



Influence Before and After Early Mobilization of Changes in Pain Levels in Sectio Cesarea Postoperative Clients at Royal Prima Hospital in 2020

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Abstract: *Sectio Caesarea is artificial labor in which the fetus is born through an incision in the front wall of the abdomen and the uterine wall. The number of Sectio Caesarea patients in Indonesia has exceeded the recommended threshold of the Department of Health > 20%. Surgery can cause postoperative pain in the client, this pain is usually felt 12 to 36 hours after surgery. One of the management of non-farmacological treatment of post-section caesarean section pain treatment is early mobilization. Early mobilization aims to accelerate wound healing, improve circulation, and prevent venous static. The purpose of this study was to determine the influence before and after early mobilization of changes in pain levels in postoperative clients of sectio caesarea. This type of research is descriptively correlational, One Group Pretest-Posttest, conducted at RSU Royal Prima Medan Petisah, North Sumatra from September to November 2020. The study population ± 43 people. The number of samples using the formula Slovin, so 36 samples were obtained. The selection of samples with non-probability sampling is consecutive sampling. Analysis of data, with a univariate, bivariate, meaningful limit of 0.05 with t-dependent test (paired t-test). The results, the change in pain level score of the pre-test test results of the mean value 3.22, at the time of the post-test test the mean value is 2.17. So the result of the value $Z = -6,128$ then p-value as much as $0.000 < 0.05$ so that it was concluded H_0 was rejected and H_a received. Concluded there is an influence of early mobilization of pain changes in postoperative clients sectio caesarea in the room of RSU Royal Prima in 2020.*

Keywords: *early mobilization; sectio caesarea; pain*

I. Introduction

Sectio caesarea is artificial labor in which the fetus is born through an incision in the front wall of the abdomen and uterine wall provided that the uterus is intact and the weight of the fetus is above 500 grams. The number of Sectio Caesarea patients in Indonesia, especially government hospitals is 20- 25% of the total childbirth, while in self-service hospitals the number is higher which is about 30-80% of the total number of deliveries. The health department's recommendation that labor with Sectio Caesarea should be no more than 20% (Warsono, Fahmi, and Iriantono 2019). Sectio caesarea is the most common method of delivering a baby, but it is still a major surgical procedure, performed on the mother in a conscious state except in an emergency (Agustin 2013); (Aust et al. 2013).

Problems that are often found in post-operative are circulation problems, urinary problems, wound problems, gastrointestinal problems, and comfort security problems (Kozier, B. 2011). Surgery can cause postoperative pain in the client, this pain is usually felt 12 to 36 hours after surgery (Hidayatulloh, Limbong, and Ibrahim 2020); (Abidin, Aceh, and Salawati 2021). Pain caused by surgery in the abdominal region (inner abdomen) about 60% of patients suffer from severe pain, 25% moderate pain and 15% mild pain (Arief Mansjoer 2010). Pain is subjective, no two individuals experience the

same pain and no two events of the same pain produce identical responses or feelings in an individual. Pain is a source of frustration, both for clients and health workers (Pinandita 2012).

Management of pain management in postoperative patients there are two, namely pharmacology or with drugs and non-pharmacology or without drugs, one of which is by early mobilization intervention. Early mobilization in postoperative patients is wisdom to immediately guide the patient out of his bed and guide him as soon as possible to walk and shift the patient's focus from the pain experienced to his mobilization activities. Mobilization is a basic human need needed by individuals to carry out daily activities in the form of joint movements, attitudes, gait, exercise, and activity skills (Nadiya and Mutiara 2018). Post-sectio caesarea mobilization can be done after the first 24-48 hours post-surgery. Mobilization aims to accelerate wound healing, improve circulation, prevent static veins, support optimal respiratory function, improve digestive function, reduce postoperative complications to restore patient function as much as possible as before surgery, maintain the patient's self-concept and prepare the patient to go home (Berkanis, Nubatonis, and Lastari 2020); (Nadiya and Mutiara 2018).

