

# A study of effectiveness of Jacobson's technique for the pain management in post cesarian women at tertiary health care centre

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## Abstract

**Background:** Surgery disturbs the body integrated system, such as bio-psycho-social-spiritual aspects and may cause discomfort such as pain response. Experience of pain is associated with many immediate and long-term negative outcomes **Aims and Objectives:** To study effectiveness of Jacobson's technique for the pain management in post cesarian women at tertiary health care centre **Methodology:** After approval from institutional ethical committee a cross-sectional study was carried out in the department of OBGY during the six month period i.e. June 2017 to November 2017 in the patients who undergone cesarean section at tertiary health care centre. 60 patients were selected for the study out of that 30 were enrolled for the Jacobson's technique Group A and 30 were enrolled to Group B for routine post cesarean treatment randomly. The pain assessment was done by the VAS (Visual Analogue Scale). The statistical analysis was done by Chi –square test and analyzed by SPSS 19 version software. **Result:** In our study we have seen that At the Pre-Jacobson's technique the pain as per the VAS in post C-section groups were coparable with each other ( $X^2=0.00$ ,  $p>0.01$ ,  $df=1$ ). After Jacobson's technique the pain as per VAS in Group A was significantly lower as compared to Group B ( $X^2=6.66$ ,  $p<0.01$ ,  $df=1$ ). **Conclusion:** It can be concluded from our study that Jacobson's technique significantly reduces pain perception after C-section and this being the non pharmacological technique should be suggested to every post C-section patients.

**Key Words:** C-section, Jacobson's technique, VAS (Visual Analogue Scale).

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## INTRODUCTION

Surgery disturbs the body integrated system, such as bio-psycho-social-spiritual aspects and may cause discomfort such as pain response. Experience of pain is associated with many immediate and long-term negative outcomes<sup>1</sup>. Experience of pain is a combination of physiological and psychological features and is a non-persistent tissue

damage<sup>2,3</sup>. Pain is the main reason for someone to seek medical assistance. Feeling of Pain sensitivity is more in females than males<sup>4</sup>. Cesarean section is among surgery procedures that induces pain. There are several reasons to perform C-section. A study found that reasons for performing caesarean section were baby's weight more than normal, fetal distress, dystocia, placenta previa, placenta abruption, decreased fetal percentage and malposition<sup>5-7</sup>. Besides, there is willingness to perform caesarean section by mothers' request in the absence of an obstetric indication<sup>8-10</sup>. A research found that 75% of patients undergone surgery experienced moderate to severe pain after surgery. The duration of pain can last for 24 to 48 hours, but can last longer depending on how the client can withstand and respond to pain. A study showed that women experience higher levels of pain intensity during the first 24 hours post-caesarean section. There were no differences in pain intensity between elective caesarean section and emergency caesarean section<sup>11</sup>.

Recently, many methods being developed to address the problem of pain in women with severe post caesarean section pain, either by pharmacological and non-pharmacological approaches. One non-pharmacological way suitable to reduce pain intensity is relaxation<sup>12</sup>. Relaxation aims to reduce anxiety, decrease muscle tension and bone and indirectly relieve pain and reduce tension related to the body's physiological status<sup>12-14</sup>. Several studies showed that relaxation is effective in reducing pain<sup>12-14</sup>

### MATERIAL AND METHODS

After approval from institutional ethical committee a cross-sectional study was carried out in the department of OBGY during the six month period i.e. June 2017 to November 2017 in the patients who undergone cesarean section at tertiary health care centre. Those patients who given written consent were included into the study so during six month period total 60 patients were selected for the study out of that 30 were enrolled for the Jacobson's technique Group A and 30 were enrolled to Group B for routine post cesarean treatment randomly. Jacobson's relaxation technique is a type of therapy that focuses on tightening and relaxing specific muscle groups in sequence. It's also known as progressive relaxation therapy. By concentrating on specific areas and tensing and then relaxing them, you can become more aware of your body and physical sensations<sup>17</sup>, it was performed as per the standard protocols<sup>16</sup>. The pain assessment was done by the VAS (Visual Analogue Scale). The statistical analysis was done by Chi –square test and analyzed by SPSS 19 version software.

### RESULT

**Table 1:** Distribution of the patients in both the groups as per the Pre- Jacobson's technique

VAS Score	Pre- Jacobson's technique		Total
	Pre- Jacobson's technique Group A	Group B	
0-5	2(66.67)	1(33.33)	3(100)
5-10	28 (49.12)	29(50.88)	57(100)
<b>Total</b>	<b>30 (50)</b>	<b>30 (50)</b>	<b>60(100)</b>

( $X^2=0.00, p>0.01, df=1$ )

At the Pre- Jacobson's technique the pain as per the VAS in post C-section groups were comparable with each other ( $X^2=0.00, p>0.01, df=1$ )

**Table 2:** Distribution of the patients in both the groups as per the Post - Jacobson's technique

VAS Score	Post- Jacobson's technique		Total
	Post- Jacobson's technique Group A	Group B	
0-5	24(82.76)	5(17.24)	29(100)
5-10	6(19.35)	25(80.65)	31(100)
<b>Total</b>	<b>30(50)</b>	<b>30 (50)</b>	<b>60 (100)</b>

( $X^2=6.66, p<0.01, df=1$ )

After Jacobson's technique the pain as per VAS in Group A was significantly lower as compared to Group B ( $X^2=6.66, p<0.01, df=1$ )

### DISCUSSION

In multivariate analysis using multiple linear regression, it was found that the Benson relaxation had the greatest effect on reduction of pain intensity in women after caesarean section (P = 0.01). According to some studies<sup>18, 19, 20</sup>, Benson relaxation has a healing effect to decrease anxiety level, cognitive and somatic anxiety, mood disturbance, body discomfort and to a level capable of relieving pain. The results found that Benson relaxation techniques had the greatest influence to decrease pain intensity. Benson relaxation technique is a simple and inexpensive technique<sup>19, 20</sup> and nurses can use to manage pain. Thus, the researchers suggest, especially the maternity nursing services, to use the technique of Benson relaxation as one of the standard operating procedures as non-pharmacological pain management in maternal post caesarean section. In our study we have seen that At the Pre- Jacobson's technique the pain as per the VAS in post C-section groups were comparable with each other ( $X^2=0.00, p>0.01, df=1$ ). After Jacobson's technique the pain as per VAS in Group A was significantly lower as compared to Group B ( $X^2=6.66, p<0.01, df=1$ ). These findings are similar to Tetti Solehati *et al*<sup>15</sup> they found The mean of pain score before intervention i.e. Relaxation Technique at CG was 4.43 cm. It was decreased to 4.40 cm (1 min), 4.27 cm (12 h), 4.10 cm (24 h), 4.00 cm (36 h), 3.93 cm (48 h), 3.83 cm (60 h), 3.67 cm (72 h) and 3.51 cm (84 h). Meanwhile, the IG was 4.97 cm. It was decreased to 4.90 cm (1 min), 4.23 cm (12 h), 3.57 cm (24 h), 3.03 cm (36 h), 2.77 cm (48 h), 2.73 cm (60 h), 2.67 cm (72 h) and 2.63 cm (84 h). The study found a significant difference comparing pain intensity before and after the intervention in CG and IG (P = 0.001), but pain reduced in IG more than CG. Also Divya Devmurari<sup>16</sup> found There was significant difference in mean values between pain scores of controlled and experimental group on VAS score.

### CONCLUSION

It can be concluded from our study that Jacobson's technique significantly reduces pain perception after C-section and this being the non pharmacological technique should be suggested to every post C-section patients.

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