence, level of education and occupation). {4Questions}.

**Tool II: Modified 24-hour Pregnancy-Unique Quantification of Emesis (PUQE) score before and after application of Benson relaxation technique:**

The PUQE scale was adapted by (**Jadidi et al., 2021**), (PUQE) score used to assess and classified the severity of NVP and classified the women into three groups according to the severity of their symptoms. It was modified by the investigator to consist of four points; the number of hours of nausea, the number of episodes of retching, the number of episodes of vomiting and the most frequent time of vomiting and nausea within the last 24 hours. Each item was scored from 1 to 5 points. The PUQE score was calculated by adding the values from each category, resulting in a total score ranged from 4 to 20 points.

**Scoring system:**

- $\leq 6$  points = mild.
- 7-12 points = moderate.
- $\geq 13$  = severe.

**Tool III: Patient's Satisfaction Sheet:** was adopted from (**Singer et al., 1998**). The visual analog satisfaction scale was an instrument in which 0 (zero) represented that the sample was unsatisfied with Benson relaxation technique and 10 fully satisfied. **Scoring system:**

0 = Unsatisfied

1-9 = Satisfied

10 = Highly satisfied

**Tool Validity:**

The validity of questionnaires was reviewed by a panel of 3 jury experts in the field of Obstetrics & Gynecological Nursing at Benha University to ascertain clarity, relevance, comprehensiveness, and

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applicability of tools. Modifications were done such as adding, rephrasing and omitting some questions.

### **Tool reliability:**

Reliability was testing statistically to assure that the tools were reliable before data collection and it was evaluated using test-retest method by the Cronbach's alpha test which is used to measure the internal consistency. Cronbach's alpha for Interview questionnaire for primigravida women was 0.813, Maternal knowledge questionnaire was 0.813, for Modified 24-hour Pregnancy-Unique Quantification of Emesis (PUQE) scale 0.841 and, Women's Satisfaction Sheet Maternal was 0.836, which denotes the high internal consistency of the used tool.

### **Ethical Considerations:**

- Approval of the Faculty ethics committee for scientific research was obtained for the fulfillment of the study .
- An official permission from the selected study setting was obtained for the fulfillment of the study.
- Before applying the tools, the investigator explained the aim and importance of the study to gain women's confidence and trust.
- The investigator took oral consent from women to participate in the study and.
- All women were given the option to withdraw from the study at any time .
- Women in the control group also received an educational guideline for an ethical consideration.

### **-Pilot study**

The pilot study was conducted on 10 % of the total sample duration that was about 3 weeks (consisted of about 10 women). There were no modifications done. Thus, women involved in the pilot study were included in the study. The pilot study was carried out

before starting data collection. It was done to estimate the time required for each tool to be filled also to check the simplicity, clarity, applicability and feasibility of the developed tools as well as to identify any possible obstacles that may hinder data collection.

### **Field work**

The study was carried out from the beginning of January 2022 to end of June 2022, covering six months. The investigator visited the pre mentioned setting from 9 to 12 pm, two days per week (Sunday and Wednesday) until the predetermined size of sample was completed. Women attended the gynecological inpatient's ward and outpatient clinics at Benha university hospital to receive required care were recruited by the investigator until the predetermined sample size was completed.

### **Preparatory phase:**

It was the first phase of the study and it included reviewing current and related literatures. Also, theoretical knowledge of various aspects of the study using books, articles, periodicals, magazines and internet to develop tools for data collection.

### **Assessment phase:**

- The aim of this phase was to collect baseline women's data as well as to determine individualized educational needs and to design a suitable educational sessions and booklet.

- The investigator visited the previously mentioned study setting 2days/week from 9 am to 12 pm. At the beginning of interview the investigator introduced herself, greeted each woman, explained the aim of the study, scheduled times and frequency of sessions to selected women to assure adherence to interventions.

-Each woman was interviewed individually. The number of interviewed women per week was 4-6 women (2-3 women/day).

