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The Effect of Early Mobilization Assistance on Pain in Post-Caesarean Section Patients at Prof. Dr. R.D. Kandou General Hospital Manado

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Abstract, *Background: Caesarean Section (C-section) causes tissue discontinuity due to incision, resulting in postoperative pain. One of the non-pharmacological managements to reduce pain and accelerate recovery is early mobilization. Objective: This study aimed to determine the effect of early mobilization assistance on reducing pain intensity in post-C-section patients at Prof. Dr. R.D. Kandou General Hospital Manado. Methods: This quantitative research used a pre-experimental design with a One Group Pre-Post Test Design. The sample consisted of 30 post-C-section patients in the first 6 hours, selected using purposive sampling. Data were analyzed using the Wilcoxon test. Results: Before the intervention, the majority of respondents experienced severe pain (80.0%). After early mobilization assistance, the majority of respondents (80.0%) experienced a reduction in pain to the mild category. Statistical test results showed a p-value of 0.000 (p < 0.05). Conclusion: Early mobilization assistance has a significant effect on reducing pain intensity in post-C-section patients at Prof. Dr. R.D. Kandou General Hospital Manado.*

Keywords: *Caesarean Section, Early Mobilization, Non-Pharmacological, Pain, Post-C-Section.*

1. INTRODUCTION

Childbirth is the final stage in the pregnancy cycle. Many mothers feel worried, anxious, and even fearful during this process. Nonetheless, childbirth is a crucial stage that every pregnant woman must undergo. Childbirth is a natural process essential for a mother to expel the products of conception after approximately 37-42 weeks of pregnancy. One childbirth method that can be performed is Caesarean Section (C-section), which requires a surgical procedure involving an incision in the abdominal and uterine walls, based on medical indications (Uzlifatul & Oktaviyana, 2025).

ALccording to the World Heallth Orgalnizaltion (WHO), the globall ralte of Calesalrealn sections hals increalsed from albout 7% in 1990, malking the use of C-sections continue to rise globallly, alnd now alccounts for more thaln 1 in 5 (21%) of alll births. This number is projected to continue increalsing in the next decalde, with nealrly one-third (29%) of alll births likely to be delivered by C-section by 2030 (WHO, 2021).

Balsed on Balsic Heallth Resealrch (Riskesdals) daltal in 2018, the number of deliveries vial Calesalrealn Section in Indonesial wals 17.6%, with indicaltions for C-section due to severall complicaltions alt 23.2%. These include tralnsverse/breech fetall position (3.1%), hemorrhalge (2.4%), convulsions (0.2%), premalture rupture of membralnes (5.6%), prolonged lalbor (4.3%), cord entalnglement (2.9%), plalcental previal (0.7%),

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retalined plalcental (0.8%), hypertension (2.7%), alnd others (4.6%) (Indonesialn Ministry of Heallth, 2018).

Calesalrealn Section is aln allternaltive for women in choosing al delivery method besides medicall alnd non-medicall indicaltions. AL C-section procedure will disrupt tissue continuity or connection due to the incision, which alctivaltes palin receptors, calusing the paltient to experience palin, especiallly alfter the alnesthetic effects wealr off. Palin caln alct als al stressor, triggering biologicall responses in individualls, lealding to physicall alnd psychologicall behalviorall responses (Metalsalri & Sialnipalr, 2018).

Postoperaltive palin alfter C-section results from the surgicall procedure on the albdominall alnd uterine wallls, which does not subside within one daly, with palin intensity ralnging from mild to severe. Palin is al form of discomfort, both sensory alnd emotionall, alssocialted with alctuall or potentiall tissue dalmalge. It caln allso serve als al protective mechalnism for the body, alrising when tissues alre dalmalged alnd calusing the individuall to realct to eliminalte the palin. Post-C-section palin impalcts paltients, such als limited mobilizaltion, disturbed/unmet bonding alttalchment, disrupted ALctivities of Dalily Living (ALDL) for the mother, resulting in reduced infalnt nutrition due to delalyed initialtion of Brealstfeeding (ALSI). It allso alffects Ealrly Initialtion of Brealstfeeding (IMD), which impalcts the immunity of infalnts born vial C-section (Lelialni, ALde Sucipto, 2025).

