



## The Relationship Between Therapeutic Communication by Anesthesia Practitioners and Pre-Anesthesia Anxiety Levels Among Patients

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### Abstract

Anesthesia and surgical procedures often cause anxiety in pre-anesthesia patients. Anxiety may affect both the physiological and psychological condition of patients before surgery. One of the efforts to reduce patient anxiety is through therapeutic communication performed by nurse anesthetists. To determine the relationship between therapeutic communication of nurse anesthetists and pre-anesthesia anxiety levels in patients at RS TK IV 03.07.04 Guntur Garut. This study used a quantitative research design with a cross-sectional approach. A total of 52 respondents were selected using purposive sampling technique. Data were collected using a therapeutic communication questionnaire and the Amsterdam Preoperative Anxiety and Information Scale (APAIS) questionnaire. Data were analyzed using Spearman rho test. The results showed that most therapeutic communication by nurse anesthetists was categorized as good in 30 respondents (57.7%). Most patients experienced mild anxiety, with 23 respondents (44.2%). Spearman rho test results showed a p-value of 0.000 ( $<0.05$ ) with a correlation coefficient of -0.847, indicating a significant relationship with a very strong negative correlation. There is a relationship between therapeutic communication of nurse anesthetists and pre-anesthesia anxiety levels in patients at RS TK IV 03.07.04 Guntur Garut. The better the therapeutic communication provided by nurse anesthetists, the lower the anxiety level of pre-anesthesia patients.

## Introduction

Surgical procedures are events that can cause psychological stress for patients, particularly during the pre-anesthetic phase, due to uncertainty regarding the anesthesia procedure, potential complications, and the expected outcomes of the surgery (Stuart, 2020). This condition often triggers pre-anesthetic anxiety, which can affect patients' physical and psychological readiness before anesthesia is administered (Putri & Toga, 2026; Mutia et al., 2024).

Pre-anesthetic anxiety is an emotional response characterized by feelings of fear, tension, and worry that arise before the induction of anesthesia. This condition may lead to increased blood pressure and heart rate, greater anesthetic drug requirements, and an increased risk of complications during and after surgery (Mazzeo et al., 2011; Tamunobelesa & Uruaka, 2023). In addition, high levels of anxiety have been associated with increased postoperative pain and slower recovery processes (Williams & McCarthy, 2020).

Anesthesiology practitioners, as healthcare professionals, have a strategic role in providing holistic anesthesia care that addresses the biological, psychological, social, and spiritual aspects of patients (Thota et al., 2024; Mahajan et al., 2021; Bilgin et al., 2025; Tollinche et al., 2018). One non-pharmacological intervention that can be implemented is effective therapeutic communication during the pre-anesthetic phase (Ministry of Health of the Republic of Indonesia, 2020). Therapeutic communication is a consciously planned interaction intended to help patients manage anxiety, improve their understanding, and develop a sense of safety and trust toward healthcare professionals (Potter et al., 2021).

The implementation of therapeutic communication by anesthesiology practitioners during the pre-anesthetic phase includes providing clear information about the anesthesia procedure, demonstrating empathy, actively listening to patients, and providing emotional support. Effective communication has been shown to reduce patients' anxiety levels, increase satisfaction, and support the overall success of anesthesia procedures (Peng et al., 2020; Colgan et al., 2024; Pereira et al., 2016; Petrescu et al., 2022). Conversely, inadequate communication may exacerbate patient anxiety and affect the physiological stability of patients before anesthesia (Silverman et al., 2016).

Previous studies have demonstrated that pre-anesthetic communication and education provided by healthcare professionals have a significant effect on reducing preoperative anxiety levels (Wiratama, 2021; Pintasari et al., 2025; Rahmawati et al., 2025). However, studies specifically examining the relationship between therapeutic communication by anesthesiology practitioners and pre-anesthetic anxiety levels remain relatively limited, particularly in military hospitals.

