

How Anxiety Plays a Role in Preoperative Care?

Yesha Shah^{1*}

ABSTRACT

The prevalence of preoperative patient anxiety is a critical area of surgical care and has a major impact on patient outcomes and surgical outcomes. This article explores the complex role of anxiety in preoperative care, focusing on strategies to reduce anxiety and improve patient well-being in the preoperative period. Anxiety in preoperative patients is not merely a transient emotional state but a complex psychological phenomenon that can significantly impact physiological responses, surgical outcomes, and overall recovery. This research investigates the interplay between anxiety and aspects of preoperative care, aiming to develop comprehensive approaches for its management.

Keywords: Anxiety, Preoperative Care

Mental health is our emotional, psychological, and social well-being that affects how we think, feel, and behave. It affects the way we handle stress, relate to others, and make decisions. Good mental health is more than the absence of mental illness; it is about maintaining balance, resilience, and purpose. Genetics, environment, and life experiences are essential in shaping mental health. Promoting mental health includes building supportive relationships, self-care, and seeking professional help when needed. Addressing mental health issues with compassion and understanding is critical to the overall quality of life. For example, insomnia (persistent difficulty falling or staying asleep) can seriously affect mood stability and cognitive function, often causing or exacerbating conditions such as depression. Depression is characterised by chronic feelings of sadness and hopelessness, which can disrupt sleep patterns and further exacerbate mental health problems. Understanding and addressing these interrelationships is essential to promoting resilience and promoting effective mental health care.

The most common types of mental health disorders and their symptoms

- **Depressive Disorders:** Examples are major depressive disorder and persistent depressive disorder. Symptoms include persistent sadness, loss of interest in activities, fatigue, and changes in appetite or sleep.
- **Anxiety disorders:** including generalised anxiety disorder and panic disorder. Symptoms include excessive worry, restlessness, rapid heart rate, and panic attacks.
- **Bipolar disorder:** characterised by mood swings between extreme highs (mania) and lows (depression) that affect energy levels and behaviour.

¹Undergraduate, Ahmedabad University

*[Corresponding Author](#)

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- **Obsessive-compulsive disorder (OCD):** involves intrusive thoughts (obsessions) and repetitive behaviours (compulsions) aimed at reducing anxiety.

How phobia and irritability are associated with anxiety?

A phobia is an intense and irrational fear of specific objects or conditions (such as medical procedures or needles) that can lead to extreme suffering and avoidance. The properties are characterised by increased sensation, improvement, and impulse and are usually caused by bipolar emotional disorders. Both conditions are intricately linked to anxiety and significantly impact preoperative care.

In preoperative settings, anxiety can exacerbate phobias, making patients' fears of medical environments more pronounced. For example, a patient with a phobia of injections may experience heightened anxiety before surgery, which can lead to severe emotional distress, refusal to cooperate, or avoidance of essential preoperative tasks. This can compromise surgical planning and increase the risk of complications. Similarly, anxiety associated with mania can interfere with preoperative care. People with mania may ignore important preoperative instructions or engage in risky behaviour due to impulsivity and overconfidence. Their high level of anxiety can make it difficult for healthcare providers to ensure adherence to preoperative protocols, which can compromise surgical safety.

Effective management of anxiety through tailored interventions such as counselling, anxiety reduction techniques, and careful preoperative planning is essential. Prevention of both phobia and manic symptoms helps to ensure that patients are adequately prepared, improve overall surgical results, and reduce the risk.

How anxiety affects a patient's mental well-being during pre-operative care?

Preoperative anxiety is an essential and often overlooked factor affecting surgical outcomes and patient recovery. It covers a range of emotional and physiological responses to waiting for surgery, including fear, anxiety and stress. Understanding and managing this anxiety is critical to enhance patient care and optimise surgical outcomes. This paper delves into the role of anxiety in preoperative care, explores its impact on patients and evaluates effective strategies to reduce anxiety.

Preoperative anxiety is a complex phenomenon with multifactorial origins. This may be due to a lack of understanding of the procedure, fear of possible complications, or general disruption of daily life. The psychological burden of surgery often heightens anxiety as patients grapple with uncertainty about their health, the surgical procedure, and postoperative recovery. This emotional stress is not just a transient reaction but an ongoing state that can significantly impact physiological responses, including increased heart rate, cortisol levels, and pain sensitivity.