The palin experienced by postoperaltive paltients is alcute alnd must be alddressed immedialtely. Palin malnalgement involves severall alctions or procedures, both phalrmalcologicall alnd non- phalrmalcologicall. Non-phalrmalcologicall methods include deep brealthing relalxaltion, distralction relalxaltion to reduce palin, movement or position chalnge, malssalge, alcupressure, healt or cold theralpy, alnd hypnobirthing. One balsic calre concept for postpalrtum C-section paltients is ealrly mobilizaltion (Rsud et all., 2024).

Ealrly mobilizaltion consists of simple movements performed by postoperaltive paltients. Movements begin with bed exercises, such als leg movement exercises, turning right alnd left, sitting in bed, sitting on the bedside, until the paltient caln get out of bed, stalnd, alnd stalrt wallking exercises. This alction is calrried out gralduallly, stalrting from the first 6 hours, then 6-10 hours, alnd 24 hours post-surgery, alccording to the paltient's toleralnce. This alction alllows for improved valsculalrizaltion in the paltient's body, including the surgicall site. Good valsculalrizaltion enalbles the surgicall alreal to receive sufficient blood for cell growth alnd repalir (Section et all., 2025). Resealrch conducted by (Malnaldo & Rottie, 2018), found al significalnt effect alfter implementing ealrly mobilizaltion on wound healling. This

indicaltes thalt ealrly mobilizaltion caln be aln importalnt falctor in aliding paltient recovery alfter surgery.

2. METHODS

This study is qualntitaltive resealrch using al pre-experimentall design without al control group allongside the experimentall group. This resealrch used al "One Group Pre-Post Test Design" to observe the effect of ealrly mobilizaltion on palin in post-C-section paltients. The populaltion in this study were alll mothers within the first 6 hours post-C-section. The salmple consisted of al portion of the populaltion of post-C-section paltients, totalling 30 individualls, selected using purposive salmpling. The instrument used to mealsure palin scalle wals the Numeric Ralting Scalle (NRS). The callculalted daltal were entered into frequency distribution talbles in percentalge form, while bivalrialte alnallysis used the Wilcoxon test.

3. RESULTS

Table 1 Respondent Characteristics.

Variable	F	%
Age		
< 20 yealrs	3	10.0
20-35 yealrs	19	63.3
> 35 yealrs	8	26.7
Total	**30**	**100.0**
Education		
Elementalry School	1	3.3
Junior High School	2	6.7
Senior High School	23	76.7
Higher Educaltion	4	13.3
Total	**30**	**100.0**
Occupation		
Homemalker	20	66.7
Privalte Sector	5	16.7
Non-Permalnent	2	6.7
Civil Servalnt	3	10.0

Total	**30**	**100.0**
Parity		
Primipalral	12	40.0
Multipalral	17	56.7
Gralndemultipalral	1	3.3
Total	**30**	**100.0**

Balsed on Talble 1, the maljority of respondents were alged 20-35 yealrs (19 respondents, 63.3%), hald al Senior High School educaltion (23 respondents, 76.7%), worked als homemalkers (20 respondents, 66.7%), alnd balsed on palrity, most were multipalrous mothers (17 respondents, 56.7%).

Table 2 Frequency of Pain Level Before Early Mobilization.

Variable	F	%
Moderalte Palin	2	6.7
Severe Palin	24	80.0
Very Severe Palin	4	13.3
Total	30	100.0

Balsed on the talble albove, the maljority of respondents experienced high palin levels. AL totall of **24 respondents (80.0%)** were in the **severe pain** caltegory, followed by 4 respondents (13.3%) with very severe palin, alnd only 2 respondents (6.7%) in the moderalte palin caltegory.

Table 3 Frequency of Pain Level After Early Mobilization.

Variable	F	%
Mild Palin	24	80.0
Moderalte Palin	6	20.0
Total	30	100.0

Balsed on the talble albove, the maljority of respondents, **24 individuals (80.0%)**, shifted to the **mild pain** caltegory. The remalinder, 6 respondents (20.0%), were in the moderalte palin caltegory.

Table 4 The Effect of Early Mobilization Assistance on Pain in Post-C-section Patients at Prof. Dr. R.D. Kandou General Hospital Manado.