- The investigator distributed, A structured interviewing questionnaire (pretest) to assess pregnant women's sociodemographic data & Current pregnancy profile.
- After that, the investigator distributed Modified 24-hour Pregnancy-Unique Quantification of Emesis (PUQE) scale to assess severity of nausea and vomiting as (pretest).
- The average time taken for completing each sheet was around 10-15 minutes depending on the response of the women. Each woman was reassured that obtained information will be confidential and used only for the purpose of the study.

#### **Planning Phase:**

- Based on results was obtained during assessment phase, the booklet regarding Benson relaxation technique & nausea and vomiting developed by the investigators in a form of printed booklet. The printed booklet was designed specifically for study group, in simple Arabic language to suit their level of understanding and to satisfy the studied pregnant women's deficit knowledge regarding nausea and vomiting according to their needs. Sessions number and its contents, different methods of teaching, and instructional media were determined. Objectives were constructed to be attained after completion of educational sessions. The time of each session was 15–20 minutes.

#### **Implementation Phase**

The intervention included the application of Benson relaxation technique through determining steps of applying of this technique, choose educational methods as discussion, role play and pictures used in an Arabic language and using educational media as lab top, written material as booklet to gain information and facilitate discussion. The implementation phase was achieved through 2 sessions, the sessions were classified as follows:

**First session (theoretical):** was conducted to equip the women with knowledge regarding nausea and vomiting during pregnancy as definitions, causes, complications, management of nausea and vomiting during pregnancy.

**Second session (practical):** This session included Benson relaxation techniques as following (**Zenouzi et al., 2021**): positioning comfortably, close eyes, focus on gradually relaxing muscles, beginning with the soles of their feet and progressing up to the face. Keeping them relaxed, breathe in through nose and exhale through mouth gently, remaining aware of breathing, When they breathe out, they say “one” to themselves or the word (my God or my Allah) and continue to breathe naturally and easily, continue these practices for 15-20 minutes. When finish sit quietly with eyes closed for several minutes and later with opened eyes, don't worry about whether are successful in achieving a deep level of relaxation. Maintain positive attitude and permit relaxation to occur at its own pace. When distracting thoughts occur, try to ignore them and dwelling upon them and return to repeating ((my God or my Allah), With practice the response should come with little effort. This technique should be performed for 15-20 minutes each day, twice daily but not within two hours after any meal since the digestive process seem to interfere with the elicitation of the relaxation response. The best time to practice the relaxation response is first thing in the morning to counter act the stress response and bring about deep relaxation and inner peace.

The investigator continued answered any raised questions and gave feedback. Control group women followed by phone to avoid their drop out from the study, but no care provided to women during break to prevent study bias.

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### **Evaluation Phase:**

To evaluate the effectiveness of Benson relaxation technique, the investigator done post-test for both study and control groups to evaluate women's nausea and vomiting state through the same format of pretest as (PUQE and the satisfaction scale) among women to evaluate degree of women satisfaction. The investigator gave educational guidelines to women in control group. Finally, investigator compared pretest and post test results of the two groups.

### **Statistical analysis:**

Data were verified prior to computerized entry. The Statistical Package for Social Sciences (SPSS version 21) was used followed by data tabulation and analysis. Descriptive statistics were applied (e.g., mean & standard deviation for continuous variables, frequency for categorical variables were analyzed and percentages). Independent t-test, Chi-square test and Pearson correlation coefficients were used. Qualitative variables were compared using qui square test ( $\chi^2$ ) as the test of significance, and independent (t) test was used to compare mean score between two groups. Correlation coefficient(r) was used to test the correlation between quantitative data. Statistical significance was considered as follows: P value  $>0.05$  non-statistically significant relation, P value  $<0.05$  statistically significant relation and P value  $<0.01$  highly- statistically significant relation.

