



Effectiveness of Motivational Intervention on Early Initiation of Mobilization among Postpartum Mothers: A Quasi-Experimental Study

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Abstract

Background: Early mobilization is an important component of postpartum recovery; however, psychological barriers such as fear, low confidence, and limited support often delay its initiation. This study aimed to evaluate the effectiveness of motivational interventions in accelerating postpartum mobilization and improving maternal self-efficacy.

Methods: A quasi-experimental design was employed involving 40 postpartum mothers who were equally divided into intervention and control groups. The intervention group received structured motivational support during the early postpartum period. Data on the timing of first mobilization and self-efficacy levels were collected using validated instruments. Statistical analysis was conducted using the independent t-test to compare mean differences between groups and the paired t-test to measure changes before and after the intervention.

Results: The intervention group demonstrated a significantly earlier mean time to first mobilization (8.2 ± 1.3 hours) compared to the control group (13.6 ± 2.1 hours) ($p < 0.001$). Self-efficacy scores in the intervention group also showed a significant increase from 62.5 ± 6.7 at baseline to 80.2 ± 5.1 after the intervention ($p < 0.001$).

Conclusion: Motivational interventions effectively accelerate postpartum mobilization and enhance maternal self-efficacy. Integrating motivational strategies into postpartum care is recommended to support optimal maternal recovery.

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INTRODUCTION

Early mobilization, defined as the prompt initiation of movement following childbirth, plays a crucial role in supporting postpartum recovery (Kanejima et al., 2020). Previous studies have shown that mothers who begin mobilization early, particularly after cesarean delivery, experience faster wound healing and improved uterine involution (Lucin & Herlinadiyaningsih, 2023). Basic mobilization movements—such as turning to the side or sitting upright—are generally safe to initiate within 6 to 10 hours after the mother is fully conscious post-surgery (B. Chen et al., 2020). Early mobilization facilitates lochia expulsion, accelerates wound recovery, supports the restoration of uterine size, and enhances digestive, urinary, and circulatory functions (Y. Chen et al., 2022; Ganer Herman et al., 2020). These physiological effects highlight its importance in preventing postpartum complications such as thromboembolism, constipation, and delayed uterine involution.

The initiation of early mobilization is strongly influenced by maternal motivation. Motivation may arise from internal factors, such as confidence and personal responsibility, or external factors, including family encouragement and healthcare support. Nurkhoniyah et al. (2023) found that mothers with strong intrinsic and extrinsic motivation were significantly more likely to initiate early mobilization after cesarean delivery. Similarly, interventions that aim to enhance maternal confidence have been shown to increase readiness for mobilization (Kusumaningrum & Kartikasari, 2020; Wang et al., 2022). These findings emphasize that emotional and social support are critical determinants of early recovery behavior.

Self-efficacy, defined as an individual's belief in their capability to perform certain behaviors, is recognized as a key determinant of health behavior. Mothers with higher self-efficacy are more willing to engage in physical activity during the postpartum period despite pain or anxiety. Motivational interventions such as supportive counseling, guided reassurance, and structured communication function to strengthen self-efficacy by providing mothers with knowledge, confidence, and emotional

readiness to mobilize. Therefore, strategies that enhance self-efficacy are essential components in facilitating early mobilization.

Early mobilization in the postpartum period also benefits the mother's psychological and emotional health. Research shows that mental and emotional difficulties, particularly anxiety and lack of support, are important factors that can delay initiation of movement after delivery. Psychological barriers, such as fear of increased pain or damage to the surgical area, often outweigh the mother's understanding of the benefits of early mobilization (Taufik djafar et al., 2022; Taniguchi et al., 2023; Gillis et al., 2021). In addition, the lack of a supportive environment can undermine the mother's confidence and reduce her motivation to begin the recovery process. To overcome these barriers, various studies recommend implementing motivational interventions, such as counseling, education, and midwife-guided reassurance. These interventions aim to reduce anxiety and increase the mother's confidence in her ability to recover safely. By creating a more supportive and informed environment, these strategies can help speed up the timing of early mobilization.

