

# A Study to Assess the Effectiveness of Jacobson's Progressive Muscle Relaxation Technique on Pain Management Among Postcesarean Mothers at A Selected Hospital in Rohtas, Bihar.

Prof. Dr. K. Latha<sup>1</sup>, Ms. Anu Kumari<sup>2</sup>, Amisha Patel<sup>3</sup>, Pravin Kumar<sup>4</sup>,  
Anu Kumari<sup>5</sup>, Khushi<sup>6</sup>, Chandramani Singh<sup>7</sup>, MD Ahmad Raza<sup>8</sup>

<sup>1</sup>Dean cum Principal, Narayan Nursing College, Gopal Narayan Singh University,  
Jamuhar, Rohtas, Bihar

<sup>2</sup>M. Sc Nursing Tutor, Department of OBG Nursing, Narayan Nursing College,  
Gopal Narayan Nursing University, Jamuhar, Rohtas, Bihar

<sup>3,4,5,6,7,8</sup>Students of Narayan Nursing College, Gopal Narayan Singh University, Jamuhar, Rohtas, Bihar  
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**Abstract—Objective of the study:** - To assess and compare the pre-test level of pain among post-cesarean mothers in the study and control group. To assess and compare the post-test level of pain among post-cesarean mothers in the study and control group. To determine the effectiveness of Jacobson's Progressive Muscle Relaxation (JPMR) technique on pain management among post-cesarean mothers in the study group. To associate the pre-test and post-test level of pain among post-cesarean mothers with their selected demographic and obstetrical variables in both study and control groups.

**Methods:** - A true experimental pre-test and post-test control group design was adopted. Fifty post-caesarean mothers were selected using purposive sampling and allocated to experimental (n=25) and control (n=25) groups.

**Results:** - The experimental group showed a significant reduction in pain scores post-intervention (mean = 0.48) compared to the control group (mean=1.16).

**Conclusion:** - Jacobson's Muscle Relaxation Technique is effective, safe, and non-invasive for reducing post-caesarean Pain. Its integration into routine postnatal care can enhance maternal recovery and reduce analgesic dependency.

## I. INTRODUCTION

Pain is the most distressing response in the early post-operative period. Patients with post operative pain has different response according to pain and opioids.

Experiencing pain is a combination of physiological and psychological features and is a non-persistent tissue damage. Pain sensitivity is more in females than males. cesarean section is one of the major surgeries that causes pain. Post operative pain is due to the increased neural input from incised nerves, muscles and tissues. Pain in post-cesarean section can be managed by pharmacological and nonpharmacological approaches. One non-pharmacological approach to decrease pain is relaxation therapy. Problem statement

“A study to assess the effectiveness of jacobson's progressive muscle relaxation technique on pain management among post cesarean mothers at a selected hospital in Rohtas, Bihar.”

## II. METHODOLOGY

**Research Design:** - a research design is true experimental randomized control group pre-test and post-test

**Population**

- Target population: All the postnatal mothers admitted in NMCH hospital, Jamuhar, Rohtas, Bihar.
- Accessible Population: All postnatal mothers of NMCH, jamuhar Rohtas, Bihar

**Sample:** The sample consisted of 50 post cesarean mothers. 25 mothers in the experimental study group

25 mothers in the control group.

Sampling Technique: - Purposive sampling technique was used for this study.

Sample Size: - samples are 50 where 25 experimental study, 25 control.

#### Sampling Criteria

##### Inclusion Criteria

- Post cesarean mothers within 24–72 hours post operation
- Post cesarean mothers who were conscious, cooperative, and willing to
- participate Post cesarean mothers aged 20- 35 years within 42 days of delivery.
- Post cesarean mother who were willing to participate in the study.
- Post cesarean mother who were tolerable in performing muscles relaxation technique.

##### Exclusion Criteria

- Post cesarean mothers with post operative complications.
- Post cesarean mothers with severe medical or psychiatric illness.
- Post cesarean mothers receiving additional pain management therapies.
- Post cesarean mothers beyond 42 days after delivery.