### **Results:**

**Table (1)** shows that (68.5% and 57.4%) of both study and control groups respectively were aged 20 -  $<25$  years old with a mean age of  $25.15 \pm 4.06$  years and  $24.09 \pm 3.80$  years respectively. As regards the residence (64.8%) of the study group and (51.9%) of control group were lived in rural area. Furthermore, educational level of (35.2%) and

(40.8%) of both study and control groups respectively were secondary education. Regarding the employment (61.1% and 66.7%) of both study and control groups respectively weren't employed. No statistically difference was detected among both groups related to socio-demographic data, which mean that the two groups under study were homogenous.

**Table (2)** elaborates that, before application of Benson's relaxation technique, the total mean scores of (PUQE) index ( $11.18 \pm 1.74$  and  $11.09 \pm 2.36$ ) in the study and control groups respectively showed that there was no statistically significant difference between them with ( $P > 0.05$ ). However, after application of Benson's relaxation technique, the total mean difference score for (PUQE) index in the study was lower than the score in the control group ( $8.96 \pm 1.41$  versus  $11.07 \pm 2.09$ ) respectively with a highly statistically significant difference ( $P \leq 0.001$ ). Such significant differences also existed in all points of (PUQE) index ( $p \leq 0.05$ ). These mean scores of (PUQE) index in the study and control groups illustrated that there was a significant improvement in nausea and vomiting among women in study group compared with these in control group, after application of Benson's relaxation technique.

**Fig. (1)** reveals that, (25.9%) of study group and (29.6%) of control group had mild nausea and vomiting before intervention respectively. Meanwhile, after intervention, (57.4%) of study group had mild nausea and vomiting compared with (27.8%) of the control group.

**Fig. (2)** reveals (74.1%) of women in study group and were satisfied with Benson's relaxation technique application. Meanwhile (16.7%) of them were unsatisfied.

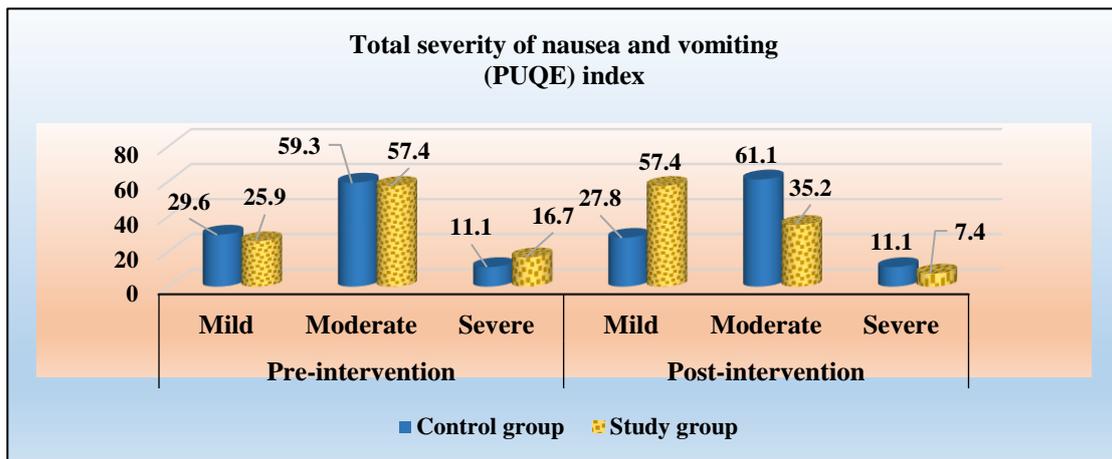
**Table (1) Distribution of the studied sample according to their socio-demographic data (n=108).**

Group Socio-demographic data	Control group n=54		Study group n=54		X2	p-value
	No	%	No	%		
<b>Age</b>						
20 - <25	31	57.4	37	68.5	1.45	0.484
25 - <30	13	24.1	10	18.5		
30 - ≤35	10	18.5	7	13.0		
<b>Mean ±SD</b>	24.09 ± 3.80		25.15 ± 4.06			
<b>Residence</b>						
Rural	28	51.9	35	64.8	1.86	0.127
Urban	26	48.1	19	35.2		
<b>Educational level</b>						
Read and write	8	14.8	10	18.5	0.476	0.924
Basic education	10	18.5	10	18.5		
Secondary education	22	40.8	19	35.2		
University education	14	25.9	15	27.8		
<b>Occupation</b>						
Housewife	36	66.7	33	61.1	0.361	0.548
Employed	18	33.3	21	38.9		

