

The Relationship between Characteristics of Pregnant Women and Level of Anxiety before Caesarean Section Surgery in Spinal Anesthesia at RSIA Abby Lhokseumawe

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Abstrak

Kecemasan merupakan perasaan tidak nyaman yang timbul akibat ketakutan terhadap sesuatu yang tidak spesifik dan sumbernya tidak diketahui. Proses operasi seksio sesarea dapat menimbulkan kecemasan, yang terkait dengan ketakutan terhadap prosedur operasi, penyuntikan, ancaman kematian, dan tindakan anestesi. Hal ini juga dapat mencakup kekhawatiran terkait kemungkinan cacat atau kematian pada ibu dan bayi. Faktor-faktor seperti usia, tingkat pendidikan, dan pengalaman operasi pada ibu dapat memengaruhi tingkat kecemasan sebelum menjalani operasi seksio sesarea. Penelitian ini bertujuan untuk mengetahui hubungan antara karakteristik ibu hamil dan tingkat kecemasan sebelum operasi seksio sesarea dengan anestesi spinal di RSIA Abby Lhokseumawe. Metode penelitian yang digunakan adalah analitik dengan pendekatan cross-sectional. Sampel penelitian terdiri dari pasien yang akan menjalani operasi seksio sesarea, dengan jumlah responden sebanyak 52 orang. Pengambilan sampel dilakukan secara purposive sampling. Pengumpulan data dilakukan melalui wawancara dan kuesioner menggunakan skala kecemasan preoperatif Amsterdam. Hasil penelitian menunjukkan bahwa terdapat hubungan antara karakteristik ibu hamil dengan tingkat kecemasan sebelum operasi seksio sesarea dengan anestesi spinal. Nilai p pada data usia adalah 0,003, pada data pendidikan adalah 0,001, dan pada data pengalaman operasi adalah 0,000. Studi ini menemukan bahwa usia, tingkat pendidikan, dan pengalaman operasi ibu hamil terkait dengan tingkat kecemasan sebelum operasi seksio sesarea dengan spinal anestesi.

Kata Kunci : kecemasan; pre-operasi; seksio sesarea; hamil; wanita.

Abstract

Anxiety is a feeling of an uncomfortable that arises due to fear of something unspecified and unknown sources. The process of cesarean section surgery can induce anxiety, associated with fears of the surgical procedure, injections, the threat of death, and anesthesia. This can also encompass concerns about potential disabilities or death for both the mother and the baby. Factors such as age, level of education, and prior surgical experience in mothers can influence the level of anxiety before undergoing cesarean section surgery. This research aims to determine the relationship between the characteristics of pregnant women and the level of anxiety before cesarean section surgery with spinal anesthesia at RSIA Abby Lhokseumawe. The research method used is analytical with a cross-sectional approach. The research sample consists of patients who will undergo cesarean section surgery, with a total of 52 respondents. Sampling is done through purposive sampling. Data collection is carried out through interviews and questionnaires using the Amsterdam Preoperative Anxiety and Information Scale. The research results indicate that there is a relationship between the characteristics of pregnant women and the level of anxiety before cesarean section surgery with spinal anesthesia. The p-value for age data is 0.003, for education data is 0.001, and for surgical experience data is 0.000. This study found that the age, educational level, and prior surgical experience of pregnant women are associated with the level of anxiety before undergoing cesarean section surgery with spinal anesthesia.

Keywords: anxiety, pre-operative, caesarean section; pregnant; women

Introduction

Anxiety is an uncomfortable feeling that arises from fear of something unspecified and unknown (1). One situation that can trigger anxiety is the process of childbirth with the intervention of a cesarean section. Mothers undergoing cesarean section experience different fears compared to those delivering vaginally (2). According to 2020 World Health Organization (WHO) statistics, countries with the highest rates of cesarean section include Brazil (52%), Cyprus (51%), Colombia (43%), Mexico (39%), Australia (32%), and Indonesia (30%). The prevalence of cesarean sections continues to rise globally, with the WHO average ranging from 5-15% of 1000 births worldwide. Government hospitals have an approximately 11% rate, while private hospitals exceed 30%. WHO reported a surge in cesarean section deliveries across Asia, reaching 110,000 per birth during 2017-2019 (3). In Aceh Province, Indonesia, the incidence of cesarean sections in 2015 reached 3,401 out of 170,000 deliveries, accounting for about 20% of total deliveries (4).