Some of the results of previous research conducted by Fauziah (2013), about the Relationship of Early Mobilization Post Sectio Caesaria (SC) with the Process of Wound Healing Surgery in the Obstetrics Room of the Hospital. Abdul Wahab Sjahranie Samarinda year 2018, there is a significant link between early mobilization and the wound healing process of sectio caesaria (SC) surgery (Fauziah and Fitriana 2018). Nadia's research results (2018), the results that surgical wound healing was not good in respondents who did not mobilize early, namely as many as 13 respondents (32.5%). The results of the chi-square test obtained a value of $p (0.031) < \alpha (0.05)$, thus the conclusion of the study there is a relationship between the early mobilization of post section caesarea (SC) and the healing of surgical wounds in the Obstetrics Room of the Regional General House dr. Fauziah Bireuen (Nadiya and Mutiara 2018). The purpose of this study was to determine the influence before and after early mobilization of changes in pain levels in postoperative clients sectio cesarea.

II. Review of Literature

Mobilization is a person's ability to move freely, easily, and regularly aimed at meeting the needs of a healthy life. Everyone needs to move. Loss of the ability to move leads to dependence, this situation requires nursing action. Mobilization is necessary to increase self-independence, improve health, slow down the disease process (Mubarak, W. I., Indrawati, L. & Susanto 2015). According to (Da Conceição et al. 2017); (Miranda Rocha et al. 2017), mobilization is the ability of individuals to perform deliberate physical movements of the body. When a person can move, he is usually able to do daily living activities such as eating, dressing, and walking. This ability mainly depends on the function of the central and peripheral nervous system and the musculoskeletal system and is sometimes referred to as functional ability.

While early mobilization post-surgery is a process of activities carried out after surgery, starting from light exercise on the bed to being able to get out of bed, walk to the bathroom and walk outside the room (Zurimi 2017), early mobilization can also be defined as a movement, position or activity carried out by the patient after surgery. According to (Carpenito, 2000) early mobilization is an important aspect of physiological function because it is essential for maintaining independence. The concept of early mobilization itself is actually to prevent postoperative complications. Postoperative pain is pain that

is felt as a result of the results of surgery. The incidence, intensity, and duration of postoperative pain differ from patient to patient, from surgery to surgery, and from hospital to hospital

III. Research Methods

This type of research is descriptively correlational, with the One Group Pretest-Posttest approach. The location of this research was conducted at RSU Royal Prima Medan Petisah, North Sumatra. The study was conducted from September to November 2020. The population in this study was all maternity mothers who wanted to give birth at RSU Royal Prima. The results of the survey, data from the last 3 months, the average monthly number of maternity mothers who come and utilize the Royal Prima Hospital facility is ± 43 people. Number of samples using the formula Slovin.

$$n = \frac{56}{1 + 56(0,01)^2}$$

$$n = 35,89,$$

n= 36 samples were obtained.

The selection of samples in this study using non probability sampling is consecutive sampling or sampling where all existing samples and meet the criteria of inclusion are taken to meet the size of the sample that has been determined by the researcher.

Sample inclusion criteria, namely:

- a. Post-surgery patients treated at Royal Prima Hospital
- b. Patients who were on the spot when the researcher conducted the study
- c. Vital signs (blood pressure, pulse, temperature and breathing) of stable patients
- d. Patients who are willing to be responders

Table 1. Operational Definition

Variable	Operational Definition	Parameter	Measuring Instrument	Data Scale	Result
Independent					
Early Mobilization	A movement in the muscles of the body that is done as early as possible the first 24 hours after surgery	Early Mobilization Techniques	EARLY MOBILIZATION SOP	Ordinal	1. Unable to perform well 2. Can do well
Dependen					
Pain	Uncomfortable feelings are very subjective and only the person experiencing them can explain and evaluate them.	Observation Sheet	Face Scale	Interval	1. Scale 0 No pain 2. Scale 1 Slight pain 3. Scale 2 Slightly more pain 4. Scale 3 More pain 5. Scale 4 Pain once 6. Scale 5 Severe Pain

Data Analysis, with univariate analysis, bivariate statistics is a method of data analysis to analyze the influence between two variables. Hypothesis testing to decide whether the proposed hypothesis is convincing enough to be rejected or accepted, using statistical tests used a limit of the meaning of 0.05 so that the value of $p \leq 0.05$ then the

statistic is called "meaningful" and if $p > 0.05$ then the result of the count is "meaningless". The bivariate analysis used in this study was a paired t-test to test for differences in pain scale before and after early mobilization.

