INDOGENIUS

ISSN 2828-1365

Special Issue (2025) : 231 – 235

The Application of Deep Breathing Relaxation on Pain Scale Reduction in Postpartum Patients in the Mawar Maternity Ward of Kardinah Regional General Hospital, Tegal City

Sinta Intan Wulandari[1], Lily Wahyuni Romadhon[1]
[1]*Institut Teknologi dan Kesehatan Mahardika, Cirebon, Indonesia*

Article Info

Keywords :
Caesarean Section, Deep Breathing Relaxation, Pain

Corresponding Author :
Sinta Intan Wulandari
E-mail :
wulandari.intan20@gmail.com
Phone Number : 08111290305

ABSTRACT

Background & Objective: A cesarean section is performed when spontaneous or vaginal delivery is not possible due to risks to either the mother or the baby. Pain during childbirth with cesarean section can be minimized using two methods: pharmacological and non-pharmacological. One intervention that can be provided is deep breathing relaxation technique, which helps induce a relaxed state by controlling breathing, thereby reducing pain during childbirth and aiding recovery. **Method:** This study is descriptive, using a case study method, with deep breathing relaxation performed 15 times, divided into 3 cycles. In each cycle, the patient was asked to take 5 deep breaths with one rest period. The criteria for inclusion were patients who had undergone a cesarean section with postpartum hemorrhage (PPH) as an indication, patients with pain complaints, and those who signed an informed consent form. **Result:** The results of this study showed that after three days of deep breathing relaxation intervention, patients reported feeling more relaxed, with their pain diverted and reduced. There was a decrease in pain scale from 6 to 2, with the assistance of dexketoprofen medication. **Conclusion:** Deep breathing relaxation can be an effective management strategy for reducing pain scale with medication assistance.

DOI: https://doi.org/10.56359/igj.v4i2A.708

Introduction

Cesarean section is performed when spontaneous or vaginal delivery is not possible due to risks to the mother or baby (Amita et al., 2018). *Cesarean section* rates continue to rise globally, with nearly one-third of all births expected to occur via

cesarean section by 2030. In developing countries, approximately 8% of women give birth via cesarean section.

According to the World Health Organization (WHO), the average rate of *cesarean section* births in a country is around 5–15% per 1,000 births. In Indonesia, *cesarean section* births have increased by 45.3%, with the remainder being vaginal deliveries. This figure exceeds the standards set by the WHO. The high rate of cesarean sections in Indonesia is due to the high number of planned (elective) cesarean sections, which account for 7% (Susilawati et al., 2023). The prevalence of cesarean sections in Central Java has increased from 2019 to 2023, with the proportion of *cesarean section* deliveries in Central Java reaching 17.1% of 9,291 deliveries (Kemenkes RI, 2019).

After undergoing a *cesarean section*, patients may experience pain due to the surgical wound, which can lead to fatigue, a lack of confidence in their ability to control their emotions, and an inability to care for their baby. Pain during *cesarean section* delivery can be minimized using two methods: pharmacological and non-pharmacological. One intervention that can be provided is relaxation techniques. Relaxation techniques are an effective and efficient method for reducing pain intensity as they can control pain sensations (Fatma et al., 2021). Deep breathing relaxation techniques are a self-care nursing intervention where nurses teach patients how to perform deep breathing, slow breathing (maximizing inspiration), and how to exhale slowly to relax muscle tension that contributes to pain. By performing deep breathing relaxation techniques, pain is reduced, making individuals who are in an uncomfortable state feel more comfortable (Amita et al., 2018). Additionally, according to (Lailiyah, 2019), deep breathing relaxation techniques can provide a relaxed feeling in controlling breathing, thereby reducing pain during childbirth and recovery. Once skilled in deep breathing relaxation, physical and breathing exercises will yield better results in pain control. Therefore, deep breathing relaxation techniques should be applied to patients experiencing *post-cesarean section* pain. The main advantage of deep breathing relaxation techniques is that they can be performed anywhere, anytime, under any circumstances, are easy to perform without special equipment or time.

Objective

Based on the above background, the author is interested in taking the title "The Application of Deep Breathing Relaxation in Postpartum Patients with Peb in the Mawar Nifas Room of Kardinah Regional General Hospital, Tegal City."

Method

This study is descriptive in nature, employing a case study method involving deep breathing relaxation performed 15 times, divided into 3 cycles. In each cycle, patients were asked to take 5 deep breaths with one rest period per patient, with criteria including post-SC patients with PEB indications, patients complaining of pain, and those who signed an informed consent form. The study was conducted in January 2025.

