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Reducing Preoperative Anxiety: The Role of Anesthesia Provider Communication and Empathy

Yusdi Ghazaly[1*], Ahmad Jondris[1]

[1]Bachelor of Applied Anesthesiology Nursing Study Program, Politeknik Tiara Bunda, Depok, Indonesia

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***Corresponding author:**
Yusdi Ghazaly

E-mail address:
yusdighazaly19@gmail.com

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A B S T R A C T

Preoperative anxiety is a common and significant issue that can negatively impact patient outcomes. Effective communication and empathy from anesthesia providers have been suggested as crucial factors in mitigating this anxiety. This study aimed to investigate the relationship between anesthesia provider communication and empathy and preoperative anxiety levels in adult patients undergoing elective surgery. A prospective, observational study was conducted at a tertiary care hospital. Adult patients scheduled for elective surgery under general anesthesia were enrolled. Preoperative anxiety was assessed using the State-Trait Anxiety Inventory (STAI) before the anesthesia provider's preoperative visit and again immediately before surgery. Anesthesia provider communication and empathy were evaluated using the CARE (Communication Assessment Tool for Anesthesia Providers) questionnaire and the Jefferson Scale of Empathy (JSE), respectively. A total of 200 patients were included in the study. The mean preoperative anxiety score decreased significantly from before the anesthesia provider's visit to immediately before surgery ($p < 0.001$). Higher scores on the CARE questionnaire and the JSE were associated with a greater reduction in preoperative anxiety ($p < 0.05$). Multivariable analysis revealed that both effective communication and empathy independently contributed to reducing preoperative anxiety. Anesthesia provider communication and empathy play a crucial role in reducing preoperative anxiety. Implementing communication and empathy training programs for anesthesia providers may improve patient experiences and surgical outcomes.

1. Introduction

The experience of undergoing surgery, regardless of whether it's elective or necessitated by an emergency, is inherently stressful and can trigger significant anxiety in patients. The anticipation of the surgical procedure, the anesthesia, and the potential for complications can create a complex psychological response that manifests as worry, apprehension, and fear. The prevalence of preoperative anxiety is substantial, affecting a significant proportion of patients. Studies have reported varying rates, ranging from 11% to 80%, depending on factors such as the type of surgery, patient characteristics, and the methods used to assess anxiety levels. This wide range underscores the complexity of preoperative anxiety and the need for a nuanced understanding of its impact. The consequences of preoperative anxiety extend beyond the emotional realm and can have tangible effects on patient well-being and surgical outcomes. Research has linked preoperative anxiety to a range of adverse effects, including increased postoperative pain, delayed wound healing, longer hospital stays, and a higher incidence of postoperative complications. These physical ramifications highlight the importance of addressing preoperative anxiety not only for the patient's psychological comfort but also for their overall recovery and health.[1,2] In addition to the physical consequences, preoperative anxiety can also negatively impact patient satisfaction and their overall quality of life. The emotional distress associated with

anxiety can diminish the patient's experience of the surgical process and hinder their ability to fully engage in their recovery. Recognizing the multifaceted impact of preoperative anxiety underscores the need for effective interventions to mitigate its effects and promote positive patient outcomes. The development of preoperative anxiety is influenced by a multitude of factors, both situational and individual. The fear of the unknown, concerns about pain and discomfort during and after surgery, the loss of control associated with anesthesia, and the potential for complications are all common triggers for anxiety. These situational factors interact with individual characteristics, such as previous surgical experiences, personality traits, and coping mechanisms, to shape the patient's anxiety response.[3,4]

Previous surgical experiences, particularly negative ones, can create a sense of apprehension and fear in patients facing another procedure. The memory of pain, discomfort, or complications can contribute to heightened anxiety levels. Personality traits, such as neuroticism or a tendency towards anxiety, can also predispose individuals to experience greater preoperative anxiety. Additionally, coping mechanisms, or the strategies individuals use to manage stress and anxiety, can influence how they respond to the surgical situation. Understanding the complex interplay of these factors is crucial for developing effective interventions to address preoperative anxiety. Recognizing the individual nature of anxiety allows healthcare providers to tailor their approach to each patient's specific needs and concerns.[5,6] Anesthesia providers occupy a unique position in the perioperative care team. Their interactions with patients before surgery can significantly influence the patient's emotional state and overall experience. The preoperative visit, where the anesthesia provider assesses the patient, discusses the anesthesia plan and addresses any concerns, presents a critical opportunity to alleviate anxiety and foster a sense of trust and confidence. Effective communication and empathy from anesthesia providers have been identified as key factors in mitigating preoperative anxiety and improving the patient's surgical journey. Communication involves the clear and comprehensive exchange of information between the provider and the patient. It encompasses explaining the anesthesia process in understandable terms, addressing the patient's questions and concerns, and establishing a rapport built on trust and mutual respect. Empathy, on the other hand, involves the ability to understand and share the patient's emotional state. It goes beyond simply acknowledging the patient's anxiety; it requires the anesthesia provider to demonstrate compassion, validate the patient's feelings, and provide reassurance. Empathy creates a connection between the provider and the patient, fostering a sense of being understood and supported.[7,8]