Based on preliminary observations at TK IV 03.07.04 Guntur Garut Hospital, some patients scheduled to undergo anesthesia procedures were found to exhibit signs of anxiety, such as restlessness, fear, tension, and frequent questions regarding anesthesia. Variations in the manner and intensity of therapeutic communication provided by anesthesiology practitioners were suspected to influence patients' levels of pre-anesthetic anxiety (Kharod et al., 2022; Salazar, 2022).

Therefore, research on the relationship between therapeutic communication by anesthesiology practitioners and pre-anesthetic anxiety among patients at TK IV 03.07.04 Guntur Garut Hospital is important to conduct as an effort to improve the quality of anesthesia services oriented toward patient safety and comfort.

## Methods

This study employed a quantitative analytical design with a cross-sectional approach to examine the relationship between therapeutic communication provided by anesthesiology practitioners and pre-anesthetic anxiety levels among patients. The study was conducted at TK IV 03.07.04 Guntur Garut Hospital in 2026. The sample consisted of 52 pre-anesthetic patients selected through purposive sampling based on the predetermined inclusion and exclusion criteria.

Data were collected using a therapeutic communication questionnaire completed by patients to evaluate the communication provided by anesthesiology practitioners and the Amsterdam Preoperative Anxiety and Information Scale (APAIS) to measure pre-anesthetic anxiety. Therapeutic communication was classified into fair and good categories, whereas pre-anesthetic anxiety was categorized as no anxiety, mild anxiety, moderate anxiety, or severe anxiety based on the respective questionnaire scores.

Respondent characteristics, therapeutic communication, and pre-anesthetic anxiety levels were analyzed descriptively and presented as frequencies and percentages. Before the bivariate analysis, data normality was assessed using the Shapiro–Wilk test. As the data were not normally distributed, the relationship between therapeutic communication and pre-anesthetic

anxiety was analyzed using Spearman's rho correlation test. Statistical significance was established at  $p < 0.05$ , while the correlation coefficient was used to determine the strength and direction of the relationship.

## Results and Discussion

### Univariate Analysis

#### *Respondent Characteristics*

Table 1. Frequency Distribution of Respondents Based on Age at TK IV 03.07.04 Guntur Garut Hospital in 2026

| Age                               | Frequency (f) | %          |
|-----------------------------------|---------------|------------|
| <24 years                         | 4             | 7.7        |
| 25–35 years                       | 24            | 46.2       |
| >36 years                         | 24            | 46.2       |
| <b>Gender</b>                     |               |            |
| Male                              | 27            | 51.9       |
| Female                            | 25            | 48.1       |
| <b>Education</b>                  |               |            |
| Elementary school                 | 7             | 13.5       |
| Junior high school                | 12            | 23.1       |
| Senior high school                | 26            | 50.0       |
| Diploma/Bachelor's degree (D3–S1) | 7             | 13.5       |
| <b>Total</b>                      | <b>52</b>     | <b>100</b> |

Source: Primary Data, 2026

Based on Table 1, most respondents were in the 25–35 years and >36 years age groups, with 24 respondents (46.2%) in each group, while 4 respondents (7.7%) were under 24 years of age. Regarding educational attainment, 26 respondents (50.0%) had completed senior high school, while 7 respondents (13.5%) each had completed elementary school and held a Diploma/Bachelor's degree (D3–S1). In terms of gender, the majority of respondents were male, comprising 27 respondents (51.9%), while 25 respondents (48.1%) were female.

#### *Research Variables*

Table 2. Frequency Distribution of Therapeutic Communication Provided by Anesthesiology Practitioners at TK IV 03.07.04 Guntur Garut Hospital in 2026

| Therapeutic Communication | Frequency (f) | %          |
|---------------------------|---------------|------------|
| Fair                      | 22            | 42.3       |
| Good                      | 30            | 57.7       |
| <b>Total</b>              | <b>52</b>     | <b>100</b> |

Source: Primary Data, 2026

Based on Table 2, the majority of respondents assessed the therapeutic communication provided by anesthesiology practitioners as good, with 30 respondents (57.7%), while 22 respondents (42.3%) rated it as fair.

