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Original Research

Early mobilization and length of wound healing post-sectio caesarean: A cross-sectional study

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ABSTRACT

Background: Mobilization post sectio caesarean is an effort to prevent risk and complications of infection. The early mobilization stages are the first hour after surgery, lie down first, move the arms, bend and slide the legs, and lift the heels, six to ten hours after surgery woman is required to turn her body to the right and left side.
Objective: To determine the correlation between early mobilization with length of wound healing post-sectio caesarean.
Method: A quantitative analytical study with a cross-sectional approach. The study included 30 women who had had a caesarean from September to November 2023. The research instruments used were a questionnaire and an early mobilization observation sheet. Wound healing was measured by means of the REEDA scale. Chi-square test for statistical analysis.
Results: The results showed that there were 22 respondents in good category 73.3%, and 27 people in fast wound healing category 90%. The chi-square test obtained a p-value of 0.014, it was mean that there was a significant relationship between early mobilization and length of wound healing post-sectio caesarean.
Conclusion: The application of early mobilization is effective in overcoming physical mobility disorders so that women post-sectio caesarean can return to their activities.

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1. Introduction

According to the World Health Organization (WHO), in 2020 the number of sectio caesarean (SC) deliveries increased throughout the world and exceeded the recommended range of 10%-15%. Latin America and the Caribbean region contributed to the birth rate with the highest sectio cesarean, were (40.5%), followed by Europe (25%), Asia (19.2%), and Africa (7.3%) (WHO, 2021). Based on the results of Basic Health Research in 2018, the birth rate in Indonesia reached 79.3%, with the SC method at 17.6%. Indications for SC delivery are caused

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by several complications (23.2%), including transverse/breech fetal position (3.1%), bleeding (2.4%), seizures (0.2%), premature rupture of membranes (5.6 %), prolonged labor (4.3%), umbilical cord entanglement (2.9%), placenta previa (0.7%), retained placenta (0.8%), hypertension (2.7%), and others (4.6%). Data from the Ministry of Health in 2021, SC births in Indonesia were (17.6%), the highest SC was in DKI Jakarta at (31.3%) and the lowest was in Papua (6.7%). Meanwhile, for data from South Kalimantan Province, SC deliveries were 13.53% (Ministry of Health - Republic of Indonesia, 2021).

Various efforts have been made to use non-pharmacological (Palimbo et al., 2023, Anisa et al., 2023) and modern techniques because of the various dangers that can arise during pregnancy and birth (Rahma et al., 2024). Some of the impacts that can occur if early post-SC mobilization is not carried out include abnormal bleeding, thrombosis, poor involution, blocked blood circulation, increased pain intensity, longer wound healing process and infection. Enhanced Recovery After Cesarean Sectio (ERACS) or ERAS in SC deliveries includes optimizing antepartum services, intrapartum services including anaesthesia management and postpartum services for inpatients and outpatients based on standardized guidelines. The ERAS concept was first introduced by Henrik Kehlet from Denmark in the British Journal of Anesthesia magazine in 1997 (Golder & Papalois, 2021). The aim of ERACS concept is, among other things, to handle post-operative complaints, where ERACS has been proven to be able to reduce the incidence of complaints faced by patients post-SC delivery. In addition, the ERACS technique allows faster functional recovery where patients can undergo early mobilization less than 24 hours after surgery, thereby increasing patient comfort and satisfaction (Teigen et al., 2020).

Early mobilization is important post-SC to prevent complications. The patient's ability to move and walk will determine maximum movement training. Moving and being active in bed helps prevent complications in respiratory and cardiovascular systems, avoids pressure ulcers, stimulates intestinal peristalsis, and reduces pain. With early mobilization, blood circulation improves, which will affect wound healing. Wound healing involves the integration of physiological processes. A clean surgical incision is an example of a wound with minimal tissue loss. The surgical wound will undergo primary healing (primary intention). The edges of skin are pressed together or close together so there is a low risk of infection and healing occurs quickly (Potter et al., 2017). Excessive worry and fear of moving often occur in mothers

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due to pain caused by surgical wounds. This condition also causes women to only lie on one side and this can cause stiff joints, poor posture, muscle contractures and tenderness (Naziyah et al., 2022).

