

(EFFECTIVENESS OF BENSON RELAXATION ON PAIN INTENSITY AND BREAST MILK PRODUCTION IN POST CAESAREAN SECTION MOTHERS AT ARUN HOSPITAL LHKSEUMAWE, ACEH PROVINCE)

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ABSTRACT

Background: Caesarean section is a surgical procedure that often causes postoperative pain, which may interfere with maternal mobility, breastfeeding initiation, and breast milk production. Uncontrolled pain can increase stress levels and inhibit the release of oxytocin, resulting in delayed lactation. Benson relaxation therapy is a non-pharmacological intervention that combines deep breathing and spiritual focus to induce relaxation and improve physiological responses. **Objectives:** This study aimed to determine the effectiveness of Benson relaxation therapy on pain intensity and breast milk production among post-caesarean section mothers at Arun Hospital, Lhokseumawe City, Aceh Province. **Methods:** A quasi-experimental study with a one-group pretest-posttest design was conducted from April to June 2025. Thirty post-caesarean section mothers were selected using accidental sampling. Pain intensity was measured using the Numeric Rating Scale (NRS), while breast milk production was assessed through observation of milk volume before and after the intervention. Benson relaxation therapy was administered for approximately 10 minutes. Data were analyzed using descriptive and inferential statistics with a significance level of $p < 0.05$. **Results:** The mean pain intensity score decreased from 6.00 before the intervention to 4.77 after Benson relaxation therapy, indicating a reduction of 1.23 points. Breast milk production increased from an average of 40.2 ml to 94.8 ml after the intervention, with an average increase of 54.6 ml. Statistical analysis showed significant differences in pain intensity and breast milk production before and after the intervention ($p < 0.05$). **Conclusions:** Benson relaxation therapy was effective in reducing pain intensity and increasing breast milk production among post-caesarean section mothers. This therapy can be considered a simple, safe, and cost-effective complementary intervention to support postoperative recovery and promote successful breastfeeding. (Ndraha *et al.*, 2024)

Keywords: Benson relaxation therapy, pain intensity, breast milk production, caesarean section, postpartum mothers.

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Published by SEKOLAH TINGGI ILMU KESEHATAN MITRA HUSADA MEDAN

INTRODUCTION

Cesarean section has become one of the most frequently performed obstetric procedures worldwide. Increasing cesarean delivery rates contribute to various postoperative complications, particularly pain that limits maternal mobility and interferes with breastfeeding initiation. Postoperative pain stimulates stress hormones that inhibit oxytocin release, resulting in delayed breast milk production. Pain management using pharmacological methods is commonly applied; however, complementary approaches such as Benson relaxation therapy provide additional benefits without adverse effects. Benson relaxation combines breathing exercises with spiritual affirmation, producing a relaxation response that reduces sympathetic nervous activity and enhances endorphin release. This mechanism is expected to decrease pain perception while improving maternal comfort and lactation. (Morita, Amelia dan Putri, 2020) Based on preliminary observations at Arun Hospital Lhokseumawe, many mothers experienced severe postoperative pain and delayed breastfeeding after cesarean delivery. Therefore, this study aimed to determine the effectiveness of Benson relaxation therapy on pain intensity and breast milk production among post-caesarean mothers. (Lisa Putri Utami Damanik *et al.*, 2024)

METHODS

This study employed a quasi-experimental research design using a one-group pretest-posttest approach to evaluate the effectiveness of Benson relaxation therapy on pain intensity and breast milk production among post-caesarean section mothers. The study was conducted at Arun Hospital, Lhokseumawe City, Aceh Province, from April to June 2025. The population of this study consisted of all postpartum mothers who underwent cesarean section delivery and received inpatient care at Arun Hospital during the research period. Based on hospital records, the average number of cesarean deliveries during the study period was approximately 34 cases per month. The sample included 30 post-caesarean section mothers who met the inclusion criteria and agreed to participate in the study. Respondents were selected using an accidental sampling technique, whereby eligible participants encountered during the study period were recruited until the required sample size was achieved. The independent variable in this study was Benson relaxation therapy, while the dependent variables were pain intensity and breast milk production. Pain intensity was assessed using the Numeric Rating Scale (NRS), a standardized instrument ranging from 0 (no pain) to 10 (worst possible pain). (Febiantri dan Machmudah, 2021)

Breast milk production was measured by observing and recording the average volume of breast milk produced before and after the intervention using an observation sheet prepared by the researcher. (Tavallali *et al.*, 2023)

