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Factors That Influence Anxiety In Mothers In Labor In The Facing Section Cesarean (Sc) Delivery

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ABSTRACT

Background: *Anxiety occurs due to factors or sources that are considered a threat or endanger the individual. Facing a section cesarean (SC) operation can cause anxiety in the mother; excessive anxiety can affect the smoothness of the birth operation plan*
Objective: *to analyze the relationship between maternal characteristic SC and the mother's anxiety level in facing SC delivery at Wates Husada Hospital.*
Methods: *correlation analytical research, with a cross-sectional design. The sampling technique used was purposive sampling for 1 month, which obtained up to 33 samples. This research was carried out at Wates Husada Hospital in*

January 2024. The independent variable was maternal characteristic, and the dependent variable was anxiety in facing SC. Data were collected using the APAIS anxiety questionnaire. Statistical test using the Kendal Tau test.
Results: *There is a relationship between age, parity, cause of SC, and anxiety about facing cesarean section (SC) delivery at Wates Husada Hospital. Health workers, especially midwives, provide appropriate midwifery care to reduce anxiety in patients who will undergo caesarean section surgery. Based on the results of the reliable statistical test, the p values obtained for the variables age, parity, causes of (SC), and anxiety are 0.010, 0.023, and 0.023.*
Conclusion: *The level of maternal anxiety regarding Caesarean delivery (SC) is related to age, parity, and cause of SC.*
Keywords: *Anxiety, section cesarean delivery, cross-sectional, purposive sampling*

ABSTRAK

Latar Belakang: Kecemasan terjadi karena adanya faktor atau sumber yang dianggap sebagai ancaman atau membahayakan bagi individu itu sendiri. Menghadapi *section cesarean (SC)* dapat menimbulkan kecemasan pada ibu, kecemasan yang berlebihan dapat mempengaruhi kelancaran rencana operasi kelahiran
Tujuan: Menganalisis hubungan karakteristik ibu dengan tingkat kecemasan ibu menghadapi persalinan SC di RSUD Wates Hudasa.
Metode: penelitian analitik korelasional, dengan rancangan *cross sectional*. Teknik pengambilan sampel menggunakan *purposive sampling* selama 1 bulan yang diperoleh sebanyak 33 sampel. Penelitian ini dilaksanakan di RSUD Wates Husada pada bulan Januari 2024. Variabel bebas adalah karakteristik ibu dan variabel terikat adalah kecemasan menghadapi SC. Pengumpulan data menggunakan kuesioner kecemasan APAIS. Uji statistik menggunakan uji *Kendal Tau.*
Hasil: Ada hubungan antara usia, paritas, penyebab SC dengan kecemasan menghadapi persalinan SC di RSUD Wates Husada. Tenaga kesehatan khususnya bidan memberikan asuhan kebidanan yang tepat untuk menurunkan kecemasan pada pasien yang akan menjalani operasi caesar. Berdasarkan hasil uji statistik reliabel diperoleh nilai *p-value* untuk variabel usia, paritas, penyebab (SC) dan kecemasan adalah 0,010, 0,023, dan 0,023.
Kesimpulan: Tingkat kecemasan ibu terhadap persalinan caesar (SC) berhubungan dengan usia, paritas, dan penyebab SC.
Kata Kunci: Kecemasan, persalinan *caesar*, *cross-sectional, purposive sampling*

INTRODUCTION

A cesarean section is the birth of a fetus through an incision in the abdominal wall (laparotomy) and uterine wall (hysterotomy) (Cunningham, F. G., Leveno, K. J., Bloom, S. L., Hauth, J. C., Rouse, D. J., & Spong, 2012). A cesarean section is a method of delivering a fetus by making an incision in the uterine wall through the front abdominal wall (Rombach et al., 2021). The rate of cesarean section deliveries in Indonesia is also quite high. Based on recorded data, the number of deliveries via cesarean section nationally is around 15.3% of the total number of deliveries (from 20,591 samples of mothers who gave birth in the last 5 years who were interviewed in 33 provinces). This occurs not only in private hospitals but also in government hospitals (Ayuningtyas et al., 2018). Another study on preoperative anxiety levels and information needs found that of 320 respondents, 102 patients (32%) experienced preoperative anxiety (Fatrida & Tanjung, 2023). Anxiety is a condition that can affect any individual. Anxiety arises from factors or sources perceived as threatening or harmful to the individual. Excessive anxiety can disrupt some bodily systems and endanger the individual (Ahsan et al., 2017). Generally, individuals experience anxiety when undergoing medical procedures because medical procedures can cause complications that could potentially harm the individual. If a person is about to undergo a medical procedure such as