A preliminary study shows data on post-SC in 2021 was 1.9% of 225 births and increased in 2022 to 2.23% of 288 deliveries. Furthermore, ERACS is useful for accelerating the return to normal physiological activities, reducing the duration of hospitalization, saving treatment costs in obstetrics units and returning patients more rapidly. This study aims to determine a correlation between early mobilization and length for wound healing post-sectio caesarean.

2. Method

Research design

This type of research is observational analysis with a cross-sectional approach. Analysis of data on papulation events obtained from only one observation time is a characteristic of cross-sectional studies. The population is all women post-SC from September to November 2023 at Pertamina Tanjung Hospital.

Respondent

This research succeeded in collecting 30 respondents. Respondents were obtained through an accidental sampling technique. Accidental sampling is a side sampling technique by finding respondents who are in accordance with the research objectives, in this context, respondents are mothers who underwent SC with the ERACS procedure.

Data collection

Data collection was carried out on respondents who had expressed their willingness to take part in research activities. The research instruments were questionnaires and early mobilization observation sheets. Wound healing was measured using redness, edema, ecchymosis, discharge, and approximation (REEDA) scale. The REEDA is a measure of perineal healing that was mainly created by Davidson (Alvarenga et al., 2015; Pebolo et al., 2020).

Data Analysis

Data were analyzed descriptively and presented in the form of frequency distributions and percentages because the data collected was a type of data category. Correlation analysis between early mobilization and the duration of post-SC wound healing was carried out using the Chi-square test. The software used for data analysis is Statistical Package for Social

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Sciences version 25.

Ethical consideration

This research has considered ethical aspects by not forcing respondents to take part in activities. Freedom for respondents to continue activities or stop participating in activities. The aim of the activity has been well conveyed, and the expected benefits are for the good of future patients and health science in general. The research implementation has been approved by the research ethics commission of Sari Mulia University with identity number 140/KEP-UNISM/II/2024.

3. Results

Respondent characteristics

The data shown in Table 1, obtained characteristics based on age frequency, largest in the category 20 -35 years or no risk (19 respondents [63.3%]). In the occupation category, the majority were unemployed (26 respondents [86.7%]). Meanwhile, in the education level category, senior high school is the highest frequency (14 respondents [46.7%]) compared to junior high school and elementary school (eight respondents each [26.7%]).

Table 1. Characteristics of respondents

Characteristics	Frequency (respondent)	Percentage (%)
Ages (year)		
20-35 (has no risk)	19	63.3
< 20 and > 35 (has risks)	11	36.7
Occupations		
Unemployed	26	86.7
Self-employed	4	13.3
Education levels		
Elementary school	8	26.7
Junior High School	8	26.7
Senior High School	14	46.7

Distribution of early mobilization and length of healing wounds post-sectio caesarean

The data distribution in Table 2 shows that the good category in the early mobilization variable is the highest frequency of the 30 respondents who participated, as many as 22 respondents (73.3%), while the less category is eight respondents (26.7%). On the other hand, the wound healing time variable showed the highest frequency in the fast category, with as many as 27 respondents (90.0%). Then in the medium category, there were only three

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respondents (10.0%), and none were in the late category (0.0%).

Table 2. Frequency distribution based on early mobilization and length of healing wounds post-sectio caesarean

Categories	Frequency (respondent)	Percentage (%)
Early mobilization		
Good	22	73.3
Less	8	26.7
Length of healing wounds		
Fast	27	90.0
Medium	3	10.0
Late	0	0.0

Correlation of early mobilization and length of healing wounds post-sectio caesarean

In Table 3, the results of cross-tabulation processing show that early mobilization data in the good category regarding wound healing time of post-SC in a fast category is the highest (73.3%) compared to other categories. The remaining frequency for eight people was in less category of early mobilization (26.7%), there were five people in fast category for a length of wound healing (16.6%), and medium category was three people (10.0%). Fisher's exact test obtained a p-value (0.014), meaning that there is a significant correlation between early mobilization and length of wound healing post-SC.