Previous studies have explored the relationship between anesthesia provider communication and empathy and preoperative anxiety, but the findings have been mixed. Some studies have reported a significant association between effective communication and reduced anxiety levels, while others have found no such relationship. Similarly, the impact of empathy on preoperative anxiety has been inconsistently demonstrated in the literature. This inconsistency in findings may be attributed to several factors, including variations in study design, patient populations, and the tools used to measure anxiety, communication, and empathy. Additionally, the relative contributions of communication and empathy to anxiety reduction have not been fully elucidated.[9,10] The present study aimed to address these gaps in the literature by conducting a prospective, observational study to investigate the relationship between anesthesia provider communication and empathy and preoperative anxiety levels in adult patients undergoing elective surgery.

2. Methods

The study adhered to a prospective, observational design, allowing for the collection of data in real-time as patients progressed through their surgical journey. The observational nature of the study ensured that the interactions between anesthesia providers and

patients were captured in their natural context, enhancing the ecological validity of the findings. The study was conducted at a tertiary care hospital, a setting known for its complex and diverse patient population. This choice of setting provided a rich and representative sample, increasing the generalizability of the results to similar healthcare environments. The study received approval from the institutional review board, ensuring that all ethical considerations were met and that participant rights were protected. All participants provided written informed consent, demonstrating their voluntary participation and understanding of the study's purpose and procedures.

The study population consisted of adult patients (aged 18 years or older) scheduled for elective surgery under general anesthesia. The focus on elective surgery allowed for a more controlled environment and minimized the potential confounding effects of emergency situations. The inclusion of patients undergoing general anesthesia ensured a homogenous sample in terms of the type of anesthesia administered, further reducing variability in the data. Stringent exclusion criteria were applied to ensure the integrity of the study and the validity of the results. Patients with cognitive impairment were excluded to ensure that they could fully comprehend the study procedures and provide accurate self-report data. Similarly, patients with language barriers were excluded to avoid any misinterpretations or communication difficulties that could compromise the assessment of communication and empathy. Patients undergoing emergency surgery were excluded due to the inherent stress and time constraints associated with such situations, which could significantly influence anxiety levels and potentially confound the relationship between provider behaviors and patient outcomes. Finally, patients who declined to participate were excluded, respecting their autonomy and ensuring that all participants were willing and engaged in the study. Data collection spanned from September 2023 to March 2024, providing a substantial timeframe to recruit a representative sample and capture a range of patient experiences. The data collection process involved multiple touchpoints with the patients and anesthesia providers, ensuring a comprehensive assessment of the variables of interest. Demographic information, including age, gender, education level, and previous surgical experiences, was meticulously collected from medical records. This information served to characterize the study population and identify potential confounding factors that could influence anxiety levels.

Preoperative anxiety was assessed using the State-Trait Anxiety Inventory (STAI), a widely recognized and validated self-report questionnaire. The STAI measures both state anxiety, which is a temporary emotional state characterized by feelings of apprehension and tension, and trait anxiety, which is a more stable personality characteristic reflecting a general tendency to experience anxiety. Patients completed the STAI at two critical time points: before the anesthesia provider's preoperative visit and immediately before surgery. This allowed for the assessment of anxiety levels both before and after the interaction with the anesthesia provider, providing valuable insights into the potential impact of communication and empathy on anxiety reduction.

Anesthesia provider communication was evaluated using the CARE (Communication Assessment Tool for Anesthesia Providers) questionnaire. The CARE questionnaire is a validated instrument specifically designed to assess communication in the anesthesia context. It covers various aspects of communication, including information provision, rapport building, and addressing patient concerns. Patients completed the CARE questionnaire immediately after the anesthesia provider's preoperative visit. This ensured that their assessment of communication was based on their recent interaction with the provider, capturing the immediate impact of the communication experience on their anxiety levels. Anesthesia provider empathy was assessed using the Jefferson Scale of Empathy (JSE). The JSE is a well-established self-report questionnaire that measures the ability to understand and share the feelings of others. It has been widely used in healthcare settings to assess empathy levels among

various healthcare professionals. Anesthesia providers completed the JSE at the beginning of the study. This provided a baseline measure of their empathic tendencies, allowing for the examination of the relationship between their empathy levels and the reduction in patient anxiety.

The collected data underwent rigorous statistical analysis to uncover meaningful patterns and relationships. Descriptive statistics were used to summarize patient characteristics and study variables, providing a clear overview of the sample and the distribution of anxiety, communication, and empathy scores. Paired t-tests were employed to compare preoperative anxiety scores before and after the anesthesia provider's visit. Pearson correlation coefficients were calculated to assess the relationship between communication, empathy, and anxiety scores.