Recent studies highlight the extensive impact of preoperative anxiety on surgical outcomes. Elevated anxiety levels have been associated with increased pain perception, longer recovery times, and higher rates of postoperative complications. In addition, patients with preoperative anxiety disorders usually show that their surgical experience is poor. These discoveries emphasise the need for comprehensive methods for preoperative care to solve an alarm in the mood and physiological aspects.

A growing body of research is focusing on interventions aimed at reducing preoperative anxiety. Preoperative education, which includes giving patients detailed information about

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the procedure, has been shown to reduce anxiety by reducing uncertainty and empowering patients. Relaxation techniques such as guided imagery and deep breathing exercises can provide immediate stress relief by neutralising the physiological stress responses associated with anxiety. Cognitive behavioural therapy (CBT), which can address maladaptive thought patterns and promote effective coping strategies, has been shown to be effective in controlling preoperative anxiety.

Despite these advancements, the integration of anxiety-reducing strategies into routine preoperative care needs to be more consistent. Many healthcare systems still lack standardised protocols for addressing preoperative anxiety, and resource constraints and varying levels of training can hamper the implementation of effective interventions. Furthermore, existing interventions often meet the unique needs of individual patients, resulting in a one-size-fits-all approach that may not be universally effective.

This article aims to address this gap by providing a detailed analysis of how anxiety affects preoperative patients and evaluating a range of strategies to reduce anxiety. Using a multidisciplinary approach incorporating insights from psychology, medicine, and nursing, the research seeks to offer a comprehensive understanding of preoperative anxiety and develop tailored interventions that can be integrated into standard care practice.

The exploration of preoperative anxiety is not just an academic exercise but a vital endeavour that has the potential to improve patient outcomes and improve the overall quality of surgical care. By addressing the psychological and physiological aspects of anxiety, this study contributes to a more nuanced understanding of preoperative care. It lays the foundation for future innovations in patient management and support.

LITERATURE REVIEW

Introduction

Anxiety is a common and significant psychological problem faced by patients undergoing surgical procedures. Effective management of preoperative anxiety is essential to improving patient outcomes and enhancing the surgical experience. This literature review examines the role of anxiety in preoperative care through the lens of recent research. This review summarises the results of several key studies, including the effectiveness of preoperative counselling, social support, structured education, and the prevalence of preoperative anxiety in different settings.

Preoperative counselling and anxiety reduction

A study titled "Effectiveness of Preoperative Counselling in Reducing Anxiety in Patients Undergoing General Anaesthesia at Northwestern General Hospital" highlighted the effect of preoperative counselling on anxiety levels. Research at Northwestern General Hospital has shown that structured preoperative counselling is highly effective in reducing anxiety in patients scheduled to undergo general anaesthesia. Consultations often include detailed explanations of the surgical procedure, anaesthesia, and recovery process, which help patients feel more informed and less anxious (Slik et al., 2022).

The study found that patients who received preoperative counselling reported significantly lower levels of anxiety than those who did not receive preoperative counselling. The consultation meeting solved common fears and clearly understood the expectations that led to an alarm reduction. The study emphasised the importance of incorporating personalised

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pre-surgery consultations to improve patient convenience and reduce stress (Slik et al., 2022).

Social support and preoperative anxiety: a systematic review

A comprehensive systematic review and meta-analysis entitled “Social support and preoperative anxiety in patients undergoing elective surgery” investigated the relationship between social support and preoperative anxiety. This review summarises the results of several studies and finds that a solid social support network is associated with lower preoperative anxiety levels (Kok et al., 2022).

Social support, which includes emotional, practical, and informational support from family, friends, and healthcare providers, is critical in reducing anxiety. A meta-analysis showed that patients who received strong social support reported lower levels of anxiety and better overall satisfaction with their surgical experience. Interventions that enhance social support, such as involving family members in preoperative discussions and providing access to support groups, have been found to be effective in reducing anxiety (Kok et al., 2022). This highlights the need for healthcare providers to actively engage patient support networks as part of comprehensive preoperative care.

Impact of Preoperative Anxiety on Brain Surgery Patients

The study “The Impact of Preoperative Anxiety on Patients Undergoing Brain Surgery: A Systematic Review” focuses on the specific challenges faced by patients undergoing brain surgery. This review outlines how elevated preoperative anxiety can significantly affect patient outcomes in the context of brain surgery, which is often associated with high-stakes and complex procedures (Oteri et al., 2021).