IV. Discussion

4.1 Results

a. Karakteristik Respondents at Royal Prima Medan Hospital year 2020

The characteristics of respondents are a picture of the diversity of respondents based on gender, age, education and occupation. Based on this characteristic is expected to provide a better and clearer description of the condition of the 100 respondents and their relationship to the problem and the purpose of the study.

Table 2. Overview of Research Respondents, based on Age, Education and Employment Status

Characteristic	Category	Sum	Percentage
Age	<25 years	9	25%
	>25 years	27	75%
Education	SMP	8	22.2%
	SMA	7	19.4%
	Higher Education (D3, S1, S2, S3)	21	58.3%
Employment Status	PNS	9	25%
	Private	7	19.4%
	Entrepreneurial	20	55.6%

Source: Primary data, processed 2020.

Age reflects the physical condition of a person. In relation to the field of health, age can reflect the specific health care needs in a person. Based on Table 2. It is known that the largest number of respondents at the age of 30 to 40 years is as many as 27 patients. The level of education reflects the level of intellect of a person. The largest number of respondents at the Higher Education Level was 21 patients. Employment status reflects a person's income level. This condition often also reflects the selection of locations for health checks. The largest number of respondents on employment status is self-employment which is as many as 20 patients.

b. Client Pain Level Post Operation Sectio caesarea before Early Mobilization at Royal Prima Medan Hospital Year 2020

Postoperative pain is a side effect that must be suffered by those who have undergone surgery, including sectio caesarea surgery. The pain can be caused by attachments between tissues due to surgery. The pain is almost impossible to eliminate 100% and each person will experience different levels of pain. The level of pain can be seen on a different level of the face where 0 = No pain, 1 = Slight pain, 2 = Slighter pain, 3 = More pain, 4 = Pain once and 5 = Severe pain.

Table 3. Distribution of Frequency and Percentage of Pain Rate of Post Sectio Caesarea Surgery Before Early Mobilization At Royal Prima Medan Hospital in 2020

No	Pain Level	Sum (n)	Percentage
1	Severe Pain	8	22.2
2	Pain Once	11	30.6
3	More pain	17	47.2
Sum		36	100

Based on table 3. It is known that before the early mobilization the majority of respondents felt even more pain while the minority of respondents experienced severe pain.

c. Early Mobilization Conducted by Post Operation Client Sectio caesarea at Royal Prima Medan Hospital in 2020

Immediate mobilization step by step is very useful to help the course of healing of postoperative patients. Based on table 4. It is known that the majority of respondents who can mobilize early well while the minority cannot do well.

Table 4. Distribution of Frequency and Percentage of Early Mobilization of Clients Post Operation Sectio caesarea at Royal Prima Medan Hospital in 2020

No	Early Mobilization	Sum (n)	Percentage
1	Can Do Well	23	63.9
2	Can't Do Well	13	36.1
Sum		36	100

d. Client Pain Level Post Operation Sectio caesarea after Early Mobilization at Royal Prima Medan Hospital in 2020

Based on table 5. It is known that after early mobilization, the majority of respondents felt a little more pain and a minority of respondents felt even more pain.

Table 5. Distribution of Frequency and Percentage of Pain Rate of Post Sectio Caesarea Surgery After Early Mobilization At Royal Prima Medan Hospital in 2020

No	Pain Level	Sum (n)	Percentage
1	More pain	12	33.3
2	A Little More Pain	24	66.7
Sum		36	100

e. Pain Level Before and After Early Mobilization of Client Post Operation Sectio caesarea at Royal Prima Medan Hospital in 2020

Based on table 6. The average level of pain before early mobilization was 3.22 and after early mobilization, an average of 2.17, there was a decrease of 1.05. The minimum value of pain level in early pre mobilization is 3 and the maximum value is 5 while in early post mobilization the minimum pain level is 2 and the maximum value is 3.

