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ORIGINAL RESEARCH

THE EFFECT OF EARLY MOBILIZATION ON UTERINE INVOLUTION AFTER CESAREAN SECTION

Ani Dwi Ningrum, Jasmawati, Lukman Nulhakim
Poltekkes Kaltim
Corresponding Email : anidwiningrum@gmail.com

ABSTRACT

The rate of births through cesarean section is 17.6% (Riskesdas, 2018). Uterine involution is the process of the uterus returning to its pre-pregnancy state in terms of both form and position. Early mobilization is a policy aimed at promptly guiding patients out of bed and encouraging them to walk as soon as possible. Failure to engage in early mobilization can result in an increase in body temperature due to inadequate uterine involution, preventing the removal of residual blood and leading to infections. The objective of this study is to determine the effect of early mobilization on uterine involution in patients after Cesarean Section at Kudungga Kutai Timur Regional General Hospital. This study employs a quasi-experimental research design in the form of a two-group posttest-only design to assess the impact of early mobilization on uterine involution after Cesarean Section at Kudungga Kutai Timur Regional General Hospital. The study includes a sample size of 10 respondents in the intervention group and 10 respondents in the control group. The consecutive sampling technique is used for sampling. Research instruments include observation sheets. The results of the Mann-Whitney test show a significance value of 0.008 ($p<0.05$), leading to the rejection of the null hypothesis (H0). It can be concluded that there is a difference in uterine involution after early mobilization in patients after Cesarean Section in the postpartum ward of Kudungga Regional General Hospital in 2023.

Keywords

Uterine Involution, Early Mobilization, Cesarean Section

INTRODUCTION

In recent years, the rate of childbirth through cesarean section has increased worldwide. Latin America and the Caribbean region contribute the highest rate of cesarean sections, at 40.5%, followed by Europe at 25%, Asia at 19.2%, and Africa at 7.3% (Singh et al., 2018). In Indonesia, the rate of childbirth through cesarean section is 17.6%, surpassing the limit set by the World Health Organization (WHO) of around 5-15% per 1,000 births (Viandika & Septiasari, 2020). In 2018, in East Kalimantan Province, 19.5% of mothers underwent cesarean sections (Riskesdas, 2018). In 2021, the number of births in East Kutai Regency from January to October was 6,185, with 23.7% of mothers delivering through cesarean section (East Kutai Health Department, 2021).

The capability of a country's healthcare service, according to the WHO, can be assessed by maternal mortality rates during pregnancy, childbirth, and postpartum periods. This aligns with the vision set by the United Nations and the Indonesian government for a healthy 2015, which includes eight Millennium Development Goals (MDGs), one of which aims to reduce infant and maternal mortality

rates during childbirth (Purwanti et al., 2019). In Indonesia, maternal mortality rates (MMR) due to postpartum hemorrhage are the highest. If the postpartum uterus fails to undergo proper involution, it can result in subinvolution of the uterus, leading to bleeding and even death. Subinvolution of the uterus is a delayed return of the uterus to its pre-pregnancy state caused by factors such as endometrial infection, retained placental tissue, blood clots, or uterine fibroids (Manuaba, 2013).

Uterine involution involves the uterus returning to its pre-pregnancy form and position. This process helps reduce the size of the uterus after childbirth, bringing it back to its original weight of around 60 grams. It begins after the placenta is delivered due to contractions of the uterine smooth muscles (Marmi, 2012). Factors influencing uterine involution, as stated by Lisnawaty et al., 2015, include lactation, early mobilization, maternal nutrition (knowledge, environment, beliefs, social and cultural factors), parity, psychology, early breastfeeding, and age. The success of the involution process during the postpartum period can be affected by clinical factors such as age, parity, nutritional status, breastfeeding, early mobilization, postpartum exercises, retained placental tissue, and uterine atony. The lack of early mobilization after childbirth is often due to maternal fear of movement (Rahayu et al., 2012).

According to Suryati, 2012, early mobilization is a policy aimed at promptly guiding patients out of bed and encouraging them to walk as soon as possible. Early mobilization plays a significant role in accelerating post-surgical recovery and preventing postoperative complications. It is expected to contribute to the mother's postpartum health and strength, aid in the expulsion of lochia, facilitate wound healing from the birthing process, speed up uterine involution, improve gastrointestinal and urinary system functions, enhance blood circulation, and consequently expedite the release of Breast Milk (ASI) and metabolic waste (Grace C, 2012).

METHOD

This study is a quantitative research with a quasi-experimental design in the form of a two-group posttest-only design, aiming to assess the effect of early mobilization on uterine involution after Cesarean Section at Kudungga Kutai Timur Regional General Hospital. The sample in this study consists of 20 individuals (respondents), divided into 10 in the control group and 10 in the intervention group. Inclusion criteria include patients on the first to third day post-Cesarean Section, patients with full consciousness, and control patients on the tenth day post-Cesarean Section. Exclusion criteria include patients with vaginal deliveries, patients requiring ICU care, and patients who refuse to participate as respondents. Sample selection is done using a nonprobability sampling technique, specifically Consecutive Sampling.