The review highlights that preoperative anxiety can exacerbate stress during surgery, potentially leading to complications and longer recovery times. It also notes that patients undergoing brain surgery experience unique anxieties related to the potential for severe outcomes and long-term recovery challenges. Targeted interventions, such as preoperative psychological counselling and stress management techniques, were found to be effective in reducing anxiety and improving overall outcomes for these patients (Oteri et al., 2021).

Structured Preoperative Education

The study “Effectiveness of Structured Preoperative Education on Anxiety Level of Patients Undergoing Elective Orthopaedic Surgery” explores how structured educational interventions impact preoperative anxiety levels. The research indicates that providing patients with comprehensive preoperative education, including detailed information about the surgery, expected outcomes, and recovery processes, can significantly reduce anxiety (Vimala et al., 2021).

Structured education helps patients set realistic expectations and feel more prepared for surgery. The study found that patients who participated in structured educational programs reported lower anxiety levels and higher satisfaction with their surgical experience. This suggests integrating educational components into preoperative care can effectively manage anxiety (Vimala et al., 2021). The findings emphasise the importance of clear communication and thorough preparation in reducing preoperative anxiety.

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Prevalence of preoperative anxiety in South India

Finally, the study “Prevalence of Preoperative Anxiety Among Patients in a Tertiary Care Hospital in South India, Chennai”, investigates the prevalence of preoperative anxiety in a specific cultural and geographical context. The research reveals that a significant proportion of patients in this South Indian hospital experience high levels of preoperative anxiety (SreeRanjani et al., 2023).

This study highlights that preoperative anxiety is prevalent among patients undergoing surgery in Chennai, with factors such as cultural attitudes, socio-economic conditions, and individual psychological factors influencing anxiety levels. The high prevalence of anxiety in this setting underscores the need for tailored interventions that consider cultural and socio-economic contexts. By understanding these factors, healthcare providers can develop more effective strategies for managing preoperative anxiety and improving patient outcomes (SreeRanjani et al., 2023).

Synthesis and Implications

The reviewed studies suggest that preoperative anxiety is a multifaceted problem influenced by several factors, including the availability of counselling, social support, structured education, and individual patient relationships. Each study contributes to a comprehensive understanding of how different approaches can be used to manage preoperative anxiety effectively.

- **Preoperative counselling:** Structured counselling has been shown to reduce anxiety by providing patients with basic information and addressing their concerns (Slik et al., 2022). Personalising these sessions to meet individual needs further increases their effectiveness.
- **Social Support:** The importance of social support networks in reducing preoperative anxiety cannot be overstated. Strong support from family, friends, and healthcare providers can significantly reduce stress and increase patient satisfaction (Kok et al., 2022). Integrating support mechanisms into preoperative care plans is essential.
- **Educational Interventions:** Structured preoperative education plays a crucial role in preparing patients for surgery and reducing anxiety. Detailed information that provides related procedures and recovery processes helps to determine realistic expectations and reduce the level of alarms (Vimala et al., 2021).
- **Context-Specific Considerations:** The high prevalence of preoperative anxiety in diverse settings, such as the tertiary care hospital in Chennai, highlights the need for culturally and contextually tailored interventions. Understanding local anxiety factors can help design more effective preoperative care strategies (SreeRanjani et al., 2023).

Effective control of preoperative anxiety is essential to improving surgical results and patient experience. The reviewed studies emphasise the importance of incorporating preoperative counselling, social support, structured education, and situation-specific considerations into preoperative care. By addressing anxiety using these multifaceted approaches, healthcare professionals can improve patient well-being, increase satisfaction, and potentially reduce the risk of complications associated with high preoperative anxiety.

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Further studies should consider various patients and cultural experiences to optimise different environments before surgery and explore and improve these strategies.

METHODOLOGY

Study Design

This study used a quantitative cross-sectional design to examine the role of anxiety in the preoperative care of patients undergoing total knee replacement surgery (TKR). The study focused on understanding patients' stress levels and how they affect their overall preoperative experience. Participants will include individuals scheduled to undergo right, left, or bilateral TKR, and the study will assess anxiety using questions from the Surgical Anxiety Questionnaire (SAQ). The sample consisted of 100 participants with equal representation of men and women (50 women and 50 men). The data collection method used is Google Forms.

Total knee replacement (TKR)

Total knee replacement (TKR) is a surgical procedure in which artificial components replace the knee joint damage. The procedure can be unilateral or bilateral:

- **Right TKR:** Surgery performed on the right knee.
- **Left TKR:** Surgery performed on the left knee.
- **Bilateral TKR:** surgery on both knees at the same time.