Table 6. Pain Levels Before and after Early Mobilization of Post-Surgery Clients Sectio Caesarea At Royal Prima Hospital

No	Pain Level	Sum (n)	Mean	SD	Min Max
1	Early Pre-Mobilization	36	3.22	0.801	3-5
2	Early Post-Mobilization	36	2.17	0.481	2-3

f. Bivariate Analysis

Based on the results of research on the influence after and before conducting early mobilization against changes in pain in postoperative clients sectio caesarea at RSU Royal Prima Medan in 2020.

Table 7. Results of t-dependent Description Test (paired t-test) Changes in Pain Levels Before and After Early Mobilization In Post-Surgery Sectio Caesarea At Royal Prima Medan Hospital in 2020

No	Pain Level	Sum (n)	Mean	Z	p-value
1	Early Pre-Mobilization	36	3.22	-6.128	0,000
2	Early Post-Mobilization	36	2.17		

Based on table 7. It is known that the change in pain level score of the pre-test test results in a mean value of 3.22, at the time of the post-test test the mean value is 2.17. So that the result of the value $Z = -6,128$ then p-value as much as $0.000 < 0.05$ so that it is concluded H_0 in reject and H_a received, which means there is an influence of early mobilization of pain changes in post-caesarean sectio surgery clients in the room of RSU Royal Prima in 2020.

4.2 Discussion

a. Pain Level before Early Mobilization to Post Surgery Clients Sectio Caesarea at Royal Prima Medan Hospital in 2020

Section caesarea is a way of giving birth to a fetus by making an incision in the uterine wall through the front of the abdomen or vagina or also called a hysterotomy to give birth to the fetus from the womb (Blondeau et al. 2015). Sectio caesarea is the most common method of delivering a baby, but it is still a major surgical procedure, performed on the mother in a conscious state except in an emergency (Fauziah and Fitriana 2018); (Nadiya and Mutiara 2018). Pain in clients with Sectio Caesarea resulting from the uterus that often contracts because it is still in the process of returning to its original shape and also pain that arises from the incision area of the operation (Schubert et al. 2020). Severe pain is a residual symptom caused by surgery on the abdominal regio (inner abdomen) about 60% of patients suffer from severe pain, 25% moderate pain and 15% mild pain (Mubarak, W. I., Indrawati, L. & Susanto 2015). Pain is subjective, no two individuals experience the same pain and no two events of the same pain produce identical responses or feelings in an individual. Pain is a source of frustration, both for clients and for health workers (Nadiya and Mutiara 2018).

Pain is a highly individualized and subjective experience that can affect everyone at any age. Pain can occur in children and adults. Causes of pain are the process of disease, injury, procedures, and surgical interventions (Kyle, T & Carman 2015); (Wahezi et al. 2020). Based on the results of a study of 36 respondents on the effect of early mobilization of pain changes in postoperative clients sectio caesarea in the room of the Royal Prima RSU in 2020, it is known that before early mobilization the majority of respondents felt even more pain while the minority of respondents experienced severe pain. Some of the results of previous research conducted by Nadia (2018), The results that surgical wound healing is not good in respondents who do not mobilize early, namely as many as 13 respondents (32.5%). Chi-square test results get a value of $p (0,031) < \alpha (0,05)$, Thus the conclusion of the study there is a relationship between the early mobilization of post section caesarea (SC) and the healing of surgical wounds in the Obstetrics Room of the Regional Public House dr. Fauziah Bireuen. Solomon's research (2010), found a difference in comfort

between post-natal cesarean patients who made early mobilization and those who were late to mobilize (Nadiya and Mutiara 2018).

b. Pain Levels after Early Mobilization of Sectio Caesarea Post Surgery Clients at Royal Prima Medan Hospital in 2020

Pain is a highly individualized and subjective experience that can affect everyone at any age. Pain can occur in children and adults. Causes of pain are the process of disease, injury, procedures, and surgical interventions (Kyle 2015). Based on the results of a study of 36 respondents on the effect of early mobilization of pain changes in postoperative clients sectio caesarea in the room of RSU Royal Prima in 2020 it is known that after being given early mobilization the majority of respondents felt slightly more pain and a minority of respondents felt even more pain.