Table 3. Frequency Distribution of Pre-Anesthetic Anxiety Levels among Patients at TK IV 03.07.04 Guntur Garut Hospital in 2026

| Anxiety Level    | Frequency (f) | %    |
|------------------|---------------|------|
| No anxiety       | 3             | 5.8  |
| Mild anxiety     | 23            | 44.2 |
| Moderate anxiety | 16            | 30.8 |

|                |           |            |
|----------------|-----------|------------|
| Severe anxiety | 10        | 19.2       |
| <b>Total</b>   | <b>52</b> | <b>100</b> |

Source: Primary Data, 2026

Based on Table 3, the largest proportion of respondents experienced mild anxiety, comprising 23 respondents (44.2%), while 10 respondents (19.2%) experienced severe anxiety.

### ***Bivariate Analysis***

Before conducting the bivariate analysis, the researcher first assessed the normality of the data using the Shapiro–Wilk test. The results of the normality test showed a significance value (Sig.) of  $0.001 < 0.05$ , indicating that the research data were not normally distributed. Therefore, the bivariate analysis was conducted using the Spearman's rho correlation test.

Table 4. Relationship between Therapeutic Communication Provided by Anesthesiology Practitioners and Pre-Anesthetic Anxiety Levels among Patients at TK IV 03.07.04 Guntur Garut Hospital in 2026

| <b>Variables</b>                            | <b>r</b> | <b>p-value</b> | <b>N</b> |
|---------------------------------------------|----------|----------------|----------|
| Therapeutic communication and anxiety level | -0.847   | 0.000          | 52       |

Based on the Spearman's rho correlation test, the correlation coefficient (r) was -0.847 with a p-value of 0.000 ( $<0.05$ ). These findings indicate a statistically significant relationship between therapeutic communication provided by anesthesiology practitioners and the pre-anesthetic anxiety levels of patients at TK IV 03.07.04 Guntur Garut Hospital. The negative correlation coefficient indicates an inverse relationship, meaning that better therapeutic communication provided by anesthesiology practitioners is associated with lower levels of pre-anesthetic anxiety among patients. The absolute correlation coefficient of 0.847 indicates a very strong correlation between the two variables.

### **Respondent Characteristics Based on Age, Gender, and Education**

Based on the research findings, most respondents were in the 25–35 years and  $>36$  years age groups, with 24 respondents (46.2%) in each group, while 4 respondents (7.7%) were under 24 years of age. These findings indicate that the majority of respondents were of productive adult age. During adulthood, individuals generally have a greater level of cognitive maturity and experience in dealing with health problems, including undergoing anesthesia and surgical procedures. Nevertheless, surgical procedures may still cause anxiety due to fear of anesthesia procedures, pain, or possible complications during surgery.

In terms of gender, the majority of respondents were male, comprising 27 respondents (51.9%), while 25 respondents (48.1%) were female. The predominance of male respondents in this study indicates that patients undergoing anesthesia procedures at the study site were more frequently male than female. Gender may influence an individual's emotional response to stress and anxiety. However, both male and female patients may experience anxiety before anesthesia, depending on their experiences, family support, and individual ability to manage stress.

Regarding educational attainment, most respondents had completed senior high school, comprising 26 respondents (50.0%), while 7 respondents (13.5%) each had completed elementary school and held a Diploma/Bachelor's degree (D3–S1). Educational attainment influences an individual's ability to receive, understand, and interpret health information provided by healthcare professionals. Respondents with higher levels of education tend to understand explanations regarding anesthesia procedures more easily, which may help reduce anxiety before surgery. Conversely, respondents with lower levels of education may potentially

experience higher levels of anxiety due to limited understanding of the procedures they are about to undergo (Delewi et al., 2017; Ali et al., 2015; Baldwin et al., 2023).

Age, gender, and educational characteristics are important factors that may influence patients' pre-anesthetic anxiety levels. Therefore, anesthesiology practitioners need to provide therapeutic communication tailored to the characteristics of each patient so that information can be properly understood and patient anxiety can be minimized before anesthesia is administered.

