



RESEARCH ARTICLE

# The Correlation Between Mothers' Knowledge About Caesarean Section With Mothers' Anxiety During Pre-Surgery At Ummi General Hospital In Bengkulu City

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## Abstract

Caesarean section is a surgical delivery method that is increasingly being used. Even though considered as a general procedure, caesarean section can cause anxiety on mother, especially during pre-operation. One of the factors that allegedly influence the anxiety level is Mothers' knowledge about caesarean section. This research purpose is to find out the correlation between Mothers' knowledge about caesarean section with Mothers' anxiety during pre operation at Ummi Hospital of Bengkulu City. This research uses analytic survey method with cross section research design. The research population is all mothers who will choose labor with caesarean section at RSU Ummi of Bengkulu City with total sample number 45 respondent who taken by using total sampling technique. Data are collected by using questionnaire about knowledge and anxiety, then analyzed by using univariate and bivariate using Chi-Square test. The research result shows that almost half of respondent has good knowledge (37,8%) and mild anxiety level (40,0%) The result of Chi-Square shows that p-value = 0,008 ( $p < 0,05$ ), means there is a significance correlation between Mothers' knowledge with pre-operation anxiety. It can be concluded that the increase of health education pre-operation is very important to increase the Mothers' knowledge and to reduce anxiety result before conduct caesarean section.

**keywords:** Knowledge, Anxiety, Caesarean Section, Pre-Operation Mother.

## Introduction

Caesarean Section (CS) is not the latest thing for mothers because CS is a process of labor with surgery where slices are conducted on Mothers' stomach (laparotomi) and Womb (Histrektomi) to deliver the baby (Aprilia, 2019)

According to World Health Organization (WHO), cesarean section is getting popular in the world, and in 2021, the delivery proportion with CS increases to 21%. This labor number with CS method has increased globally and has reached the WHO recommendation for 10-15% this growth will continue for years in the future. If this trend still continues, the proportion of caesarean section delivery in 2030 will happen in West Asian (50%), East Asian (63%), Latin America and Caribbean (54%), Australia and New Zealand (45%), South Europe (47%) and North Africa (48%) (World Health Organization, 2021)

According to Indonesia Health Profile in 2022 shows that in 2022, there was a decrease in Maternal Mortality Rate into 106 mother death for 100.000 of living birth (50,96%). According to Indonesia Demography and Health Survey (IDHS), one of the indicators for Social Welfare Status of an area is Maternal Mortality Rate. Maternal Mortality with the highest number in Indonesia is in 2020 for 4.627 cases.

That number increases compared in 2019 for 4221 cases. From 4.627 of Mothers' death, the highest maternal mortality rate was found at West Java province for 15,99%. The highest of Maternal Mortality is not far from certain factors, one of them is

related with process and delivery method with conducted at health facility.

In Indonesia, delivery number through Caesarean Section always increased. In 2022, data shows that there is about 15,3% from 177.440 deliveries. While in 2023 increases to 17,6% from 178.736 deliveries. CS number variation between areas shows that there is a different population characteristics, health service condition, health facilities policy, also clinical or non-clinical factors which influence in choosing the delivery. On the other hand, the maternal mortality is still quite high in Indonesia is not also separated from pregnancy complication and delivery, includes things that happened on mother with caesarean section delivery (Profil Kesehatan Indonesia, 2024)

Anxiety is a general feeling which suffered by someone, where anxiety shows the reaction toward the dangers which warn other people instinctively that there is a danger and related people who might lose control in that situation (Lynda, 2018).

Factors which influence anxiety when mother will conduct delivery is knowledge level, husband factor, economy factor and psychology factor. Knowledge experience has correlation with behavior which from the knowledge where a mother suffered anxiety with has no delivery about how the process, especially on mother with low knowledge toward delivery process, things that will be and must be suffered by mother as an impact from delivery process. It is caused by the lack of information which obtained by Anxiety (Notoatmodjo, juga dapat 2018).

Formed as mental health symptoms, like tension, confusion, worry, hard to concentrate, uncertain feeling and others (Dalami, 2019). Woman want her delivery success and deliver perfect baby.

There are two ways of giving birth, first is vaginal delivery and caesarean section or section caesarean delivery, it is called a surgical procedure to deliver the baby by making an incision or cut in the skin, abdominal muscles, and specifically (2018). The Mothers' uterus (Surinah, Section caesarean is generally performed when

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the normal vaginal delivery process is not possible or because of medical or non-medical indications. Medical action is only taken if there are problems in the birth process that could threaten the life of the mother and fetus, for example, pregnancy with preeclampsia (Judhita, 2019).

Based on preliminary survey data at Ummi Hospital, the number of cesarean deliveries in the last six months (January–August 2025) also increased by 890 cases. (UMMI General Hospital Medical Records Data, 2025).

**Method**

This research uses an analytical survey method with a cross-sectional design. Cross-sectional research is a type of research that emphasizes the time of measurement/observation of independent and dependent variable data only once at a time (Nursalam, 2017). The population in this study were 35 patients who would undergo cesarean section delivery in the Maternity Room of Ummi Hospital on January 1-10. The sampling technique used was non-probability sampling with total sampling type. All samples were taken and used as research respondents.