The data collection techniques used were interviews, observations, and physical examinations of the patients' bodies using inspection, palpation, percussion, and auscultation methods. The study also included documentation of diagnostic examination results.

Data analysis was conducted by the author at the field site, Kardinah General Hospital, from the data collection process until all data were collected using the technique of presenting facts obtained from interviews, observations, and physical examinations, as well as documentation studies, and narrated to address the research questions in the final scientific paper. The data were then analyzed by comparing the results obtained with existing theories in the discussion.

Results

During the assessment and when asked about her complaints, the patient complained of pain at the SC surgical wound, with a pain scale of 6. The pain felt like stabbing and came and went, and the patient appeared to be grimacing. In addition, the patient complained that her milk had not yet come in and that no milk appeared when she tried to breastfeed her child. The patient also mentioned that her leg was still stiff and painful when moved, and her leg could only bend to 30 degrees at present. The patient was administered Ceftriaxone 3x1 vial, Metronidazole 3x1 vial, Dexketoprofen 3x1 amp, Amlodipine 1x10mg, Dopamet 3x500mg, and MgSO4 50cc administered at 5cc/hour. The diagnosis was Acute Pain related to physical trauma, Ineffective Breastfeeding related to inadequate breast milk supply, Physical Mobility Impairment related to the effects of pharmacological agents, and Skin/Tissue Integrity Impairment related to post-operative wounds. Deep breathing relaxation was performed as an adjunct intervention alongside analgesic medication administration. Deep breathing relaxation was applied to Mrs. N for 3 days, with 15 sessions per day, each consisting of 3 cycles of 5 deep breaths followed by a short rest. This deep breathing relaxation was performed for 15–20 minutes with the patient lying down.

Discussion

During the assessment and when asked about their complaints, the patient complained of pain at the SC surgical wound, with a pain scale of 6. The pain felt like stabbing and came and went, and the patient appeared to be grimacing. The pain felt by the patient was due to the SC surgical procedure, which involved an abdominal incision to deliver the fetus. This aligns with the findings of (Susilawati et al., 2023), who stated that the effects on post-SC patients include pain resulting from the process of removing the baby through an abdominal incision.

After the assessment process, the following vital signs were recorded: blood pressure 139/62 mmHg, temperature 37.1℃, pulse 101 beats per minute, and SpO2: 95%. The patient complained of pain at the cesarean section incision site, with a pain scale of 6, the pain felt like being stabbed and came and went, and the patient appeared to be grimacing. Thus, the primary issue identified was acute pain. Acute pain is a sensory or emotional experience associated with actual or functional tissue damage, with sudden or gradual onset and varying intensity from mild to severe, lasting less than three months (PPNI, 2021). The pain experienced by the patient was due to the cesarean section procedure, which involved an abdominal incision to deliver the fetus. This aligns with the opinion of (Susilawati et al., 2023), who state that the impact on post-SC patients is pain resulting from the process of removing the baby through an abdominal incision. Therefore, the primary diagnosis established is acute pain related to a physical injury agent (surgical procedure).

Non-pharmacological pain management or treatment, according to (Maghfiroh, 2022), includes cutaneous stimulation and massage, ice and heat therapy,

Transcutaneous Electrical Nerve Stimulation (TENS), distraction, and relaxation. Relaxation techniques used to reduce pain are highly varied, but in this study, deep breathing relaxation served as an adjunct intervention for acute pain. Deep breathing relaxation is a technique that stimulates the body to release endogenous opioids, thereby forming a pain-inhibiting system. These hormones can block pain impulses, thereby reducing the patient's perception of pain (Igiany, 2018). Thus, it can be said that deep breathing relaxation can reduce pain levels.

After three days of implementation, there was a decrease from a pain level of 6 to a pain level of 2 (mild pain). This result aligns with the study by (Fatma et al., 2021), which found that based on the post-operative pain scale after a cesarean section, there was a change in pain levels following the implementation of deep breathing relaxation techniques.

After three days of intervention with a frequency of 15 times per day over three cycles, the patient reported feeling more relaxed, with the pain being diverted and reduced. There was a decrease in the pain scale from 6 to 2, with the assistance of dexketoprofen medication. This aligns with the study by (Agnesia & Aryanti, 2022) conducted on two patients, both of whom experienced significant changes in pain scale scores. Subject 1 saw a decrease in pain scale scores to 1 from vulnerable (0-10), (0-10) and subject 2 experienced a decrease in pain scale to 0 from the range (0-10). Additionally, research by (Fitri et al., 2024) indicates that the application of deep breathing relaxation techniques effectively reduces pain levels in patients post-cesarean section surgery.