Pain in clients with Sectio Caesarea resulting from the uterus that often contracts because it is still in the process of returning to its original shape and also pain that arises from the incision area of the operation (Nadiya and Mutiara 2018). Severe pain is a residual symptom caused by surgery on the abdominal regio (inner abdomen) about 60% of patients suffer from severe pain, 25% moderate pain and 15% mild pain (Arief Mansjoer 2010).

c. Effect of Early Mobilization on Pain Levels in Post-Surgery Clients Sectio caesarea at Royal Prima Medan Hospital in 2020

The results of the study from the Wilcoxon Rank Test showed $p\text{-value} = 0.000 < 0.05$, this means H_0 was rejected and H_a accepted there was an early mobilization effect on pain changes in postoperative clients sectio caesarea in patients in the room of RSU Royal Prima in 2020. Mothers who experience sectio caesarea sometimes understand the implementation of mobilization, but the mother does not understand what the benefits of mobilization do (Berkanis et al. 2020). Mobilization is a basic human need needed by individuals to carry out daily activities in the form of joint movements, attitudes, gait, exercise and activity skills (Ferinawati and Hartati 2019). Post-sectio caesarea mobilization can be done after the first 24-48 hours post-surgery. Mobilization aims to accelerate wound healing, improve circulation, prevent static veins, support optimal respiratory function, improve digestive function, reduce postoperative complications to restore patient function as much as possible as before surgery, maintain the patient's self-concept and prepare the patient to go home (Nadiya and Mutiara 2018).

The results of this study are supported by several results of research conducted earlier by (Nadiya and Mutiara 2018), There is a link between the early mobilization of post section caesarea (SC) and the healing of surgical wounds in the Obstetrics Room of the Regional Public House dr. Fauziah Bireuen (Berkanis et al. 2020); (Ferinawati and Hartati 2019); (Fauziah and Fitriana 2018).

V. Conclusion

The level of pain before early mobilization in postoperative clients of sectio caesarea majority felt even more pain and a minority experienced severe pain. The level of pain after early mobilization in the majority of postoperative clients of sectio caesarea was slightly more painful and the minority felt even more pain. There is an early mobilization effect on pain changes in post-operative clients of sectio caesarea in patients in the hospital room of RSU Royal Prima in 2020.