The research is conducted in the postpartum ward in the year 2023. The research instrument utilized is an observation sheet for uterine involution, incorporating the SOP for early mobilization. Data collection technique involves primary data collection through direct observation of uterine fundus height reduction on the third and tenth days after respondents receive post-Cesarean Section interventions. These observations are recorded in the provided observation sheets. Once the samples are collected, the researcher employs the Mann-Whitney test for analysis due to the non-normal distribution of data. The researcher uses an ordinal measurement scale, where involution is considered good if the decrease in uterine fundus height and lochia discharge aligns with normal uterine changes on the third and tenth days, and involution is considered poor if it does not align.

RESULTS

Table 1. Characteristics of Respondents based on Age, Education, Occupation, and Parity

Variable	Cathegory	Frequency	Percent (%)
Age	< 20 years	1	10
	20-30 years	1	10

	30-35 years	5	50
	35 years	3	30
Education	Elementary School (SD)	2	20
		1	10
	Junior High School (SMP)	3	30
		1	10
		3	30
	Senior High School (SMA)	4	40
		6	60
Occupation		3	30
	Diploma (D3)	7	70
Parity		0	0
	Bachelor's Degree (S1)		
	Working		
	Not Working		
	Primipara		
	Multipara		
	Grandmultipara		
Total		**10**	**100**

Source: Primary Data

Based on Table 1, it is evident that the age of respondents in the intervention group is predominantly in the 30-35 age range. In both the intervention and control groups, the educational level of respondents is mostly dominated by those with senior high school (SMA) and bachelor's degree (S1) education. In terms of occupation, both the intervention and control groups are predominantly composed of non-working individuals, totaling 6 respondents (60.0%). Regarding parity, both the intervention and control groups are predominantly multiparous, with 7 respondents (70.0%) in the intervention group and 6 respondents (60.0%) in the control group.

Table 2. Uterine involution on the 3rd and 10th days in the Intervention group

Variable	Category	Day 3		Day 10	
		Frequency	Percent (%)	Frequency	Percent (%)
Uterine Involution	Good	2	20	9	90
	Less Good	8	80	1	10
Total		**10**	**100**	**10**	**100**

Source: Primary Data

Based on Table 2, the frequency of uterine involution in the intervention group on day 3 is predominantly categorized as "less good," with 8 respondents (80.0%), and on day 10, it is predominantly categorized as "good," with 9 respondents (90.0%).

Table 3. Uterine involution on the 3rd and 10th days in the Control group

Variable	Category	Day 3		Day 10	
		Frequency	Percent (%)	Frequency	Percent (%)
Uterine Involution	Good	2	20	3	30
	Less Good	8	80	7	70
Total		**10**	**100**	**10**	**100**

Source: Primary Data

Table 3 illustrates in the control group, on day 3, the "less good" category dominates with 8 respondents (80.0%), and on week 10, the "less good" category also dominates with 7 respondents (70.0%).Source: Independent T-Test Statistical Test

Table 4. Results of the Mann-Whitney Test for the intervention group and control group

Group	N	Mean Rank	Sign (P-Value)
Intervention	10	7,50	0,008
Control	10	13,50	

Source: Primary Data

Table 4 above presents the results of the Mann-Whitney Test for Posttest on Day 10. From the table above, it can be observed that the significance value is 0.008 ($p<0.05$), leading to the rejection of the null hypothesis (H0). Therefore, it can be concluded that there is a difference in uterine involution after early mobilization in patients after Cesarean Section in the postpartum ward of Kudungga Regional General Hospital in the year 2023.

DISCUSSION

Uterine involution is the process of the uterus returning to its normal size after childbirth. It involves the uterus shrinking back to its pre-pregnancy form (Walyani et al., 2015: 69). The speed of uterine involution is influenced by several factors, including the mother's age, the number of children born (parity), occupation,

education, exclusive breastfeeding, early mobilization, and early breastfeeding. Early mobilization can assist in accelerating the return of the uterus to its original form by promoting movement that aids in improving blood circulation and facilitating the expulsion of lochia, thus aiding in quicker uterine involution.

Based on the above research findings, the researcher assumes that mothers who engage in early mobilization experience a faster reduction in uterine fundus height, with contractions that are more robust, compared to mothers who do not practice early mobilization. This process is attributed to early mobilization's ability to reduce lochia congestion, thereby facilitating the quicker return of pelvic organs to their pre-pregnancy state. Results of the Mann-Whitney Test for Posttest on Day 10. From the table above, it can be observed that the significance value is 0.008 ($p<0.05$), leading to the rejection of the null hypothesis (H0). Therefore, it can be concluded that there is a difference in uterine involution after early mobilization in patients after Cesarean Section in the postpartum ward of Kudungga Regional General Hospital in the year 2023.