The type of TKR may affect the patient's level of anxiety, as some patients have a higher level of uncertainty or discomfort during bilateral surgery compared to unilateral surgery.

Age Group:

Patients between the ages of 40 and 80 (approximately) planned for one-sided or bilateral TKR.

Data collection

The data is collected using a structured, self-administered questionnaire based on the surgical alarm questionnaire (SAQ). The SAQ consists of several items designed to measure a patient's level of preoperative anxiety and focuses on different aspects, such as:

- Fear of pain after surgery
- Fear of failed surgery
- Recovery time concerns
- General anxiety about surgery

The SAQ has been validated in surgical settings and is commonly used to assess anxiety levels in patients facing surgery.

Procedure

- **Preoperative meeting:** Patients scheduled for surgery will be contacted and invited to participate in the study. The questionnaire was given one day before the operation.
- **Questionnaire administration:** Participants will complete the questionnaire before their scheduled preoperative consultation. Patients can understand and answer questionnaires. All questions were accurate. ethical considerations

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- **Informed consent:** All participants must give verbal consent before participating in the study. They will be informed about the research aims and procedures and the data's confidentiality.
- **Confidentiality:** Participants' anonymity will be maintained throughout the study, and the data collected will be accessible only to the research team.

This method provides a basis for investigating the role of anxiety in the preoperative care of patients with TKR while ensuring a balanced representation of gender and different types of surgery.

RESULTS AND DISCUSSIONS

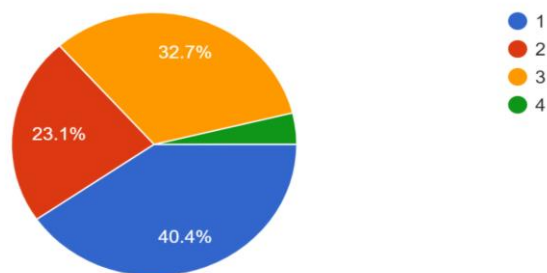
Results

The study collected responses from 52 respondents, an even mix of male and female participants between 45 and 81. All respondents underwent right, left, or bilateral total knee replacement (TKR). The results of the questionnaire provide valuable insight into how anxiety plays a role in preoperative care, particularly during TKR surgery.

Figure 1. Anxiety level about surgery

On a scale of 1 to 4, how anxious do you feel about your upcoming surgery?

52 responses



The results showed significant differences in patients' preoperative anxiety levels:

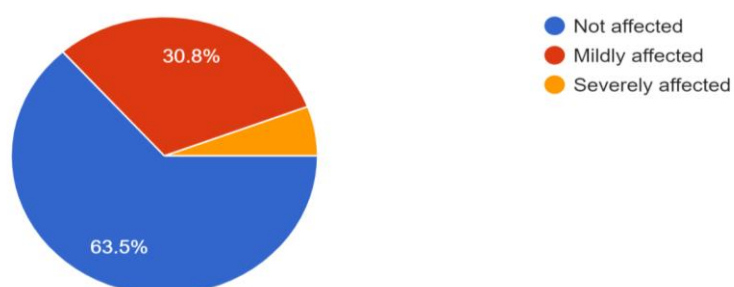
- 40.4% of patients reported neutral anxiety.
- 23.1% of patients experienced mild anxiety.
- 32.7% felt moderate anxiety.
- Severe anxiety was reported by 3.8% of patients.

These results suggest that a significant proportion of patients experience some level of anxiety before TKR surgery, with moderate anxiety being particularly common.

Figure 2: The impact of anxiety on sleep

How has your sleep been affected since learning about your upcoming surgery?

52 responses



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When examining how preoperative anxiety affects sleep quality:

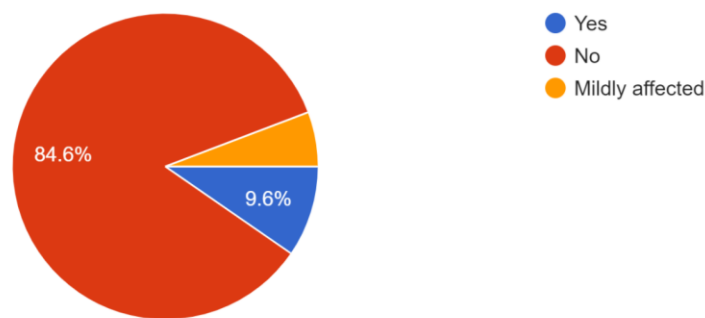
- 63.5% of patients reported that their sleep was not affected.
- 30.8% experienced minor sleep disturbances.
- 5.8% of patients reported severe sleep disturbances due to anxiety related to surgery and the recovery process.

