THE IMPACT OF EARLY MOBILIZATION ON CHANGES IN PAIN LEVELS OF CLIENTS AFTER SECTION CESAREA SURGERY AT ROYAL PRIMA MARELAN HOSPITAL: BEFORE AND AFTER

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ABSTRACT

Cesarean section (C-section) rates in Indonesia exhibit a wide range, often surpassing recommended thresholds, particularly in private healthcare facilities. Effective management of postoperative pain, including strategies like early mobilization, is crucial in enhancing wound healing outcomes. This study aimed to evaluate the impact of early mobilization on pain levels among postoperative cesarean section clients. The research employed a descriptive correlational design using a One Group Pretest-Posttest approach conducted at Royal Prima Marelan Hospital in January 2024. The study population consisted of laboring mothers planning to deliver at the hospital, averaging around 52 attendees per month over the last three months. Utilizing the Slovin formula, a sample size of 35 was determined and selected through consecutive sampling based on inclusion criteria. Bivariate statistics were employed to analyze the relationship between variables, with hypothesis testing indicating the validity of hypotheses based on a significance level of 0.05 (p ≤ 0.05 for "meaningful" results and p > 0.05 for "not meaningful" results). The study used a paired t-test for bivariate analysis to assess pain scale changes pre- and post-early mobilization. The findings from the Wilcoxon Test revealed a significant difference, with Early Mobilization demonstrating a positive effect on reducing Pain Levels among inpatients at Royal Prima Marelan Hospital in 2024. Evaluation of Pain Levels in post-cesarean section clients indicated that before Early Mobilization, a majority experienced heightened pain levels, including a small proportion with severe pain. However, after Early Mobilization, while most clients reported a slight increase in pain levels, a minority experienced a more substantial increase. These outcomes suggest that Early Mobilization influences changes in pain levels among postoperative clients at Royal Prima Marelan Hospital in 2024.

KEYWORDS: *Cesarean section rates, Postoperative pain management, Early mobilization impact, Pain levels assessment, Bivariate statistics analysis.*

BACKGROUND

Cesarean section is a surgical procedure in which the fetus is delivered through an incision in the abdominal wall and the uterine wall, provided that the uterus is intact and the fetus weighs over 500 grams. The number of Caesarean section patients in Indonesia, especially in government hospitals, is 20-25% of total deliveries, while in private hospitals, the number is higher, around 30-80% of total deliveries. The Department of Health recommends that Caesarean section deliveries ideally not exceed 20% (Warsono, Fahmi, and Iriantono 2019). Cesarean section is the most common method of childbirth, but it is still a major surgical procedure performed on mothers who are conscious unless it's an emergency (Agustin 2013); (Aust et al. 2013).

Post-surgery, pain often arises due to stimulation of the nerves around the surgical area. This happens because body tissues are cut or disturbed during surgery, and the surrounding nerves send pain signals to the brain. Postoperative pain can vary from mild to severe, depending on the type of surgery, the individual's sensitivity to pain, and the pain management the medical team provides. The duration of postoperative pain also varies but can generally be felt for several days to weeks after surgery. In general, the most severe pain is usually felt in the first days after surgery and then begins to decrease over time. To manage postoperative pain, the medical team usually administers analgesics or painkillers, either in oral or intravenous form. In addition, other pain management techniques such as cold or hot compresses, physical therapy, and relaxation techniques can also help reduce pain intensity and improve patient comfort after surgery. (Abidin, Aceh, and Salawati 2024). Pain that arises after surgery in the intra-abdominal region (inner abdomen) can vary in intensity. About 60% of patients experienced severe pain, 25% had moderate pain, and 15% had mild pain. This variation can be influenced by various factors, including the type of surgery, the individual's sensitivity to pain, and the effectiveness of pain management provided by the medical team (Arief Mansjoer, 2010).

Pain management in postoperative patients involves two approaches, namely pharmacology using drugs and non-pharmacology without drugs. One practical non-pharmacological approach is early mobilization intervention. Early mobilization in postoperative patients is a policy that immediately moves patients from their beds and guides them to walk as quickly as possible. It aims to divert

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the patient's attention from pain to physical activity. Mobilization is a basic human need for daily activities, such as moving, maintaining posture, walking, and other exercises (Nadiya and Mutiara, 2018).

Based on Nadia's research (2018), 13 respondents (32.5%) who did not mobilize early experienced poor healing of surgical wounds. The results of the chi-square test showed a value of ρ (0.031) < α (0.05), which means that there is a significant relationship between early mobilization after cesarean section (SC) and surgical wound healing in the Midwifery Room of the Regional Public House dr. Fauziah Bireuen (Nadiya and Mutiara 2018). The purpose of this study was to determine the effect before and after early mobilization on changes in pain levels in postoperative cesarean section clients.