Before data collection, all participants received an explanation regarding the objectives and procedures of the study and provided informed consent. Baseline measurements of pain intensity and breast milk production were obtained before the intervention. Benson relaxation therapy was then administered approximately two hours after cesarean section surgery, before the administration of analgesic medication in the inpatient ward. The intervention lasted for approximately 10 minutes in a quiet and comfortable environment. Participants were instructed to sit or lie in a comfortable position, close their eyes, relax all body muscles gradually, regulate slow and deep breathing, and repeat spiritual words or phrases according to their personal beliefs while maintaining concentration and passive awareness. (Novita Dwi Safitri dan Annisa Andriyani, 2024)

Following the intervention, pain intensity and breast milk production were reassessed using the same measurement instruments. The collected data were processed through several stages,

including editing, coding, data entry, scoring, tabulation, and data cleaning to ensure completeness and accuracy before statistical analysis. Data analysis consisted of univariate and bivariate analyses.(Hajar *et al.*, 2024)

Univariate analysis was performed to describe respondent characteristics and summarize the distribution of study variables using frequency distributions, means, standard deviations, minimum and maximum values, and 95% confidence intervals. Bivariate analysis was conducted to compare pain intensity and breast milk production before and after Benson relaxation therapy using appropriate statistical tests with a significance level of 95% ($p < 0.05$). The results were presented in tables and narrative form to facilitate interpretation and discussion of the effectiveness of Benson relaxation therapy among post-caesarean section mothers.(Goncalves, 2025)

RESULTS AND DISCUSSIONS

The average age of respondents was 29.43 years, with most mothers having no previous cesarean history and being multiparous. The mean pain score before intervention was 6.00, decreasing to 4.77 after Benson relaxation therapy, indicating a reduction of 1.23 pain scale points. Breast milk production increased substantially following intervention. The average milk volume increased from 40.2 ml before therapy to 94.8 ml after Benson relaxation. Statistical analysis demonstrated significant differences in pain intensity and breast milk production before and after Benson relaxation therapy ($p < 0.05$), indicating the effectiveness of the intervention.(Manulang *et al.*, 2025)

Format for Table and Image:

Table 1. Table of respondent characteristics (description of the table)

Variable	Mean	SD	Minimum–Maximum	Mean Difference
Before Intervention	6.00	0.695	5–7	5,74–6,26
After Intervention	4.77	0.728	After Intervention	4.49–5.04

CONCLUSIONS

This study was conducted to determine the effectiveness of Benson relaxation therapy on pain intensity and breast milk production among post-caesarean section mothers at Arun Hospital, Lhokseumawe City, Aceh Province. Based on the findings, Benson relaxation therapy was proven to be effective in reducing postoperative pain intensity and increasing breast milk production among post-caesarean section mothers. The mean pain score significantly decreased after the intervention, while breast milk production increased substantially compared to pre-intervention measurements.(Hartati *et al.*, 2023)

These findings indicate that Benson relaxation therapy can provide positive physiological and psychological effects by promoting relaxation, reducing stress and anxiety, and enhancing hormonal responses associated with pain control and lactation. The therapy may improve maternal comfort, facilitate postoperative recovery, and support successful breastfeeding practices during the postpartum period.(Manurung Herna Rinayanti dan Tiurmaida Sigalingging, 2022)

Therefore, Benson relaxation therapy can be considered a simple, safe, cost-effective, and non-pharmacological complementary intervention that may be integrated into routine postpartum nursing and midwifery care. Healthcare providers are encouraged to apply this therapy as part of comprehensive maternal care for mothers undergoing caesarean section. (Wahyuni, Hutabarat dan Kunci, 2022)

Future studies are recommended to involve larger sample sizes, control groups, and multicenter settings to strengthen the evidence regarding the effectiveness of Benson relaxation therapy. Further research may also explore its impact on maternal anxiety, sleep quality, early mobilization, breastfeeding self-efficacy, mother–infant bonding, and exclusive breastfeeding outcomes. (Anggraini, 2022)

ACKNOWLEDGEMENT

The authors would like to express their sincere gratitude to STIKes Mitra Husada Medan for providing academic support during this study. The authors also thank the Director and healthcare staff of Arun Hospital, Lhokseumawe City, Aceh Province, for granting permission and facilitating the research process. Special appreciation is extended to all respondents who willingly participated in this study and contributed valuable data to the completion of this research.

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