

Research Article

EFFECTIVENESS OF BENSON RELAXATION TECHNIQUE ON REDUCTION OF PAIN AND STRESS AMONG THE POST OPERATIVE OBSTETRICAL AND GYNECOLOGICAL PATIENTS

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ABSTRACT

Postoperative pain and stress are common among obstetrical and gynaecological (OBG) patients and can adversely affect recovery, patient comfort, and overall well-being. Benson's Relaxation Technique is a simple, safe, and cost-effective non-pharmacological intervention that promotes relaxation and may help reduce postoperative pain and stress. **Methodology:** A quantitative research approach with a true experimental pre-test-post-test control group design was adopted. The study was conducted in selected hospitals, Tumkur. 60 postoperative obstetrical and gynaecological patients were selected using simple random sampling and randomly assigned to the experimental group (n=30) and control group (n=30). Baseline pain and stress levels were assessed on the second postoperative day using standardized pain and stress assessment scales. Descriptive and inferential statistics, including paired and independent t tests, were used to analyse the data. **Results:** The mean pain score in the experimental group decreased from 6.46 ± 2.14 during the pre-test to 3.63 ± 2.00 during the post-test. The mean stress score decreased from 24.46 ± 7.72 to 14.83 ± 4.84 . The paired t test showed a statistically significant reduction in pain ($t=7.325$, $p<0.001$). The independent t test also demonstrated a significant difference in post-test pain scores between the experimental and control groups ($t=4.752$, $p<0.05$). These findings indicate that Benson's Relaxation Technique effectively reduced postoperative pain and stress among OBG patients. **Conclusion:** The study concludes that Benson's Relaxation Technique is an effective non-pharmacological nursing intervention for reducing postoperative pain and stress among obstetrical and gynaecological patients. Incorporating this relaxation technique into routine postoperative nursing care can improve patient comfort, promote faster recovery, and enhance the quality of nursing care.

Keywords: Effectiveness; Benson's Relaxation Technique; Pain and Stress; Postoperative Obstetric and Gynecological Patients.

INTRODUCTION

Surgery threatens the integrity of the body, such as biopsychosocial-spiritual aspects, and may cause discomfort, such as pain response. Experience of pain is associated with many immediate and long-term negative outcomes.¹

Recently, many methods being developed to address the problem of pain in women with severe post-caesarean section pain, either by pharmacological and nonpharmacological approaches. One nonpharmacological way suitable to reduce pain intensity is relaxation. Relaxation aims to reduce anxiety, decrease muscle tension and bone, and indirectly relieve pain and reduce tension related to the body's physiological status.²

Benson Relaxation Technique also known as 'Relaxation Response' method is a widely recognized technique that can be effective in reducing both pain and stress by inducing a state of deep relaxation through focused breathing and mental centering making it a valuable non pharmacological approach to managing discomfort and anxiety.

Dr. Herbert Benson developed the Benson relaxation technique, which is a type of meditation that focuses on muscle relaxation followed by focused breathing to relieve stress.³

The most frequent issue following surgery is discomfort. Pain is a sensory and emotional experience that is influenced by physiological, sensory, affective, cognitive, sociocultural, and behavioral aspects.⁵

although pain is an inevitable component of the healing process after surgery; it is frequently not managed properly, which can have negative effects.

Untreated postoperative pain can result in clinical and psychological changes that impair quality of life while raising morbidity and death.⁶ inadequately treated postoperative pain can significantly contribute to surgical patient morbidity, resulting in a delay in inpatient recovery and the ability to return to daily functional activities.⁷

NEED FOR THE STUDY

Women with high stress coping capacity had a significantly shorter sick leave, experienced postoperative symptoms significantly less often, and with lower intensity, than women with low stress coping capacity. With the exception of symptom intensity, these findings were related to having had the operation under spinal anesthesia as opposed to general anesthesia. Hospital stays, use of analgesics and abdominal pain were not related to stress coping capacity.⁸

THE OBJECTIVES OF THE STUDY

1. To assess the pre-test level of pain among postoperative obstetrical and gynecological patients in the experimental and control groups.
2. To assess the pre-test level of stress among postoperative obstetrical and gynecological patients in the experimental and control groups.
3. To evaluate the effectiveness of Benson Relaxation Technique on reduction of pain among postoperative obstetrical and gynecological patients by comparing the pre-test and post-test scores in the experimental group.

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4. To evaluate the effectiveness of Benson Relaxation Technique on reduction of stress among postoperative obstetrical and gynecological patients by comparing the pre-test and post-test scores in the experimental group.
5. To compare the post-test pain scores between the experimental and control groups.
6. To compare the post-test stress scores between the experimental and control groups.
7. To determine the association between pre-test levels of pain with selected demographic variables among postoperative obstetrical and gynecological patients.
8. To determine the association between pre-test levels of stress scores with selected demographic variables among postoperative obstetrical and gynecological patients.