Conclusion

The general condition of the patient with post-SC indications of PEB in Mrs. N is that she has hypertension, namely 161/96, with positive proteinuria results of 1+. After the operation, the patient complained of pain at the SC surgical wound, with a pain scale of 6, feeling like being stabbed and coming and going, and the patient appeared to be grimacing. Additionally, the patient reported that her breast milk had not yet come in, and there was no milk flow when she attempted to breastfeed her child. The patient also mentioned that her legs remained stiff and painful when moved, and her legs could only bend to 30 degrees. There was skin/tissue damage resulting from the cesarean section procedure performed via abdominal incision. After receiving intervention for 3 days at a frequency of 15 times per day over 3 cycles, the patient reported feeling more relaxed, with the pain she felt being distracted and reduced. There was a decrease in the patient's pain scale from a score of 6 to a score of 2, with the assistance of dexketoprofen medication.

References

Agnesia, A. P., & Aryanti, D. (2022). Teknik Relaksasi Nafas Dalam Pada Ibu Post Sectio Caesarea RSUD Dr. Soekardjo Tasikmalaya: Studi Kasus. *Nursing Care and Health Technology Journal (NCHAT)*, *2*(2), 87–91. https://doi.org/10.56742/nchat.v2i2.44

Amita, D., Fernalia, & Yulendasari, R. (2018). Pengaruh Teknik Relaksasi Nafas Dalam Terhadap Intensitas Nyeri Pada Pasien Post Operasi Sectio Caesarea di Rumah Sakit Bengkulu. *Jurnal Kesehatan Holistik*, *12*(1), 26–28. http://ejurnalmalahayati.ac.id/index.php/holistik/article/download/124/69

Fatma, H., Sulistyowati, P., & Ajiningtiyas, E. S. (2021). Pengaruh Teknik Relaksasi

Napas Dalam Terhadap Intensitas Nyeri Pada Post Operasi Sectio Caesarea. *Journal of Nursing & Health*, *6*(1), 15–24. http://jurnal.politeknikyakpermas.ac.id/index.php/jnh/article/view/142%0A

Fitri, M. A., Andayani, S. A., & Dewi, N. E. C. (2024). Penerapan Teknik Relaksasi Diaphragmatic Breathing untuk Mengurangi Nyeri Post Operasi Sectio Caesarea pada Pasien dengan Indikasi Gemelli di Ruang Nifas RSUD Sidoarjo. *TRILOGI: Jurnal Ilmu Teknologi, Kesehatan, Dan Humaniora*, *5*(1), 1–8. https://doi.org/10.33650/trilogi.v5i1.7119

Igiany, P. D. (2018). Perbedaan Nyeri Pada Pasien Pasca Bedah Fraktur Ekstremitas Sebelum Dan Sesudah Dilakukan Teknik Relaksasi Napas Dalam. *Jurnal Manajemen Informasi Dan Administrasi Kesehatan (JMIAK)*, *1*(1), 16–21. https://doi.org/10.32585/jmiak.v1i1.123

Kemenkes RI. (2019). Laporan Nasional Riskesdas 2018. *Lembaga Penerbit Badan Penelitian Dan Pengembangan Kesehatan*.

Lailiyah, S. R. (2019). Efektifitas Teknik Relaksasi Nafas Dalam dan Pijatan Effleurage terhadap penurunan skala nyeri pada post sectio caesarea. *NURSING UPDATE : Jurnal Ilmiah Ilmu Keperawatan P-ISSN : 2085-5931 e-ISSN : 2623-2871*, *1*(1), 61–69. https://doi.org/10.36089/nu.v1i1.37

Maghfiroh, M. (2022). ASUHAN KEPERAWATAN NYERI AKUT PADA PASIEN POST OPERASI APPENDIKTOMI DI RS KAMAR MEDIKA KOTA MOJOKERTO. In *Stikes Bina Sehat PPNI* (Vol. 33, Issue 1). Stikes Bina Sehat PPNI Mojokerto.

PPNI. (2021). *Standar Diagnosis Keperawatan Indonesia (Definisi dan Indikator Diagnosis)*. DPP PPNI.

Susilawati, Utari Kartaatmadja, F. S., & Suherman, R. (2023). Pengaruh Teknik Relaksasi Nafas Dalam Terhadap Intensitas Nyeri Pasien Post Partum Sectio Caesarea Di Ruang Rawat Nifas Rsud Sekarwangi Sukabumi. *Media Informasi*, *19*(1), 13–19. https://doi.org/10.37160/bmi.v19i1.53