

Original Articles

Education Level, Age, Caesarean Section Surgery History, and Recovery Duration in Post-Operative Caesarean Section Patients

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Abstract

Background: Caesarean section surgery is a delivery procedure performed for mothers who want to give birth with complications. The recovery process from caesarean section surgery will vary from one person to another. Several factors can affect the recovery duration of caesarean section surgery, including education level, age, history of caesarean section surgery, motivation given by health workers, early mobilization provided by health workers, and others.

Objective: This study aimed to analyse the relationship between education level, age, history of caesarean section surgery, and recovery duration of post-operative caesarean section surgery.

Methods: The research design used is descriptive-analytic research with a cross-sectional approach. This research was carried out from May 5, 2021, until June 15, 2021, in the Recovery Room of the General Hospital of Jasem, Sidoarjo. The sampling technique used is incidental sampling, so the number of respondents obtained in this study is 50. The research instrument used was medical records to determine the level of education, age and history of caesarean section surgery. In addition, the researchers also used the Bromage Scale to evaluate the duration of recovery from post-operative caesarean section surgery. The statistical test used was the Spearman Rho test with a significance level of $< .05$ using SPSS 21.

Results: This study showed a relationship between age and history of caesarean section surgery (p -value $< .05$, $r = .310$). The results of this study also showed that there was a relationship between age and history of caesarean section surgery with duration of recovery of post-operative caesarean section surgery (p -value $< .05$, $r = .356$; p -value $< .001$, $r = .603$, respectively).

Conclusion: This study found that health workers are expected to consider age and history of caesarean section surgery in the recovery process of post-operative caesarean section surgery patients.

INTRODUCTION

Caesarean section surgery is a surgical procedure that aims to assist the delivery process because the birth process cannot be carried out typically (Ulfa, 2021). Based on data from the World Health Organization [WHO] in Aprina & Puri (2016), the incidence of caesarean section has increased in developing countries. The amount reaches 15% of the number of deliveries. Data from the Basic Health Research [Riskesdas] in Aprina & Puri, (2016) showed that the incidence rate in Indonesia related to delivery through Caesarean section operation reaches 9.8% of the number of deliveries. After the caesarean section, it will take time to recover from the anaesthesia given during the caesarean section (Diana & Yachin, 2019). The recovery time for each patient will vary. Several factors can affect the duration of post-operative Caesarean section recovery. The factors include the anaesthetic drug type, the dose given, the patient's general condition (age, comorbidities/indications for Caesarean section), previous experience of Caesarean section operation, education level, hypothermia. (Chrisnajayantie, 2020; Maher & Abdelaziz, 2017; Saracoglu et al., 2012). According to Prawirohardjo (2010), age affect a person's readiness to face the process of pregnancy, childbirth, and care for babies. Employment and education level able to anticipate possible risks to the condition of pregnant women who have to undergo the Caesarean Section Surgery delivery process (Ulfa, 2021). According to Sari (2017), a mother who has already undergone a Caesarean Section Surgery delivery will be better prepared to face every condition after a Caesarean Section Surgery. Therefore, the researcher wanted to conduct a study to analyze the relationship between educational level, age, Caesarean Section Surgery History and recovery duration in post-operative Caesarean Section Patients.

METHODS

Study Design

This research used a descriptive-analytical research design with a cross-sectional approach.

Settings

This research was conducted in the Recovery Room of the General Hospital of Jasem, Sidoarjo, from May 5, 2021, until June 15, 2021.

Research Subject

The target population in this study were all pregnant women who gave birth by Caesarean section operation at the General Hospital of Jasem, Sidoarjo. The sampling technique was incidental sampling. This sampling method was chosen because of the uncertainty in the target population number. The total sample of this study was 50 respondents whose data was taken from May 5, 2021, to June 15, 2021.

Instruments

Data collection used medical records to determine the level of education, age, and history of caesarean section surgery. In contrast, the recovery time for postoperative Caesarean section was

assessed using the patient's recovery time in fulfilling the Bromage Score (Anaesthesia UK, 2014) with a value of 2 to be transferred to the inpatient room. The recovery time is based on the Standard Operating Procedure at the General Hospital of Jasem, Sidoarjo.

Data Collection

Data were collected after the ethical test result was obtained from the health research by the Health Polytechnic of Kerta Cendekia . After getting the results of the health research ethics test, the researchers applied for permission from the hospital leadership. After getting permission from the hospital leadership, the researchers collected data using research instruments prepared. At the time of data collection, the researchers asked the willingness of the post-operative caesarean section patients to be respondents in this study. The researcher also explained the rights of the post-operative caesarean section patients in this study when they were willing to become research respondents. The respondents' demographic data was obtained through the medical records. For the recovery time data, the researcher made observations using the Bromage Score to evaluate the length of the recovery time of the respondents.

Data Analysis

Analysis of the data in this study used the Spearman Rho test using the SPSS 21 application. The level of significance used in this statistical test is $< .05$.

Ethical Consideration

In collecting data, the researcher asked the respondents' willingness in a form of patient consent. The respondents' identity is also kept confidential following health research ethics. In addition, the implementation of this research has obtained permission from the General Hospital of Jasem with the number 056/S-ETRN/RSUJ/V/2021. This research has also been declared to have passed the ethical test of health research conducted by the Health Polytechnic of Kerta Cendekia with the number 085/KEPK/KC/V/2021.