Research conducted in Canada, Saudi Arabia, and Sri Lanka on preoperative anxiety rates revealed prevalences of 89%, 55%, and 76.7%, respectively. A study in Austria reported a preoperative anxiety rate of 45.3% among surgical patients. In Nigeria, studies in tertiary hospitals and pilot studies indicated preoperative anxiety rates of 51.0% and 90%, respectively. In Indonesia, research at RSUD dr. Soekarjo Tasikmalaya found a preoperative anxiety rate of 71.4% among patients (5).

Based on the frequency distribution of maternal anxiety levels before cesarean section in the Hesti Room of Rumkit TK Zainul Arifin, we found that 24 respondents (57.1%) experienced severe anxiety, 16 respondents (38.1%) experienced moderate anxiety, and 2 respondents (4.8%) experienced mild anxiety. These results indicate significance (6).

The preoperative phase is the initial stage in the surgical process, starting with the decision to undergo surgery and ending with the transfer of the patient to the operating room. Physiological and psychological readiness of the patient is crucial at this stage. Physiological reactions are directly related to the surgical process, while psychological reactions, although not directly related to the surgery itself, have a significant impact on the success of the procedure as they can trigger larger responses. Every surgical procedure can induce anxiety in patients (7).

Cesarean section procedures have the potential to cause anxiety, not only related to the mother's own condition but also to the baby's condition. Mothers undergoing cesarean section

may perceive it as a hazardous procedure, causing anxiety related to the surgical procedure, injection, and the threat of death (8).

The characteristics of mothers undergoing cesarean section, such as age, education level, and previous surgical experience, can influence their anxiety before surgery (4). One internal factor influencing maternal anxiety during childbirth is age. According to Lutfa in Santoso (2009), anxiety disorders can occur at any age, but due to the many challenges faced by adults, it is more common in older individuals. According to WHO, 534 million people experience preoperative anxiety, and 50% of patients worldwide experience anxiety (9). As shown by research conducted at RSUD Kanjuruhan Kepanjen in Malang Regency, low educational levels are also associated with increased anxiety (10). Previous surgical experience can also impact the anxiety level of patients by providing an overview of past events (11). Considering the information above, researchers are interested in investigating the relationship between the characteristics of pregnant women and the level of anxiety before cesarean section with spinal anesthesia at RSIA Abby Lhokseumawe.

Methods

This quantitative research is of an analytical observational nature and was conducted at RSIA Abby Lhokseumawe using a cross-sectional method. The study population consisted of all patients who had undergone cesarean section surgery before receiving spinal anesthesia at RSIA Abby. Purposive sampling was employed, and 52 samples met the inclusion and exclusion criteria.

Inclusion criteria for this study were:

1. ASA I-II physical status.
2. Patients undergoing cesarean section with spinal anesthesia.
3. Willingness to be a respondent.
4. Ability to read and write.

Exclusion criteria for this study were:

1. Patients already diagnosed with anxiety disorders (having received psychiatric treatment).
2. Patients undergoing emergency surgery.

The characteristics of mothers as the Independent variable in this study include age, education level, and surgical experience. The dependent variable is the level of maternal anxiety before cesarean section surgery with spinal anesthesia. The research instrument

consists of the Amsterdam Preoperative Anxiety and Information Scale (APAIS) questionnaire and interviews. Data analysis and presentation were performed through:

1. Univariate analysis to determine the distribution of age, education, surgical experience, and anxiety levels, presented in frequency distribution tables for each group to identify the proportion of these variables.
2. Bivariate analysis to determine the relationship between age, education, surgical experience, and the level of preoperative anxiety in cesarean section surgery with spinal anesthesia at RSIA Abby Lhokseumawe, using the Spearman rank correlation test.