Although early mobilization has been widely recommended, studies that specifically apply quasi-experimental motivational interventions aimed at improving self-efficacy to accelerate early postpartum mobilization remain limited, particularly in Indonesia and the Southeast Asian region. Cultural, social, and health system contexts in this region may influence maternal psychological readiness differently compared to Western clinical settings. This study contributes to filling this gap by examining the effectiveness of structured motivational interventions in promoting early mobilization among postpartum mothers. This research aims to evaluate the effectiveness of motivational interventions in promoting early mobilization in postpartum mothers by enhancing maternal self-efficacy.

METHODS

This study used a quasi-experimental design with a pre-test and post-test control group approach. The research was conducted at the Indonesian Army Brawijaya Hospital

(RSAD) in Surabaya, Indonesia. Participants included postpartum mothers who had given birth either through vaginal delivery or cesarean section. Eligible mothers were aged 18–40 years, had delivered within the past 6–12 hours, were clinically stable and fully conscious, able to communicate, and willing to participate. Exclusion criteria included postpartum complications (e.g., hemorrhage or infection), psychiatric or neurological disorders, and physical limitations that hindered mobility.

Participants were selected using purposive sampling based on the inclusion criteria. A total of 40 mothers were enrolled and allocated into two groups of equal size (20 in the intervention group and 20 in the control group). As randomization was not employed, the absence of random allocation represents a potential source of bias. To reduce this limitation, baseline homogeneity testing was conducted to ensure that both groups had comparable demographic and clinical characteristics prior to the intervention. The results confirmed no significant differences between groups at baseline, thereby supporting internal validity in outcome comparison.

Intervention Protocol

The intervention group received a structured motivational program to enhance maternal self-efficacy toward early mobilization. The program began within 6–8 hours postpartum with an educational session on the benefits, safety, and stages of early mobilization. Motivational interviewing techniques were used to address concerns, strengthen confidence, and encourage mothers' participation in mobilization activities. Midwives provided guided support for gradual movement progression, including turning in bed, sitting, standing, and short ambulation, according to maternal comfort. Supportive communication and encouragement were provided every six hours during the first 24 hours postpartum. In addition, mothers received motivational leaflets to reinforce the educational messages and promote adherence to early mobilization practices. The control group received routine postpartum care according to hospital standards without additional motivational components. This protocol is described in sufficient detail to enable replication.

Measurement Instruments

Maternal self-efficacy was measured using the Postpartum Mobilization Self-Efficacy Scale (PMSES). The instrument demonstrated strong psychometric properties, with a Content Validity Index (CVI) of 0.89 and Cronbach's Alpha reliability coefficient of 0.87, indicating good internal consistency. The timing of initial mobilization was measured using an observation checklist developed according to clinical mobilization standards.

Data Collection and Analysis

Baseline measurements were taken immediately after childbirth (pre-test). The intervention was delivered continuously during the first 24 hours postpartum. Post-test assessments, including time of first mobilization and self-efficacy scores, were recorded within the same 24-hour period. Data were analyzed using SPSS software. Descriptive statistics were used to describe participant characteristics. Within-group differences were analyzed using paired t-tests, while between-group comparisons were assessed using independent t-tests. A p-value < 0.05 was considered statistically significant.

Ethical Considerations

This study received approval from the Health Research Ethics Committee of Indonesian Army Brawijaya Hospital (RSAD) Surabaya. Written informed consent was obtained from all participants. Confidentiality and anonymity were strictly maintained throughout the study.

RESULT AND DISCUSSION

A total of 40 postpartum mothers participated in the study, with 20 assigned to the intervention group and 20 to the control group. In the intervention group, 65% of the participants underwent cesarean delivery, while in the control group the figure was 60%; the rest had spontaneous vaginal deliveries. This distribution ensures a relatively comparable delivery experience between the two groups. Parity can affect both physical and psychological aspects of postpartum recovery. Mothers who have already given birth (multiparous) generally have better practical knowledge and adjustment strategies, which may support earlier mobilization and increased self-efficacy (El-Sayed et al., 2020; Scott et al., 2020). In

contrast, first-time mothers (primiparas) may experience higher levels of anxiety and uncertainty, which may lead to more cautious behavior during the early stages of recovery. Education level also plays an important role in shaping how individuals respond to health

information and manage their recovery process. Although the intervention was designed to be accessible regardless of literacy level, the similarity of educational background between the two groups helped minimize the risk of bias or confounding factors.