### **Therapeutic Communication Provided by Anesthesiology Practitioners**

Based on the research findings, therapeutic communication provided by anesthesiology practitioners was predominantly categorized as good, with 30 respondents (57.7%), while 22 respondents (42.3%) were categorized as fair. These findings indicate that most anesthesiology practitioners were able to provide good therapeutic communication to pre-anesthetic patients through the provision of information, an empathetic attitude, emotional support, and the ability to listen to patients' concerns before anesthesia was administered.

Therapeutic communication is an important form of non-pharmacological intervention in anesthesia services because it can help patients understand the procedures they will undergo, thereby reducing fear and anxiety. Good communication can also increase patients' trust in healthcare professionals and provide a sense of security before surgery. Conversely, suboptimal communication may cause patients to feel confused, afraid, and anxious about the anesthesia and surgical procedures they will undergo.

The findings of this study show that good therapeutic communication was more frequently observed than communication categorized as fair. This indicates that anesthesiology practitioners at TK IV 03.07.04 Guntur Garut Hospital have implemented therapeutic communication relatively optimally for pre-anesthetic patients. The therapeutic communication provided included introducing themselves to patients, explaining anesthesia procedures, answering patients' questions, providing emotional support, and creating a comfortable and non-threatening communication environment (Alqahtani et al., 2024; Modabber et al., 2022; Burns-Nader & Hernandez-Reif, Jackson & McLernon, 2025).

This study is consistent with the theory proposed by Potter et al. (2021), which states that therapeutic communication is professional communication consciously planned to help patients cope with psychological problems, increase their sense of security, and accelerate the healing process. In addition, Mahyuvi et al. (2023) and Mawaddah & Handrianto (2023) stated that effective therapeutic communication can increase patient satisfaction and help reduce anxiety before medical procedures are performed.

The findings of this study are also supported by Saragih et al. (2025), who found that therapeutic communication by healthcare professionals was associated with reduced preoperative anxiety among patients. Saragih et al. (2025) also reported that therapeutic communication provided before anesthesia procedures could help patients become calmer and more cooperative when undergoing medical procedures.

Based on these findings, it can be concluded that therapeutic communication provided by anesthesiology practitioners plays an important role in pre-anesthetic care. Good communication can help patients feel more comfortable, understand anesthesia procedures, and reduce anxiety before undergoing surgery.

### **Pre-Anesthetic Anxiety Levels among Patients**

Based on the research findings, most respondents experienced mild anxiety, comprising 23 respondents (44.2%), while 16 respondents (30.8%) experienced moderate anxiety, 10 respondents (19.2%) experienced severe anxiety, and 3 respondents (5.8%) experienced no

anxiety. These findings indicate that most pre-anesthetic patients still experienced anxiety before undergoing anesthesia and surgical procedures.

Pre-anesthetic anxiety is a common emotional response experienced by patients who are about to undergo surgery (Salzmann et al., 2023; Kharod et al., 2022). This condition may arise from fear of the anesthesia procedure, concerns about pain, possible complications, or uncertainty regarding surgical outcomes. In addition, insufficient information and understanding of anesthesia procedures may also increase patients' anxiety levels before surgery.

The majority of respondents in this study experienced mild anxiety. This indicates that patients were still able to control their emotions despite experiencing fear and concern about the anesthesia procedure they were about to undergo. Nevertheless, some respondents experienced moderate to severe anxiety. This condition may affect patients' physiological status, such as increased blood pressure, heart rate, and muscle tension, potentially interfering with the anesthesia or surgical process.

The findings of this study are consistent with Stuart's (2020) theory, which states that surgery and anesthesia are situations that can cause psychological stress in patients. This study is also supported by Ali et al. (2019), Hernández-Palazón et al. (2018), Aust et al. (2018) who reported that preoperative patients generally experience anxiety due to insufficient understanding of the medical procedures they are about to undergo. In addition, Handayani et al. (2020) found that patients who did not receive education or psychological support from healthcare professionals tended to experience higher levels of anxiety.

Pre-anesthetic anxiety levels need to be a concern for healthcare professionals, particularly anesthesiology practitioners, because untreated anxiety may affect patients' readiness to undergo surgery. Therefore, therapeutic communication, pre-anesthetic education, emotional support, and psychological approaches are essential to help reduce patient anxiety so that patients become calmer, more comfortable, and more cooperative before anesthesia is administered.