RESEARCH METHODS
This type of research is descriptive correlational, with a Group Pretest-Postest approach. The location of this research was Royal Prima Marelan Hospital in January 2024. The population in this study was all maternity mothers who wanted to give birth at Royal Prima General Hospital. The survey results, data from the last three months, show the average monthly number of maternity mothers who come and use the facilities of Royal Prima Hospital is $\pm$ 52 people. The number of samples uses the Slovin formula.
n = 52/1+52 (0.01)2
n = 34.21, so that 35 samples were obtained.

Sample selection in this study uses non-probability sampling, namely consecutive sampling or sampling, where all existing samples that meet the inclusion criteria are taken to meet the sample size determined by the researcher.
   Sample inclusion criteria, namely:
   a. Postoperative sectio caesarea patients treated at RSU Royal Prima Marelan
   b. Patients who were on-site when researchers conducted the study
   c. The patient's vital signs (blood pressure, pulse, temperature, and breathing) are stable.
   d. Patients who are willing to be respondents

Bivariate statistics is a method of data analysis to analyze the influence between two variables. Hypothesis testing to decide whether the hypothesis proposed is convincing enough to be rejected or accepted, using statistical tests used a meaning limit of 0.05 so that the p-value $\leq$ 0.05, then the statistics are called "meaningful" and if p > 0.05, then the calculation results are "meaningless." The bivariate analysis used in this study was a paired t-test to examine differences in pain scales before and after early mobilization.

RESULTS AND DISCUSSION
Postoperative pain is a common side effect experienced by individuals who have undergone surgery, including Caesarean section. This pain can be caused by tissue adhesions resulting from the surgery. It is nearly impossible to eliminate this pain, and each person may experience varying levels of pain. Pain levels can be assessed using a facial scale with different degrees, where 0 = No pain, 1 = Slight pain, 2 = Slightly more pain, 3 = More pain, 4 = Severe pain, and 5 = Intense pain.

Table 1. Distribution of Frequency and Percentage of Pain Level of Postoperative Sectio Caesarea Clients Before Early Mobilization at Royal Prima Marelan Hospital in 2024

No	Pain Level	Sum (n)	Percentage
1	Severe pain	8	23%
2	Painful Once	12	34%
3	More Pain	15	43%
	TOTAL	**35**	**35**

Based on Table 1. It is known that before early mobilization, the majority of respondents felt more pain, while the minority of respondents experienced severe pain. Immediate step-by-step mobilization is very useful in helping the healing of postoperative patients.

Table 2. Distribution of Frequency and Percentage of Early Mobilization of Postoperative Sectio Caesarea Clients at Royal Prima Marelan Hospital in 2024

No	Early Mobilization	Sum (n)	Percentage
1	Can Do Well	26	74%
2	Can't Perform Well	9	26%
	TOTAL	**35**	**100**

Based on Table 2. shows the frequency distribution and percentage of Early Mobilization of clients after sectio caesarea surgery at Royal Prima Marelan Hospital in 2024. Of the total 36 respondents, 26 respondents (74%) could do Early Mobilization well, while nine (26%) could not. The overall total of respondents reached 100%.

Table 3.Frequency and Percentage Distribution of Pain Level of Postoperative Sectio Caesarea Clients After Early Mobilization at Royal Prima Marelan Hospital in 2024

No	Pain Level	Sum (n)	Percentage
1	More Pain	11	31%
2	Slightly More Painful	24	69%
	TOTAL	**35**	**100**

Based on Table 3. presents the frequency distribution and Percentage Pain Level of postoperative sectio caesarea clients after Early Mobilization at Royal Prima Marelan Hospital in 2024. Of the total 35 respondents, 11 (31%) experienced more pain levels, while 24 (69%) experienced slightly more pain. The total percentage of all respondents was 100%.

Table 4.Pain Level Before and After Early Mobilization in Postoperative Sectio Caesarea Clients at Royal Prima Hospital

No	Pain Level	Sum (n)	Mean	SD	Min Max
1	Pre-Early Mobilization	35	**3.45**	**0.814**	**3-5**
2	Post-Early Mobilization	35	**2.22**	**0.521**	**2-3**

Based on Table 4. provides an overview of Pain Levels before and after Early Mobilization on postoperative sectio caesarea clients at Royal Prima Marelan Hospital. Before Early Mobilization (Pre-Early Mobilization), out of 35 respondents, the average Pain Level was 3.45 with a standard deviation of 0.814, and the range of values was between 3 and 5. After Early Mobilization (Post-Early Mobilization), the average Pain Level was 2.22.