This suggests that although anxiety affected sleep in about a third of patients, most were able to maintain regular sleep patterns despite preoperative concerns.

Figure 3. Effects of anxiety on appetite

Is your appetite affected due to preoperative anxiety?

52 responses



The effect of preoperative anxiety on appetite was also studied:

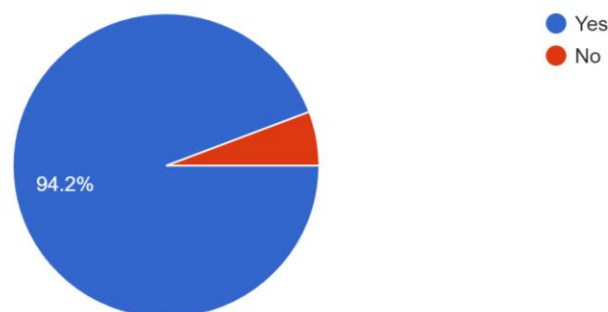
- 84.6% of patients reported no change in appetite.
- 5.8% observed mild changes in appetite.
- 9.6% of people reported severe appetite.

Most patients appeared to have maintained everyday eating habits, though a small subset did experience significant disruptions in appetite due to anxiety and medicine.

Figure 4. Surgical knowledge

Do you think receiving emotional support (from family, friends, or a psychologist) has helped manage your anxiety preoperatively?

52 responses



Most patients feel they have a good understanding of the surgical procedure.

- 69.2% of the population thought they had enough knowledge about the operation.
- 26.9% of people believe they have some knowledge.
- Only 3.8% thought they needed to be better informed.

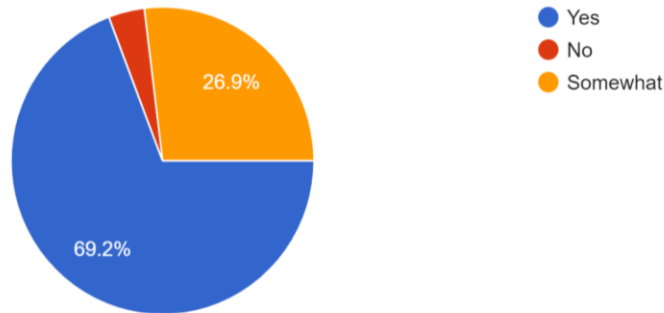
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These findings suggest that most patients have a reasonable understanding of surgical procedures, which may influence how they manage preoperative anxiety.

Figure 5. Effects of emotional support on coping with anxiety

Do you feel you have enough information about the surgical procedure to ease your anxiety?

52 responses



The results show that people rely heavily on emotional support to cope with anxiety:

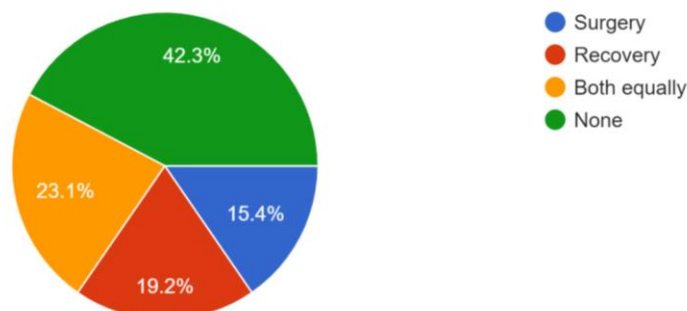
- 94.2% of patients reported that emotional support from family, friends, or a psychologist helped manage preoperative anxiety.
- 5.8% felt that emotional support had no effect.

This highlights the important role of social and psychological support in reducing preoperative anxiety.

Figure 6. Specific preoperative concerns

Do you feel more anxious about the surgery itself or the recovery process afterward?

52 responses



Patient anxiety is further broken down into specific problem areas:

- 15.4% were worried about the operation itself.
- 19.2% were more worried about the recovery process.
- 23.1% felt anxious about the surgery and recovery.
- 42.3% reported that they did not feel anxious and were ready for surgery.

