

THE EFFECT OF POSTPARTUM BLUES INTERVENTION ON PSYCHOLOGICAL ADAPTATION IN POSTPARTUM MOTHERS POST CESAREAN SECTION

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Abstract

The postpartum period requires special attention due to the various emotional changes experienced by mothers, such as feeling thrilled, overwhelmed, let down, weepy, and physically exhausted. To address these challenges, an intervention that integrates early mobilization, therapeutic communication, and enhanced family support is highly needed to foster successful psychological adaptation. Aims: This study aimed to determine the effect of a postpartum blues intervention on the psychological adaptation of postpartum mothers after cesarean section. Methods: This study employed a quasi-experimental design with a one-group pretest-posttest approach. The sample consisted of 35 postpartum mothers on their first to third postpartum day, selected using a purposive sampling technique. Data were collected from August to September 2023 using the Edinburgh Postnatal Depression Scale (EPDS) questionnaire. The intervention was administered after completion of the pretest questionnaire, followed by administration of the posttest questionnaire. Data were analyzed using univariate analysis and bivariate analysis with the Wilcoxon signed-rank test. Results: Univariate analysis showed that the mean psychological adaptation score increased from 44.83 before the intervention to 66.57 after the intervention. Bivariate analysis demonstrated a significant difference in maternal psychological adaptation before and after the intervention, with a p-value of 0.000. Conclusion: Postpartum blues intervention comprising early mobilization, therapeutic communication, and enhanced family support is highly effective in helping mothers navigate emotional changes and achieve optimal psychological adaptation during the postpartum period.

Keywords: Cesarean section, postpartum blues intervention, psychological adaptation.

INTRODUCTION

The postpartum period (puerperium) is defined as the interval from the birth of the infant and placenta until approximately forty days thereafter, during which the reproductive organs gradually return to their non-pregnant state (Bobak, 2010). This period is characterized by profound physiological and psychological shifts. Maternal psychological adaptation typically progresses through three distinct phases described by Reva Rubin: the taking-in phase, the taking-hold phase, and the letting-go phase. Failure to navigate these phases smoothly can lead to transient or prolonged mood disturbances, such as postpartum blues or postpartum depression (Arienta Sari, 2020). Because these phases largely unfold during the earliest days of hospitalization, structured nursing support at this stage is essential to help mothers adapt successfully rather than progress toward more severe and prolonged mood disturbances.

The World Health Organization (WHO, 2018) notes that the general prevalence of postpartum blues worldwide ranges from 3% to 8%, with 50% of cases occurring within the productive age group of 20–50 years. Furthermore, global statistics suggest that postpartum blues affects approximately 20% of women at some point in their lives, while in Asian countries the incidence is remarkably high, fluctuating between 26% and 85% (Arienta Sari, 2020). In Indonesia, data from the Central Statistics Agency (BPS, 2022) recorded a Total Fertility Rate (TFR) of 2.1, meaning that, on average, a woman gives birth to two children during her reproductive years. This high birth rate underscores the urgency of addressing postpartum psychological issues. These figures indicate that postpartum blues is not a trivial, self-limiting phenomenon but a substantial maternal health concern that warrants systematic attention from maternity health services, particularly in high-birth-rate settings such as Indonesia.

According to research by Adli (2022), the incidence of postpartum blues in Indonesia reaches 23%, and universal screening using the Edinburgh Postnatal Depression Scale (EPDS) reveals that 14–17% of postpartum women are at high risk. This psychological vulnerability can severely impact maternal well-being. While detailed epidemiology regarding postpartum blues in Jambi Province remains scarce in both institutional reports and published studies, the birth rate in Jambi City was documented at 10,602 live births in 2018 (BPS Jambi Province, 2019). Furthermore, Riskesdas data indicate that deliveries via Sectio Caesarea (SC) in Indonesia reached 17.6%. At the hospital where this study was conducted, 662 cesarean deliveries were performed between January and July 2023, averaging approximately 132 cases per month. This substantial monthly caseload suggests that a considerable number of mothers in this setting are potentially exposed to the psychological stressors