Research Results

1. Description of Characteristics of Pregnant Women Before Cesarean Section Surgery

Table 1. Distribution of Respondents by age

Age	Frequency	Percentage (%)
20-35 yrs	48	92,3
>35 yrs	4	7,7
Total	52	100,0

Source : Primary Data, 2023

Based on Table 1, the age of mothers who will undergo cesarean section is mostly found at the age of 20-35 years, which is 48 people (92.3%), while the age of >35 years is 4 people (7.7%).

Table 2. Distribution of Respondents by Education

Education	Frequency	Percentage (%)
Elementary	7	13,5
Middle	17	32,7
High	28	53,8
Total	52	100,0

Source : Primary Data, 2023

Based on Table 2, the education level of mothers who will undergo cesarean section is mostly high, with a total of 28 individuals (53.8%). The middle education level accounts for 17 individuals (32.7%), while the least is elementary education, with a total of 7 individuals (13.5%).

Table 3. Distribution of respondents based on operating experience

Surgery Experience	Frequency	Percentage (%)
Has never undergone surgery	23	44,2
Has undergone surgery	29	55,8

Total	52	100,0
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Source : Primary Data, 2023

Based on Table 3, the experience of the mother's surgery is often found to have undergone surgery, totaling 29 individuals (55.8%), while those who have never undergone surgery are 23 individuals (44.2%).

2. Description of the Level of Anxiety in Pregnant Women Pre-Cesarean Section Surgery

Table 4. Distribution of Anxiety of Preoperative Respondents to Cesarean Section

Anxiety	Frequency	Percentage (%)
No Anxiety	3	5,8
Mild	4	7,7
Moderate	22	42,3
Severe	5	9,6
Very Severe	18	34,6
Total	52	100,0

Source : Primary Data, 2023

Based on Table 4, the anxiety level in mothers who will undergo cesarean section is mostly categorized as moderate anxiety, with a total of 22 individuals (42.3%). The category of extremely severe anxiety is 18 individuals (34.6%), severe anxiety is 5 individuals (9.6%), mild anxiety is 4 individuals (7.7%), while the least is no anxiety at all, with a total of 3 individuals (5.8%).

3. The Relationship of Characteristics of Pregnant Women with the Level of Preoperative Anxiety Cesarean Section in Spinal Anesthesia

Table 5. Relationship of Age with Preoperative Anxiety Level of Cesarean Section

Age	Anxiety										r	P Value
	None		Mild		Moderate		Severe		Very Severe			
	n	%	n	%	n	%	n	%	n	%		
20-35 yrs	1	33,3	3	75,0	21	95,5	5	100,0	18	100,0	-0,399	0,003
>35 yrs	2	66,7	1	25,0	1	4,5	0	0	0	0		
Total	3	100,0	4	100,0	22	100,0	5	100,0	18	100,0		

Source : Primary Data, 2023

Table 5 shows that respondents aged 20-35 years mostly have a moderate level of anxiety, with a total of 21 individuals (95.5%), and those aged >35 years mostly do not experience anxiety, with a total of 2 individuals (66.7%). The result of the Rank Spearman correlation test obtained a correlation coefficient (r) of -0.399 with a p-value of 0.003 (<0.05).

The null hypothesis (Ho) is rejected, indicating that in this study, there is a significant negative correlation between age and the level of anxiety in pre-operative cesarean section, meaning that the younger someone is, the higher the level of anxiety or vice versa. The strength of the correlation coefficient is considered moderate based on the D.A de Vaus category.