### **Relationship between Therapeutic Communication Provided by Anesthesiology Practitioners and Pre-Anesthetic Anxiety Levels among Patients**

Based on the results of the Spearman's rho statistical test, the correlation coefficient ( $r$ ) was -0.847 with a p-value of 0.000 ( $p < 0.05$ ). These results indicate a significant relationship between therapeutic communication provided by anesthesiology practitioners and pre-anesthetic anxiety levels among patients at TK IV 03.07.04 Guntur Garut Hospital. The negative correlation coefficient indicates an inverse relationship, meaning that the better the therapeutic communication provided by anesthesiology practitioners, the lower the patients' pre-anesthetic anxiety levels. The correlation coefficient of 0.847 indicates a very strong relationship.

The findings of this study indicate that therapeutic communication plays an important role in helping reduce patients' anxiety before undergoing anesthesia and surgery. Patients who receive good therapeutic communication tend to feel calmer, more comfortable, and better understand the anesthesia procedures they will undergo. Conversely, patients who receive less therapeutic communication tend to experience higher levels of anxiety due to fear, uncertainty, and insufficient understanding of the medical procedures to be performed (Mahyuv et al., 2023; Amoah et al., 2019).

Therapeutic communication provided by anesthesiology practitioners includes providing information about anesthesia procedures, answering patients' questions, providing emotional support, demonstrating empathy, and establishing a trusting relationship with patients. This approach can help patients reduce psychological tension before surgery. Through good

communication, patients feel cared for and become better prepared to face anesthesia and surgical procedures.

The findings of this study are consistent with Saragih et al. (2025), who demonstrated a significant relationship between therapeutic communication by healthcare professionals and preoperative anxiety levels. Peng et al. (2020) also stated that therapeutic communication provided before anesthesia procedures could significantly reduce patient anxiety. In addition, Musarofah et al. (2025) found that effective therapeutic communication was associated with reduced anxiety levels among patients before surgery.

According to Potter et al. (2021), therapeutic communication is professional communication designed to help patients cope with psychological problems, increase their sense of security, and establish a trusting relationship between patients and healthcare professionals. Stuart (2020) also stated that emotional support and effective communication from healthcare professionals can help reduce patients' anxiety responses before undergoing medical procedures.

Based on the research findings, it can be concluded that therapeutic communication provided by anesthesiology practitioners is closely related to patients' pre-anesthetic anxiety levels. The better the therapeutic communication provided, the lower the patients' anxiety levels. Therefore, therapeutic communication needs to be continuously improved as an essential component of anesthesia services oriented toward patient safety, comfort, and psychological needs.

## Conclusion

The characteristics of the respondents showed that most respondents were in the 25–35 years and >36 years age groups, with 24 respondents (46.2%) in each group. The majority of respondents were male, comprising 27 respondents (51.9%), and most had completed senior high school, comprising 26 respondents (50.0%). Therapeutic communication provided by anesthesiology practitioners was predominantly categorized as good, with 30 respondents (57.7%), while 22 respondents (42.3%) were categorized as fair. The pre-anesthetic anxiety levels of patients were predominantly categorized as mild anxiety, comprising 23 respondents (44.2%), followed by moderate anxiety among 16 respondents (30.8%), severe anxiety among 10 respondents (19.2%), and no anxiety among 3 respondents (5.8%). There was a significant relationship between therapeutic communication provided by anesthesiology practitioners and pre-anesthetic anxiety levels among patients at TK IV 03.07.04 Guntur Garut Hospital, with a p-value of 0.000 (<0.05) and a Spearman's rho correlation coefficient of -0.847, indicating a very strong negative relationship.