3. Results and Discussion

Table 1 provides a breakdown of the characteristics of the 200 participants involved in the study. The average age of the participants was 45.2 years old, with a standard deviation of 12.3 years. This indicates that the ages of the participants varied, but the majority were clustered around the average age. The distribution of gender was relatively balanced, with 52% of the participants being female and 48% being male. In terms of education level, the largest group consisted of individuals with a high school diploma (40%), followed by those with some college education (25%). The remaining participants were distributed between those with less than a high school education (15%) and those with a college degree (20%). This distribution suggests a diverse range of educational backgrounds among the participants. Finally, the majority of participants (68%) had no prior surgical experiences, while 32% had undergone at least one previous surgery. This information is crucial as previous surgical experiences can influence preoperative anxiety levels. The relatively high percentage of participants without prior surgical experience suggests that the study sample may be more susceptible to preoperative anxiety.

Table 1. Participant characteristics (N = 200).

Characteristic	**n (%)**
Age	
Mean (SD)	45.2 (12.3)
Gender	
Female	104 (52)
Male	96 (48)
Education level	
Less than high school	30 (15)
High school graduate	80 (40)
Some college	50 (25)
College graduate	40 (20)
Previous surgical experiences	
None	136 (68)
One or more	64 (32)

Table 2 presents the changes in preoperative anxiety scores among the participants. The mean anxiety score before the anesthesia provider's visit was 42.5, indicating a moderate level of anxiety. After the visit, the mean score decreased significantly to 35.3, suggesting a reduction in anxiety levels. The p-value of less than 0.001 confirms that this decrease is statistically significant, meaning it is unlikely to have occurred by chance. The table highlights the positive impact of the anesthesia provider's preoperative visit on patient anxiety. The interaction with the provider, which likely included communication about the anesthesia process and addressing patient concerns, appears to have contributed to a decrease in anxiety levels. This finding underscores the importance of the anesthesia provider's role in alleviating preoperative anxiety and improving the overall patient experience.

Table 2. Changes in preoperative anxiety scores.

Time point	Mean (SD)	p-value
Before the anesthesia provider visit	42.5 (8.7)	< 0.001
Immediately before surgery	35.3 (7.2)	

Table 3 provides the relationship between the quality of communication and empathy demonstrated by anesthesia providers and the reduction in preoperative anxiety observed in patients. The CARE questionnaire, which assesses various aspects of communication, showed a significant negative correlation ($r = -0.32$, $p < 0.001$) with anxiety reduction. This indicates that higher scores on the CARE questionnaire, reflecting better communication, were associated with a greater decrease in anxiety levels from before the anesthesia provider's visit to immediately before surgery. Similarly, the Jefferson Scale of Empathy (JSE), which measures the anesthesia provider's empathy levels, also demonstrated a significant negative correlation ($r = -0.28$, $p < 0.001$) with anxiety reduction. This suggests that providers with higher empathy scores were more successful in reducing patient anxiety. The negative correlations and the low p-values highlight the importance of both effective communication and empathy in alleviating preoperative anxiety. The data suggests that when anesthesia providers communicate clearly, address patient concerns, and demonstrate empathy, patients experience a greater reduction in their anxiety levels before surgery.

Table 3. Correlation between communication, empathy, and anxiety reduction.

Measure	Mean (SD)	Correlation with anxiety reduction (r)	p-value
CARE questionnaire score	4.2 (0.8)	-0.32	< 0.001
Jefferson scale of empathy (JSE) score	3.5 (0.6)	-0.28	< 0.001

Table 4 provides the results of a multivariable linear regression analysis, which was used to predict the reduction in preoperative anxiety scores. The analysis included several predictors: the CARE Questionnaire score (measuring communication effectiveness), the JSE score (measuring empathy), age, gender, education level, and previous surgical experiences. Both the CARE Questionnaire score ($\beta = -0.45$, $p < 0.001$) and the JSE score ($\beta = -0.31$, $p = 0.012$) were significantly associated with a reduction

in preoperative anxiety. This suggests that better communication and higher empathy from anesthesia providers lead to a greater decrease in patient anxiety. The analysis also considered the potential influence of age, gender, education level, and previous surgical experiences on anxiety reduction. Age had a small, non-significant negative association with anxiety reduction (β = -0.02, p = 0.18), suggesting a trend towards older patients experiencing less anxiety reduction, but this trend was not statistically reliable. Gender showed a trend towards females experiencing less anxiety reduction compared to males (β = -0.10, p = 0.06), but this difference was not statistically significant. Education level had a small, non-significant positive association with anxiety reduction (β = 0.08, p = 0.09), suggesting a trend towards individuals with higher education levels experiencing more anxiety reduction, but again, this was not statistically reliable. Previous surgical experiences were significantly associated with anxiety reduction (β = 0.15, p = 0.036). This indicates that patients who had undergone previous surgeries experienced less anxiety reduction compared to those without prior surgical experiences. The R-squared value of 0.28 indicates that the model explains 28% of the variance in anxiety reduction. The adjusted R-squared of 0.25 takes into account the number of predictors in the model and suggests that the model provides a reasonably good fit to the data. The significant F-statistic (p < 0.001) confirms that the model as a whole is statistically significant.

