

The Effect of Video-Based Education Strategies on Early Mobilization Compliance of Post Sectio Caesarea Mothers in the Lotus Room of Primaya Sukabumi Hospital

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ABSTRACT

After a cesarean section, many mothers experience discomfort in the incision area and limited mobility, which can increase the risk of infection, delay uterine involution, and impair recovery. Early mobilization plays a crucial role in accelerating the healing process and preventing complications, but patient compliance remains low due to limited understanding. Video-based education is an innovative alternative that can increase patient engagement and understanding. This study aimed to determine the effect of a video-based early mobilization strategy on mothers' compliance with early mobilization after cesarean section in the Lotus Ward at Primaya Hospital, Sukabumi. This study used a quasi-experimental design with a control group and pre-post test measurements. A sample of 36 respondents, divided into 18 in the intervention group and 18 in the control group, was selected through purposive sampling. The intervention group received video-based education, while the control group received no intervention. Data were analyzed using the Wilcoxon Signed-Rank test at a significance level of 0.05. There was a significant increase in early mobilization compliance scores in the intervention group after receiving video-based education ($p < 0.05$), while the control group showed no significant change. Video-based education strategies are effective for increasing early mobilization compliance among mothers after cesarean section. Hospitals are advised to integrate video education into their postoperative care programs to support optimal patient recovery.

Keywords: video-based education, early mobilization, cesarean section, compliance

INTRODUCTION

The World Health Organization (WHO) estimates that problems during pregnancy, childbirth, or the postpartum period are responsible for 25–50 percent of maternal deaths (2021). Currently, caesarean sections are standard, regardless of the level of wealth or poverty of a country (Sindhumol et al., 2022). Caesarean section is an option available to women during childbirth. When complications arise during a normal delivery that are potentially fatal, a cesarean section is performed (Sumantri and Fitri, 2022).

Cesarean section is an abbreviation of the Latin word "caedere", which means to cut, according to Selung et al. (2022). The mother's abdomen will always have scars from a cesarean section, with surgical methods for childbirth. In addition, this method has a negative impact on the mother's health and causes severe pain after

surgery. (Guillermina, Amelia, and K. M. Morita, Putri, 2020). An alternative definition of cesarean section is surgical removal of the amniotic sac, fetus, and placenta through incisions in the abdominal and uterine walls (Syaiful & Fatmawati, 2020).

After a cesarean section, many individuals report discomfort around the incision area. Based on a comparison between babies born by cesarean section (27.3% higher) and those born spontaneously (about 9% lower), Yanti (2020) found that the level of discomfort in the first group was much lower. Demelash et al. (2022) and Rohmania et al. (2023) found that between 78% to 93% of women reported moderate to severe pain after a cesarean section. Some patients may experience mobility problems after a cesarean section. Not exercising after a cesarean section can have serious consequences. First, if uterine involution is inadequate, the patient may

experience an increase in core body temperature. This is due to an increased risk of infection and the inability to excrete residual blood (Nurfitriani, 2017). According to Oktaviani, Kusumajaya, and Agustiani (2022), early mobility is one of the factors that affect wound healing after surgery.

The goal of early mobilization is to speed up the recovery of mothers undergoing cesarean sections by encouraging them to stretch as soon as they get out of bed. If they realize it, mothers who have had a cesarean section will mobilize early. Early mobilization is something that mothers can learn through education.

The goal of health education, according to Notoatmodjo (2018), is to empower community members to make informed decisions about their own health through instruction and advocacy. Basically, health education focuses on helping people learn to take care of themselves and their communities so everyone can live longer, healthier lives (Indriani, 2020). Integrating video into the curriculum is just one of many possible approaches.

Video is defined as a moving image with sound, or a recording of a live image or a television program intended for broadcast on television, according to the Great Dictionary of the Indonesian Language. The English word "video" derives from the Latin "video-vidivisum," meaning "to see" or "to have the ability to see." According to Azhar Arsyad (2011): 49, the best video is described as a "sequence of images within a frame," with each frame automatically projected through the projector lens to create the illusion of an image directly on the screen. Until now, mothers who have undergone a cesarean section have only received basic verbal instructions.