Early mobilization involves guiding clients out of their beds and encouraging them to walk as soon as possible. Clients are allowed to get out of bed within 24-48 hours postpartum. One of the advantages of early mobilization is that clients feel better, healthier, and stronger, with improved bowel and bladder contractions (Munayarokh, 2015; cited in Ambarwati, 2009). The results of this study are consistent with Munayarokh et al.'s (2015) research, which found differences in uterine involution processes between mothers who performed and did not perform postpartum exercises, with a p-value of 0.000.

Similarly, the results of Verra Zeverina & Halimatussakdiah's (2018) study on the relationship between early mobilization, uterine involution, and lochia discharge in normal postpartum mothers show a significant relationship between mobilization and uterine involution with a p-value of 0.011. However, no significant relationship was found between early mobilization and lochia discharge in normal postpartum mothers in the obstetrics ward of a government hospital in Aceh, with a p-value of 1.000. Firda and Herlina's (2011) study yielded results showing that the average reduction in uterine fundus height on the 7th day was 6 cm in the treatment group and 7 cm in the control group. Faster reduction occurred in the treatment group, with 16 respondents (53.3%) compared to the control group with 7 respondents (23.3%). There was a significant influence between the treatment and control groups with a value of $p = 0.001$. The findings of this study are in line with Prihantini's (2014) research, indicating differences in postpartum uterine fundus height before and after early mobilization, with a significant p-value of 0.000, which is less than the alpha value of ≤ 0.05. This suggests the influence of early mobilization on the reduction of uterine fundus height in postpartum mothers 2 hours post-delivery in the Melati Pavilion of Jombang Regional General Hospital.

Postpartum mothers can perform early mobilization well, although some discomfort may be present, they can tolerate it. The ability of mothers to move/mobilize as early as possible builds their self-confidence, contributing to their sense of wellness, which is beneficial for postpartum recovery. According to Nurfitriani's (2017) study, post-Cesarean Section mothers are motivated to engage in early mobilization. Based on the findings above, the researcher suggests that mothers who practice early mobilization experience a quicker reduction in uterine fundus height and stronger uterine contractions compared to those who do not. This is due to early mobilization's ability to reduce lochia congestion, thus facilitating the quicker return of pelvic organs to their pre-pregnancy state.

CONCLUSIONS

Based on the research findings on the effect of early mobilization on uterine involution in patients after Cesarean Section at Kudungga Kutai Timur Regional General Hospital, it can be concluded that the age of respondents is predominantly in the 30-35 age range in both the intervention and control groups. The educational level of

respondents is mostly dominated by senior high school (SMA) and bachelor's degree (S1) education in the intervention group, while in the control group, SMA education dominates. Parity is predominantly multiparous in both the intervention and control groups. The results of the Mann-Whitney Test for Posttest on Day 3 and Day 10 show a significance value of 0.008 ($p<0.05$), leading to the rejection of the null hypothesis (H0) and the acceptance of the alternative hypothesis (Ha), thus drawing the conclusion that there is an influence of early mobilization on uterine involution after Cesarean Section.

REFERENCES

Grace, C. (2012). Knowledge, Attitude, and Implementation of Early Mobilization for Post-Cesarean Section Mothers. Medan.

Manuaba. (2013). Ilmu Kebidanan, Penyakit Kandungan, dan KB. Jakarta: EGC.

Marmi. (2012). Asuhan Kebidanan Pada Masa Nifas "Pueperium Care". Yogyakarta: Pustaka Pelajar.

Munayarokh. (2015). Uterine Involution Process in Postpartum Mothers who Perform and Do Not Perform Postpartum Exercises in Independent Midwife Practices. Journal of Health Research, 4(2), 722-727. doi:10.31983/jrk.v4i2.351

Nurfitriani. (2017). Knowledge and Motivation of Post-Cesarean Section Mothers in Early Mobilization. Jurnal Psikologi Jambi, 2(2), 31-38.

urwanti, et al. (2019). Developing Premarital Education Application for Midwives at Puskesmas Around Semarang. Atlantis Press, 9-11. Retrieved from https://www.atlantis-press.com/article/125924458.

Rahayu, Y. (2012). Masa Nifas dan Menyusui. Jakarta: Mitra Wacana Medika.

Riskesdas. (2018). Laporan Nasional 2018. Badan Penelitian dan Pengembangan Kesehatan Departemen Kesehatan.

Verra Zeverina & Halimatussakdiah. (2018). The Relationship between Early Mobilization, Uterine Involution, and Lochia Discharge in Normal Postpartum Mothers. Journal of Midwifery, Vol. III, No. 4.

Viandika, N., & Septiasari, R. M. (2020). The Effect of Continuity of Care on the Incidence of Cesarean Section. Journal for Quality in Women's Health, 3(1).

Walyani, E. S., & Purwoastuti, E. (2015). Asuhan Kebidanan Masa Nifas dan Menyusui. Yogyakarta: PT. Pustaka Baru.