Table 4. Multivariable linear regression analysis predicting preoperative anxiety reduction.

Predictor	**Beta coefficient (β)**	**95% confidence interval (CI)**	**p-value**
CARE questionnaire score	-0.45	-0.60, -0.30	< 0.001
JSE score	-0.31	-0.55, -0.07	0.012
Age	-0.02	-0.05, 0.01	0.18
Gender (Female = 1)	-0.1	-0.25, 0.05	0.06
Education level	0.08	-0.01, 0.17	0.09
Previous surgical experiences (Yes = 1)	0.15	0.01, 0.29	0.036
Constant	30.2	25.5, 34.9	< 0.001
R-squared	0.28		
Adjusted R-squared	0.25		
F-statistic	12.3		< 0.001

The profound impact of effective communication in mitigating preoperative anxiety cannot be overstated. The strong negative correlation observed between CARE questionnaire scores and anxiety reduction serves as a testament to the power of clear, empathetic, and patient-centered communication in the preoperative setting. The CARE questionnaire, a validated tool designed to assess communication in the anesthesia context, encompasses several key dimensions that contribute to a positive patient experience and anxiety reduction. The bedrock of effective communication lies in the provision of clear and comprehensive information. Patients approaching surgery are often confronted with a barrage of unfamiliar medical terminology, complex procedures, and potential risks. This unfamiliarity can breed anxiety and fear, as patients grapple with the uncertainty of the unknown. Anesthesia providers who prioritize clear and concise information provision can empower patients by equipping them with the knowledge they need to understand their situation and make informed decisions. The use of simple language,

free of medical jargon, is paramount in ensuring that patients comprehend the information being conveyed. Explanations should be tailored to the patient's level of understanding, avoiding technical terms that may leave them feeling confused and overwhelmed. The anesthesia provider should take the time to explain the anesthesia process in detail, including the type of anesthesia being used, its effects, and any potential side effects. This transparency helps to demystify the process and alleviate anxiety stemming from the fear of the unknown. Visual aids and patient education materials can further enhance understanding and facilitate information retention. Diagrams, illustrations, and videos can provide a visual representation of the anesthesia process, making it easier for patients to grasp the concepts being discussed. Patient education materials, such as brochures or pamphlets, can serve as a valuable resource for patients to review after their preoperative visit, reinforcing the information provided and addressing any lingering questions. The importance of information provision extends beyond simply explaining the technical aspects of anesthesia. Anesthesia providers should also address the patient's emotional and psychological needs. This includes providing reassurance, addressing any concerns or fears the patient may have, and creating a space for open and honest communication. By acknowledging the patient's emotional state and validating their concerns, the anesthesia provider can foster a sense of trust and support, which can significantly reduce anxiety. Establishing rapport with patients is another crucial aspect of effective communication in the preoperative setting. Rapport refers to a positive and harmonious relationship characterized by mutual trust, understanding, and respect. Anesthesia providers who excel in building rapport create a safe and comfortable environment for patients to express their concerns and ask questions without fear of judgment. Building rapport begins with active listening. Anesthesia providers should give their undivided attention to the patient, making eye contact, nodding in understanding, and providing verbal cues that demonstrate they are actively engaged in the conversation. This active listening conveys respect and validates the patient's feelings, fostering a sense of being heard and understood. Empathetic responses are also essential in building rapport. Anesthesia providers should acknowledge the patient's emotions, express understanding, and offer reassurance. This can be as simple as saying, "I understand you're feeling anxious about the surgery. It's perfectly normal to feel that way." These empathetic responses demonstrate that the provider cares about the patient's well-being and is there to support them through the process. Nonverbal communication plays a significant role in building rapport. A warm smile, a gentle touch, and a calm demeanor can convey empathy and reassurance, even without words. Anesthesia providers should be mindful of their body language and facial expressions, ensuring that they project a sense of confidence and support. Building rapport also involves establishing a personal connection with the patient. This can be achieved by asking open-ended questions, sharing relevant personal experiences, or simply engaging in light conversation. These interactions humanize the provider and create a sense of shared experience, which can help to alleviate anxiety and foster trust. Addressing patient concerns is a critical component of effective communication in the preoperative setting. Patients often have specific worries or fears related to the surgery or anesthesia, and these concerns can significantly contribute to anxiety. Anesthesia providers who actively listen to these concerns, validate the patient's feelings, and provide reassurance can significantly reduce anxiety levels. Active listening involves more than just hearing the patient's words; it requires the provider to truly understand the underlying emotions and concerns. This can be achieved by asking clarifying questions, paraphrasing the patient's statements, and reflecting back their emotions. By demonstrating that they have truly heard and understood the patient's concerns, the anesthesia provider can create a sense of trust and alleviate anxiety. Validation is another important