associated with cesarean delivery, reinforcing the need for a facility-based intervention such as the one evaluated in this study. Jambi Province was selected as the study site precisely because of this research gap: unlike provinces such as North Sumatra, where the cesarean delivery rate has been documented at 23.89% and DKI Jakarta recorded the highest national rate of C-sections at 31.3%, based on Riskesdas data (Yanti et al., 2022), comparable province-level data on cesarean delivery and its psychological consequences for Jambi remain largely undocumented, even though the hospital-level caseload above indicates that the issue is far from negligible. Among the provinces.

Physiological changes after a cesarean section primarily manifest as acute surgical pain, which often restricts early mobility and hinders self-care and infant-care activities, ultimately exacerbating psychological stress. This temporary, mild postpartum mood disturbance is commonly referred to as the postpartum blues or baby blues, affecting up to 55% to 85% of all new mothers worldwide (Thitipitchayanant et al., 2018), a range broadly consistent with the reported 37% to 67% prevalence among postpartum women in Indonesia (Manurung & Setyowati, 2021). First-time mothers are particularly susceptible due to unrealistic expectations regarding motherhood. Symptoms usually develop within 2 to 4 days postpartum and resolve within 14 days, presenting as crying bouts, loneliness, rejection, anxiety, confusion, and insomnia (Manurung & Setyowati, 2021). If neglected, it can impair maternal-infant bonding, causing long-term pediatric behavioral and cognitive issues such as aggression, sleep disturbances, and hyperactivity (Chen et al., 2022; McKelvey & Espelin, 2018).

Several previous studies have examined interventions to address postpartum blues, with varying components and outcomes. A self-empowerment, affirmation, and relaxation (Self-EAR) audio-based program delivered over four weeks was shown to significantly reduce postpartum blues scores among Thai mothers (Thitipitchayanant et al., 2018). Husband and family support has also been consistently linked to a lower risk of postpartum blues and depression, with Indonesian studies reporting significant associations between spousal support and postpartum mood outcomes (Renata & Agus, 2021; Handini & Puspitasari, 2021). Early mobilization following cesarean section has similarly been associated with better physical recovery and psychological readiness, including reduced anxiety around post-operative verticalization when combined with brief psychological preparation (Prokopowicz & Byrka, 2021), and better recovery of independent daily activities (Yanti et al., 2022).

Structural determinants such as social support, coping strategies, socioeconomic status, and gender roles have also been shown to jointly influence the incidence of postpartum blues (Kurniawati & Septiyono, 2022). Collectively, these studies indicate that single-component interventions — whether physical, communicative, or social — each contribute only modestly to maternal psychological recovery, underscoring the novelty and urgency of testing a combined, multi-component intervention integrating early mobilization, therapeutic communication, and family support, as undertaken in the present study.

Mitigating these adverse outcomes requires a multi-component postpartum blues intervention consisting of early mobilization, therapeutic communication, and family system support. Early mobilization assists in uterine involution, prevents thromboembolic complications, and restores muscle tone stretched during pregnancy. Therapeutic communication provides verbal and nonverbal support tailored to the patient's psychological needs (Maulana, 2009). Concurrently, family system support ensures the mother feels valued and protected, reducing the impact of external environmental stressors. This is consistent with previous findings showing that inadequate husband or family support is significantly associated with a higher risk of postpartum blues, with one Indonesian study reporting an odds ratio of 2.331 ($p = 0.042$) for postpartum blues among mothers who received inadequate husband support (Renata & Agus, 2021), and another reporting a highly significant association between husband support and postpartum depression levels ($p = 0.000$) (Handini & Puspitasari, 2021). This study aimed to evaluate the effect of a comprehensive postpartum blues intervention on the psychological adaptation of postpartum mothers following cesarean section.