Table 3. Correlation between early mobilization and length of wound healing *post-sectio* caesarean

Early mobilization	Length of wound healing post sectio caesarean						Total		p-value*
	Fast		Medium		Late		n	%	
	n	%	n	%	n	%			
Good	22	73.3	0	0	0	0	22	73.3	0.014
Less	5	16.7	3	10.0	0	0	8	26.7	

Notes: n are respondents; * is Fisher's exact test.

4. Discussions

Post-sectio caesarean mobilization is a movement, position or activity carried out within a few hours after giving birth. Moving the body early is also conditioned to be careful and gradual. According to Carpenito-Moyet (2009), this is intended to prevent complications from appearing early, speed up recovery, healing time for surgical wounds, and reduce risks due to prolonged bed rest such as pressure ulcers, stiffness due to tension of muscles throughout the body system, blood circulation, respiratory system is disturbed, there are also peristaltic and urinary disorders (Indanah et al., 2021). Sometimes patients are reluctant to move

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because they are afraid of stitches coming loose and also complain of pain in the surgical area. Roslianti et al. (2018), show that a total of 34 women post-SC, showed the highest results in early mobilization with good implementation categories at 6 – 12 hours (61.8%), 12 – 24 hours (67.6%), >24 hours (100%), and after few days postpartum (73.5%). In line with the results of Dewi et al. (2022), that early mobilization is very effective in accelerating post-SC recovery, mainly in the wound healing process. Also in several previous studies, researchers conducted experiments by adding progressive exercises and other proven early ambulation techniques. This is in line with the study from Jadhav and Gosavi (2023), which also combined progressive exercise in the experimental group with early mobilization, the results of a p-value were <0.05 which was more effective than the control group. The frequency distribution was highest in the very good (74.55%) and good (25.45%) categories, while in the control group, 36 (65.45%) had good results, and 19 (34.54%) had bad results. This is also relevant to research from Youness and Ibrahim (2017) and Susanti & Sari (2022).

There are various determining factors that influence the speed of post-SC wound healing. The more effective time or length of treatment days, the faster process and length of wound healing will be. The benefits of early mobilization also help blood circulation to become smooth so that oxygen transfer into the tissue is also good and this is what helps wound healing occur quickly too. Other techniques and methods have also been proven Macones et al. (2019), including providing adequate nutrition to meet nutritional content, wound care and medicines that can be accessed and afforded by patients and families. In literature study, Idawati et al. (2023), the pain felt by post-SC patients is also influenced by early mobilization as a non-pharmacological healing technique. One of the reluctance post-SC women to carry out early mobilization is due to pain. At this point, it is important to discuss aspects of pain and mobilization because post-operative pain results in stress to which patient will respond biologically and psychologically. This sensory reaction gives rise to feelings of discomfort that each individual expresses differently.

Post-SC scars are disruption of cell continuity resulting from surgery carried out by opening abdominal wall with certain indications to remove the fetus and placenta (Debras, E., 2024; Schepker et al., 2015; Vasudeva et al., 2016). The wound healing process consists of three phases, namely inflammation, proliferation (epithelialization) and maturation (remodelling), each phase has its own characteristics, where wounds have potential to cause

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infection, and become one of obstacles to wound healing process. In accordance with Guo & DiPietro (2010), and Green et al. (2016), apart from mobilization, it is also important to consider other factors that could influence or even hinder the post-op wound healing process, including age, nutritional status, mobilization, infection, circulation and oxygenation, medications, and wound conditions. The correlation between mobilization and wound healing, blood vessels that supply blood to the wound area cause blood clotting and platelets will gather in the wound area to stop bleeding by forming fibrin threads. This then causes increased circulation to function well (Singh et al., 2020).