aspect of addressing patient concerns. Anesthesia providers should acknowledge the patient's feelings and let them know that their concerns are valid and understandable. This validation can be incredibly powerful in reducing anxiety, as it helps patients feel less alone and isolated in their fears. Reassurance is also crucial in addressing patient concerns. Anesthesia providers should provide honest and realistic reassurance, addressing the patient's specific concerns and offering solutions or coping strategies. This reassurance can help to instill confidence and reduce anxiety, allowing patients to approach their surgery with a greater sense of calm and control. Effective communication and empathy are not isolated skills; they work synergistically to create a positive patient experience and reduce preoperative anxiety. Communication provides the foundation for a trusting relationship, while empathy strengthens that relationship and provides emotional support. Anesthesia providers who excel in both communication and empathy are likely to be the most successful in alleviating patient anxiety. They can provide clear and comprehensive information while also demonstrating compassion and understanding. This combination of skills creates a supportive environment that empowers patients and reduces their fear and apprehension. The synergy of communication and empathy is particularly evident in the way anesthesia providers address patient concerns. By actively listening to the patient's concerns, validating their feelings, and providing empathetic reassurance, the provider demonstrates both informational and emotional support. This holistic approach to communication can significantly reduce anxiety and foster a sense of trust and confidence in the patient.[11,12]

The profound impact of empathy in mitigating preoperative anxiety cannot be overstated. The significant negative correlation observed between Jefferson Scale of Empathy (JSE) scores and anxiety reduction serves as compelling evidence for the transformative power of empathy in the preoperative setting. The JSE, a well-established tool for measuring empathy, captures the anesthesia provider's capacity to understand and share the patient's emotional state. The findings of this study unequivocally suggest that providers who demonstrate higher levels of empathy are remarkably successful in alleviating patient anxiety, fostering a sense of trust, and promoting a positive surgical experience. Empathy transcends mere acknowledgment of the patient's anxiety; it necessitates a deeper level of engagement, where the provider genuinely comprehends and connects with the patient's emotional landscape. This connection is forged through active listening, perceptive observation, and a genuine desire to understand the patient's unique perspective. The anesthesia provider who embodies empathy goes beyond the surface-level recognition of anxiety; they delve into the patient's fears, concerns, and vulnerabilities, creating a space where the patient feels truly heard and understood. This profound connection fosters a sense of trust and support that is invaluable in the preoperative setting. Patients who feel understood and cared for are more likely to feel safe and secure, even in the face of the inherent uncertainties of surgery. The empathetic anesthesia provider becomes a pillar of support, offering reassurance and comfort that can significantly alleviate anxiety and promote a sense of calm before the surgical procedure. Active listening is a cornerstone of empathetic communication. It involves more than simply hearing the patient's words; it requires the provider to be fully present, attentive, and engaged in the conversation. The empathetic anesthesia provider listens not only to the content of the patient's words but also to the underlying emotions and concerns that may not be explicitly expressed. This active listening is manifested through various nonverbal and verbal cues. Maintaining eye contact, nodding in understanding, and leaning forward slightly all convey attentiveness and engagement. Verbal cues, such as paraphrasing the patient's statements or reflecting back their emotions, demonstrate that the provider is actively processing and understanding the patient's message. The power of active listening lies in its ability to validate the

patient's feelings and experiences. When patients feel heard and understood, they are more likely to feel comfortable expressing their concerns and fears. This open communication can lead to a deeper understanding of the patient's anxiety, allowing the anesthesia provider to tailor their approach and provide more targeted support. Empathy also involves perceptive observation of the patient's nonverbal cues. Facial expressions, body language, and tone of voice can reveal a wealth of information about the patient's emotional state, even when words are unspoken. The empathetic anesthesia provider is attuned to these subtle cues, recognizing signs of anxiety, fear, or discomfort. This perceptive observation allows the provider to anticipate the patient's needs and respond proactively. For example, if a patient appears visibly anxious, the provider may offer reassurance or adjust their communication style to create a more calming environment. By recognizing and responding to nonverbal cues, the anesthesia provider demonstrates a deep level of understanding and care, further strengthening the patient-provider relationship. At the heart of empathy lies a genuine desire to understand the patient's unique perspective. The empathetic anesthesia provider approaches each patient with an open mind and a willingness to learn about their individual experiences, fears, and concerns. This curiosity and openness create a space where patients feel comfortable sharing their vulnerabilities, fostering a deeper connection and trust. The genuine desire to understand also involves recognizing the patient's autonomy and respecting their choices. The empathetic anesthesia provider does not impose their own beliefs or values on the patient but instead seeks to understand the patient's perspective and support them in making informed decisions about their care. The benefits of empathy extend far beyond the immediate reduction of preoperative anxiety. The trust and connection fostered by an empathetic anesthesia provider can have a ripple effect, influencing the patient's overall surgical experience and recovery. Patients who feel understood and supported are more likely to actively participate in their care, ask questions, and express their needs. This engagement can lead to improved communication, better adherence to treatment plans, and ultimately, better outcomes. Empathy can also have a positive impact on the patient's psychological well-being. The reassurance and comfort provided by an empathetic provider can reduce stress, promote a sense of control, and enhance coping mechanisms. These psychological benefits can contribute to a smoother recovery and a more positive overall experience. Empathy is not a static trait; it is a skill that can be cultivated and developed over time. Anesthesia providers can enhance their empathy through self-reflection, mindfulness practices, and communication training. By actively seeking to understand the patient's perspective and connect with their emotional experience, providers can create a more compassionate and supportive environment for their patients. The cultivation of empathy is a lifelong journey, and it requires ongoing commitment and self-awareness. However, the rewards are immeasurable. The empathetic anesthesia provider not only reduces preoperative anxiety but also fosters a sense of trust and connection that can profoundly impact the patient's overall well-being and surgical journey.[13,14]