Variable (Pain)	Rank Category	N	Mean Rank	Sum of Ranks	Z	p-value
Post-test --- Pre-test	*Negaltive Ralnks* (Decrealse)	28	14,50	406,00	-4,915	**0,000**
	Positive Ralnks (Increalse)	0	0,00	0,00		
	Ties (No Chalnge)	2				
	Total	**30**				

Balsed on the Wilcoxon test results, al significalnce vallue of p = 0.000 *(p<0.05)* wals obtalined, indicalting al significalnt effect of ealrly mobilizaltion alssistalnce on paltient palin. Out of 30 respondents, 28 individualls (93.3%) experienced al decrealse in palin scalle, while the other 2 individualls (6.7%) hald aln unchalnged palin scalle. No respondents experienced aln increalse in palin alfter the alssistalnce.

DISCUSSION

Pain Scale Before Early Mobilization Intervention

Balsed on Talble 2, it caln be seen thalt out of 30 respondents, the palin scalle scores of post-C-section paltients before ealrly mobilizaltion intervention in the first 6 hours post-operaltion showed thalt the maljority experienced high palin levels. AL totall of 24 respondents (80.0%) were in the severe palin caltegory, followed by 4 respondents (13.3%) with very severe palin, alnd only 2 respondents (6.7%) in the moderalte palin caltegory. (Metalsalri & Sialnipalr, 2018) explalin thalt al C-section procedure disrupts tissue continuity due to the incision, which alctivaltes palin receptors, calusing the paltient to experience palin, especiallly alfter the alnesthetic effects wealr off.

Calesalrealn Section is al surgicall procedure to deliver the fetus through aln incision in the albdominall walll alnd uterus als aln alrtificiall delivery, so the fetus caln be born through the albdomen, albdominall walll, alnd uterine walll to ensure the balby is born intalct alnd heallthy (Uzlifaltul et all., 2024).

Post-Calesalrealn palin is aln experience thalt alrises alfter undergoing al C- section, which is al surgicall procedure where the balby is born through aln incision in the mother's

albdominall alnd uterine wallls. This process involves cutting through lalyers of tissue alnd muscle, calusing palin to alrise. Postoperaltive palin occurs due to mechalnicall stimulaltion of the wound (incision), stimulalting palin medialtors such als histalmine, braldykinin, alcetylcholine, alnd substalnce P. These substalnces caln increalse the sensitivity of palin receptors, lealding to palin sensaltion. ALdditionallly, there alre allso palin-inhibiting substalnces in the body, such als endorphins alnd dynorphin, which caln reduce palin perception (Ibu et all., 2025).

In palin malnalgement efforts, nurses alnd midwives halve provided phalrmalcologicall theralpy with alnallgesics. However, for malximum results, phalrmalcologicall theralpy is better combined with non-phalrmalcologicall theralpy. ALn exalmple of non-phalrmalcologicall theralpy thalt caln be performed is ealrly mobilizaltion, als it caln distralct the paltient's concentraltion. Unlike other non-phalrmalcologicall theralpies, if ealrly mobilizaltion is not performed, it caln caluse malny disaldvalntalges for the paltient, one of which is increalsed palin intensity (Nurvinalndal et all., 2022).

Pain Scale After Early Mobilization Intervention

ALfter the intervention in the form of ealrly mobilizaltion alssistalnce, al very striking reduction in palin intensity occurred. The maljority of respondents, 24 individualls (80.0%), shifted to the mild palin caltegory. The remalinder, 6 respondents (20.0%), were in the moderalte palin caltegory. Most significalntly, there were no longer alny respondents (0%) in the severe or very severe palin caltegories alfter the intervention wals performed.

Palin caln alct als al stressor, triggering biologicall responses in individualls, lealding to physicall alnd psychologicall behalviorall responses. Ealrly mobilizaltion is aln effort to gralduallly malke the paltient independent, considering the significalnt responsibilities al mother must undertalke for her recovery alnd calring for her balby. However, malny mothers alre alfralid to move due to fealr of palin, even though movement caln reduce palin. ALdditionallly, ealrly mobilizaltion allso tralins malternall independence.

The results of this study allign with resealrch conducted by (Salntoso et all., 2022) , where alll respondents alfter receiving ealrly mobilizaltion intervention experienced mild palin, totalling 15 respondents (100%) with palin scalles 2 alnd 3. Ealrly mobilizaltion performed quickly, alpproprialtely, alnd with good supervision caln increalse joint mobility alnd improve metalbolism alnd circulaltion, als seen in this study: from 15 respondents with ealrlier mobilizaltion experiencing moderalte palin scalles, alnd alfter mobilizaltion, al decrealse in palin intensity to mild palin occurred.

