

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

Surabhi Tomar Sharma^{1*}, Rakesh Thakuria²

^{1,2}Associate Professor, Department of Obstetrics and Gynecology, NIMS Medical College and Hospital Jaipur, Rajasthan, INDIA.

Email: surabhit@gmail.com

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).

*Address for Correspondence:

Dr. Surabhi Tomar Sharma, Evaa Hospital, B 28-29 Govind Marg, Near Moti Doongri Circle, Jaipur, Rajasthan, INDIA.

Email: surabhit@gmail.com

Received Date: 28/05/2018 Revised Date: 30/06/2018 Accepted Date: 22/07/2018

DOI: <https://doi.org/10.26611/10127112>

Access this article online

Quick Response Code:



Website:

www.medpulse.in

Accessed Date:
27 July 2018

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 outcomes¹. Experience of pain is a combination of physiological and psychological features and is a non-persistent tissue

damage^{2,3}. Pain is the main reason for someone to seek medical assistance. Feeling of Pain sensitivity is more in females than males⁴. 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 malposition⁵⁻⁷. Besides, there is willingness to perform caesarean section by mothers' request in the absence of an obstetric indication⁸⁻¹⁰. 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 section¹¹.

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 relaxation¹². Relaxation aims to reduce anxiety, decrease muscle tension and bone and indirectly relieve pain and reduce tension related to the body's physiological status¹²⁻¹⁴. Several studies showed that relaxation is effective in reducing pain¹²⁻¹⁴

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 sensations¹⁷, it was performed as per the standard protocols¹⁶. 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)
Total	30 (50)	30 (50)	60(100)

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

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)
Total	30(50)	30 (50)	60 (100)

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

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^{18, 19, 20}, 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^{19, 20} 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*¹⁵ 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 Devmurari¹⁶ 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.

REFERENCES

1. Alhani F. 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. Herr K, Coyne PJ, Key T, Manworren R, McCaffery M, Merkel S, et al. Pain assessment in the nonverbal patient: position statement with clinical practice recommendations. *Pain Manag Nurs*. 2006; 7(2):44–52. doi: 10.1016/j.pmn.2006.02.003.
3. Keogh E, Ellery D, Hunt C, Hannent I. Selective attentional bias for pain-related stimuli amongst pain fearful individuals. *Pain*. 2001; 91(1-2):91–100.
4. Fillingim RB, King CD, Ribeiro-Dasilva MC, Rahim-Williams B, Riley J3. Sex, gender, and pain: a review of recent clinical and experimental findings. *J Pain*. 2009; 10(5):447–85. doi: 10.1016/j.jpain.2008.12.001.
5. Hankins GD, Clark SM, Munn MB. Cesarean section on request at 39 weeks: impact on shoulder dystocia, fetal trauma, neonatal encephalopathy, and intrauterine fetal demise. *Semin Perinatol*. 2006;30(5):276–87
6. Bergholt T, Stenderup JK, Vedsted-Jakobsen A, Helm P, Lenstrup C. Intraoperative surgical complication during cesarean section: an observational study of the incidence and risk factors. *Acta Obstet Gynecol Scand*. 2003; 82(3):251–6.
7. Al Rowaily MA, Alsalem FA, Abolfotouh MA. Cesarean section in a high-parity community in Saudi Arabia: clinical indications and obstetric outcomes. *BMC Pregnancy and Childbirth*. 2014; 14(1):92. doi: 10.1186/1471-2393-14-92.
8. Gonen R, Tamir A, Degani S. Obstetricians' opinions regarding patient choice in cesarean delivery. *Obstet Gynecol*. 2002; 99(4):577–80.
9. MacDonald C, Pinion SB, MacLeod UM. Scottish female obstetricians' views on elective caesarean section and personal choice for delivery. *J Obstet Gynaecol*. 2002; 22(6):586–9. doi: 10.1080/0144361021000020312.
10. Turner CE, Young JM, Solomon MJ, Ludlow J, Bensus C, Phipps H. Vaginal delivery compared with elective caesarean section: the views of pregnant women and clinicians. *BJOG*. 2008; 115(12):1494–502.
11. Karlstrom A, Engstrom-Olofsson R, Norbergh KG, Sjolting M, Hildingsson I. Postoperative pain after cesarean birth affects breastfeeding and infant care. *J Obstet Gynecol Neonatal Nurs*. 2007;36(5):430–40.
12. Kwekkeboom KL, Cherwin CH, Lee JW, Wanta B. Mind-body treatments for the pain-fatigue-sleep disturbance symptom cluster in persons with cancer. *J Pain Symptom Manage*. 2010; 39(1):126–38.
13. Kwekkeboom KL, Gretarsdottir E. Systematic Review of Relaxation Interventions for Pain. *Journal of Nursing Scholarship*. 2006; 38(3):269–77.
14. Good M, Stanton-Hicks M, Grass JA, Anderson GC, Lai HL, Roykulcharoen V, et al. Relaxation and music to reduce postsurgical pain. *J Adv Nurs*. 2001; 33(2):208–15.
15. Tetti Solehati; Yeni Rustina; Benson Relaxation Technique in Reducing Pain Intensity in Women After Cesaerean Section; *Anesthesiology and pain medicine*; 2015 June; 5(3): e22236.
16. Divya Devmurari, Sanket Nagrale. Effectiveness of Jacobson's progressive muscle relaxation technique for pain management in post-cesarean women. *Indian Journal of Obstetrics and Gynecology Research*, April-June, 2018;5(2):228-232
17. What is Jacobson's Relaxation Technique? Available at : <https://www.healthline.com/health/what-is-jacobson-relaxation-technique>
18. Rambod M, Sharif F, Pourali-Mohammadi N, Pasyar N, Rafii F. Evaluation of the effect of Benson's relaxation technique on pain and quality of life of haemodialysis patients: a randomized controlled trial. *Int J Nurs Stud*. 2014; 51(7):964–73.
19. Galvin JA, Benson H, Deckro GR, Fricchione GL, Dusek JA. The relaxation response: reducing stress and improving cognition in healthy aging adults. *Complement Ther Clin Pract*. 2006; 12(3):186–91.
20. Solehati T, Rustina Y. The Effect of Benson Relaxation on Reduction of Pain Level Among Post Caesarean Section Mother at Cibabat Hospital, Indonesia. *J Nurs Health Care*. 2013; 1:171–175.

Source of Support: None Declared
Conflict of Interest: None Declared