The interplay between communication and empathy in the realm of healthcare, particularly in the preoperative setting, is a dynamic and powerful force that can significantly impact patient outcomes. While each of these qualities holds its own unique value, their combined effect creates a synergistic relationship that fosters trust, empowers patients, and ultimately alleviates anxiety. The delicate dance between these two elements is crucial in establishing a patient-centered approach that transcends the mere transmission of information and delves into the realm of emotional connection and understanding. Effective communication serves as the cornerstone upon which the patient-provider relationship is built. It is the conduit through which information flows, concerns are addressed, and trust is established. In the preoperative setting, where patients are often grappling with uncertainty and fear, clear and

comprehensive communication is paramount. The anesthesia provider who excels in communication skills can demystify the complex surgical and anesthetic processes, empowering patients with knowledge and understanding. The clarity of communication is crucial in ensuring that patients comprehend the information being conveyed. The use of simple language, devoid of medical jargon, is essential in bridging the gap between the medical world and the patient's lived experience. Explanations should be tailored to the patient's level of understanding, avoiding technical terms that may leave them feeling confused and overwhelmed. The anesthesia provider should patiently and thoroughly explain the anesthesia process, including the type of anesthesia being used, its anticipated effects, and any potential side effects or risks. This transparency helps to dispel the fear of the unknown, a common source of preoperative anxiety. The anesthesia provider should also actively engage in a dialogue with the patient, encouraging them to ask questions and express any concerns they may have. This open communication fosters a sense of partnership and shared decision-making, empowering patients to take an active role in their care. By addressing patient concerns directly and honestly, the anesthesia provider can alleviate anxiety and build trust. While effective communication lays the foundation for a trusting relationship, empathy serves to strengthen that bond and provide crucial emotional support. Empathy is the ability to understand and share the feelings of another, to see the world from their perspective, and to connect with their emotional experience. In the preoperative setting, empathy allows the anesthesia provider to truly understand the patient's fears, anxieties, and vulnerabilities. Empathy goes beyond simply acknowledging the patient's emotions; it involves a genuine attempt to connect with their experience. The empathetic anesthesia provider listens attentively, not only to the words being spoken but also to the underlying emotions and concerns. They observe the patient's nonverbal cues, such as facial expressions and body language, to gain a deeper understanding of their emotional state. This deep level of understanding allows the anesthesia provider to respond in a way that validates the patient's feelings and provides reassurance. A simple statement like, "I can see that you're feeling anxious about the surgery. It's perfectly normal to feel that way," can go a long way in alleviating anxiety and fostering a sense of connection. The empathetic provider creates a safe space for the patient to express their fears and concerns without judgment, fostering a sense of trust and support. The true power of communication and empathy lies in their synergistic relationship. Effective communication provides the foundation for a trusting relationship, while empathy strengthens that relationship and provides crucial emotional support. When these two elements are combined, they create a powerful force that can significantly reduce preoperative anxiety and enhance the patient's overall surgical experience. The anesthesia provider who excels in both communication and empathy can seamlessly integrate these skills to create a patient-centered approach. They can provide clear and comprehensive information while also demonstrating compassion and understanding. This holistic approach empowers patients, validates their feelings, and fosters a sense of trust and support. The synergy of communication and empathy is particularly evident in the way anesthesia providers address patient concerns. By actively listening to the patient's concerns, validating their feelings, and providing empathetic reassurance, the provider demonstrates both informational and emotional support. This comprehensive approach to communication can significantly reduce anxiety and instill confidence in the patient. The interplay of communication and empathy ultimately empowers patients by fostering a sense of connection and control. When patients feel heard, understood, and supported, they are more likely to actively participate in their care, ask questions, and express their needs. This engagement can lead to improved communication, better adherence to treatment plans, and ultimately, better outcomes. The empowered patient is not a passive recipient of care but an active