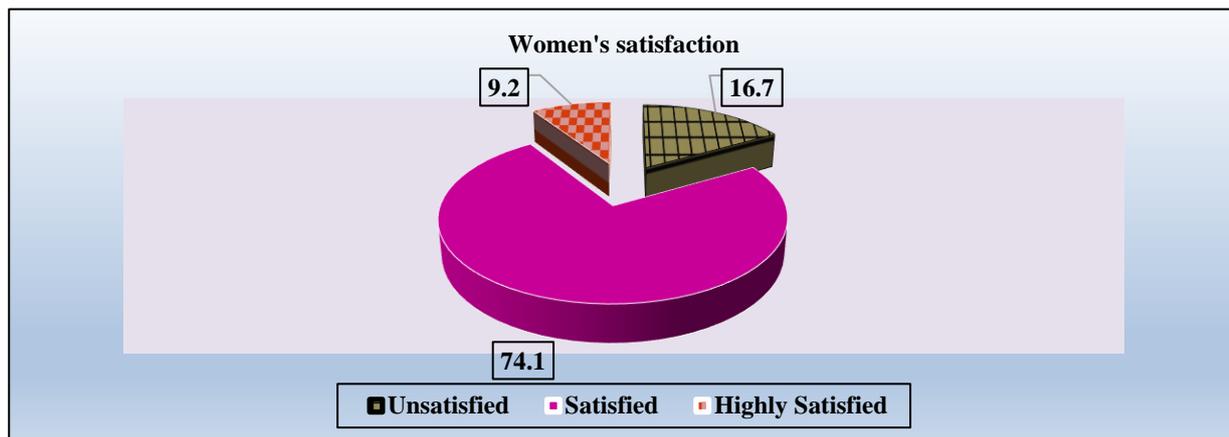
**Table (2): Mean cores of Pregnancy-Unique Quantification of Emesis (PUQE) index of studied sample before and after application of Benson relaxation technique (n=108).**

Pregnancy-Unique Quantification of Emesis (PUQE) index		Max. score	Control group n=54	Study group n=54	Independent t-test	P-value
			Mean ± SD	Mean ± SD		
Number of hours of nausea within the last 24 hours.	Before intervention	5	3.52±1.07	3.67±1.08	0.71	<b>0.477</b>
	After intervention		3.41±0.92	2.54±0.81	5.19	<b>0.000**</b>
Number of episodes of retching within the last 24 hours.	Before intervention	5	2.28±0.94	2.57±0.81	1.75	<b>0.083</b>
	After intervention		2.19±0.80	1.81±0.75	2.47	<b>0.015*</b>
Number of episodes of vomiting within the last 24 hours.	Before intervention	5	2.07±0.74	1.89±0.63	1.38	<b>0.168</b>
	After intervention		2.15±0.68	1.74±0.70	3.04	<b>0.003*</b>
Most frequent time of vomiting and nausea within the last 24 hours.	Before intervention	5	3.22±0.96	3.06±0.97	0.89	<b>0.375</b>
	After intervention		3.33±0.91	2.87±1.01	2.50	<b>0.014*</b>
Total score	Before intervention	20	11.09±2.36	11.18±1.74	0.231	<b>0.818</b>
	After intervention		11.07±2.09	8.96±1.41	6.12	<b>0.000**</b>

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**Figure (1):** Distribution of the studied sample's (PUQE) index regarding severity of nausea and vomiting in both study and control groups before and after intervention (n =108).



**Figure (2):** Satisfaction of the studied sample's (study group) regarding Benson's relaxation technique application

**Discussion:**

Nausea and vomiting in early pregnancy are so common that it can be considered a normal part of pregnancy. It is referred to as "morning sickness" although this is a misnomer because symptoms will often persist through the day. Symptoms usually begin between the fourth and seventh week after the last menstrual period and resolve in many women by the twelfth week and in most women by twentieth week of pregnancy (Abd Allah et al., 2020). Benson relaxation is a combination of relaxation

response techniques that is completely non-invasive and may reduce the need for patients to use anti-vomiting drugs. This method has less side effects and it saves the cost of hospitalization (Zahra et al., 2019).