After receiving counseling on early mobilization, 13 women (54.2% of the total) at the Dr. Doris Sylvanus Palangkaraya Regional General Hospital exhibited excellent behavior after undergoing cesarean section (Herlinadiyaningsih, Greiny Arisani, and Yeni Lucin, 2024). Fourteen of the twenty-four postpartum women who watched health education films on early mobilization exhibited sufficient behavior to be included in the study. Mothers who have recently had a cesarean section can benefit from video-based teaching as they begin to heal. A study conducted at Brawijaya Hospital Level III in Surabaya found that, among 43 participants, 2 (5% of the total) showed improvement from before to after the education. One example is that 22 people (51% of the total) were considered inadequate after training, while 21 (47%) were considered adequate. Interestingly,

only one of the three individuals experienced significant changes as a result of education (AZIZI, ANA, Purwati, Khalimatus, 2024).

We used random assignment to divide 63 patients at Emanuel Hospital, Banjarnegara, into two groups: one that received the intervention and the other that did not. Wiranti (2023) found that, in terms of early mobilization behavior, the control group had the largest proportion (66.7%), while the intervention group had the highest proportion of extraordinary behavior (90%). At Banjarnegara Islamic Hospital, 32 women (71.1%) watched videos about early mobilization after cesarean sections, while 13 mothers (28.9%) reported feeling unmotivated, according to Yutiwi (2023).

The purpose of this study was to determine whether 63 patients who underwent cesarean section at Mardi Waluyo Hospital, Metro City, began early mobility more than 6 hours after the procedure. There were 31 patients in the control group and 32 in the experimental group. The results showed that 78.1% of test subjects and 67.7% of control subjects did this (Sary, Ambar 2030).

Some mothers who underwent cesarean sections missed the first day of early mobilization because the learning material on this matter is now delivered orally in the Lotus Room of Primaya Hospital in Sukabumi. The mother's unwillingness to mobilize early may be influenced by a lack of engaging learning materials on the topic. Engaging and original material is a crucial part of any instructional program because it can enhance students' understanding.

Based on an initial survey conducted from October 2–7, 2025, researchers selected 8 participants as the sample. Only two of the eight postoperative patients who had a cesarean section actually took action within six hours of receiving the information. For a variety of reasons, including discomfort around the surgical wound or concerns that their stitches would come loose when moving, the other six chose not to do so.

METHODE

This study used a quasi-experimental design with control groups and pre-test and post-test measurements. Therapy was given to the experimental group, while the control group received no intervention in this design. Patients who were treated at Primaya Sukabumi Hospital for the previous three months for postoperative treatment by caesarean section were the population in this study. In this study, there were 18 subjects in the intervention group, and 18 subjects in the control group to avoid *dropping out*, this study

used a technique in the form of "non-probability sampling" because the population could not be known the number of members, and with "purposive sampling" which became a technique to determine the sample. For outcomes that did not follow a normal distribution, the intervention group was tested using the Wilcoxon Signed-Rank Test.

To determine whether H1 or Ho is accepted, the Wilcoxon Signed Rank Test is used.

RESULT

Respondent Characteristics

Table 1
Description of Characteristics of *Post Sectio Caesarea Maternal Respondents* in the Lotus Room of Primaya Sukabumi Hospital (n=36)

Characteristics	Category	Frequency (f)	Percentage (%)
Age	17-25 years	7	19
	25-35 years	28	78
	36-45 years	1	3
	Total	36	100
Education	Elementary School	5	14
	Junior High School	9	25
	High School	14	39
	College	8	22
	Total	36	100
Jobs	Work	10	36
	Not Working	26	64
	Total	36	100
Number of Deliveries	1 time	26	72
	2 times	10	28

Based on table 1. it is stated that most of the respondents are between 25-35 years old as many as 28 mothers, the education level of most respondents is high school education is 14 people,

there are 10 working mothers, and the number of non-working people is 26 people, and the highest number of births is in 1x childbirth as many as 26 people.