In line with research (Paul et al., 2019), which showed complete post-SC healing in an experimental group showing a gradual increase in post-operative recovery from the first day (23.77 ± 2.763), second day (35.37 ± 2.498) and third day (45 .67 ± 2.564) similar to the control group, there was also an improvement in postoperative recovery on first day (18.17 ± 1.147), on second day (22.53 ± 2.776) and on third day (32.97 ± 2.671), which when compared with control group, postoperative recovery was much faster in experimental group. It was further explained that the standard time for post-SC wound healing is approximately one week, while the recovery of the uterus in the post-partum period is approximately three months. It further added important practice implications for early ambulation and recovery by conducting program training and health education for nurses providing care to post-SC women, should practice early ambulation on the ward after 24 hours post-SC. Preparing post-SC women to perform daily activities on their own as soon as possible and be able to independently carry their babies with early help from ambulation training.

Zuiatna (2019), shows that there is 50.0% of respondents in fast category for post-SC wound healing, and Chi-square test results show a p-value of 0.042, which was similar to Irmayanti (2019), a p-value of 0.03. The healing time for post-SC wounds can last for one year or more until the scars merge firmly. Therefore, adequate care is needed for every post-operative wound. Likewise, research by Harahap et al. (2023), showed that almost all respondents, namely 15 respondents, experienced wound healing in the inflammatory phase category both on the third day post-SC and after (post-test) early mobilization. The results of the paired sample T-test showed that the p-value was <0.05, which means that early mobilization had a significant effect on the wound healing process in the inflammatory phase post-sectio caesarean.

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5. Conclusion

From the results and practical implications that have been described in this research, implementing early mobilization in every woman after sectio caesarean is very related and influences the process and duration of healing of wounds or surgical scars as well as overall recovery during the post-partum period. At the same time, other factors also determine the duration of wound healing, including oxygenation, blood circulation and physiological systems, adequate nutrition and nutritional intake, progressive exercise or exercise movements and other treatments.

6. Conflict of interest

All authors declare no conflict of interest.

7. References

Alvarenga, M. B., Francisco, A. A., de Oliveira, S. M., da Silva, F. M., Shimoda, G. T., & Damiani, L. P. (2015). Episiotomy healing assessment: Redness, Oedema, Ecchymosis, Discharge, Approximation (REEDA) scale reliability. *Revista latino-americana de enfermagem, 23*(1), 162–168. https://doi.org/10.1590/0104-1169.3633.2538

Anisa, F. N., Palimbo, A., Maolinda, W., & Yuliyana. (2023). Effect of warm compress and breathing technique on duration of the second stage of labor. *Health Sciences International Journal, 1*(1), 16-23. https://hsij.anandafound.com/journal/article/view/7

Carpenito-Moyet, L. J. (2009). Nursing care plans & Documentation – Nursing diagnoses and collaborative problems. China: Wolters Kluwer Health – Lippincott Williams & Wilkins.

Debras, E., Capmas, P., Maudot, C., & Chavatte-Palmer, P. (2024). Uterine wound healing after caesarean section: A systematic review. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *296*, 83–90. https://doi.org/10.1016/j.ejogrb.2024.02.045

Dewi, A. P. S., Maesaroh, S., Sulasih, U., Rahmadhani, W., & Novyriana, E. (2022). The Role of Early Mobilization on Wound Healing After Sectio Caesarea. *Journal of Sexual and Reproductive Health Sciences, 1*(1), 7-14. https://doi.org/10.26753/jsrhs.v1i1.698.