Regarding **personal characteristics** of the studied groups, the result of the present study showed that there was no statistically significant difference between study and control groups regarding personal characteristics (age, residence, educational level and occupation). This may be due to homogeneity of the studied population. This

could be because the study sample was chosen using purposeful random sampling. This was advantageous to the current study since it ensured homogeneity of the two study populations, generalization of the study outcomes, and avoided the confounding variables' effect.

This result was consistent with **Hassan et al., (2022)** who studied "Effect of Pilates Exercises versus Benson Relaxation Technique on Premenstrual Syndrome Symptoms, Egypt" stated that no statistically significant differences were observed between both groups in relation to their socio-demographic data.

In the present study, more than two-thirds and more than half of both study and control groups respectively were aged (20 - <25) years old with a mean age of  $25.15 \pm 4.06$  years and  $24.09 \pm 3.80$  years respectively. From the investigator's point of view this result may be due to that biologically, women are most fertile when they're teenagers, but socially, this is the time to get pregnant for more women.

This result was agreed with **Samarakoon et al., (2020)** who conducted a study entitled "Knowledge and Practices Regarding Self-Management of Minor Ailments among Pregnant Mothers, Colombo, Sri Lanka" whose results revealed that the majority of participants were 20-29 years old.

Concerning educational level, the present study revealed that educational level of more than one-third and more than two-fifths of both study and control groups respectively were secondary education.

**El-Sheikh et al., (2021)** agreed this study in their study entitled "Effectiveness of Evidence-Based Measures on Nausea and Vomiting during First Trimester of Pregnancy, Ain Shams, Egypt" cleared that near half of them had secondary education.

Owing to residence, the present study findings revealed that near two-thirds of the study group and more than half of control group were lived in rural area. From the investigator's point of view this result may be due to that Benha University hospitals receive women from many surrounding rural areas and centers.

The result comes in consistent with **Farooq & Gobindgarh, (2021)** Who found in their study about "Review Article related to knowledge among antenatal women regarding minor ailments in pregnancy, Punjab, Pakistan" that more than half were residing in the rural area.

As regards occupation, the present study illustrated that more than half and two-thirds of both study and control groups respectively weren't employed. The result agreed with **Guler et al., (2021)** who studied "Health literacy and knowledge of antenatal care among pregnant women, Turkey" who found that two-thirds of participants weren't employed.

Regarding Mean scores of Pregnancy-Unique Quantification of Emesis (PUQE) index of studied sample (study and control groups) at pre- and post-intervention phases, the present study clarified that, there was a marked decrease in severity of nausea and vomiting after application of Benson's relaxation technique, that the total mean difference score for (PUQE) index in the study was lower than the score in the control group respectively with a highly statistically significant difference. This result confirmed the achievement of current research hypothesis.

The same finding was reported by **Jadidi et al., (2021)**, who conducted a study entitled "The effect of Benson relaxation training on the severity of nausea and vomiting in pregnant women" mentioned in their study about that mean scores of nausea

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and vomiting in the study group before and after the intervention was highly statistical significant ( $P < 0.001$ ). After the intervention, the severity of nausea and vomiting in the study group was significantly lower than the control group and the difference was highly statistical significant ( $P < 0.001$ ).

Furthermore, **Farideh et al., (2021)** supported this study in the study entitled "The effect of Benson relaxation training on the severity of nausea and vomiting in pregnant women" who signified that the mean scores of nausea and vomiting in the intervention group before and after the intervention decreased from  $(8.30 \pm 1.60)$  to  $(5.30 \pm 2.65)$  which was statistically significant ( $P < 0.001$ ), also changed from  $(8.38 \pm 1.51)$  to  $(7.39 \pm 1.70)$  in the control group and this difference was statistically significant ( $P = 0.01$ ). After the intervention, the severity of nausea and vomiting in the intervention group was significantly lower than the control group and the difference was statistically significant ( $P < 0.001$ ).