Table 6. Relationship of Education with Preoperative Anxiety Level of Cesarean Section

Education	Anxiety										r	P Value
	None		Mild		Moderate		Severe		Very Severe			
	n	%	n	%	n	%	n	%	n	%		
Elementary	0	0	0	0	0	0	1	20,0	6	33,3	-0,438	0,001
Middle	0	0	0	0	10	45,5	1	20,0	6	33,3		
High	3	100,0	4	100,0	12	54,5	3	60,0	6	33,3		
Total	3	100,0	4	100,0	22	100,0	5	100,0	18	100,0		

Source : Primary Data, 2023

Table 6 indicates that respondents with elementary education mostly experience extremely severe anxiety, totaling 6 individuals (33.3%). Respondents with middle education mostly have moderate anxiety, with a total of 10 individuals (45.5%), while those with high education mostly experience moderate anxiety, totaling 12 individuals (54.5%). The Rank Spearman correlation test resulted in a correlation coefficient (r) of -0.438 with a p-value of 0.001 (<0.05). Therefore, the null hypothesis (Ho) is rejected, indicating a significant negative correlation between education and the level of anxiety in pre-operative cesarean section. This suggests that the higher the level of education, the lower the level of anxiety or vice versa. The strength of the correlation coefficient is considered moderate based on the D.A de Vaus category.

Table 7. Relationship of Surgery Experience with Preoperative Anxiety Level of Cesarean Section

Surgery Experience	Anxiety										r	P Value
	None		Mild		Moderate		Severe		Very Severe			
	n	%	n	%	n	%	n	%	n	%		
Has never undergone surgery	0	0	0	0	4	18,2	1	20,0	18	100,0	-0,768	0,000
Has undergone surgery	3	100,0	4	100,0	18	81,8	4	80,0	0	0		
Total	3	100,0	4	100,0	22	100,0	5	100,0	18	100,0		

Source : Primary Data, 2023

Table 7 shows that respondents who have never undergone surgery mostly have an

extremely severe level of anxiety, totaling 18 individuals (100.0%), while respondents who have undergone surgery mostly have a moderate level of anxiety, totaling 18 individuals (81.8%). The Rank Spearman correlation test resulted in a correlation coefficient (r) of -0.768 with a p -value of 0.000 (<0.05). Therefore, the null hypothesis (H_0) is rejected, indicating a significant negative correlation between surgery experience and the level of anxiety in pre-operative cesarean section. This implies that the more surgical experience a person has, the lower their level of anxiety, or vice versa. The strength of the correlation coefficient is considered very strong based on the D.A de Vaus category.

Discussion

Descriptions of the Characteristics of Preoperative Pregnant Women Cesarean Section in Spinal Anesthesia

The research results on 52 participants indicate that the majority of them, a total of 48 individuals (92.3%), fall within the age range of 20-35 years. This is likely due to the advancing scientific knowledge, impacting societal habits to refrain from marrying at an age below 20. Additionally, the increased knowledge among women regarding pregnancy after the age of 35 may also be a contributing factor (12).

These findings align with the theory stating that high-risk pregnancies are more common in individuals under 20 and over 35 years old. In the context of healthy reproduction, the age range of 20-35 years is considered safe for pregnancy, delivery, and childbirth (13).

In terms of education, out of a total of 52 respondents, the majority have higher education, comprising 28 individuals (53.8%), while respondents with elementary education only consist of 7 individuals (13.5%). Education is considered a factor that can broaden one's insights and knowledge. Higher education levels can facilitate understanding of the risks associated with the childbirth process. Individuals with higher education tend to have a broader perspective compared to those with lower education (14).

Based on surgical experience, out of 52 respondents, a total of 29 individuals (55.8%) have undergone surgery before, while 23 individuals (44.2%) have not. This finding is consistent with a study by Astuti et al. in 2021, showing that the majority of 50 respondents had undergone surgery before. These results affirm that a cesarean section birth does not automatically influence subsequent deliveries, whether they should be through surgery or not. The decision to perform surgical procedures in subsequent deliveries may depend on medical

indications such as a large baby size, a narrow pelvis, or conditions that prevent a normal delivery (15).