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## References

- Ali, S., Farooq, I., Khan, S. Q., Moheet, I. A., Al-Jandan, B. A., & Al-Khalifa, K. S. (2015). Self-reported anxiety of dental procedures among dental students and its relation to gender and level of education. *Journal of Taibah University Medical Sciences*, 10(4), 449-453. <https://doi.org/10.1016/j.jtumed.2015.06.002>
- Ali, Z., Ahsan, Z., Liaqat, N., & Din, I. U. (2024). Bridging the gap: evaluation of preoperative patients' education by comparing expectations and real-perioperative surgical



- experiences: a mixed-methods descriptive cross-sectional study. *BMC health services research*, 24(1), 964. <https://doi.org/10.1186/s12913-024-11388-z>
- Alqahtani, M. A. S., Althobaiti, B. S. S., Alanazi, H. M. M., Alkahtani, R. Z., Al-Munyif, A. N. A., Alassaf, D. M., ... & Alenezi, K. S. (2024). The Impact Of Nursing Support On Reducing Dental Anxiety Among Pediatric Patients Undergoing Dental Procedures: A Comprehensive Analysis. *Cultura: International Journal of Philosophy of Culture and Axiology*, 21(3s), 182-201.
- Amoah, V. M. K., Anokye, R., Boakye, D. S., Acheampong, E., Budu-Ainooson, A., Okyere, E., ... & Afriyie, J. O. (2019). A qualitative assessment of perceived barriers to effective therapeutic communication among nurses and patients. *BMC nursing*, 18(1), 4. <https://doi.org/10.1186/s12912-019-0328-0>
- Aust, H., Eberhart, L., Sturm, T., Schuster, M., Nestoriuc, Y., Brehm, F., & Rüsç, D. (2018). A cross-sectional study on preoperative anxiety in adults. *Journal of psychosomatic research*, 111, 133-139. <https://doi.org/10.1016/j.jpsychores.2018.05.012>
- Baldwin, C., Pickering, G., & Dale, G. (2023). Knowledge and self-efficacy of youth to take action on climate change. *Environmental Education Research*, 29(11), 1597-1616. <https://doi.org/10.1080/13504622.2022.2121381>
- Bilgin, A., Öcalan, S., & Kovancı, M. S. (2025). Intensive care nurses' pain management experiences within the framework of the biopsychosocial-spiritual model in Türkiye: a qualitative approach. *Journal of Religion and Health*, 64(2), 948-964. <https://doi.org/10.1007/s10943-025-02251-4>
- Burns-Nader, S., & Hernandez-Reif, M. (2016). Facilitating play for hospitalized children through child life services. *Children's health care*, 45(1), 1-21. <https://doi.org/10.1080/02739615.2014.948161>
- Colgan, D. D., Eddy, A., Aulet-Leon, M., Green, K., Peters, B., Shangraw, R., ... & Oken, B. (2024). Compassion, communication, and the perception of control: a mixed methods study to investigate patients' perspectives on clinical practices for alleviating distress and promoting empowerment during awake craniotomies. *British journal of neurosurgery*, 38(4), 911-922. <https://doi.org/10.1080/02688697.2021.2005773>
- Delewi, R., Vlastra, W., Rohling, W. J., Wagenaar, T. C., Zwemstra, M., Meesterman, M. G., ... & Henriques, J. P. (2017). Anxiety levels of patients undergoing coronary procedures in the catheterization laboratory. *International Journal of Cardiology*, 228, 926-930. <https://doi.org/10.1016/j.ijcard.2016.11.043>
- Hernández-Palazón, J., Fuentes-García, D., Falcón-Araña, L., Roca-Calvo, M. J., Burguillos-López, S., Doménech-Asensi, P., & Jara-Rubio, R. (2018). Assessment of preoperative anxiety in cardiac surgery patients lacking a history of anxiety: contributing factors and postoperative morbidity. *Journal of cardiothoracic and vascular anesthesia*, 32(1), 236-244. <https://doi.org/10.1053/j.jvca.2017.04.044>
- Jackson, M., & McLernon, M. (2025). Beyond the chair: approaching dental care for survivors of trauma: Beyond the chair: approaching dental care for survivors of trauma. *British Dental Journal*, 238(11), 858-862. <https://doi.org/10.1038/s41415-025-8488-7>
- Kharod, U., Panchal, N. N., Varma, J., & Sutaria, K. (2022). Effect of pre-operative communication using anaesthesia information sheet on pre-operative anxiety of patients undergoing elective surgery—A randomised controlled study. *Indian Journal of Anaesthesia*, 66(8), 559. [https://doi.org/10.4103/ija.ija\\_32\\_22](https://doi.org/10.4103/ija.ija_32_22)