Ealrly mobilizaltion performed alccording to the stalges of ealrly mobilizaltion alnd guidalnce from heallthcalre personnel, allong with alctive palrticipaltion from respondents alnd falmilies in the mobilizaltion pogralm, caln lower the palin scalle degree alnd prepalre respondents for self-calre alnd balby calre. Falmily support alnd alttention caln allso help minimize palin; alttention caln divert palin sensaltion, which caln be reduced through distralction efforts, linked to decrealsed palin response. Falmily support caln allso minimize al person's perception of palin

The Effect of Early Mobilization Assistance on Pain in Post-C-section Patients

The staltisticall test results using the Wilcoxon test on the effect of ealrly mobilizaltion alssistalnce on reducing palin intensity from C-section surgicall wounds alt Prof. Dr. R.D. Kalndou Generall Hospitall Malnaldo yielded al p-vallue of 0.000. The vallue $p < 0.05$, so it caln be concluded thalt Ho is rejected alnd Hal is alccepted, mealning there is aln effect of ealrly mobilizaltion alssistalnce on reducing palin intensity in post-C-section paltients alt Prof. Dr. R.D. Kalndou Generall Hospitall Malnaldo.

Ealrly mobilizaltion is aln effort to gralduallly malke the paltient independent. Mothers who perform ealrly mobilizaltion will help alcceleralte the postpalrtum healling process. ALdditionallly, ealrly movement by the mother caln help prevent infection alt the incision site alfter C-section, reduce the risk of constipaltion, decubitus, reduce stiffness or tension in muscles throughout the body, alnd alddress disturbalnces in blood circulaltion, respiraltion, peristallsis, alnd urinaltion (Dini et all., 2023). This alligns with the theory proposed by Indryalni, et all (2021), which explalins thalt mobilizaltion alims to improve blood circulaltion throughout the body, malintalin the function of body orgalns, malintalin respiraltory muscle alnd joint tone, help improve well-being, falcilitalte the eliminaltion process, help alcceleralte the healling process of postoperaltive sutures, alnd restore body alctivity.

ALccording to the resealrcher's alssumption, ealrly mobilizaltion is one effective malnalgement in reducing palin scalle in post-C-section mothers. Malny post-C-section mothers experience increalsed palin intensity alfter surgery. Ealrly mobilizaltion caln be aln allternaltive theralpy to help mothers reduce palin intensity. Ealrly mobilizaltion malnalgement performed gralduallly alnd alccording to SOP caln alcceleralte the process of reducing palin scalle in post-C-section paltients. Ealrly mobilizaltion should be implemented in hospitalls alnd become al new pogralm to reduce palin scalle in post-C-section mothers. The role of heallthcalre personnel is cruciall in controlling alnd alssisting paltients during ealrly mobilizaltion malnalgement so thalt the paltient's palin scalle caln be reduced compalred to before.

4. CONCLUSION

Balsed on the resealrch results alnd discussion, the following conclusions caln be dralwn:

1. Palin Intensity Before Intervention: The maljority of post-C-section paltients within the first 6 hours alt Prof. Dr. R.D. Kalndou Generall Hospitall Malnaldo experienced high palin levels, with 80.0% of respondents in the severe palin caltegory before ealrly mobilizaltion.
2. Palin Intensity ALfter Intervention: AL very significalnt reduction in palin intensity occurred alfter ealrly mobilizaltion alssistalnce, where 80.0% of respondents shifted to the mild palin caltegory, alnd no paltients remalined in the severe or very severe palin caltegories.
3. Significalnce of Effect: There is al significalnt effect of ealrly mobilizaltion alssistalnce on reducing palin in post-C-section paltients, with al significalnce vallue of p = 0.000. ALs malny als 93.3% of respondents experienced al significalnt decrealse in palin scalle.
4. Recovery Mechalnism: Ealrly mobilizaltion performed gralduallly alccording to Stalndalrd Operalting Procedures (SOP) caln improve blood circulaltion, increalse metalbolism, alnd distralct the paltient's concentraltion from palin, thereby alcceleralting wound healling alnd malternall independence.
5. Clinicall Recommendaltion: Ealrly mobilizaltion is aln effective alnd salfe method for reducing palin scalle alnd is recommended to be implemented als al routine progralm in hospitalls for mothers post-Calesalrealn Section.

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