Descriptions of the Anxiety Level of Preoperative Pregnant Women Cesarean Section in Spinal Anesthesia

Based on the anxiety levels of the 52 respondents, the majority, comprising 22 individuals (42.3%), experienced a moderate level of anxiety. This was followed by a severe anxiety level experienced by 18 individuals (34.6%), and the least prevalent was insignificant anxiety, with only 3 individuals (5.8%). Preoperative cesarean section patients tend to experience higher levels of anxiety compared to postoperative cesarean section patients. Anxiety in preoperative cesarean section patients may manifest through symptoms such as restlessness and fear, which are not always clearly visible. Patients often express anxiety through specific behaviors, such as repetitive questioning, a desire to distract attention, unwillingness to talk, or incessant movements, which may hinder sleep (16).

Common signs and symptoms of anxiety in patients involve palpitations, which can be caused by excessive worry about the surgical procedure and tension leading up to the operation. Anxiety can also be related to a lack of understanding of the surgical procedure, apprehension while awaiting surgery, and concerns about surgical outcomes that can provoke anxiety before the operation (17).

Smeltzer and Bare (2013) state that preoperative anxiety in patients can stem from fear of pain or death, worries about uncertainty, or fear of changes in body image. Other factors that can contribute to anxiety involve financial problems, family responsibilities, work obligations, and concerns about a poor prognosis and the risk of disability in the future (18).

According to Sadock, B.J. and Sadock, V.A. (2010), there are several intrinsic and extrinsic factors influencing the level of patient anxiety. Intrinsic factors include age, patient experience with treatment, self-concept, role, and coping mechanisms. Extrinsic factors include medical conditions (diagnosis of the disease), education level, spiritual aspects, access to information, adaptation processes, and therapeutic communication (19).

One frequently used method to reduce anxiety levels is relaxation techniques, as conveyed by Isaacs et al. (2016). Relaxation techniques not only focus on addressing the underlying causes of tension but also create a comfortable and pleasant condition for individuals. Through relaxation, individuals can control and focus their attention, allowing them to respond more appropriately when facing stress (20).

Relationship of Age with Preoperative Anxiety Level Cesarean Section in Spinal Anesthesia

Based on the Rank Spearman correlation test, a correlation coefficient (r) of -0.399 with a p -value of 0.003 (<0.05) was found, indicating a significant negative relationship between age and the level of anxiety before cesarean section surgery. The younger someone is, the higher the level of anxiety, and the older someone is, the lower the level of anxiety. According to the categories, this correlation coefficient is considered moderate. This study is consistent with Haniba et al., who, based on their research using the Spearman Rank Test, obtained a p -value <0.05 , specifically $p=0.000$. Since $0.000 < 0.05$, H_1 is accepted, and H_0 is rejected, meaning there is a relationship between age and the level of anxiety in patients facing surgery in the Melati Room of the Regional General Hospital of Bangil (11).

The above facts indicate a correlation between age and the level of anxiety related to cesarean section surgery. This aligns with Stuart's concept of development, stating that age is one of the internal elements causing anxiety (21).

This study found that younger age groups more frequently experience anxiety and stress compared to older individuals. How someone copes with anxiety and stress is influenced by their age. Age affects an individual's behavior and actions. Someone is more prepared to face problems as they grow older and mature. When they are young, it may be difficult to adapt to their environment, and it becomes harder to control anxiety or manage their emotions and feelings. However, cognitive and technical capacities tend to increase with age, indicating mental wisdom, which involves rational thinking, emotional control, and acceptance of others (11).

Relationship of Education with Preoperative Anxiety Level Cesarean Section in Spinal Anesthesia

Based on the analysis of the Rank Spearman correlation test, a correlation coefficient (r) of -0.438 with a p -value of 0.001 (<0.05) was obtained. This indicates a significant negative relationship between the level of education and the level of anxiety before cesarean section surgery. In other words, the higher someone's level of education, the lower their level of anxiety, and vice versa. The strength of this correlation can be categorized as moderate based on the criteria of D.A de Vaus. The findings of this research are consistent with the results of a study conducted by Yanti et al. (2015), which used statistical analysis of Spearman rank rho correlation. The research results showed a p -value of 0.000, indicating a value lower than

alpha ($\alpha=0.005$). This means there is a relationship between education and the level of anxiety in patients before undergoing cesarean section surgery in the Obstetrics Room of Urip Sumoharjo Hospital, Bandar Lampung, in 2015 (22).