participant in their own health journey. They are informed, engaged, and confident in their ability to navigate the surgical process. This sense of empowerment can significantly reduce anxiety and promote a more positive overall experience. The benefits of effective communication and empathy extend far beyond the immediate reduction of preoperative anxiety. The trust and connection fostered by these qualities can have a ripple effect, influencing the patient's overall surgical experience and recovery. Patients who feel understood and supported are more likely to report higher levels of satisfaction with their care. They are also more likely to have a positive perception of the anesthesia provider and the surgical team, which can contribute to a more positive overall experience. Furthermore, the reduction in preoperative anxiety can have tangible benefits for the patient's physical health. Studies have shown that lower levels of anxiety are associated with reduced postoperative pain, faster wound healing, and shorter hospital stays. By alleviating anxiety, communication, and empathy can contribute to improved patient outcomes and a smoother recovery.[15,16]

The findings of the present study resonate harmoniously with a growing chorus of research that underscores the pivotal role of communication and empathy in the perioperative landscape. The existing literature has consistently highlighted the positive impact of effective communication on various patient outcomes, including reduced anxiety, increased satisfaction, and improved overall well-being. The present study adds its voice to this chorus, affirming the significant association between clear, comprehensive communication and a reduction in preoperative anxiety. The utilization of the CARE questionnaire, a validated tool specifically designed to assess communication in the anesthesia context, lends further credence to the robustness of these findings. Similarly, the literature has documented the profound impact of empathy on patient experiences and outcomes. Research has shown that empathy from healthcare providers, including anesthesia providers, can significantly reduce patient anxiety and enhance their overall experience of care. The present study echoes these findings, demonstrating a clear negative correlation between empathy scores, as measured by the Jefferson Scale of Empathy (JSE), and preoperative anxiety levels. The higher the anesthesia provider's empathy score, the greater the reduction in patient anxiety. The present study, however, distinguishes itself from previous research by venturing beyond the established link between communication, empathy, and anxiety reduction. It delves deeper into the nuanced interplay of these factors, examining their independent and combined effects on anxiety levels. The multivariable analysis employed in this study serves as a powerful tool to disentangle the unique contributions of communication and empathy, while simultaneously controlling for other potential confounding variables such as age, gender, education level, and previous surgical experiences. The results of this analysis are particularly illuminating. They reveal that both communication and empathy exert independent and statistically significant effects on anxiety reduction. In other words, even after accounting for the influence of other factors, both effective communication and high levels of empathy remain potent predictors of decreased anxiety in patients awaiting surgery. This finding underscores the importance of considering both communication and empathy as integral components of patient-centered care in the perioperative setting. The implications of this finding are far-reaching. It suggests that anesthesia providers should not only strive for technical proficiency but also cultivate strong communication and empathy skills. The ability to connect with patients on an emotional level, to understand their fears and concerns, and to provide clear and compassionate communication can significantly enhance the patient experience and contribute to improved outcomes. The present study also challenges the notion that communication and empathy are interchangeable or redundant. While they often work in tandem, the multivariable analysis demonstrates that they each have a unique and

valuable contribution to make in reducing preoperative anxiety. This finding suggests that training programs for anesthesia providers should focus on developing both communication and empathy skills, recognizing their distinct yet complementary roles in patient care. Furthermore, the study's emphasis on the independent effects of communication and empathy highlights the importance of a multi-faceted approach to anxiety reduction. While pharmacological interventions may be necessary in some cases, the present study suggests that non-pharmacological approaches, such as effective communication and empathy, can also play a significant role in alleviating anxiety and improving patient well-being. In comparing the present study to previous research, it is important to acknowledge the limitations of the existing literature. Many prior studies have focused on either communication or empathy in isolation, failing to fully explore their interplay and relative contributions to anxiety reduction. Additionally, some studies have relied on subjective measures of communication and empathy, which may be prone to bias and inconsistency. The present study addresses these limitations by employing validated tools to assess communication and empathy, ensuring a more rigorous and standardized evaluation. The use of the CARE questionnaire and the JSE provides a more objective and comprehensive assessment of these constructs, enhancing the validity and reliability of the findings. Moreover, the prospective, observational design of the present study allows for the capture of real-time interactions between anesthesia providers and patients, providing a more ecologically valid representation of the preoperative experience. This approach contrasts with retrospective studies or those relying on self-report measures, which may be subject to recall bias or social desirability effects.[17,18]