Table 1. Characteristics of Participants

Characteristic	Intervention Group (n = 20)	Control Group (n = 20)	p-value
Age (years) (Mean $\pm$ SD)	27.4 $\pm$ 3.1	27.1 $\pm$ 3.4	0.78
Type of Delivery			
- Cesarean Delivery	13 (65%)	12 (60%)	0.75
- Spontaneous Vaginal	7 (35%)	8 (40%)	
Parity			
- Primiparous	9 (45%)	8 (40%)	0.75
- Multiparous	11 (55%)	12 (60%)	
Education Level			
- Primary school	4 (20%)	5 (25%)	0.89
- Secondary school	10 (50%)	9 (45%)	
- Higher education	6 (30%)	6 (30%)	

Time of First Mobilization

The mean time of first mobilization such as sitting, standing, or walking, in the intervention group was 8.2 $\pm$ 1.3 hours after delivery, which was significantly earlier than the control group with a mean of 13.6 $\pm$ 2.1 hours ($p < 0.001$). This indicates that mothers who received the motivational intervention started mobilizing about 5.4 hours earlier than those who received standard care. Early mobilization in the postpartum period is an important element in accelerating recovery after delivery. (Patel & Zakowski, 2021; Tazreean et al., 2022; Nelson et al., 2020). Delayed mobilization has

been associated with increased risk of deep vein thrombosis, delayed return of bowel function, increased pain perception, and prolonged hospital stays (Omairan et al., 2024; Ripollés-Melchor, 2020; Huang et al., 2021). In this study, mothers who received the intervention started their first mobilization such as sitting, standing, or walking in an average of 8.2 hours after delivery, which was significantly earlier compared to the control group whose average was 13.6 hours ($p < 0.001$). These results are in line with the main objective of the study, which was to assess whether motivation-based support can accelerate the onset of mobilization.

Table 2. Time of First Mobilization

Group	Mean $\pm$ SD (hours)	df	p-value
Intervention	8.2 $\pm$ 1.3	38	< 0.001
Control	13.6 $\pm$ 2.1		

The effectiveness of the intervention in encouraging early mobilization can be explained through theories of health behaviour, particularly Social Cognitive Theory. This model emphasizes that motivation, self-efficacy and outcome expectations are key elements that influence behavior change (Islam et al., 2023; Schunk & DiBenedetto, 2020; Hoyer et al., 2026). Motivational support plays an important role in accelerating the initiation of postpartum movement by increasing psychological readiness, reducing fear, and strengthening

the mother's confidence to perform physical activity immediately after delivery. In this study, support was provided through direct communication, setting recovery targets, and regular interactions with midwives. These strategies are known to be effective in improving mothers' readiness to begin physical recovery. The motivational interventions implemented in this study were specifically designed to activate these behavioral factors. Verbal encouragement from midwives, in particular, was instrumental in helping mothers believe in their ability

to recover, especially in the vulnerable early postpartum period.

Self Efficacy Scores

There was a significant increase in self-efficacy scores from pre-test to post-test in the

intervention group. The mean self-efficacy score in the intervention group increased from 62.5 ± 6.7 to 80.2 ± 5.1 ($p < 0.001$). In contrast, the control group showed only a minimal increase (from 61.9 ± 7.2 to 65.3 ± 6.8 ; $p = 0.08$).