Education, according to Notoatmojo, can lead someone to have extensive knowledge and insights. Individuals with higher education levels tend to have broader knowledge compared to those with lower education. Education influences understanding of the childbirth process, and individuals with higher education are quicker to understand the potential risks during childbirth. In this study, the majority of respondents had higher education, such as D-3/Bachelor's degree, so they are more likely to anticipate these risks. Higher education also plays a role in the respondents' anxiety levels, in line with Stuart's (2007) and Tomb's (2004) theories stating that education level influences cognitive abilities. Individuals with higher education are better at thinking rationally, absorbing new information, and analyzing problems. Stuart & Sundden (2007) state that respondents with higher education are more adaptive in responding to surgical events compared to respondents with lower education. Therefore, high levels of anxiety are more likely to be found in respondents with lower education because of their lack of understanding of the surgical procedure and a frightening perception of the event (22).

Relationship of Surgery Experience with Preoperative Anxiety Level Cesarean Section in Spinal Anesthesia

Based on the results of the Rank Spearman correlation test, a correlation coefficient (r) of -0.768 with a p -value of 0.000 (<0.05) was found. This result indicates a significant negative correlation between surgical experience and the level of anxiety in mothers before undergoing cesarean section surgery. In other words, the more surgical experience someone has, the lower their level of anxiety, and vice versa. This correlation coefficient has a very strong strength, according to the categorization of D.A de Vaus. This finding is consistent with a study conducted by Sukamti et al. (2021), which also found a relationship between surgical experience and the level of anxiety in mothers undergoing cesarean section surgery at Restu Kasih Hospital in Jakarta (23).

Previous surgical experience can influence the level of anxiety in mothers facing cesarean section surgery. For mothers undergoing surgery for the first time, anxiety tends to be higher because they have uncertainty about the surgical process they will undergo. On the contrary, previous surgical experience can enhance the mental readiness of mothers facing subsequent

surgeries. Mothers who have had previous surgical experience tend to have lower anxiety levels compared to those undergoing surgery for the first time. This is because mothers with previous surgical experience are more familiar with the procedures they will undergo, reducing their anxiety levels (23).

Conclusions and Suggestions

Based on the results of research on the relationship between the characteristics of pregnant women with the level of anxiety before cesarean section in spinal anesthesia at RSIA Abby Lhokseumawe on 52 respondents, it can be concluded that:

1. By age, most are found at the age of 20-35 years. Based on education most are found with a higher level of education. Based on previous surgery experience, most respondents were found to have undergone surgery before. Based on the level of anxiety, most respondents were found with moderate levels of anxiety.
2. There is a relationship between maternal age and the level of anxiety before cesarean section surgery in spinal anesthesia.
3. There is a relationship between maternal education and the level of anxiety before cesarean section surgery in spinal anesthesia.
4. There is a relationship between the mother's surgical experience and the level of anxiety before cesarean section surgery in spinal anesthesia.

Based on the results of research on the relationship between the characteristics of pregnant women with the level of anxiety before cesarean section in spinal anesthesia at RSIA Abby Lhokseumawe on 52 respondents, several suggestions can be given :

1. For Related Institutions

Based on this study, it was found that respondents experienced anxiety before cesarean section surgery, this can be an evaluation for hospitals on patient anxiety management. Among them, providing education to patients before undergoing surgery, this is done to make patients feel better and not anxious.

2. For the Next Researcher

Further researchers are expected to add variables, expand the population and increase the sample studied. So that the next researcher gets better results. The next study is expected to examine other factors that affect anxiety such as the level of knowledge of preoperative mothers of cesarean sections. The results of this study are expected to be

used as a foundation and as a study for future researchers and can be used as a reference to develop research with other variables.

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