**Univariate Analysis**

**Table 1** Frequency Distribution of Respondents Based on Knowledge Level at Ummi Hospital, Bengkulu City

Knowledge	Frequency	Percentage%
Less	13	28.9
Moderate	15	33.3
Good	17	37.8
Total	45	100.00

Based on table 1 above, it was found that 1 out of 45 respondents, almost all 17 (37.8%) had good knowledge.

**Table 2** Frequency Distribution of Respondents Based on the Anxiety Level of Pre-Operative by Mothers at Ummi Hospital, Bengkulu City

Anxiety	Frequency	Percentage%
Mild	18	40.0
Moderate	10	22.2
Severe	17	37.8
Total	45	100.00

Based on table 1 above, it was obtained from 45 respondents that almost half of the respondents, 17 (37.8%) had severe anxiety.

**Bivariate Analysis**

Bivariate analysis to determine the relationship between the independent variable of knowledge with the dependent variable of pre-operative anxiety. To see whether there is a relationship between the independent variable and the dependent variable, a statistical test (chi-square) can be used with the SPSS program.

**Table 3** The Correlation Between Mothers' Knowledge About Cesarean Section With Mothers' Anxiety During Pre-Surgery At Ummi General Hospital In Bengkulu City

Pre-surgery anxiety	Knowledge						N	%	P-Value
	Less		Moderate		Good				
	N	%	N	%	N	%			
Mild	1	2.2	7	15.6	10	22.2	18	40.0	0.008
Moderate	2	4.4	5	11.1	3	6.7	10	22.2	
Severe	10	22.2	3	6.7	4	8.9	17	37.8	
Total	13	28.9	15	33.3	17	37.8	45	100.0	

It is known that the level of pre-surgery anxiety has a significant relationship with the level of respondent knowledge. The results of this statistical test showed a p-value = 0.008 (p < 0.05), which means there is a significant relationship between knowledge and pre-surgery anxiety.

**Result and Discussion**

Based on the research results in Table 1, it shows that of the 45 respondents, almost all respondents had a good level of knowledge, they are 17 respondents (37.8%), followed by moderate knowledge of 15 respondents (33.3%), and less knowledge of 13 respondents (28.9%).

These results indicate that most mothers undergoing pre-caesarean section surgery at Ummi Hospital, Bengkulu City, have a fairly good understanding of surgical procedures, including the definition, procedures, benefits, and possible risks. According to Notoatmodjo (2014), knowledge is the result of knowing after someone senses an object, and good knowledge can be obtained through education, experience, information from health workers, and information media.

Good knowledge in pre-surgery mothers can also be influenced by health education provided by medical personnel before surgery is performed. This is in line with Sari's (2020) research which states that providing pre-surgery information and education plays an important role in increasing patient knowledge so that patients are better prepared physically and psychologically to face surgery.

Based on Table 2, it is known that of the 45 respondents, almost all of the respondents experienced mild anxiety, namely 18 respondents (40.0%), followed by severe anxiety of 17 respondents (37.8%), and moderate anxiety of 10 respondents (22.2%).

Pree-surgery anxiety is a common emotional response experienced by patients before undergoing surgery. According to Stuart (2016), anxiety is a response to an unclear threat and is often associated with feelings of fear, worry and uncertainty. In mothers who are going to undergo a cesarean section, anxiety can arise due to concerns about the surgical process, post-surgical pain, the condition of the baby, and possible complications.

This high proportion of severe anxiety in this study indicates that although some respondents have sufficient knowledge, other factors such as first-time experience of surgery, family support, and the individual's psychological condition also influence the level of anxiety. This is in line with research by Fitriani (2019) which states that pre-operative anxiety is not only influenced by one factor, but is the result of the interaction of various psychological and social factors.

The Relationship between Maternal Knowledge and Pree-surgery Anxiety for Sectio Caesarea.

Based on the results of the bivariate analysis in Table 3, a  $p$ -value of 0.008 ( $p < 0.05$ ) was obtained, which indicates that there is a significant relationship between maternal knowledge about cesarean section and pre-operative maternal anxiety at Ummi Hospital, Biengkulu City.

This data distribution shows that respondents with less knowledge mostly experienced severe anxiety, they are 10 respondents (22.2%). This indicates that limited knowledge causes mothers to have a poor understanding of the surgical procedures they will do, thus increasing feelings of fear, uncertainty and excessive worry.

On the other hand, among respondents with good knowledge, the majority experienced mild anxiety are 10 respondents (22.3%). Good knowledge allows the mother to rationally understand the surgical procedure, thereby reducing the perception of threat and helping to control emotional responses.

This finding is also in line with previous research by Putri (2021) which stated that there is a significant relationship between the level of knowledge and maternal anxiety before a cesarean section, where mothers with low knowledge tend to experience higher anxiety than mothers with good knowledge. This research is in line with researcher Nindya (2020) who stated that a person's psychological response will not only influence the level of knowledge about pre-cesarean section surgery with the level of anxiety. Pregnant women who do not yet have knowledge about pre-cesarean section operations may be anxious and may wonder about the subsequent risks after cesarean section operations.

#### conclusion and suggestions

This conclusion is that there is a significant relationship between knowledge and pre-surgical anxiety at Ummi Hospital, Biengkulu City. It is hoped that this Ummi Hospital in Biengkulu City can improve health services, especially in the aspect of pre-operative education, in order to reduce the level of anxiety of mothers who will conduct a cesarean section by providing structured and continuous health education regarding the cesarean section procedure, benefits, risks, and post-operative care, so that mothers have adequate knowledge and better psychological readiness.

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