Golder, H. J., & Papalois, V. (2021). Enhanced Recovery after Surgery: History, Key Advancements and Developments in Transplant Surgery. *Journal of clinical medicine*, *10*(8), 1634. https://doi.org/10.3390/jcm10081634

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Vol. 2, No. 2, August 2024, pp. 104 – 114
ISSN: 3026-5037 DOI: https://doi.org/10.71357/hsij.v2i2.32

Guo, S., & Dipietro, L. A. (2010). Factors affecting wound healing. *Journal of dental research*, *89*(3), 219–229. https://doi.org/10.1177/0022034509359125

Harahap, S., Sianturi, S. I., & Dalimunthe, D. Y. (2023). The Effect of Early Mobilization on the Process of Wound Healing in the Inflammatory Phase of Post Sectio Caesarea. *Asian Journal Health and Science, 2*(11), 887-895. https://doi.org/10.58631/ajhs.v2i11.70

Idawati, I., Khaironnisa, D., Aisyah, S., Husna, N., & Setiawati, D. (2023). Effect of early mobilization on post SC pain (a literature review). *Science Midwifery*, 11(3), 620-628. https://doi.org/10.35335/midwifery.v11i3. 1260.

Indanah, I., Karyati, S., Aulia, Q. A. Y., & Wardana, F. (2021, May). Hubungan Status Paritas Dan Mobilisasi Dini Dengan Kemandirian Ibu Post Sectio Caesaria. In Prosiding University Research Colloquium (pp. 660-665). https://repository.urecol.org/index.php/proceeding/article/view/1461.

Irmayanti. (2019). Early Mobilization in the Healing Process of Sectio Caesarea Wounds in Postpartum Mothers at Dewi Sartika Hospital [in Indonesia]. *Jurnal SMART Kebidanan*, *6*(1), 16-19. https://doi.org/ 10.34310/sjkb.v6i1.237.

Jadhav, C., & Gosavi, A. (2023). To Assess the Effect of Early Ambulation and Progressive Exercise on Post-cesarean Section Recovery among Women at Selected Hospitals of the City. *International Journal of Nursing Research*, *9*(1), 22-28. https://doi.org/10.31690/ijnr.2023.v09i01.005

Macones, G. A., Caughey, A. B., Wood, S. L., Wrench, I. J., Huang, J., Norman, M., Pettersson, K., Fawcett, W. J., Shalabi, M. M., Metcalfe, A., Gramlich, L., Nelson, G., & Wilson, R. D. (2019). Guidelines for postoperative care in cesarean delivery: Enhanced Recovery After Surgery (ERAS) Society recommendations (part 3). *American Journal of Obstetrics and Gynecology*, *221*(3), 247.e1-247.e9. https://doi.org/10.1016/j.ajog.2019.04.012

Ministry of Health - Republic of Indonesia. (2021). Indonesi Health Profil [in Indonesia]. Jakarta: Ministry of Health - Republic of Indonesia

Naziyah, Wowor, T. J., Dwi, L. (2022). The Relationship of Early Mobilization and Wound Healing of Inflammation Phase among Post Cesarean Section Women at PMI Hospital Bogor West Java. *Nursing and health sciences journal,2(2),* 99-103. https://doi.org/10.53713/nhs.v2i2.42

Health Sciences International Journal (HSIJ)
Vol. 2, No. 2, August 2024, pp. 104 – 114
ISSN: 3026-5037 DOI: https://doi.org/10.71357/hsij.v2i2.32

Palimbo, A., Anisa, F. N., Handayani, L., & Hasanah, U. (2023). The effectiveness of using warm compresses and birthing balls on the anxiety level of the active phase of the first stage of labor. *Health Sciences International Journal, 1*(1), 1-8. https://hsij.anandafound.com/journal/article/view/3

Paul, R., Narayan, P. J., & Kaur, H. (2019). Effectiveness of Early Ambulation on Post Operative Recovery among the Women with Caesarean Section (CS). *Int J Trend Sci Res Dev*, 3, 851-5. https://doi.org/10.31142/ijtsrd23067

Pebolo, P. F., Judith, A., & Dan, K. K. (2020). Episiotomy-related morbidities measured using redness, edema, ecchymosis, discharge and apposition scale and numerical pain scale among primiparous women in Mulago National Referral Hospital, Kampala, Uganda. *The Pan African medical journal*, *36*, 347. https://doi.org/10.11604/pamj.2020.36.347.25049

Potter, P. A., Perry, A. G., Stockert, P. A., & Hall, A. M. (2017). Fundamental of nursing, ninth edition. Missouri: Elsevier.