surgery, their anxiety must be addressed first (Dwi Wicaksana et al., 2022). Other factors that can influence anxiety include internal factors, including age, gender, knowledge level, personality types A and B, environment, and situation (Rejeki et al., 2022). One way to reduce anxiety is by mentally preparing the client. One way to prepare for this mental state is through health education. The ability to actively listen to both verbal and nonverbal messages is crucial for building a trusting relationship with clients. This can then lead to planning nursing interventions and supportive care to reduce client anxiety levels (Windartik, E., & Pratiwi, 2023). Health education is essentially an activity to convey health messages to communities, groups, or individuals to gain knowledge about good health (Milah, 2022). This study was conducted to identify the characteristic SC of mothers giving birth with anxiety levels facing cesarean delivery at Wates Husada Hospital. Based on the issues and needs that have been raised, the author wishes to analyze the relationship between maternal characteristic SC and the mother's anxiety level. This research has received a letter of ethical approval from STIKES Majapahit with number: No. 115/EC-SM2025

METHOD

Participant characteristic SC and research design

This research is a correlational analytic study, seeking to explain, estimate, and test relationships based on existing theories to see the relationship between the variables of education level and the causes of SC surgery on anxiety levels. and is taken according to the criteria. Inclusion criteria: first SC, Women in their first trimester Exclusion criteria include a history of serious mental illnesses, such as schizophrenia. Bleeding during pregnancy, Pregnancy abnormalities (fibroids, malignancy, cysts, and bleeding disorders). This type of research is descriptive analytic with a cross-sectional design. The population in this study was all mothers who had SC at Wates Hasada Hospital in the last three months, with an average of 104 mothers.

Sampling procedures

The sampling technique in this study is non-probability sampling with a purposive sampling technique, and is taken according to the criteria.

Sample size, power, and precision

Sample number using the Lameshow formula and obtained for each group of 33 respondents. The variables that are seen here are independent variables, namely the age, parity, and cause of SC, and dependent variables, which are the level of maternal anxiety regarding cesarean delivery (SC). The instruments in this study are Pre Pre-Operative Anxiety and Information Scale (APAIS)

Measures and covariates

The method of collecting data in this research is using primary data, because the researcher collected the data by using the Anxiety Pre Operative Anxiety and Information Scale (APAIS), which had been tested for validity and reliability.

Data analysis

The univariate analysis performed produced the frequency and percentage values of each variable studied and the distribution of the characteristic SC of the mothers in labor. Bivariate analysis was used to explain the relationship between the independent and dependent variables using the Kendall Tau statistical test with a probability of ≤ 0.05, and the data was processed using a computerized method. This analysis was performed using a computer program, and the statistical test results were

obtained using a 95% degree of significance, and the error rate (α) = 5%. For the interpretation of the results, if the p-value of the value α is 0.05.

RESULTS AND DISCUSSION

Characteristic of Respondents

The study showed that the proportion of mothers in the age group was 20 - ≥ 35 years.

Table 1. Characteristic of Respondents

Variable	Frequency	Percentage (%)
Age		
≤ 20	2	6,6
21 – 35	8	26,6
≥ 35	20	66,8
Total	30	100,0
Work		
Housewife (IRT)	4	13,3
Self-employed	4	13,3
civil servant	6	20,0
Private sector employee	16	53,4
Total	30	100,0
Education		
Base	8	26,7
Secondary	16	53,3
High	6	20,0
Total	30	100,0
Knowledge		
Good	13	43,4
Enough	10	33,3
Not enough	7	23,3
Total	30	100
Contraceptive users		
IUD	17	56,7
Not the IUD	13	43,3
Total	30	100,0

Based on table 1 shows that most mothers giving birth are aged 20-35 years, namely 18 people (54.5%), most of the mothers giving birth are unemployed, namely 26 people (78.8%). Most of the mothers giving birth have secondary education, namely 20 people (60.6%). As for parity, most of the mothers giving birth are multiparous, namely 19 (57.6%). Most of the causes of SC for mothers giving birth are emergencies, namely 17 (51.5%). Almost half of the mothers giving birth experience moderate anxiety, namely 11 people (33.3%). Based on table 1 shows that most of the respondents are aged 20-35 years, namely 18 people (54.5%). This could be due to the increasing development of science along with time, so many parents do not marry off their children under the age of 20 (Haslan et al., 2021), and increasing knowledge of women about pregnancy at the age of 35 (Sari et al., 2021). There is a match between theory and research results, where the theory states that the high risk for pregnancy is <20 years and >35 years. In the healthy reproductive period, it is known that the safe age for pregnancy, labor, and delivery is 20-35 years (Sukma, D. R., & Sari,