Table 5. Descriptive Test Results Wilcoxon Signed Ranks Test Changes in Pain Level Before and After Early Mobilization in Postoperative Sectio Caesarea Clients at Royal Prima Marelan Hospital in 2024

No	Pain Level	Sum (n)	Mean	Z	p-value
1	Pre-Early Mobilization	**35**	**3.41**	-3.715	**0,004**
2	Post-Early Mobilization	**35**	**2.32**		

Based on Table 5. presents the results of the paired t-test description test related to changes in Pain Level before and after Early Mobilization on postoperative sectio caesarea clients at Royal Prima Marelan Hospital in 2024. Before Early Mobilization (Pre-Early Mobilization), the average Pain Level was 3.41; after Early Mobilization (Post-Early Mobilization), the average Pain Level decreased to 2.32. Statistical tests showed a Z value of -3.715 with a p-value of 0.004, indicating a significant difference and a positive effect of Early Mobilization on reducing Pain Levels in patients.

DISCUSSION
Cesarean section, also known as C-section, is a medical procedure for delivering a baby by making an incision in the uterine wall through the abdomen or vagina, also known as hysterotomy, to allow the baby to be born from inside the uterus. This method is typically used when a vaginal delivery is not feasible or safe for the mother or the baby (Blondeau et al., 2015). Cesarean section, or C-section, is the most common method for delivering a baby, but it remains a major surgical procedure performed on the mother while she is conscious, except in emergencies (Fauziah and Fitriana, 2018); (Nadiya and Mutiara, 2018). feel the same pain, and no two identical pain events produce the same response or feeling in a person. The experience of pain is highly individualized and influenced by various factors such as individual sensitivity, health conditions, and social context. Pain can also be a source of frustration for both patients and healthcare professionals. Patients may feel frustrated in the face of uncomfortable pain, while healthcare professionals may find it challenging to manage pain effectively or provide adequate care to patients. Pain management is essential to patient care to ensure comfort and a better quality of life (Nadiya and Mutiara 2018).

Pain is a highly individualized and subjective experience that can affect individuals of all ages. This can happen to children as well as adults. The causes can vary from disease processes, injuries, and medical procedures to surgical interventions (Kyle 2015). Based on the results of research on 35 respondents about the effect of Early Mobilization on changes in pain in postoperative sectio caesarea clients in the hospital room of Royal Prima Hospital in 2024, it is known that after being given Early Mobilization, the majority of respondents felt a little more pain and the minority of respondents felt more pain again. Pain in clients with Sectio Caesarea is caused by the uterus that often contracts because it is still in the process of returning to its original shape, and also the pain that arises from the surgical incision area (Nadiya and Mutiara 2018). Severe pain is a sequela caused by surgery on the intra-abdominal region (inner abdomen). About 60% of patients suffer from severe, 25% moderate, and 15% mild (Arief Mansjoer 2010).

The results of the Wilcoxon Test showed a Z value of -3.715 with a p-value of 0.004, indicating a significant difference and positive effect of Early Mobilization on reducing Pain Levels in inpatients at RSU Royal Prima Marelan in 2024. Mobilization is a basic human need required by individuals to perform daily activities such as joint movements, posture, walking style, exercises, and activity capabilities. Post-sectio caesarea mobilization, as described by Ferinawati and Hartati in 2019, can begin after the first 24-48 hours postoperatively. The purpose of the mobilization is to accelerate the wound healing process, improve blood circulation, prevent venous static (blood clots), support optimal respiratory function, improve digestive function, reduce the risk of postoperative

complications, restore the patient's body function as much as possible as before surgery, maintain the patient's self-concept, and prepare the patient to return home to rum (Nadiya and Mutiara 2018). The results of this study are supported by several research results conducted previously by (Nadiya and Mutiara 2018), stated that there is a relationship between Early Mobilization post section Caesarea (SC) and surgical wound healing in the Midwifery Room of the Regional Public House dr. Fauziah (Fauziah and Fitriana 2018).

CONCLUSION

Studies on Pain Levels in postoperative cesarean section clients show that before Early Mobilization, the majority of clients experienced increased pain levels, with a minority experiencing severe pain. However, after Early Mobilization, the majority of clients still experienced a slight increase in pain levels, although there was a minority who felt a more significant increase in pain. This indicates that early mobilization will influence pain levels in postoperative clients at Royal Prima Marelan Hospital in 2024.

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