Early Mobilization Compliance in the Intervention Group Before Educational Action

Table 2
Early Mobilization Compliance in the Intervention Group Before Educational Action (n=18)

Early Mobilization	F	%	Red	Median	Std Deviation	Min-Max
Obedient	5	28%	2	2	0.767	1-3
Non-compliant	13	72%				

Based on table 2. the mean value of compliance before being given video education was 2 indicating that before being given education, the level of maternal compliance in carrying out early mobilization was in the low category. The standard deviation value of 0.767 which is smaller

than the mean value shows that the data is homogeneous, which means that before education, the majority of respondents uniformly had a low level of compliance and did not know the importance of early mobilization.

Early Mobilization Compliance in the Control Group Before Educational Action

Table 3
Early Mobilization Compliance in the Control Group Before Educational Action (n=18)

Early Mobilization	F	%	Red	Median	Std Deviation	Min-Max
Obedient	7	39%	1.89	1.5	0.963	1-3
Non-compliant	11	61%				

Based on Table 3, the average compliance of respondents before being educated was 1.89, with a median of 1.5. This shows that before the

intervention, the majority of post-SC mothers had low compliance with early mobilization. The low median value compared to the mean indicates that

most respondents tend to be passive. The standard deviation of 0.963 indicates variation in scores

among respondents before receiving educational information.

Early Mobilization Compliance in Intervention Groups After Educational Actions

Table 4

Early Mobilization Compliance in Intervention Groups After Educational Actions

Early Mobilization	F	%	Red	Median	Std Deviation	Min-Max
Obedient	16	88%	4.78	4.5	1.801	2-7
Non-compliant	2	12%				

Based on Table 4, the mean compliance value was obtained after video education. There was an increase in the average score of 4.78. This shows that, in general, mothers in the intervention group have very good compliance after education.

However, a standard deviation of 1,801 indicates variation in behavior among respondents. This shows that, even though the majority are compliant, there are still differences in compliance levels among respondents.

Early Mobilization Compliance in the Control Group After Educational Action

Table 5

Early Mobilization Compliance in the Control Group After Educational Action

Early Mobilization	f	%	Red	Median	Std Deviation	Min-Max
Obedient	6	33%	2.22	2	0.647	1-3
Non-compliant	12	67%				

Table 5 shows a mean value of 2.22 and a median of 2. Although there was an average increase of 0.33 from the pre-test score (1.89), this increase was suspected not to be the result of educational interventions, but rather the influence of routine hospital care or the respondents' natural

motivation during the recovery period. In addition, the standard deviation of 0.647 indicated that respondents' behavior in the control group tended to be homogeneous, with demonstrated compliance still in the sufficient category and not yet at the optimal level.

The Effect of Video-Based Education Strategies on Early Mobilization Compliance of Post-Section Cesarean Mothers in the Lotus Room of Primaya Sukabumi Hospital in the Intervention Group

Table 6

Wilcoxon Test The Effect of Video-Based Education Strategies on Pre-Test and Post-Test Early Mobilization Compliance in the Intervention Group

Early Mobilization	Z	Asymp. Sig. (2-tailed)
Intervention Groups	-3.420b	0.001

The significance value of the intervention group after treatment was 0.001, which is smaller than 0.05, as shown in Table 4.5. This suggests that

the intervention group's post-test scores were significantly higher than their pre-test scores.

The Effect of Video-Based Education Strategies on Early Mobilization Compliance of Post Sectio Caesarea Mothers in the Lotus Room of Primaya Sukabumi Hospital in the Control Group

Table 7

Wilcoxon Test The Effect of Video-Based Education Strategies on Pre-Test and Post-Test Early Mobilization Compliance in the Control Group

Early Mobilization	Z	Asymp. Sig. (2-tailed)
Control Group	-1.192b	0.233

From Table 7 the control group had a significant value greater than 0.05, with a value of 0.233. In the control group, there was no

statistically significant change between pre-test and post-test scores.