- Kharod, U., Panchal, N. N., Varma, J., & Sutaria, K. (2022). Effect of pre-operative communication using anaesthesia information sheet on pre-operative anxiety of patients undergoing elective surgery—A randomised controlled study. *Indian Journal of Anaesthesia*, 66(8), 559. [https://doi.org/10.4103/ija.ija\\_32\\_22](https://doi.org/10.4103/ija.ija_32_22)
- Mahajan, A., Esper, S. A., Cole, D. J., & Fleisher, L. A. (2021). Anesthesiologists' role in value-based perioperative care and healthcare transformation. *Anesthesiology*, 134(4), 526-540. <https://doi.org/10.1097/ALN.0000000000003717>
- Mahyuvi, T., Masqurotin, M., & Rumpiati, R. (2023). Therapeutic communication with patient anxiety levels during operation preparation: a cross-sectional study. *International Journal of Nursing and Health Services (IJNHS)*, 6(4), 257-265. <https://doi.org/10.35654/ijnhs.v6i4.716>
- Mahyuvi, T., Masqurotin, M., & Rumpiati, R. (2023). Therapeutic communication with patient anxiety levels during operation preparation: a cross-sectional study. *International Journal of Nursing and Health Services (IJNHS)*, 6(4), 257-265. <https://doi.org/10.35654/ijnhs.v6i4.716>
- Mawaddah, N., & Handrianto, W. (2023). Therapeutic Communication With Patients In The Emergency Room Hospital. *Jurnal Kegawatdaruratan Medis Indonesia*, 2(1), 1-12. <https://doi.org/10.58545/jkmi.v2i1.43>
- Mazzeo, A. T., La Monaca, E., Di Leo, R., Vita, G., & Santamaria, L. B. (2011). Heart rate variability: a diagnostic and prognostic tool in anesthesia and intensive care. *Acta Anaesthesiologica Scandinavica*, 55(7), 797-811. <https://doi.org/10.1111/j.1399-6576.2011.02466.x>
- Modabber, M., Campbell, K. M., McMurtry, C. M., Taddio, A., & Dempster, L. J. (2022). Children's perceptions of dental experiences and ways to improve them. *Children*, 9(11), 1657. <https://doi.org/10.3390/children9111657>
- Musarofah, U., Retnaningsih, D., & Wirawati, M. K. (2025). Hubungan komunikasi terapeutik perawat dengan tingkat kecemasan pasien pre operasi di RSI Pekajangan. *Jurnal Ilmu Kesehatan Umum (Vitamin)*, 3(4), 258–275. <https://doi.org/10.61132/vitamin.v3i4.1786>
- Mutia, L., Novitasari, D., & Burhan, A. (2024). The Relationship Between Pre-Anesthesia Anxiety and the Incidence of Post-Operative Nausea and Vomiting (PONV) in Patients Undergoing General Anesthesia at Islamic Hospital Purwokerto. *Java Nursing Journal*, 2(1), 93-102.
- Peng, F., Peng, T., Yang, Q., Liu, M., Chen, G., & Wang, M. (2020). Preoperative communication with anesthetists via anesthesia service platform (ASP) helps alleviate patients' preoperative anxiety. *Scientific Reports*, 10(1), 18708. <https://doi.org/10.1038/s41598-020-74697-3>
- Peng, F., Peng, T., Yang, Q., Liu, M., Chen, G., & Wang, M. (2020). Preoperative communication with anesthetists via anesthesia service platform (ASP) helps alleviate patients' preoperative anxiety. *Scientific Reports*, 10(1), 18708. <https://doi.org/10.1038/s41598-020-74697-3>
- Pereira, L., Figueiredo-Braga, M., & Carvalho, I. P. (2016). Preoperative anxiety in ambulatory surgery: The impact of an empathic patient-centered approach on psychological and clinical outcomes. *Patient education and counseling*, 99(5), 733-738. <https://doi.org/10.1016/j.pec.2015.11.016>
- Petrescu, M. D., Popa, F., & Purcărea, V. L. (2022). How could perioperative anxiety be addressed via surgical team communication approaches? Findings from a scoping