#### Data Collection Procedure

The data collection procedure was done for a period of one week. A written permission obtained from the nursing superintendent to conduct the study in the OBG & GYNEE department NMCH, Rohtas, Bihar. The researcher met the subjects and explained about the purpose of the research and assured confidentiality and anonymity and consent was obtained from the subjects. 50 samples were selected using purposive sampling technique. The researcher adopted quasi experimental pretest and posttest research design. The demographic variables were collected by using Numerical Pain Rating Scale. During pretest was Jacobson's progressive muscle relaxation technique for pain management in post cesarean mothers measured by Numerical Pain Rating Scale. This had 10 questions for 15 minutes. Then the subjects

received self-knowledge given pain management in post cesarean mothers for 30 mins. Post test was done by researcher as lime pretest to Effectiveness of Jacobson's progressive muscle relaxation technique for pain management in post cesarean mothers.

### III. RESULT

The result of the study categories in following sections, the section-1 the frequency of the selected Demographic variables in variables among post caesarean mothers in experimental group the AGE GROUP of Post Caesarean Mother's are, 6(24%) of them belong to 18--22 years of age, 10(40%) of them belong to 23-27 years, 5(20%) of them belong to 28-32 years, 4(16%) of them belong to 32 year above. The section-2 With regard to RELIGION of Post Caesarean Mothers, 20(80%) of them belong to Hindu, 3(12%) of them belong to Muslim, 2(8%) of them belong to Christian, 0(0%) of them belong to other. The section-3 While considering the EDUCATION of Post Caesarean Mothers, 0(0%) of them were no formal education, 13(52%) of them were primary education, 6(24%) of them were secondary education, 3(12%) of them were higher secondary education, 3(12%) of them were Graduation, 0(0%) of them were post-graduation and above. The section-4 Regarding RESIDENTIAL AREA of Post Caesarean Mothers, 7(28%) of them were urban area, 18(72%) of them were Rural area, 0(0%) of them were semi-Urban area, The section-5 Regarding OCCUPATION of Post Caesarean Mothers, 3(12%) of them were private job, 1(4%) of them were Government job, 0(0%) of them were self-employed, 21(84%) of them were home maker. The section-6 Regarding MONTHLY INCOME of Post Caesarean Mothers, 15(60%) of them were less than 10000, 4(16%) of them were 10000-20000, 2(8%) of them were 20000-30000, 3(12%) of them were 30000-40000 above. 1(4%) of them were 40000 above. The section-7 Regarding TYPES OF FAMILY of Post Caesarean Mothers, 9(36%) of them were nuclear family, 14(56%) of them were joint family, 2(8%) of them were extended family. The section-8 Regarding TYPES OF CAESAREAN SECTION of Post Caesarean Mothers, 18(72%) of them were elective Cs, 7(28%) of them were emergency Cs. The section-9 Regarding NUMBER OF CHILDREN of Post Caesarean Mothers, 6(24%) of them were 1 child, 12(48%) of

them were 2 children, 4(16%) of them were 3 children, 3(12%) of them were more than 3 children.

The section-2 the frequency of the selected Demographic variables in variables among post Caesarean mothers in control group indicates the AGE GROUP of Post Caesarean Mothers, 5(20%) of them belong to 18--22 years of age, 10(40%) of them belong to 23-27 years, 10(40%) of them belong to 28-32 years, 1(4%) of them belong to 32 year above. The section-2 With regard to RELIGION of Post Caesarean Mothers, 18(72%) of them belong to Hindu, 7(28%) of them belong to Muslim, 0(0%) of them belong to Christian, 0(0%) of them belong to other. The section-3 While considering THE EDUCATION of Post Caesarean Mothers, 0(0%) of them were no formal education, 12(48%) of them were primary education, 7(28%) of them were secondary education, 4(16%) of them were higher secondary education. 2(8%) of them were Graduation, 0(0%) of them were post-graduation and above. The section-4 Regarding RESIDENTIAL AREA of Post Caesarean Mothers, 6(24%) of them were urban area, 15(60%) of them

were Rural area, 0(0%) of them were semi-Urban area. The section-5 Regarding OCCUPATION of Post Caesarean Mothers, 4(16%) of them were private job, 0(0%) of them were Government job, 1(4%) of them were self-employed, 20(80%) of them were home maker. The section-6 Regarding MONTHLY INCOME of Post Caesarean Mothers, 12(48%) of them were less than 10000, 8(32%) of them were 10000-20000, 3(12%) of them were 20000-30000, 2(8%) of them were 30000-40000 above. 0(0%) of them were 40000 above. The section-7 Regarding TYPES OF FAMILY of Post Caesarean Mothers, 12(48%) of them were nuclear family, 13(52%) of them were joint family, 0(0%) of them were extended family. The section-8 Regarding TYPES OF CAESAREAN SECTION of Post Caesarean Mothers, 16(64%) of them were elective Cs, 9(36%) of them were emergency Cs. The section -9 Regarding NUMBER OF CHILDREN of Post Caesarean Mothers, 8(32%) of them were 1 child, 11(44%) of them were 2 children, 5(20%) of them were 3 children, 1(4%) of them were more than 3 children.