DISCUSSION

Early Mobilization Compliance of Post-Caesarean Section Mothers Before Being Provided with Education

Housewives have fewer responsibilities compared to working women, which means they are more likely to have a C-section. The findings show that 26 of 100 respondents (72%) are housewives. This is supported by the findings of Widiyawati (2014), who found that work is a contributing factor to the tendency to undergo cesarean section during childbirth. This tendency is influenced by socioeconomic positions, which in turn influence the practice of health services. Housewife respondents are less likely to achieve their health goals, whereas civil servants and private-sector workers lead more regular lives.

Age, education, and information supply are variables that affect the implementation of early mobilization in mothers undergoing cesarean sections. One of the important signs of providing critical information to patients and their families to help them cope with health issues and recover faster is to meet the client's information needs in terms of health promotion. The study found that 13 mothers did not cooperate with mobilization due to a lack of education, and that this occurred before the early mobilization instruction. There was a lack of mobilization before early mobilization instructions after cesarean section, which is consistent with the findings of Imansari's (2019) research.

Some of the reasons why mothers do not mobilize early after a cesarean section include discomfort from the incision wound and concerns that the stitches may come loose if they change positions, both of which prevent them from moving freely. Pain around the surgical incision is the second most common symptom experienced by people after a cesarean section. Demelash et al. (2022) found that between 78% to 93% of women experience moderate to severe pain within a few days of a cesarean section (Rohmania et al., 2023).

A mother's childbirth history is a record of her pregnancy and subsequent delivery. When labor becomes too difficult, some mothers choose to have a cesarean section instead of giving birth naturally. Ratmiwasi (2017) stated that early mobilization is not a familiar thing for patients who have never undergone a cesarean section. According to the study's findings, the majority of women (24 out of 50) did not adhere to early mobilization after cesarean sections, which occurred before the mothers were educated. This may be related to prior labor experiences, as most

have only given birth once. Ratmiwasi (2017) stated that early mobilization is not a familiar thing for patients who have never undergone a cesarean section. Consistent with other studies, this study found that parity was associated with early mobilization among mothers after cesarean section (Sholika, 2019).

Early Mobilization Compliance of Post-Caesarean Section Mothers After Being Educated

Adherence to the treatment plan, as defined by the Indonesian Ministry of Health (2018), is understood as knowledge, understanding, agreement, and action. Health education aims to increase patients' knowledge and awareness through communication, enabling them to make more informed decisions about their health (WHO, 2024). Education can also refer to the process of imparting knowledge from authoritative figures to those who are more junior to achieve common goals. A person's knowledge directly correlates with their level of education. The importance of starting physical activity immediately after a cesarean section is most likely known to mothers with higher levels of education. Evidence shows that 14 of 36 respondents (39 percent) did not continue their education beyond high school. Half of the nine-person intervention group had completed high school, and a quarter of the four-person group had completed college. The study found that 88 percent of mothers in the intervention group were given video instructions on how to move actively after a cesarean section did so. A person's ability and knowledge to make healthy lifestyle choices can be influenced by their level of education, according to Sli's (2010) research.

Immediately after delivery, the term "early mobilization after cesarean section" encompasses any activity or position that the mother performs. To minimize complications after a cesarean section, the mother must move quickly according to the stages (Suandewi, 2022). Health education, as defined by Notoatmodjo (2018), is an educational or persuasive effort to encourage and assist people in making informed choices about their health. This study confirms previous findings by Azizi, Ana, Purwati, and Khalimatus (2024) that education affects the rate of early mobilization in mothers after cesarean section. After receiving video-based education, 16 individuals (88% of the total) in the intervention group improved their adherence to early mobilization.