METHODS

This quantitative study utilized a quasi-experimental approach with a one-group pretest-posttest design. The independent variable was the multi-component postpartum blues intervention (comprising structured early mobilization, therapeutic communication, and family support systems), while the dependent variable was the mother's psychological adaptation score. Prior to implementing the intervention, the researcher developed a Standard Operating Procedure (SOP) covering each intervention component. Early mobilization began with initial ambulation at 24–36 hours after surgery, during which the mother was assisted to turn from side to side (to the left and to the right). On the second day, the mother was assisted to sit up, and on the third day, she was assisted to move

her legs by walking. Guidance on continuing mobilization after hospital discharge was also explained to the mother.

The therapeutic communication intervention was delivered in a structured manner through the pre-interaction, working (interaction), and termination phases, following the steps of therapeutic communication set out in the SOP developed for this study. The intervention also involved family members by teaching them how to help meet the mother's and the infant's needs; families were given explanations of the mother's post-cesarean care needs on the first day, the second day, and until the mother was able to independently care for herself and her infant. This family-support activity was likewise carried out in accordance with the SOP developed for the study. The study was conducted at Bhayangkara Jambi Hospital, Jambi Province.

The target population included all postpartum mothers admitted to the maternity ward. A sample of 35 postpartum mothers on their first to third day post-cesarean section was selected using a purposive sampling technique. Inclusion criteria were mothers in the first three days postpartum following a C-section and their accompanying family members who were cooperative; exclusion criteria were mothers with post-C-section complications and those not accompanied by family. The intervention was carried out by the research team, following a prior session to align their understanding. Data collection spanned from August to September 2023. The primary research instrument was the Indonesian version of the Edinburgh Postnatal Depression Scale (EPDS). Mothers completed the pretest questionnaire upon enrollment, received the standardized postpartum blues intervention, and subsequently completed the posttest questionnaire. Data were analyzed using SPSS. Univariate analysis was performed to determine the mean, standard deviation, and range of psychological adaptation scores, the results of which are reported in the Results section (Table 2). Bivariate analysis was conducted using the non-parametric Wilcoxon signed-rank test because the data distribution was skewed. Ethical clearance for this study was officially granted by the Health Polytechnic Ethics Committee, Ministry of Health, Jambi Province (No. LB.02.06/2/315/2023).

RESULTS

A. Characteristics of Respondents

Table 1. Demographic Characteristics of Post-Cesarean Section Mothers (n = 35)

Characteristics	Frequency (n)	Percentage (%)
Age		
17–25 Years	8	22.9
26–35 Years	19	54.3
36–45 Years	8	22.8
Postpartum Day		
First Day	3	8.6
Second Day	23	65.7
Third Day	9	25.7
Education Level		
Elementary School	3	8.6
Junior High School	8	22.8
Senior High School	19	54.3
Bachelor's Degree	5	14.3
Occupation		
Housewife	32	91.4
Working Mother	3	8.6
Infant Age (Days)		
1 Day	3	8.6
2 Days	23	65.7
3 Days	9	25.7

The characteristics of the 35 respondents are displayed in Table 1. The majority of the respondents belonged to the 26–35 age group (54.3%), were on their second postpartum day (65.7%), had a senior high school education (54.3%), and were housewives (91.4%).

B. Psychological Adaptation

Table 2. Psychological Adaptation Scores Before and After Intervention (n = 35)

Variable	Mean	SD	Min	Max
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Psychological Adaptation (Pretest)	44.83	2.09	41.00	50.00
Psychological Adaptation (Posttest)	66.57	1.29	62.00	68.00

Univariate analysis (Table 2) showed that the mean psychological adaptation score before the intervention was 44.83 (SD = 2.09), which increased notably to 66.57 (SD = 1.29) after the intervention.

C. Effect of Postpartum Blues Intervention

Table 3. Effect of Postpartum Blues Intervention on Psychological Adaptation of Postpartum Mothers Post Cesarean Section

Comparison	Z-value	Asymp. Sig. (2-tailed)
Posttest – Pretest Intervention	-5.176 ^b	0.000

b Based on negative ranks.

