



## The Effect of Operating Room Tour Video on Pre-Anesthetic Anxiety in Sectio Caesarea Patients

journal home page: <https://goicare.web.id/index.php/JNJ>

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### PRE EXPERIMENTAL STUDY

#### ARTICLE HISTORY

Received: August 1, 2024  
Revised: September 14, 2024  
Accepted: September,

DOI: 10.61716/jnj.v2i3.92

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#### Abstract

**Background:** Preoperative anxiety in patients undergoing cesarean sections (CS) can significantly impact both psychological well-being and physiological responses, potentially affecting the success of anesthesia. An educational intervention, such as an Operating Room (OR) Tour video, may alleviate anxiety by familiarizing patients with the surgical environment and process. **Purpose:** To determine the effect of an Operating Room Tour video on pre-anesthetic anxiety levels in CS patients. **Methods:** This study employed a pre-experimental design with a pretest-posttest approach to assess the impact of the video on pre-anesthetic anxiety in 30 CS patients at Cilacap General Hospital. Anxiety levels were measured using the Visual Analog Scale for Anxiety (VAS-A) before and after the intervention. Statistical analysis was conducted using the Wilcoxon signed-rank test to evaluate the significance of the change in anxiety levels. **Results:** The findings revealed a significant reduction in anxiety following the video intervention. Prior to the intervention, 43.3% of participants experienced moderate anxiety, while post-intervention, 66.7% reported only mild anxiety. The Wilcoxon test confirmed the significant impact of the OR Tour video on reducing pre-anesthetic anxiety ( $p = 0.011$ ,  $p < 0.05$ ). **Conclusion:** The use of an Operating Room Tour video is an effective strategy to reduce preoperative anxiety in CS patients. This educational intervention could be a valuable addition to pre-anesthesia care, improving patient comfort and potentially contributing to better surgical outcomes.

**Keywords:** anxiety; operating room tour video; pre-anesthesia; education

### Introduction

Cesarean section (CS) delivery is used when vaginal delivery is not possible or carries a high risk for the mother and baby (Latupeirissa & Angkejaya, 2020). CS delivery is performed based on medical indications from both the mother and fetus, such as placenta previa, abnormal fetal presentation or position, and other indications that may endanger the lives of the mother or fetus (Permatasari et al., 2022). Data from the WHO's Global Survey on Maternal and Perinatal Health in 2021

showed that 46.1% of all births were conducted via CS. In Central Java, data from 2021 indicated that the rate of CS deliveries reached 17.1% [1].

One of the psychological problems experienced before surgery is anxiety. Preoperative anxiety is a common condition in preoperative patients, causing discomfort during the surgical process. Anxiety can interfere with both pre-anesthesia and intra-anesthesia procedures. Excessive physiological responses can burden and hinder anesthesia procedures, as these

activities affect body systems such as the cardiovascular system, potentially leading to palpitations, high blood pressure, elevated heart rate, and feelings of faintness (Amalia et al., 2022). Preoperative counseling is very important in reducing anxiety, which is why better nursing care is needed. This service can alleviate anxiety caused by the patient's lack of knowledge about the procedure (Nainggolan et al., 2022). Counseling can be conducted by utilizing technology. Advances in technology make it possible to deliver health education not only in the form of images but also through audiovisual media with moving pictures accompanied by music and sound (Noor et al., 2023).

Cognitive approaches, such as education through audiovisual media, can be used as an alternative to reduce anxiety by targeting the cortical pathways. Video media has advantages in conveying information compared to other media, including images and sound (audiovisual), allowing information to be absorbed more optimally (Arif et al., 2022). This counseling can be delivered using technology in the form of video media. After being provided with educational videos, some patients with severe anxiety levels reduced to mild.