Of the 36 respondents, 28 were between 25 and 35, half of the total. Since mothers are at their

most productive age between 20 and 35 years old, Kundre (2013) notes that this is also the age range in which most respondents fall. The mother's age affects the childbirth process; the older the mother, the higher the risk during childbirth. Promoting health among pregnant women will be easier than early mobilization because of the relationship between age and behavioral and cognitive development. Given that mothers' wisdom and experience increase with age, it is reasonable to assume that their decisions regarding early mobilization are strongly influenced by age (Notoadmodjo, 2010).

The effect of video-based education on early mobilization compliance in post-cesarean section patients

Health education videos improve adherence to early mobilization among C-section patients at Primaya Sukabumi Hospital, according to the study. This study uses video as a teaching technique. Videos are an effective way to learn new things and expand your horizons. Video is considered an audio-visual medium because it combines visual and auditory elements (Nurfadhillah et al., 2021). According to Maghfiroh (2017), community-friendly media, including films, brochures, and pocketbooks, can effectively disseminate health education. The goal is to improve patients' and community members' ability to understand and apply health promotion techniques.

Education for mothers about the importance of early mobilization after cesarean section significantly improves adherence, according to research from Primaya Hospital in Sukabumi. Analysis using the Wilcoxon test was necessary because the Shapiro-Wilk test indicated that the data in this study did not follow a normal distribution. The hypothesis that video-based training strategies affect early mobilization adherence in women undergoing cesarean section is supported by the statistically significant Wilcoxon test results in the intervention group (p -value = $0.001 < 0.05$). This is because more respondents complied with the recommendations for early mobilization, resulting in the desired outcomes. Consistent with prior research, this study confirms that health education significantly impacts early mobilization compliance among mothers undergoing cesarean section (Wahyuni, 2020). This is because more respondents complied with the recommendations for early mobilization, resulting in the desired outcomes. Health education using audiovisual media affects maternal behavior

after childbirth, according to this study and other studies (Setiawati, 2020).

The intervention group's compliance with early mobilization reached 72% after receiving video-based instructions, while the control group's compliance was only 28%. The results showed that the intervention group was very compliant with early mobilization. On the other hand, the control group had a much lower level of adherence to early mobilization commands (33% vs. 77%). When the patient's view favors early mobilization after a cesarean section, it is more likely to happen, according to Ismaliyah (2021). Patients may change their minds about early mobilization after listening to an audio broadcast explaining its benefits and rationale. With the help of animations, patients can learn early mobilization steps after cesarean section. Having a supportive attitude and understanding of early mobilization tactics is essential to motivate and encourage patients to move immediately after CS.

Videos are a fantastic way to convey a message because they are easy to remember and quick to load. Because moving images can convey key points more clearly and evoke strong emotions, videos are highly effective at influencing behavior (Arisani & Wahyuni, 2023). Receiving health education through video media improves patients' early mobility abilities after cesarean section, according to Kusumawati et al. (2024). According to this study, video media is an excellent tool for health education, consistent with previous findings.

Nurses are strategically positioned to help and educate mothers about the importance of early mobility after a salt catheter (SC). Maternal early mobilization after SC may be influenced by video-based instruction, according to the study. The results of this study show the value of educational programs in health facilities. Pre- and post-operative education should be done gradually using various methods, such as films, brochures, and pamphlets.

CONCLUSION

Data on the characteristics of respondents aged 25-35 years: as many as 28 respondents (78%) had a high school education; as many as 14 respondents (39%); employment status: not working (64%), working (36%). The highest number of deliveries was during the first childbirth, with 26 respondents (72%). From the post-test results in the intervention group, before receiving video-based education on early mobilization, as many as 5 respondents (27%) did not comply with early mobilization, whereas in the control group,

there were 7 respondents (38%). Among the intervention group, the pretest results showed that 13 respondents (72%) complied with early mobilization, while in the control group, 6 respondents (23%) did so. Based on the results of the study, *the results of significance (p value 0.001 < 0.05) were obtained*, so that it can be interpreted that the hypothesis is accepted, namely that there is an influence of video-based education strategies on the compliance of early mobilization of post-sectio caesarean mothers.

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