In the same context this result was agreed with **Fateme et al., (2019)** who conducted a study entitled "The effect of Benson's muscle relaxation technique on severity of pregnancy nausea" whose results revealed that the severity of nausea in the intervention group was significantly lower than the control group (0.04) that the mean difference of nausea and vomiting before and after the intervention was significant ( $P = 0.001$ ). This means that this technique has been effective in reducing the nausea and vomiting rate in pregnant women.

Also, **Nasirizadeh, (2019)** who studied "The effect of Benson's muscle relaxation technique on severity of pregnancy nausea" documented that the mean and standard deviation of severity of nausea in the

intervention (test) group before Benson relaxation was  $6.9 \pm 2.9$  and after relaxation was  $6.64 \pm 1.99$ . Analysis of severity of nausea before and after intervention in the test group showed positive effect of Benson's relaxation on the reduction of nausea and vomiting in pregnancy, its education is recommended for all pregnant women in the first trimester of pregnancy in health and counseling centers.

Concerning studied sample's (women in study group) satisfaction regarding Benson's relaxation technique application. The findings of the current study clarified that, near to three-quarters of women in study group and were satisfied with Benson's relaxation technique application. Meanwhile, less than one quarter of them were unsatisfied. this result reflect the extension regarding effectiveness of applying of Benson's relaxation technique in reducing the severity and frequency of nausea and vomiting during pregnancy pregnant women which was consistent with the advantages of this technique as a simple, non-invasive technique without side effects on the pregnant woman and her fetus, ease of use permanent availability of this technique and most importantly, being non-pharmacological, without cost and no specialized abilities or manpower required.

### **Conclusion:**

Application Benson relaxation technique had a positive effect on reducing the severity and frequency of nausea and vomiting in pregnant women which was consistent with the advantages of this technique as a simple, non-invasive technique without side effects. Therefore, the study hypothesis was accepted that application of Benson relaxation techniques would have a positive effect on

reducing nausea and vomiting among primigravida women in the first trimester of pregnancy and the study hypotheses were supported.

**Recommendations:**

- Develop awareness program for pregnant women regarding benefits of Benson relaxation technique to enhance their knowledge.
- Distribute posters and pamphlets to pregnant women to clarify steps of Benson relaxation technique.
- Further studies are proposed to investigate the effect of applying of Benson relaxation technique on reducing nausea and vomiting in pregnancy on larger sample from different settings to generalize the results.
- Conducting in-service training programs periodically and regularly to all health care providers to teach pregnant women about the effects of Benson's relaxation technique for the reduction of nausea and vomiting in pregnancy.

**Recommendation for further studies :**

- further researches should be conducted on the impact of this technique with a large number of pregnant women with another obstetrics complications.

**References**

**Abd Allah, B., A., Hashish, A. E. L., Al-Omda, A. E. A., & Hamdym, M., A. (2020).** Comparative Study between incidence of Helicobacter Pylori Infection in Women with Hyperemesis Gravidarum and Normal Pregnancy. *Al-Azhar Medical Journal*, 49(2), 481-490.

**Anggraini, F. D., Nisa, F., & Abidah, S. N. (2021).** Effectivity of Essential Oil Diffuser Blend Aromatherapy for Decrease Morning Sickness in The First Trimester of Pregnancy in Wonokromo

Surabaya. *Indian Journal of Forensic Medicine & Toxicology*, 15(3).

**Arezou, N. J., Fateme, B., Fatemeh, M. K., Vahid, M., Manizhe, N., & Zahra, M. (2019).** The effect of Benson's muscle relaxation technique on severity of pregnancy nausea. *Electronic Journal of General Medicine*, 16(2).

**Belchamber, d. C. (2021).** BENSON'S METHOD. Payne's Handbook of Relaxation Techniques E-Book: A Practical Handbook for the Health Care Professional, 261.