METHODOLOGY

A quantitative research approach with a true experimental pre-test-post-test control group design was adopted. The study was conducted in selected hospitals, Tumkur. 60 postoperative obstetrical and gynaecological patients were selected using simple random

sampling and randomly assigned to the experimental group (n=30) and control group (n=30). Baseline pain and stress levels were assessed on the second postoperative day using standardized pain and stress assessment scales. The experimental group received Benson's Relaxation Technique for 20 minutes, twice daily, for three consecutive days along with routine postoperative care, whereas the control group received routine postoperative care alone. Post-test assessment was carried out on the fourth postoperative day. Descriptive and inferential statistics, including paired and independent *t* tests, were used to analyse the data.

RESULTS

Section 1: Descriptive Statistics

A). Description of personal variables of the Samples.

The study sample composed of 60 postoperative obstetrical and gynecological patients were divided into two groups that is Experimental group and Control group consisting of 30 samples each, Experimental group were subjected to Benson Relaxation Technique while control haven't received any intervention. The findings related to Personal variables of the samples are tabulated below.

Table 1 Frequency and Percentage distribution of Samples according to their Age, Gender etc.

N=60

Sl. No	Demographic variables	Experimental Group		Control Group	
		Frequency	Percentage (%)	Frequency	Percentage (%)
1.	Age				
	a. 25 – 30 Yrs	08	26.66	07	23.33
	b. 31 – 35 Yrs	18	60.00	16	53.33
	c. 35 – 40 Yrs	04	13.33	05	16.66
	d. 40 Yrs and above	00	00.00	02	06.66
2	Marital Status				
	a. Single	08	26.66	07	23.33
	b. Married	18	60.00	16	53.33
	c. Divorced	04	13.33	05	16.66
	d. Widowed	00	00.00	02	06.66
3.	Education				
	a. No Formal Education Status	01	03.33	00	00
	b. Primary Education	04	13.33	04	13.33
	c. Secondary Education	15	50.00	13	43.33
	d. Higher Education	10	33.33	13	43.33
4	Occupation				
	a. Home-Maker	20	66.66	18	60.00
	b. Private Employee	07	23.33	07	23.33
	c. Government Employee	02	06.66	01	03.33
	d. Business	01	03.33	04	13.33
5.	Religion				
	a. Hindu	21	70.00	22	73.33
	b. Muslim	05	16.66	05	16.66
	c. Christian	02	06.66	03	10.00
	d. Others	02	06.66	00	00.00
6.	Type of Family				
	a. Nuclear	27	90.00	26	86.66
	b. Joint	03	10.00	03	10.00
	c. Extended	00	00.00	01	03.33
7.	Family Income				
	a. Less than Rs 10,000	01	03.33	03	10.00
	b. Rs 10001 – Rs 20,000	13	43.33	12	40.00
	c. Rs 20,001 – Rs 30,000	09	30.00	10	33.33
	d. More than Rs 30,000	07	23.33	05	16.66
8.	Type of Delivery				
	a. LSCS	07	23.33	08	26.66
	b. Hysterectomy	03	10.00	01	03.33
	c. Others	20	66.66	21	70.00

Table - 2 Mean, Standard Deviation, Median, and Range of postoperative obstetrical and gynecological patient's Pain and Stress scores. $n_1+n_2 = 30 + 30$

Group		Pre-Test				Post-Test			
Variable		Mean	SD	Median	Range	Mean	SD	Median	Range
Pain Scores of Samples	Experimental Group	06.466	±2.145	06	03 -10	03.63	±02.0	3.5	00- 08
	Control Group	06.166	±1.839	6.50	03 -09	06.03	±1.902	06.50	03 -09
Stress Scores of Samples	Experimental Group	24.46	±7.722	22	12 -39	14.83	±4.842	13	07 -25
	Control Group	21.76	±07.57	22	09 -38	21.70	±07.63	22.50	09 -38

The data presented in Table 2 shows the Pain and Stress scores of Samples at pre-test and post-test, In case of Pain scores during Pre-test among Experimental group, the scores ranged from **03-10** with Mean **06.466**, Median **06** and Standard deviation **±02.145**, after Post-Test the Pain scores ranged from **00 – 08** with Mean **03.633**, Median **03.50** and Standard deviation was **±02.00**, while in case of Control group during Pre-Test, the Pain scores ranged between **03 – 09** with Mean **06.166**, Median **06.50**, and Standard deviation **±01.839**, during Post-test the scores ranged **03-09**, with Mean **06.03**, Median **06.50** and Standard deviation **±01.902**.

In case of Stress scores during Pre-test among Experimental group, the scores ranged from **12-39** with Mean **24.66**, Median **22** and Standard deviation **±07.722**, after Post-Test the Stress scores ranged from **07 – 25** with Mean **14.833**, Median **13** and Standard deviation was **±04.842**, while in case of Control group during Pre-Test, the Pain scores ranged between **09 – 38** with Mean **21.76**, Median **22**, and Standard deviation **±07.57**, During Post-test the Stress scores ranged between **09-38**, with Mean **22.70**, Median **22.50** and Standard deviation **±07.63**.