2020). This study is in line with other studies that the age of mothers with the most cesarean sections is 20-35 years old, as many as 21 people (42%) (Susanti & Utama, 2022). This is reinforced by other research that pregnant women of productive age, which is categorized as early adulthood, tend to undergo cesarean sections (Diah, 2022). According to researchers, anxiety tends to occur in young to middle-aged individuals. Older women also experience severe anxiety due to past experiences and a higher risk of giving birth at an older age. Parity is the number of live births a woman has had. Parity can be divided into primipara, multipara, and grand multipara (Amir & Yulianti, 2020). According to researchers, a pregnant woman's anxiety can be influenced by her direct experience and information from posters and print media, including magazines, bulletins, and newspapers. This contradicts the results of a study that showed a high overall level of anxiety in patients scheduled for elective SC, as 72.2% of patients had an AVAS ≥50 (Suresh & Lakshmi Narasimhan, 2022). Overall anxiety levels were observed in 72.7% (112/154) of patients. It is emphasized that every patient presenting for elective SC should be assessed for anxiety during the routine preoperative anesthesia assessment, and patients found to have high levels of anxiety should be scheduled for additional counseling sessions with an anesthesiologist (Fentie et al., 2022). This action helps reduce anxiety levels and assists in making rational decisions regarding their choice of anesthetic technique. The preoperative phase is the initial phase of the surgical process. This initial phase begins with the decision to undergo surgery and ends with the patient's transfer to the operating room. At this stage, the patient's physiological and psychological readiness is required (Asali et al., 2023). Physiological reactions are directly related to the surgery itself, while psychological reactions, although not directly related to the surgery, significantly influence the success of the surgery because they can trigger a greater reaction. Any surgical procedure can cause anxiety in patients (Jeevan et al., 2024). A cesarean section has the potential to cause anxiety (Dibabu et al., 2023). Besides patients thinking about their condition, they will also think about the condition of their baby, so this can influence anxiety in pre-cesarean section patients (Eroglu et al., 2020). Furthermore, mothers who will undergo a cesarean section will perceive the surgery as a dangerous procedure, which causes anxiety. Anxiety is associated with fear of the upcoming surgery, injections, and even the threat of death due to surgical procedures and anesthesia, including the potential for disability and death (Emsaad Al-Harire et al., 2024). Signs and symptoms that are always present in patients experiencing anxiety include a rapid heartbeat due to the upcoming surgery. This can be due to excessive worry in patients caused by tension regarding the surgical procedure, causing patients to be cautious and alert. The anxiety that arises can be related to the surgical procedure that is not yet understood, anxiety while waiting for the operation, and the results of the operation, which can make patients feel anxious before the operation (Slik et al., 2022).

Table 2. Relationship between Age and Anxiety Level

Age	Emergency										Total	
	No Anxious		Anxious Light		Anxious Currently		Anxious Heavy		Panic			
	F	%	F	%	F	%	F	%	F	%	F	%
< 20 - > 35 Year	1	3,0	2	6,1	3	9,1	5	15,2	4	12,1	15	45,5
20 – 35 Year	5	15,2	3	9,1	8	24,2	1	3,0	1	3,0	18	54,5

Total	6	18,2	5	15,2	11	33,3	6	18,2	5	15,2	33	100
Nilai p-value = 0,010												

Based on table 2, there are 18 mothers aged between 20-35 years, a small portion of which experienced moderate anxiety, as many as 8 people (24.2%), while there are 15 mothers aged <20 and >35 years, a small portion of which experienced severe anxiety, as many as 5 people (15.2%). The results of the bivariate analysis with the Kendal tau test using SPSS showed a 2-tailed p-value of 0.010, where the p-value is <0.05, so that H0 is rejected, meaning there is a relationship between Age and the Level of Anxiety Facing section Cecaria (SC) Delivery.

Table 3. Relationship between Parity and Anxiety Level

Parity	Emergency										Total	
	No Anxious		Anxious Light		Anxious Currently		Anxious Heavy		Panic			
	F	%	F	%	F	%	F	%	F	%	F	%
Primipara	1	3,0	2	6,1	3	9,1	4	12,1	4	12,1	14	42,4
Multipara	5	15,2	3	9,1	8	24,2	2	6,1	1	3,0	19	57,6
Total	6	18,2	5	15,2	11	33,3	6	18,2	5	15,2	33	100
Nilai p-value	= 0,023											

Based on table 3, there are 14 primiparous mothers, a small portion of whom experienced moderate anxiety, as many as 4 people (12.1%) and panic, as many as 4 people (12.1%), while there are 19 multiparous mothers, a small portion of whom experienced moderate anxiety, as many as 8 people (24.2%). The results of the bivariate analysis with the Kendal tau test using SPSS showed a 2-tailed p-value of 0.023, where the p-value <0.05, so that H0 was rejected, meaning there is a relationship between Parity and the Level of Anxiety Facing Section Cecaria (SC) Delivery.