Bivariate analysis via the Wilcoxon signed-rank test (Table 3) confirmed that the intervention significantly improved the psychological adaptation of post-cesarean mothers.

DISCUSSION

Characteristics of Respondents

The findings revealed that 54.3% of the respondents were aged 26–35 years, which corresponds to early adulthood. According to maternal health literature, the optimal and safest age window for childbirth is between 20 and 35 years, because the female reproductive system and uterine musculature are physiologically mature enough to support fetal development and postpartum recovery without elevated risks (Maria A. Wijayarini, Peter I. Anugerah, Irene M. Bobak, & Margaret Duncan Jensen, 2012). Most mothers (65.7%) were on their second postpartum day, which aligned with the age of their infants. In standard clinical pathways, the typical hospital stay for an uncomplicated post-cesarean delivery is 3 days. By the second postpartum day (approximately 24 hours post-surgery), patients are encouraged to initiate progressive mobilization, starting with side-to-side turning, progressing to a sitting position, and

advancing to ambulation by the third day. Early ambulation promotes tissue healing, restores bowel motility, and prevents complications, though its pace must be adapted to individual pain thresholds and wound conditions.

In terms of socioeconomic factors, 54.3% of the participants had a high school education, and 91.4% were housewives. Education significantly influences an individual's cognitive appraisal and coping mechanisms. According to behavior modification theories, knowledge shapes attitudes, which ultimately guide actual health behaviors (Notoatmodjo, 2018). Providing timely psychological and physical interventions immediately after birth helps housewives build structural resilience against postpartum stressors.

Psychological Adaptation and the Intervention Effect

The study demonstrated a notable upward shift in mean psychological adaptation scores from 44.83 to 66.57 following the intervention. This positive adjustment suggests that incorporating structured early mobilization, therapeutic communication, and active support networks helps mothers successfully navigate the critical 40-day puerperium period (Brantsæter et al., 2022).

Comprehensive social and environmental assistance — particularly paternal involvement acts as a protective buffer against emotional vulnerabilities; a lack of family support is strongly correlated with an increased risk of postpartum blues (Machmudah, 2015; Peleg et al., 2015). During the first postpartum week, mothers face abrupt emotional swings. While recovering physically from surgical trauma, they must simultaneously accept major lifestyle shifts, navigate infant care demands, and manage fluctuating hormonal levels (Maliszewska et al., 2016). According to Reva Rubin's maternal role attainment theory, psychological adaptation progresses through three successive phases:

- a. Taking-In Phase (Days 1–2): The mother is focused on her immediate biological needs, such as overcoming exhaustion, surgical wound pain, and sleep deprivation. She is typically passive and reliant on health professionals. Effective therapeutic communication and adequate rest are crucial during this timeframe.
- b. Taking-Hold Phase (Days 3–10): The mother shifts her focus toward managing infant care but often experiences severe anxiety, self-doubt, and heightened emotional sensitivity. This phase represents a critical window for targeted counseling to bolster maternal self-confidence.

- c. Letting-Go Phase (Day 10 onward): The mother relinquishes her previous lifestyle, embraces her maternal identity, and takes full accountability for the infant's welfare.

The integrated postpartum blues intervention evaluated in this study addressed these phase-dependent needs. Early mobilization maintained physiological independence and guided mothers in restoring basic functional capacities (Dowlati et al., 2014; Brantsæter et al., 2022). To prevent post-cesarean section complications, mothers were mobilized progressively according to these stages, as early mobilization is an effort to help mothers regain independence and physiological function as quickly as possible.

Therapeutic communication delivered by the nursing staff offered a non-judgmental environment that validated the patients' emotional needs (Maros & Juniar, 2016). Concurrently, mobilizing family support networks provided the essential interpersonal affirmation and practical assistance required to mitigate stress (Ariguna Dira & Wahyuni, 2016; Negron et al., 2013).