Section 2: Inferential Statistics

TABLE – 03 Mean, mean difference, Standard deviation, Standard deviation difference, SEMD, and independent 't' test for post-test Pain scores of the Post-Operative Obstetrical and Gynecological patients among experimental and control groups.

Group	Mean	Mean difference	SD difference	SEMD	Independent 't' test
Experimental	03.633	-2.400	±0.505	.366	04.752
Control	06.033				

 $t'_{(58)} = 1.676, P<0.05$

The data presented in the Table 04 shows that the mean difference between post-test Pain scores of postoperative obstetrical and gynecological patients in experimental and control group is **-2.40**. To find the significance of difference in mean Pain scores among experimental and control group, an independent 't' test was computed and obtained value of independent 't' = **04.752** $p>0.05$ is found to be significant as the calculated value is higher than the table value $t'_{(58)} = 01.676$. Hence, it is inferred that there is difference between post-test Pain scores of postoperative obstetrical and gynecological patients among experimental and control groups. Hence Research Hypotheses is accepted and Null hypotheses.

Table – 04 Mean, mean difference, Standard deviation, Standard deviation difference, SEMD, and independent 't' test for post-test Stress scores of the Post-Operative Obstetrical and Gynecological patients among experimental and control groups.

Group	Mean	Mean difference	SD difference	SEMD	Independent 't' test
Experimental	14.833	-6.866	±01.649	.8841	04.162
Control	21.700				

 $t'_{(58)} = 1.676, P<0.05$

The data presented in the Table 08 shows that the mean difference between post-test Stress scores of postoperative obstetrical and gynecological patients in experimental and control group is **-6.866**. To find the significance of difference in mean Stress scores among experimental and control group, an independent 't' test was computed and obtained value of independent 't' = **04.162** $p<0.05$ is found to be significant as the calculated value is higher than the table value $t'_{(58)} = 01.676$. Hence, it is inferred that there is difference between post-test Stress scores of postoperative obstetrical and gynecological patients among experimental and control groups. Hence Research Hypotheses is accepted and Null hypotheses.

DISCUSSION

The findings of the present study demonstrated that Benson's Relaxation Technique significantly reduced pain and stress levels among postoperative obstetric and gynecological patients. The reduction in pain perception may be attributed to the relaxation response, which decreases muscle tension, reduces anxiety and promotes a sense of calmness. The results are consistent with previous studies that have reported the effectiveness of Benson's Relaxation Technique in reducing postoperative pain and stress. The findings support the use of this technique as an evidenced-based complementary nursing intervention in postoperative care.

CONCLUSION

The present study was to evaluate the effectiveness of Benson's Relaxation Technique on pain and stress among postoperative obstetric and gynecological patients. Postoperative pain and stress are very common problems that can delay recovery, reduce patient comfort, and negatively affect overall well-being. The study conclude that the present study demonstrate that Benson's Relaxation Technique is beneficial in minimizing postoperative pain and stress among obstetric and gynecological patients. The technique is simple, economical, easy to administer and free from adverse effects, making it a valuable component of holistic postoperative nursing care.

RECOMMENDATIONS

Based on the findings of the present study, the following recommendations are made:

1. Similar studies can be conducted with a large sample size
2. Comparative studies can be undertaken to evaluate Benson's Relaxation Technique against other non-pharmacological interventions for pain and stress management.
3. Similar research can be conducted in different clinical setting and among other surgical population.

REFERENCES

1. Alhani F, Shad H, Anoosheh M, et al. The effect of programmed distraction on the pain caused by venipuncture among adolescents on hemodialysis. *Pain Manag Nurs* 2010; 11(2):85–91. DOI: 10.1016/j.pmn.2009.03.005.
2. Kwekkeboom KL, Cherwin CH, Lee JW, et al. Mind-body treatments for the pain-fatigue-sleep disturbance symptom cluster in persons with cancer. *J Pain Symptom Manage* 2010;39(1):126–138. DOI: 10.1016/j.jpainsymman.2009.05.022.
3. Renuka MR. Effect of Benson's relaxationtherapy on stress among postmenopausal women at avarampalayam, coimbatore. 2014; 84
4. Demelash G., et al. Prevalence and factors associated with postoperative pain after cesarean section at a comprehensive specialized hospital in Northwest Ethiopia: prospective observational study. *Open Access Surg.* 2022; 15:1. [Google Scholar]
5. Admassu W.S., Hailekiros A.G., Abdissa Z.D. Severity and risk factors of post-operative pain in University of Gondar Hospital, Northeast Ethiopia. *J. Anesth. Clin. Res.* 2016; 7(10):675. [Google Scholar]

6. Barash P C.B.F., Stoelting Robert K., Cahalan Michael K., Stock Christine M. Lippincott Williams & Wilkins; Philadelphia: 2009. *Clinical Anesthesia*. [Google Scholar]
7. P Kjølhede, N Borendal Wodlin, L Nilsson, M Fredrikson, K Wijma. Impact of stress coping capacity on recovery from abdominal hysterectomy in a fast-track programme: a prospective longitudinal study: 09 May 2012. <https://doi.org/10.1111/j.1471-0528.2012.03342.x>.