Table 3. Self Efficacy Scores

Group	Pre-test Mean $\pm$ SD	Post-test Mean $\pm$ SD	Mean Difference	df	p-value
Intervention (n = 20)	62.5 ± 6.7	80.2 ± 5.1	+17.7	19	< 0.001
Control (n = 20)	61.9 ± 7.2	65.3 ± 6.8	+3.4	19	0.08

Self-efficacy refers to an individual's confidence in their own ability to carry out actions required to achieve particular goals or outcomes. Self-efficacy plays a central role in the postpartum period, influencing maternal engagement in self-care, newborn care, and adaptation to motherhood. The intervention group demonstrated a marked increase in self-efficacy scores from pre-test (62.5 ± 6.7) to post-test (80.2 ± 5.1), a statistically significant improvement ($p < 0.001$). In contrast, the control group showed only a small and statistically insignificant improvement (from 61.9 ± 7.2 to 65.3 ± 6.8 ; $p = 0.08$). This finding is in line with previous studies showing that

structured educational and psychological interventions are effective in improving maternal self-efficacy (Wijk, 2022; Ljungqvist et al, 2021; Grass et al., 2020). An intervention combining information delivery, emotional support and active encouragement was shown to improve postpartum recovery outcomes by making mothers feel more capable and confident in managing their recovery process. The application of Social Cognitive Theory provides a plausible framework to explain the success of this intervention, particularly through the components of verbal persuasion and experiences of success delivered in motivational sessions.

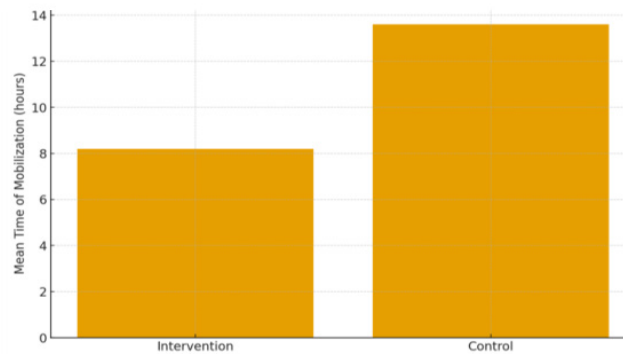


Figure 1. Comparison of Mobilization Time Between Groups

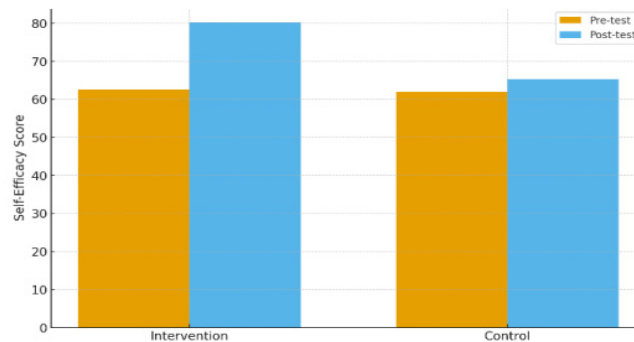


Figure 2. Comparison of Pre and Post Test Self Efficacy Scores

However, this study has some limitations. The relatively small number of participants may limit the ability of the results of this study to represent a wider population. Additionally, the absence of extended follow-up makes it difficult to determine whether the effects observed continue beyond the early postpartum phase. In addition, other variables such as family support, pain level, and psychological state have not been explicitly controlled. Future studies should consider employing larger sample sizes, multi-center designs, and qualitative components to explore the subjective experiences of participants more deeply. Additionally, further research could investigate the effect of motivational interventions on other postpartum outcomes, such as breastfeeding initiation, mental health, and maternal-infant bonding. Exploring the role of socio-cultural factors in shaping maternal responses to motivational strategies would also provide valuable insights for culturally sensitive care design.

CONCLUSION

This study demonstrates that motivational interventions significantly accelerate the initiation of early postpartum mobilization and enhance maternal self-efficacy. Mothers who received structured motivation, including education, encouragement, and continuous support from midwives, initiated mobilization earlier compared to those who received standard care. These findings emphasize the importance of integrating motivational strategies into routine postpartum care practices. From a clinical perspective, midwives and healthcare providers should adopt structured motivational communication and supportive counseling as part of standard postpartum management to improve maternal recovery, reduce the risk of complications such as delayed uterine involution and thromboembolism, and promote better physical and psychological well-being. Health institutions may consider developing standardized motivational intervention protocols and training programs to ensure consistent implementation in maternity wards. Future research is recommended to explore long-term outcomes of motivational interventions, including their effects on maternal mental health, breastfeeding success,

and overall quality of recovery, as well as to examine their applicability across different cultural and healthcare settings.

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