The implications of this research for clinical practice are far-reaching and multifaceted, underscoring the need for a paradigm shift in how we approach preoperative care. The findings serve as a clarion call for the integration of communication and empathy training into the core curriculum of anesthesia providers, the implementation of routine preoperative anxiety assessments, and the incorporation of communication and empathy strategies into the preoperative assessment process. These changes have the potential to revolutionize the patient experience, leading to reduced anxiety, improved outcomes, and a more humane and compassionate approach to healthcare. The unequivocal evidence supporting the role of communication and empathy in reducing preoperative anxiety necessitates a re-evaluation of the training and professional development of anesthesia providers. While technical proficiency remains paramount, the ability to connect with patients on an emotional level and provide effective communication is equally vital. The implementation of comprehensive training programs that focus on these skills can equip anesthesia providers with the tools they need to navigate the complexities of the preoperative encounter and foster a sense of trust and support in their patients. These training programs should encompass a wide range of communication and empathy-building techniques. Active listening, clear and concise information provision, addressing patient concerns, and demonstrating empathy through nonverbal and verbal cues are all essential skills that can be honed through targeted training. Role-playing exercises, simulations, and feedback sessions can provide valuable opportunities for anesthesia providers to practice these skills in a safe and supportive environment. The integration of communication and empathy training into the core curriculum of anesthesia providers sends a powerful message about the importance of these skills in patient care. It signals a shift away from a purely technical approach to anesthesia towards a more holistic and patient-centered model. By prioritizing communication and empathy, we can cultivate a generation of anesthesia providers who are not only technically proficient but also emotionally intelligent and compassionate. The study's findings also underscore the importance of routine preoperative

anxiety assessment. The early identification of patients with high anxiety levels allows for timely and targeted interventions, preventing anxiety from escalating and negatively impacting the patient's surgical journey. The implementation of standardized anxiety assessment tools, such as the State-Trait Anxiety Inventory (STAI), can provide a reliable and objective measure of anxiety levels, facilitating the identification of patients in need of additional support. The routine assessment of anxiety should be integrated into the preoperative evaluation process, allowing anesthesia providers to tailor their approach to each patient's individual needs. Patients identified as having high anxiety levels may benefit from additional communication and support, such as more detailed explanations of the anesthesia process, reassurance, and relaxation techniques. Early intervention can help to mitigate the negative effects of anxiety, promoting a smoother surgical experience and improved outcomes. The routine assessment of anxiety also serves as a valuable feedback mechanism for anesthesia providers. By tracking anxiety levels before and after their interactions with patients, providers can gain insights into the effectiveness of their communication and empathy skills. This feedback can inform their ongoing professional development and help them to continuously refine their approach to patient care. The study's findings highlight the potential benefits of incorporating communication and empathy strategies directly into the preoperative assessment process. Anesthesia providers can utilize a variety of tools and techniques to enhance understanding, build rapport, and alleviate anxiety. Visual aids, such as diagrams, illustrations, and videos, can be invaluable in explaining complex medical concepts in a way that is easily understandable for patients. Patient education materials, such as brochures or pamphlets, can provide a valuable resource for patients to review after their preoperative visit, reinforcing the information provided and addressing any lingering questions. Active listening, empathetic responses, and nonverbal cues can all contribute to building rapport and fostering a sense of trust and support. Anesthesia providers should take the time to truly listen to their patients, validate their feelings, and offer reassurance. A warm smile, a gentle touch, and a calm demeanor can convey empathy and create a sense of comfort, even without words. The preoperative assessment also presents an opportunity for the anesthesia provider to address any specific concerns or fears the patient may have. By actively listening to these concerns and providing honest and realistic reassurance, the provider can alleviate anxiety and instill confidence in the patient. The integration of communication and empathy strategies into the preoperative assessment process represents a shift towards a more patient-centered approach to care. It recognizes that patients are not simply passive recipients of medical treatment but active participants in their own health journey. By empowering patients with knowledge, understanding, and support, we can create a more positive and empowering surgical experience. The implications of this study extend beyond the immediate clinical setting. They call for a broader cultural shift in healthcare, one that prioritizes the human connection between providers and patients. By recognizing the profound impact of communication and empathy on patient well-being, we can create a more compassionate and humane healthcare system. This cultural shift requires a commitment from all levels of the healthcare system, from medical schools and training programs to hospitals and clinics. It involves fostering a culture of empathy and compassion, where providers are encouraged to connect with their patients on an emotional level and prioritize their individual needs and concerns. The integration of technology can also play a role in enhancing communication and empathy in healthcare. Telemedicine, virtual reality simulations, and patient portals can all facilitate communication and provide patients with greater access to information and support. Ultimately, the goal is to create a healthcare system that is not only technically proficient but also emotionally intelligent and compassionate. By prioritizing communication and empathy, we can

transform the patient experience, reduce anxiety, improve outcomes, and foster a more humane and patient-centered approach to care. The present study serves as a beacon, illuminating the path toward this brighter future.[19,20]

4. Conclusion

The present study elucidates the profound impact of anesthesia provider communication and empathy in mitigating preoperative anxiety. The implementation of communication and empathy training programs, coupled with routine anxiety assessments and the integration of these skills into preoperative evaluations, can significantly enhance the patient experience and optimize surgical outcomes. The findings underscore the indispensable role of the human connection in healthcare, advocating for a patient-centered approach that prioritizes compassion and understanding alongside technical expertise.

5. References

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