Table - 2

Table - 2.1 Frequency and percentage Distribution of Pre-test level and post-test level of Pain among Post Caesarean Mothers in Experimental Group.

Level Of Pain in Experimental Group	Pre Test		Post Test	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
No pain	0	0%	13	52%
mild pain	0	0%	12	48%
moderate pain	0	0%	0	0%
severe pain	15	60%	0	0%
worst pain	10	40%	0	0%

From the table below finding given

- In posttest level of pain in pretest experimental group, no pain = 0%, mild pain = 0%, moderate pain = 0%, sever pain = 60%, and worst pain = 40%
- In posttest level of pain in posttest experimental group, no pain = 52%, mild pain = 48%, moderate pain = 0%, sever pain = 00%, and worst pain = 0%

Table - 2.2 Frequency and percentage distribution of Pre- test Level and Post- test Level of Jacobson’s Muscle Relaxation Technique among Post Caesarean Mothers in Hospital in Control Group.

N= 25

Level Of Pain in Experimental Group	Pre Test		Post Test	
	Frequency (F)	Percentage (%)	Frequency (F)	Percentage (%)
No pain	0	0%	0	0%
mild pain	0	0%	21	84%
moderate pain	0	0%	4	16%
severe pain	12	48%	0	0%
worst pain	13	52%	0	0%

From the table below finding given

- In posttest level of pain in pretest experimental group, no pain = 0%, mild pain = 0%, moderate pain = 0%, severe pain = 48%, and worst pain = 52%
- In posttest level of pain in posttest experimental group, no pain = 0%, mild pain

= 84%, moderate pain = 16%, severe pain = 0%, and worst pain = 0%

Table - 3

Difference between the mean pre-test and post-test score of pain among experimental group of Post Caesarean Mothers.

Table - 3.1 - Difference between the mean pre-test and post-test pain among experimental group of Post Caesarean Mothers

Experimental Group	Mean	SD	Mean difference	t value	p value	Interpretation
PRE TEST	3.40	~0.52	2.92	20.45	<0.0001	Significant
POST TEST	0.48	0.51				

From the table below finding given in pretest the mean = 3.40, SD = ~0.52 In posttest the mean = 0.48, SD = 0.51

Table - 3.2 - Difference between the mean pre-test and post-test score of pain among control group of Post Caesarean Mothers

Experimental Group	Mean	SD	Mean difference	t value	p value	Interpretation
PRE TEST	3.52	0.51	0.14	18.72	<0.0001	Significant
POST TEST	1.16	0.37				

From the table below finding given in pretest the mean = 3.52, SD = 0.51 In posttest the mean = 1.16, SD = 0.37

Table - 4 - Difference between mean post test scores of pains between experimental and control group of Post Caesarean Mothers.

POSTTEST	MEAN	SD	t value	p value	Interpretation
EXPERIMENTAL GROUP	0.48	0.51	5.38	~0.0001	Significant
CONTROL GROUP	1.16	0.37			

From the table below finding given

In experimental group the mean = 0.48, SD = 0.51 In control group the mean = 1.16, SD = 0.37

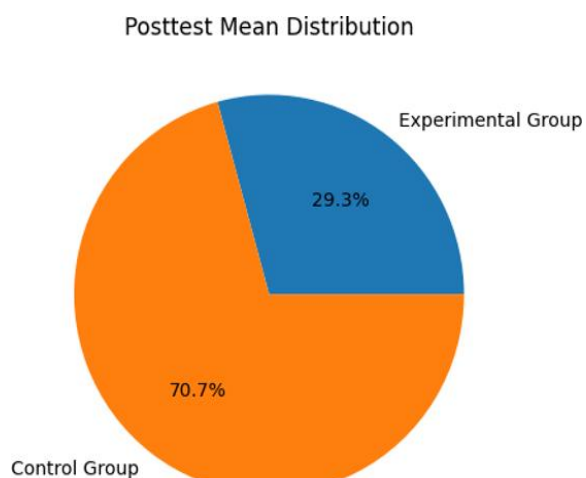


Figure 4- Difference between mean post test scores of pains between experimental and control group of post caesarean mothers.

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