Rahmah, L., Yuliana, F., Palimbo, A., Wahdah, R., & Rahayu, I. P. (2024). Treatment of perineal wounds using complementary alternative therapies: Evidence based case review. *Health Sciences International Journal, 2*(1), 24-33. https://hsij.anandafound.com/journal/article/view/14

Roslianti, E., Srinayanti, Y., Kusumawaty, J., & Setiyani, E. (2018). The description of the treatment of early mobilization on the mother post sectio caesarea in Lotus Ii Blud Hospitals Banjar year 2018. *Jurnal Kesehatan, 5*(2), 1-11. https://doi.org/10.52221/jurkes.v5i1.18

Schepker, N., Garcia-Rocha, G. J., von Versen-Höynck, F., Hillemanns, P., & Schippert, C. (2015). Clinical diagnosis and therapy of uterine scar defects after caesarean section in non-pregnant women. *Archives of gynecology and obstetrics*, *291*(6), 1417–1423. https://doi.org/10.1007/s00404-014-3582-0

Singh, M. S., Nutan, M. K., & Jaiswar, S. P. (2020).Effectiveness Of Early Ambulation On Post-Operative Post Operative Recovery Among Caesarean Mothers. *Int. J. Curr. Res, 12*(06), 11938-11945. https://doi.org/10.24941/ijcr.38983.06.2020

Health Sciences International Journal (HSIJ)
Vol. 2, No. 2, August 2024, pp. 104 – 114
ISSN: 3026-5037 DOI: https://doi.org/10.71357/hsij.v2i2.32

Susanti & Sari, I. (2022). Early mobilization behavior of mother post section caesarea at Embung Fatimah Hospital Batam City. *International Journal of Nursing and Midwifery Science (IJNMS)*, *6*(1), 82-87. https://doi.org/10.29082/IJNMS/2022/Vol6/Iss1/382

Teigen, N. C., Sahasrabudhe, N., Doulaveris, G., Xie, X., Negassa, A., Bernstein, J., & Bernstein, P. S. (2020). Enhanced recovery after surgery at cesarean delivery to reduce postoperative length of stay: a randomized controlled trial. *American journal of obstetrics and gynecology, 222(*4), 372-e1. DOI: 10.1016/j.ajog.2019.10.009.

Vasudeva, A., Amin, S. V., Prakashini, K., Bharatnur, S., & Mundkur, A. (2016). Post-caesarean Haematomas, Septic Collections and Wound Disruptions- Re-Laparotomy Based on Abdominal Imaging. *Journal of clinical and diagnostic research : JCDR*, *10*(11), QJ01–QJ02. https://doi.org/10.7860/JCDR/2016/20920.8833

WHO. (2021). Caesarean section rates continue to rise, amid growing inequalities in access – Rising rates suggest increasing numbers of medically unnecessary, potentially harmful procedures. https://www.who.int/news/item/16-06-2021-caesarean-section-rates-continue-to-rise-amid-growing-inequalities-in-access

Youness, E., & Ibrahim, W. (2017). Effect of early and progressive exercises on post-caesarean section recovery among women attending women's heath hospital. International Journal of Advanced Nursing Studies, 6(2), 71-78. https://doi.org/10.14419/ijans.v6i2.7660

Zuiatna, D. (2019). The Relationship between Early Mobilization and Healing of Post-Caesarean Section Wounds at RSU Melati Perbaungan in 2018 [in Indonesia]. *Jurnal Gentle Birth, 2*(1), 1-9. http://dx.doi.org/10.56695/jgb.v2i1.19