**Bottone-Post, C. (2022).** Nausea and vomiting of pregnancy. In *Clinical Pharmacology During Pregnancy* (pp. 155-176). Academic Press.

**Devkate, P., Mathew, B., Patel, K., Halpati, S., Dhodi, D., Halpati, V., ... & Sebastian, K. (2022).** A study to assess the knowledge regarding self-management of minor ailments in pregnancy among antenatal mothers. *Asian Journal of Nursing Education and Research*, 12(1), 21-24.

**El-Sheikh, M. A., Marak, A. I., & Ahmed, E. M. (2021).** Effectiveness of Evidence-Based Measures on Nausea and Vomiting during First Trimester of Pregnancy. *Evidence-Based Nursing Research*, 3(4), 9-9.

**Farideh, K., Zahra, J., Arezoo, S., & Soodabeh, A. (2021).** The effect of Benson relaxation training on the severity of nausea and vomiting in pregnant women Iranina *Journal of Obstetrics Gynecology and Infertility*, 8 (24), 75 - 83

**Farooq, Z. T., & Gobindgarh, P. (2021).** A Review Article related to knowledge among antenatal women regarding minor ailments in pregnancy. *International*

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Journal of Creative Research Thoughts (IJCRT), 9(5), 284-289.

**Fateme, B., Fatemeh, M. K., Vahid, M., Arezou, N. J., Manizhe, N., & Zahra, M. (2019).** The effect of Benson's muscle relaxation technique on severity of pregnancy nausea. *Electronic Journal of General Medicine*, 16(2).

**Gadsby, S. (2019).** Body representations and cognitive ontology: drawing the boundaries of the body image. *Consciousness and cognition*, 74, 102772.

**Guler, D. S., Sahin, S., Ozdemir, K., Unsal, A., & Uslu Yuvaci, H. (2021).** Health literacy and knowledge of antenatal care among pregnant women. *Health & social care in the community*, 29(6), 1815-1823.

**Hassan Ahmed, A., Mohamed Hassan, N., Hassan Shamekh, A., & S Badawy, A. (2022).** Effect of Pilates Exercises versus Benson Relaxation Technique on Premenstrual Syndrome Symptoms. *Egyptian Journal of Health Care*, 13(2), 39-53.

**Hidayati, W., Ropyanto, C. B., & Kusumaningrum, N. S. D. (2019).** Effects of Benson's Relaxation Technique on Nausea in Patients with Chronic Kidney Disease Undergoing Hemodialysis. *KnE Life Sciences*, 510-519.

**Jadidi, Z., Kazemi, F., Shayan, A., & Aghababaei, S. (2021).** The effect of Benson relaxation training on the severity of nausea and vomiting in pregnant women. *The Iranian Journal of Obstetrics, Gynecology and Infertility*, 24(8), 75-83.

**Mansour, S. E. S., & Saadoon, O. H. M. (2022).** Effect of Benson's relaxation therapy on pain and sleep quality among

post-cesarean mothers. *Egyptian Nursing Journal*, 19(2), 88.

**Nasirizadeh, M., (2019).** The effect of Benson's muscle relaxation technique on severity of pregnancy nausea. Available at <https://scholar.archive.org/work/c7a2g6iktvcqtcpcxh6zoalagi> accessed on 22/7/2022. At 4:00pm

**Panuccio, F., Berardi, A., Marquez, M. A., Messina, M. P., Valente, D., Tofani, M., & Galeoto, G. (2022).** Development of the Pregnancy and Motherhood Evaluation Questionnaire (PMEQ) for evaluating and measuring the impact of physical disability on pregnancy and the management of motherhood: a pilot study. *Disability and Rehabilitation*, 44(8), 1474-1480.

**Parmar, R., & Tiwari, A. (2021).** Effect of Benson's Relaxation Therapy on Post Caesarean Section Pain and Stress: A Pilot Study. *Journal of Clinical & Diagnostic Research*, 15(6).