**Material and Methods**

Quantitative research is a study that uses measurements, calculations, formulas, and numerical data certainty in its planning. This study employs a Pre-Experimental Pre-Post Test Control Group Design. Pre-Experimental is a type of research method in the field of social sciences used to test causal hypotheses about cause-and-effect relationships between two variables. The population in this study consists of pre-anesthesia CS patients at Cilacap General Hospital, with an average of 30 patients per month. The study was conducted from October 2023 to August 2024, with data collection taking place from July 8 to July

19, 2024. The anxiety level assessment tool used to measure pre-operative anxiety is the Visual Analog Scale for Anxiety (VAS-A), which consists of a 10 cm horizontal line, with a point on the left end indicating "no anxiety at all" and a point on the right end indicating "very severe anxiety." This study has received Ethical Approval from the Health Research Ethics Committee of Harapan Bangsa University, No. B.LPPM-UHB/543/06/2024

**Result  
Characteristics Distribution**

The distribution of respondents' characteristics based on age, gender, education level, and surgical history can be seen in Table 4.1:

Tabel 4. 1 Distribution of Age Respondents' Characteristics

Age	Frequence (f)	Percentage (%)
Late Adolescence (17-25 years)	5	16, 7
Early Adulthood (26-35 years)	19	63, 3
Late Adulthood (36-45 years)	6	20
Total	30	100

Table 4.1 above shows that the average age of respondents falls into the Early Adult category (26–35 years), with 19 respondents (63.3%).

Tabel 4. 2 Distribution of Education level Respondents' Characteristics

Education Level	Frequence (f)	Percentage (%)
Junior High School	3	10%
Senior High School	17	56, 7%

Bachelor's Degree / Diploma 4	10	33, 3%
Total	30	100

The results of the study in table 4.2 show that. The majority of respondents have a high school education, with 17 respondents (56.7%).

Tabel 4. 3 Distribution of Surgical History Respondents' Characteristics

Surgical History	Frequence (f)	Percentage (%)
Had Previous Surgery	25	83, 3%
Never Had Surgery	5	16, 7%
Total	30	100

The results of the study in table 4.3 show that most respondents have a history of previous surgery, with 25 respondents (83.3%)

**Pre-anesthesia anxiety levels in patients before receiving the operating room tour video.**

The frequency of anesthesia anxiety levels before the provision of the operating room tour video can be seen in the table below:

Table 4.4: Levels of pre-anesthesia anxiety in patients before receiving the operating room tour video at Cilacap General Hospital (n=30)

Category	Number	Percentage %
Not Anxious	1	3, 3%
Mild Anxiety	15	50%
Moderate Anxiety	13	43, 3%
Severe Anxiety	1	3, 3%
Total	30	100%

Table 4.4 above shows that the majority of respondents fall into the mild and moderate anxiety categories (50% and 43.3%), with severe anxiety present in 1 respondent (3.3%).

**Pre-anesthesia anxiety levels in patients after receiving the operating room tour video**

The frequency of pre-operative anxiety levels in patients after receiving the operating room tour video education can be seen in the table below

Table 4.5: Levels of pre-anesthesia anxiety in patients after receiving the operating room tour video at Cilacap General Hospital (n=30)

Category	Number	Percentage %
Not Anxious	2	7%
Mild Anxiety	20	67%
Moderate Anxiety	8	27%
Total	30	100%

Table 45 above shows that after receiving education through the operating room tour video, the majority of respondents were at a mild anxiety level, with 20 respondents (67%), and no severe anxiety was found

Table 4. 6 Analysis Comparison Levels of pre-anesthesia anxiety in patients before receiving the operating room tour video at Cilacap General Hospital

		N	Mean Rank	Sum of Ranks	P value
Posttest Anxiety Pretest Anxiety	Negative Ranks	9 <sup>a</sup>	5.50	49.50	0,01
	Positive Ranks	1 <sup>b</sup>	5.50	5.50	
	Ties	20 <sup>c</sup>			
	Total	30			

The bivariate test used is the Wilcoxon test. Based on Table 4.6 above, the Wilcoxon bivariate test results show that among the samples, 9 respondents had a decrease in anxiety scores, 1 respondent had an increase in anxiety scores, and 20 respondents had no change in anxiety scores, with a mean rank of 5.5 and a sum of ranks of 49.50. The Asymp. Sig. (2-tailed) value was 0.011, which means  $p < 0.05$ . It can be concluded that the Wilcoxon test indicates a significant effect on the reduction of pre-anesthesia anxiety scores with the provision of the operating room tour video. These findings support the alternative hypothesis (H1) that the intervention of an operating room tour video is effective in reducing pre-anesthesia anxiety in patients undergoing CS. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis is accepted, which is consistent with the theory that providing appropriate information before medical procedures can reduce patient anxiety