References

- Abidin, Zainoel, Banda Aceh, and Liza Salawati. 2021. "Profil Pasien Sectio Caesarea Di Rumah Sakit Umum Daerah Dr. Zainoel Abidin Banda Aceh Tahun 2019." *Jurnal Kedokteran Syiah Kuala* 21(1):139–43.
- Agustin. 2013. "Jurnal Kesehatan Masyarakat Andalas." *Obesitas Sentral Dan Kadar Kolesterol Darah Total* 9(1):37–43.
- Arief Mansjoer. 2010. *Kapita Selekta Kedokteran*. edisi 4. Jakarta: Media Aesculapius.
- Aust, H., M. Zemlin, F. Woernle, H. Wulf, and D. Rüsç. 2013. "Sectio Caesarea in Regionalanästhesie: Pro Und Kontra Der Supplementären Sauerstoffgabe." *Anaesthesist* 62(3):201–12.
- Berkanis, Nubatonis, and Lastari. 2020. "Pengaruh Mobilisasi Dini Terhadap Intensitas Nyeri Pada Pasien." *CHM-K Applied Scientifics Journal* 3(1):6–13.
- Blondeau, Marie José C. E., Kathelijne M. Koorengel, A. J. Schneider, A. L. M. J. Van Der Knijff-Van Dortmund, and Wybo J. Dondorp. 2015. "Een Sectio Caesarea Tegen Haar Wil?" *Nederlands Tijdschrift Voor Geneeskunde* 159(12).
- Da Conceição, Thais Martins Albanaz, Ana Inês Gonzáles, Fernanda Cabral Xavier Sarmiento De Figueiredo, Danielle Soares Rocha Vieira, and Daiana Cristine Bündchen. 2017. "Safety Criteria to Start Early Mobilization in Intensive Care Units. Systematic Review." *Revista Brasileira de Terapia Intensiva* 29(4):509–19.
- Fauziah, and Fitriana. 2018. "Hubungan Mobilisasi Dini Post Sectio Caesaria (SC) Dengan Proses Penyembuhan Luka Operasi Di Ruang Kebidanan RSUD. Abdul Wahab Sjahranie Samarinda Tahun 2018." *Midwifery Journal* 23–27.
- Ferinawati, Ferinawati, and Rita Hartati. 2019. "Hubungan Mobilisasi Dini Post Sectio Caesarea Dengan Penyembuhan Luka Operasi Di Rsu Avicenna Kecamatan Kota Juang Kabupaten Bireuen." *Journal of Healthcare Technology and Medicine* 5(2):318.
- Hidayatulloh, Ana Ikhsan, Earlyana Octavia Limbong, and Kusman Ibrahim Ibrahim. 2020. "Pengalaman dan Manajemen Nyeri Pasien Pasca Operasi di Ruang Kemuning V RSUP Dr. Hasan Sadikin Bandung : Studi Kasus." *Jurnal Ilmu Keperawatan dan Kebidanan* 11(2):187.
- Kozier, B., Et. a. 2011. *Buku Ajar Fundamental Keperawatan*. Jakarta: EGC.
- Kyle, T & Carman, S. 2015. *Buku Praktik Keperawatan Pediatri*. Jakarta: EGC.
- Kyle, T. & Carman S. 2015. *Buku Praktik Keperawatan Pediatrik*. Jakarta: EGC.
- Miranda Rocha, A. R., B. P. Martinez, V. Z. Maldaner da Silva, and L. A. Forgiarini Junior. 2017. "Early Mobilization: Why, What for and How?" *Medicina Intensiva* 41(7):429–36.
- Mubarak, W. I., Indrawati, L. & Susanto, J. 2015. *Buku Ajar Ilmu Keperawatan Dasar. Buku 2*. Jakarta: Salemba Medika.
- Nadiya, Sarah, and Cut Mutiara. 2018. "Hubungan Mobilisasi Dini Post Sectio Caesarea (SC) Dengan Penyembuhan Luka Operasi Di Ruang Kebidanan RSUD Dr. Fauziah Kecamatan Kota Juang Kabupaten Bireuen." *Journal of Healthcare Technology and Medicine* 4(2):187.
- Pinandita, I. et. a. 2012. "Jurnal Ilmiah Kesehatan Keperawatan, Volume 8, No. 1, Februari 2012." *Jurnal Kesehatan Perawatan* 8(1):32–43.
- Schubert, A. K., T. Wiesmann, T. Neumann, and T. Annecke. 2020. "Selection of the Optimal Anesthesia Regimen for Cesarean Section." *Anaesthesist* 69(3):211–22.
- Wahezi, Sayed, Robert A. Duarte, Sandeep Yerra, Mark A. Thomas, Beendu Pujar, Nalini Sehgal, Charles Argoff, Laxmaiah Manchikanti, David Gonzalez, Ruchi Jain, Chong

- Kim, Michael Hossack, Shayan Senthelal, Ankush Jain, Nathanael Leo, Naum Shaparin, Daniel Wong, Ashley Wong, Kim Nguyen, Jaspal Ricky Singh, Giacinto Grieco, Arpan Patel, Merritt D. Kinon, and Alan David Kaye. 2020. "Telemedicine during Covid-19 and beyond: A Practical Guide and Best Practices Multidisciplinary Approach for the Orthopedic and Neurologic Pain Physical Examination." *Pain Physician* 23(4 Special Issue):S205–37.
- Warsono, Warsono, Faradisa Yuanita Fahmi, and Galuh Iriantono. 2019. "Pengaruh Pemberian Teknik Relaksasi Benson Terhadap Intensitas Nyeri Pasien Post Sectio Caesarea Di RS PKU Muhammadiyah Cepu." *Jurnal Ilmu Keperawatan Medikal Bedah* 2(1):44.
- Zurimi, Suardi. 2017. "Pengaruh Pemberian Mobilisasi Dini Terhadap Penyembuhan Luka Pada Pasien Post Herniatomi Inguinalis Lateralis Di RS Bhayangkara Ambon." *Global Health Science* 2(2):149–54.