**Putri<sup>1</sup>, S. S., Isnaini, N., & Yuviska, I. A. (2020).** The effect of mint oil on nausea and vomiting during pregnancy. *Malahayati International Journal of Nursing and Health Science*, Volume 03, No.1, March 2020: 35-39.

**Samarakoon, S. K. S. N., Mohamed, F. F. H., Wijerathna, K. M. S. M., & Kisokanth, G. (2020).** Knowledge and Practices Regarding Self-Management of Minor Ailments among Pregnant Mothers. *J Matern Child Health*;05(03):303-312. <https://doi.org/10.26911/thejmch.2020.05.03.09>.

**Shayan, A., Jadidi, Z., Kazemi, F., & Aghababaei, S. (2021).** The effect of Benson relaxation training on the severity of nausea and vomiting in pregnant

women. *The Iranian Journal of Obstetrics, Gynecology and Infertility*, 24(8), 75-83.

**Singer, A.J., and Thode, J.R., (1998).** Determination of the minimal clinically significant difference on a patient Mistral analog satisfaction scale. *Acad Emerg Med*. 5: 1007-11.

**Thatal, A., Luksom, P. G., & Narwat, Y. (2020).** Fetomaternal outcome in elderly primigravida. *Indian Journal of Obstetrics and Gynecology Research*, 7(2), 243-247.

**Wang, Z., Liu, K., Chen, Y., Wu, D., Lin, R., & Pan, L. (2020).** Effects of progressive muscle relaxation on anxiety and sleep quality in patients with COVID-

19. *Complementary therapies in clinical practice*, 39, 101132.

**Zahra, M., Fateme, B., Fatemeh, M. K., Vahid, M., Arezou, N. J., & Manizhe, N. (2019).** The effect of Benson's muscle relaxation technique on severity of pregnancy nausea. *Electronic Journal of General Medicine*, 16(2).

**Zenouzi, A., Moghadam, Z. B., Babayanzad, S., Asghari, M., & Rezaei, E. (2021).** The Effect of Benson Relaxation Technique on Stress, Anxiety, and Depression in Pregnant Women. *Holistic Nursing Practice*.

## تأثير تطبيق تقنيات بنسون للإسترخاء على الغثيان والقيء بين السيدات البكرات في الأشهر الثلاثة الأولى من الحمل

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يعتبر الغثيان والقيء من الأعراض الشائعة التي تعاني منها السيدات الحوامل في بداية الحمل خاصة في الأشهر الثلاثة الأولى من الحمل. لذا هدفت الدراسة إلى تقييم تأثير تقنيات بنسون للإسترخاء على الغثيان والقيء بين السيدات البكرات في الأشهر الثلاثة الأولى من الحمل. تم إستخدام دراسة شبه تجريبية لتحقيق الهدف من هذه الدراسة. أجريت الدراسة في العيادات الخارجية لأمراض النساء والتوليد بمستشفيات بنها الجامعي. تم استخدام عينة غرضية. اشتملت العينة على 108 سيدة تعاني من الغثيان والقيء أثناء الحمل (54 سيدة مجموعة الدراسة و 54 سيدة المجموعة الضابطة). أوضحت النتائج إلى أن هناك فروق ذات دلالة إحصائية عالية بين مجموعات الدراسة والضابطة فيما يتعلق بمتوسط درجات مؤشر الحمل الكمي الفريد للقيء بعد تطبيق تقنية بنسون للإسترخاء. وكذلك معظم السيدات في مجموعة الدراسة كن راضيات عن تطبيق تقنيات بنسون للإسترخاء. لخصت الدراسة أن تطبيق تقنيات بنسون للإسترخاء كان له تأثير إيجابي في تقليل شدة وتكرار الغثيان والقيء أثناء الحمل. كانت غالبية السيدات في مجموعة الدراسة راضيات عن تطبيق تقنيات بنسون للإسترخاء. كما اوصت الدراسة بتطبيق تقنيات بنسون للإسترخاء على الغثيان والقيء أثناء الحمل على عينة أكبر من أماكن مختلفة لتعميم النتائج.