Empirical evidence further supports the phase-specific relevance of each intervention component. During the Taking-In phase, early mobilization guided according to post-cesarean recovery stages has been shown to reduce anxiety related to first ambulation when paired with brief psychological preparation (Prokopowicz & Byrka, 2021), consistent with this study's structured mobilization protocol. During the Taking-Hold phase, therapeutic communication functions similarly to structured psychoeducational or self-affirmation programs, which have demonstrated measurable reductions in postpartum blues symptoms (Thitipitchayanant et al., 2018). Across all phases, consistent family and husband involvement has repeatedly been shown to lower the risk of postpartum mood disturbance (Renata & Agus, 2021; Handini & Puspitasari, 2021), reinforcing the protective role of family system support within this study's intervention. Taken together, these component-level findings help explain why the combined, multi-component intervention — rather than the p-value alone — produced the substantial improvement in psychological adaptation scores observed in this study (from 44.83 to 66.57, $p = 0.000$).

Statistical testing yielded a p-value of 0.000 ($p < 0.05$), indicating a highly significant intervention effect. Post-cesarean mothers require targeted, proactive care protocols spanning the immediate (first 24 hours), early (first week), and late (weeks 1–6) postpartum periods to safeguard against severe clinical deterioration (Kathree et al., 2014). If postpartum blues is left unmanaged, it can progress into postpartum depression, which usually manifests around the 7th postpartum day (Lanes et al., 2011). Unresolved maternal mood disorders negatively impact the

child's development, leading to higher risks of sleep disturbances, tantrums, hyperactive behaviors, language delays, and long-term attachment issues (Chen et al., 2022; McKelvey & Espelin, 2018).

The Effect of Postpartum Blues Intervention on the Psychological Adaptation of Postpartum Mothers Post Cesarean Section

Based on the research results, postpartum blues intervention was found to affect maternal psychological adaptation, with a p-value of 0.000. The postpartum period is the period after giving birth during which the reproductive organs return to their pre-pregnancy condition within approximately six weeks (Maria A. Wijayarini, Peter I. Anugerah, Irene M. Bobak, & Margaret Duncan Jensen, 2012). Post-cesarean mothers need to be ready to mobilize and care for themselves and their babies, and mothers adjusting to a new family role require good support from both nurses and family. The nurse's role in providing care includes communication aimed at supporting the patient's recovery, while the family — particularly the husband or those closest to the mother — plays an essential role in providing the support needed to help mothers overcome postpartum blues.

Clinically, the postpartum period is commonly divided into three stages: immediate postpartum (0–24 hours), during which uterine involution, lochia discharge, temperature, and blood pressure are closely monitored; early postpartum (1–7 days), during which the absence of bleeding and foul-smelling lochia is ensured and effective breastfeeding is established; and late postpartum (1–6 weeks), during which ongoing daily care, examinations, and family planning counseling are provided. Adequate material and psychological support for mothers is needed throughout each of these stages (Kathree et al., 2014; Bobak. (2010).

When postpartum blues is not addressed properly, it can affect the mother's relationship with her baby and other family members, and, if left untreated, may progress to postpartum depression lasting from around the seventh day after delivery, with consequences for the child's behavioral development, sleep, and independence as previously described (Chen et al., 2022; McKelvey & Espelin, 2018). Harmony within the family experiencing postpartum blues is often disrupted when the husband is not yet aware of what his wife is experiencing, underscoring the importance of family education as part of the intervention.

CONCLUSION

This study found that the postpartum blues intervention significantly improved the psychological adaptation of postpartum mothers after cesarean section, as reflected in the marked increase in mean psychological adaptation scores from 44.83 to 66.57 ($p = 0.000$). The combined protocol described in the Methods section comprising structured early mobilization, therapeutic communication, and active family support appears to help mothers achieve greater emotional stability and physical independence during the puerperium. Based on these findings, maternity ward and psychiatric nurses are encouraged to incorporate similar multi-component supportive protocols to identify early emotional changes and facilitate a healthy transition to motherhood.

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