Table 4. Relationship between SC causes and anxiety levels

Reason SC	Emergency										Total	
	No Anxious		Anxious Light		Anxious Currently		Anxious Heavy		Panic			
	F	%	F	%	F	%	F	%	F	%	F	%
Elective	1	3,0	2	6,1	4	12,1	5	15,2	4	12,1	16	48,5
Emergency	5	15,2	3	9,1	7	21,2	1	3,0	1	3,0	17	51,5
Total	6	18,2	5	15,2	11	33,3	6	18,2	5	15,2	33	100
Nilai p-value= 0,011												

Based on the results of table 4, the implementation of elective SC was 16 mothers giving birth, a small portion experienced severe anxiety as many as 5 people (15.2%), while the implementation of emergency SC was 17 mothers giving birth, a small portion experienced moderate anxiety as many as 7 people (21.2%). The results of the bivariate analysis with the Kendal test using SPSS showed a 2-tailed p-value of 0.011, where the p value <0.05, so that H0 was rejected, meaning

there is a relationship between the Cause of SC and the Level of Anxiety Facing Section Cesarean (SC) Delivery at Wates Husada Hospital.

Based on the results of bivariate analysis with the test *Kendal using* SPSS, it is known that the value of Sig 2 2-tail is 0.010, which is a p value < 0.05 until H_0rejected, meaning there is a relationship between Age and Anxiety Levels Facing Section Cesarean (SC) Delivery at Wates Husada Hospital. In line with other studies that there is a relationship between age and the level of anxiety of patients who will face surgery (Liu et al., 2023). The statement above shows that age is related to the level of anxiety pre-operative cesarean section. According to other studies that one of the internal factors that causes anxiety levels is age (Anak Agung Angga Pringga Dana et al., 2024). According to researchers based on this study, young age groups are more prone to stress and anxiety than older ones; age maturity influences a person in responding to situations and overcoming the anxiety experienced. Age affects a person's attitude and actions. The more mature and adult a person is, the more prepared they are to face a problem. When a person is still young, it will be difficult to adapt to environmental conditions, and it is increasingly difficult to control anxiety or control emotions and feelings (Wulandari et al., 2023). However, the older a person is, the more their technical and psychological maturity increases, which indicates mental maturity in the sense of being wiser, thinking rationally, controlling emotions, and being tolerant of others (Wahyudi et al., 2025). The results of bivariate analysis using the test on the causes of SC were obtained. *Kendal knows that* a Sig 2 tail value is 0.011, which p value < 0.05 until H_0rejected, meaning there is a relationship between the Cause of SC and the Level of Anxiety Facing Section Cecaria (SC) Delivery at Wates Husada Hospital. Based on table 4.9, it is known that the implementation of elective SC was 16 respondents, a small portion experienced severe anxiety as many as 5 people (15.2%), while the implementation of emergency SC was 17 respondents, a small portion experienced moderate anxiety as many as 7 people (21.2%). Several obstacles in the delivery process cause the baby to not be able to be born normally, for example placenta previa, central and lateral ruptures, narrow pelvis, labor does not progress (prolonged labor), preeclampsia, distortion, and fetal malpresentation, these conditions cause the need for a surgical procedure, namely sectio cesarea (SC) (Kaarayeno & Choeron, 2023).

LIMITATION OF THE STUDY

The researcher is aware of the limitations in this study; the first is the status of the husband's assistance, which can contribute to the anxiety of mothers giving birth. The researcher has not been able to confirm the accessibility of health services that can trigger the psychological condition of mothers giving birth, so it would be better for the researcher to involve the husband's assistance in measuring the anxiety of mothers giving birth, even cultural factors that have not been studied.

CONCLUSIONS AND SUGGESTIONS

The level of maternal anxiety towards section cesarean (SC) delivery is related to age, parity, and cause of SC. For further researchers, they should conduct further research on husbands' support, accessibility of health services, culture, and spirituality of the condition of the mother giving birth.

ETHICAL CONSIDERATIONS

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Conflict of Interest

No conflict of interest that is directly or indirectly related to the current article was found.

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