## Discussions

The characteristics of respondents in this study are examined based on age, education level, and surgical history. Regarding age, the majority of respondents are between 26–35 years old, with 19 respondents (63.3%). The researcher believes that the age range of 29–39 years is sufficiently mature, as individuals in this age group are generally able to think logically and make decisions about what is good or bad for their lives. The pre-anesthesia anxiety level in this study showed that before the provision of the operating room tour video, the majority of respondents experienced moderate anxiety, with 13 respondents (43.3%). The researcher's opinion is that patients undergoing surgery who have not received education about the procedure they will undergo are likely to experience

higher anxiety due to a lack of knowledge or information about health and the procedure. The impact of education using a procedural video on the level of pre-operative anxiety in this study showed a reduction in anxiety levels. Before the video education, the majority of respondents had moderate anxiety, with 13 respondents (43.3%). After receiving the video education, the majority of respondents experienced mild anxiety, with 20 respondents (66.7%). The researcher's opinion is that providing education to pre-operative patients can offer knowledge and understanding of the procedure or anesthesia, thereby reducing the anxiety felt by the patients. The study results indicate that the provision of the operating room tour video has an effect on reducing pre-anesthesia anxiety in CS patients. The Asymp. Sig. (2-tailed) value was 0.011, which means  $p < 0.05$ . It can be concluded that, based on the Wilcoxon test, there is a significant effect on the reduction of pre-anesthesia anxiety scores with the provision of the operating room tour video.

## Limitations and Future Research

This study did not strictly control factors that could influence anxiety, such as the type of surgical procedure, access to information, family support, and other factors that could affect respondents' anxiety. The data collection technique in this study was based on the responses to questions provided by respondents using the Visual Analog Scale for Anxiety. This technique could introduce bias in data collection, such as respondents not completing the questionnaire diligently due to high subjectivity in providing their opinions. Respondents may have been less cooperative in determining their anxiety scale, and some respondents might have felt confused or struggled to understand and determine their anxiety levels

## Conclusion

The distribution of respondent characteristics shows that the highest category based on age is Early Adult (26-35 years) with 19 respondents (63.3%), based on education level is high school education with 17 respondents (56.7%), and based on surgical history is having had previous surgery with 25 respondents (83.3%). The highest distribution of pre-anesthesia anxiety levels before the operating room tour video is in the mild anxiety category, with 15 respondents (50%). The highest distribution of pre-anesthesia anxiety levels after the operating room tour video is also in the mild anxiety category, with 20 respondents (67%). Bivariate analysis using the Wilcoxon test shows a significant effect of education through the operating room tour video on reducing anxiety scores, with an Asymp. Sig. (2-tailed) value of 0.011, which means  $p < 0.05$ . The study results indicate that the alternative hypothesis (H1) is accepted, meaning that the provision of the operating room tour video significantly reduces pre-anesthesia anxiety in CS patients. Thus, this visual information is effective in reducing patient anxiety before surgical procedures.

## Acknowledgments

The researchers would like to thank all those who have guided and fully assisted in this research, as well as the respondents who have been willing to help this research. So that this research can be fully implemented properly.

## Funding

None

## Conflict of Interest

The authors declare no conflicts of interest relevant to this study.

## Data Availability

The data supporting the findings of this study are available from the corresponding author upon reasonable request.

## Author Contributions

**Intania Muthmainnah Sastiyana:** Contributed to the conception and design of the study, database searches, methodology development, data analysis and interpretation, and manuscript writing. **Roro Lintang Suryani:** Participated in the study's conception and design, conducted database searches, developed methodology, assessed bias risk, contributed to data analysis and interpretation, and took part in writing, reviewing, and editing the manuscript. **Murniati:** Engaged in the study's conception and design, performed database searches, contributed to methodology development, assessed bias risk, conducted data analysis and interpretation, and was involved in writing, reviewing, and editing the manuscript.

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