- review. *Hospital practice*, 50(3), 159-169.  
<https://doi.org/10.1080/21548331.2022.2059979>
- Pintasari, P., Suryani, R. L., & Rahmawati, A. N. (2025). Edukasi Video Operating Room Tour Guna Mengurangi Kecemasan Pada Pasien Pre Anestesi Di RSUD dr. Soedirman Kebumen. *Jurnal Pengabdian Masyarakat-PIMAS*, 4(3), 207-213.  
<https://doi.org/10.35960/pimas.v4i3.1879>
- Potter, P. A., Perry, A. G., Stockert, P. A., & Hall, A. M. (2021). *Fundamentals of nursing* (10th ed.). Elsevier.
- Putri, A. S. A., & Toga, E. (2026). Combined Butterfly Hug and Religious Music Therapy on Reducing Preoperative Anxiety. *Professional Health Journal*, 8(1), 577-589.  
<https://doi.org/10.54832/phj.v8i1.1525>
- Rahmawati, D., Handayani, R. N., & Adriyani, F. H. N. (2025). Pemberian Edukasi Puasa Sebelum Tindakan Operasi Dalam Upaya Meningkatkan Pengetahuan Pasien Pre Operasi Di Rsud Dr. R. Goeteng Taroenadibrata. *Jurnal Pengabdian Masyarakat Bhinneka*, 3(4), 1139-1145. <https://doi.org/10.58266/jpmb.v3i4.343>
- Salazar Maya, Á. M. (2022). Nursing care during the perioperative within the surgical context. *Investigacion y educacion en enfermeria*, 40(2).
- Salzmann, S., Euteneuer, F., Kampmann, S., Rienmüller, S., & Rüsç, D. (2023). Preoperative anxiety and need for support—A qualitative analysis in 1000 patients. *Patient Education and Counseling*, 115, 107864. <https://doi.org/10.1016/j.pec.2023.107864>
- Saragih, H., Derang, I., Sembiring, F., & Sitohang, R. B. (2025). The Relationship of Nurse Therapeutic Communication with Anxiety Level in Preoperative Patients at Santa Elisabeth Hospital Medan. *Jurnal Ventilator*, 3(4), 125-139.  
<https://doi.org/10.59680/ventilator.v3i4.2126>
- Silverman, J., Kurtz, S., & Draper, J. (2016). *Skills for communicating with patients* (3rd ed.). CRC Press.
- Stuart, G. W. (2012). *Principles and practice of psychiatric nursing-e-book: principles and practice of psychiatric nursing-e-book*. Elsevier Health Sciences.
- Tamunobeleva, D. M. S., & Uruaka, C. I. (2023). General anaesthetic agents and their implication on the cardiovascular system: a systematic review. *Saudi J Med Pharm Sci*, 9(3), 171-184.
- Thota, R. S., Ramkiran, S., & Iyer, S. (2024). The crucial and integral role of an anaesthesiologist as a palliative physician: A holistic approach to patient care and comfort. *Journal of Onco-Anaesthesiology and Perioperative Medicine*, 1(3), 135-136.
- Tollinche, L. E., Walters, C. B., Radix, A., Long, M., Galante, L., Goldstein, Z. G., ... & Yeoh, C. (2018). The perioperative care of the transgender patient. *Anesthesia and analgesia*, 127(2), 359. <https://doi.org/10.1213/ANE.0000000000003371>
- Williams, J. B., & McCarthy, R. J. (2020). Anxiety and postoperative outcomes. *Current Opinion in Anaesthesiology*, 31(3), 292-298.  
<https://doi.org/10.1097/ACO.0000000000000587>
- Wiratama, P. J. F. (2021). Penatalaksanaan Non Farmakologi Pada Pasien Pra Operasi Yang Mengalami Kecemasan Di Rsud Kabupaten Buleleng (Studi Kasus). *Institute Kesehatan Dan Teknologi Bali*, 2(7).