RESULTS

Characteristics of Respondents

Table 1. Characteristics of Respondents at Jasem General Hospital, Sidoarjo, from 5 May 2021, to 15 June 2021 (n = 50)

The Respondents Characteristics	Frequency	Percentage (%)
Education Level		
Elementary School	0	0
Junior High School	3	6
Senior High School	30	60
University	17	34
Age (Min = 20; Max = 42; Mean = 29.42; SD = 5.570)		
20-30 years	34	68
31-40 years	13	26
> 40 years	3	6

History of Caesarean Section Surgery		
Ever	26	52
Never	24	48
Recovery Duration in Post Caesarean Section Surgery		
Less than 2 hours to reach Bromage Score 2	23	46
More than 2 hours to reach Bromage Score 2	27	54

Sources: Primary Data of Questionnaire, 2021.

Table 1 shows that most of the respondents had a high school education, as many as 30 respondents (60%). Most of the respondents were aged 20-30 years (68%) and had a history of previous surgery (52%). 27 respondents (54%) needed a recovery time of more than 2 hours to achieve a Bromage Score 2.

The relationship Analysis between Education Level, Age, History of Caesarean Section Surgery, and Duration of Recovery of Postoperative Caesarean Section using the Spearman Rho Test.

Table 2. Results of Data Analysis on the Relationship between Education Level, Age, History of Caesarean Section Surgery, and Duration of Recovery of Post-operative Caesarean Section at the General Hospital of Jasem, Sidoarjo from 5 May 2021, to 15 June 2021

	Age		History of Caesarean Section Surgery		Educational Level	
	<i>p</i> -value	<i>r</i>	<i>p</i> -value	<i>r</i>	<i>p</i> -value	<i>r</i>
History of Caesarean Section Surgery	.028	.310*				
Educational Level	.222	.176	.592	-.078		
Duration of Recovery of Post-operative Caesarean Section	.011	.356*	.000	.603***	.801	-.036

Sources: Primary Data of Questionnaire, 2021.

Table 2 shows that there was a relationship between the respondent's age and the history of Caesarean Section surgery (p -value $< .05$, $r = .310$). The data from the study also showed a relationship between age and history of caesarean section and the duration of recovery of Postoperative Caesarean section (p -value $< .05$, $r = .356$; p -value $< .001$, $r = .603$, respectively).

DISCUSSION

Based on the study results above, it was found that there was a relationship between age and history of caesarean section surgery. The age of pregnant women who are too young (<20 years) or too old (>35 years) are factors that complicate pregnancy, so mothers are advised to do caesarean section surgery. According to Prawirohardjo (2010), mothers who get pregnant early are still not ready to cope with childbirth, postpartum and care for the baby. Meanwhile, old pregnant mothers had higher risk of congenital abnormalities and complications during childbirth. In addition, a history of caesarean section surgery was obtained by pregnant women who gave birth with complications during their previous pregnancy. According to Intan Salfariani & Nasution (2016), mothers who had multiple

caesarean section surgery are at greater risk of complications. For this reason, mothers who have had a history of caesarean section surgery will be advised to perform caesarean section surgery again during the subsequent delivery, even though they still have the opportunity to give birth vaginally.

The results of the above study also showed a relationship between age and history of caesarean section surgery with the recovery duration of post-operative caesarean section surgery. According to the researchers, this condition was because they had previous experience of caesarean section surgery. The similar result was stated by Jasim et al. (2017) in their research. Based on Jasim et al.'s research, age and history of caesarean section surgery will affect post-operative caesarean section surgery patients in pain management, so it will also affect the duration of recovery of post-operative caesarean section surgery. A relatively young age will impact on a person's level of anxiety to carry out early mobilization. It can also impact recovery duration from post-operative caesarean section surgery (Prawirohardjo, 2010). According to Diana & Yachin (2019), age and history of caesarean section surgery affect the intention of mothers who undergo post-operative caesarean to carry out early mobilization. The early mobilization is expected to speed up the recovery duration of post-operative caesarean section surgery patients.

Education level had no relationship to all variables (age, history of caesarean section surgery, and recovery duration of post-operative caesarean section surgery). The education level was not related to age because as long as a person can access proper education at any age, then that person's knowledge will be quite well. According to William et al. in Putra et al. (2019), someone who has a reasonably good family income will be able to take a enough high education. Education level was also not related to the history of caesarean section surgery. This history of caesarean trend is caused by complications in the normal delivery process (age, parity, previous medical history, and natural abnormalities during pregnancy) (Aprina & Puri, 2016; Wahyuni & Rohani, 2019) or the direct intention of married couples to take delivery by caesarean section surgery caused by several things (e.g. anxiety, the timing of birth, insurance ownership, etc.) (Sitorus & Purba, 2019). Education level was not related to the recovery duration of post-operative caesarean section surgery. The recovery duration of post-operative caesarean section surgery is more influenced by experience and the amount of information obtained by a person related to ways to shorten the duration of recovery of post-operative caesarean section surgery (Diana & Yachin, 2019; Jasim et al., 2017)

LIMITATION

This study has limitations including the small number of respondents and the research area. In addition, there are still many variables that might be related to the recovery duration in post-operative caesarean section patients. Based on these limitations, further research is needed by considering other variables that may be related to the recovery duration in post-operative caesarean section patients with a more significant number of respondents and research areas conducted in several hospitals so that the comparison can be seen.

CONCLUSION

Based on the study results above, health workers should consider age and history of caesarean section surgery as factors that affect the recovery duration in post-operative caesarean section patients. In addition, nurses must also provide motivation and train patients for early mobilization.

AUTHOR CONTRIBUTION

Kusuma Wijaya Ridi Putra	: Conceptualization, methodology, and writing-original draft
Riesmiyatiningdyah	: Investigation, data duration, visualization, and supervision
Risti Puji Listari	: Formal analysis, funding acquisition and writing-review
Meli Diana	: Software, validation, and resources
Chanandchidadussadee Toonsiri	: Project administration and editing

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CONFLICT OF INTEREST

There is no conflict of interest in this research.

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