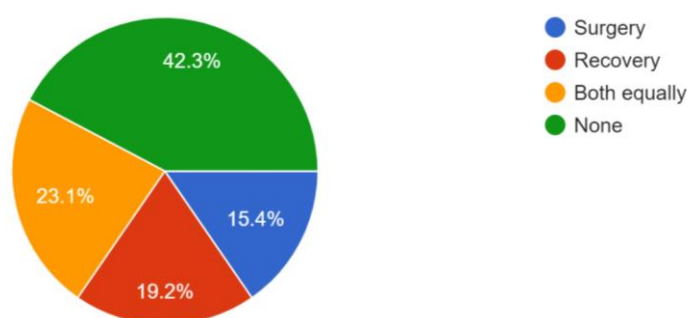
A large proportion of patients expressed anxiety about both surgery and recovery, indicating that anxiety is not limited to the surgical procedure but also concerns about postoperative outcomes.

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Figure 7. Addressing anxiety to improve recovery

Do you feel more anxious about the surgery itself or the recovery process afterward?

52 responses



When asked if treating anxiety would help recovery:

- 57.7% of patients believed that it would have a positive effect on their recovery.
- 38.5% were not sure about the benefits.
- Only 3.8% thought it would not help at all.

This suggests that most patients recognise the potential value of preoperative anxiety management to improve postoperative recovery, although some remain unsure of the association.

DISCUSSION

The results of this study highlight the critical role that anxiety plays in the preoperative care of patients undergoing total knee replacement (TKR). Anxiety was a shared experience among these patients, with 55.8% reporting some level of anxiety (mild, moderate, or severe) and only 42.3% reporting readiness for surgery but no anxiety. This prevalence of preoperative anxiety is consistent with the existing literature, which suggests that surgical procedures, especially significant procedures such as TKR, are often emotionally draining for patients due to uncertainty about the outcome and potential postoperative problems.

Anxiety and its multidimensional Consequences

Anxiety before surgery can manifest itself in many ways, affecting sleep, appetite, emotional well-being and the patient's general preparedness. The results of the study show that although 63.5 % of patients have no sleep disorders, 30.8 % of patients report gently, while 5.8 % of patients report serious sleep problems due to anxiety. These numbers reflect the known link between anxiety and sleep disorders, and improving emotional awakening can ruin the ability to rest and fall asleep, causing a possible reduction in fatigue and the results of postoperative recovery. Be aware that anxiety-related sleep disturbances can worsen existing conditions, such as chronic pain, and complicate the patient's recovery from surgery.

Similarly, the data showed that anxiety had a small but significant effect on appetite, with 15.4% of respondents reporting a change in appetite. This corresponds to the physiological response to anxiety, where the body's stress mechanisms can suppress hunger. Patients with anxiety-related appetite disturbances may experience problems maintaining adequate nutrition, which is essential for postoperative recovery.

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The role of knowledge and emotional support

The results of this study suggest that knowledge about surgery may play a role in reducing preoperative anxiety. The majority of respondents (69.2%) felt that they had sufficient knowledge about the procedure, and this group generally reported lower levels of anxiety. This highlights the importance of patient education to reduce uncertainty and fear before surgery. Well-structured preoperative education programs that thoroughly explain the surgical process, risks, and recovery expectations can empower patients and reduce anxiety. In addition, emotional support is a crucial factor in managing preoperative anxiety, with 94.2% of patients reporting that support from friends, family, or a psychologist helped them cope. This finding reinforces the idea that a solid social support network can reduce the emotional burden of surgery and provide patients with peace of mind and a sense of security. Healthcare providers should encourage family involvement in preoperative care and consider offering psychological counselling to patients with increased anxiety to further support mental health.

Anxiety, surgery and recovery

Interestingly, while 15.4% of respondents were only concerned about surgery and 19.2% were more concerned about recovery, a large proportion (23.1%) reported being concerned about both surgery and recovery. This highlights the dual nature of preoperative anxiety, where patients worry not only about the surgery itself but also about the possibility of long-term recovery, pain, or complications. Addressing this general experience of anxiety requires not only preoperative intervention but also a clear postoperative care plan to ensure the patient's planned recovery trajectory. 57.7% of patients believed that addressing anxiety before surgery would help with recovery, suggesting that patients recognise the mind-body connection during recovery. Controlling preoperative anxiety can improve patient compliance with postoperative instructions, reduce pain perception, and potentially shorten hospital stays, thereby improving recovery outcomes. However, 38.5% of patients who expressed uncertainty expressed a need for more education about the benefits of psychological intervention on surgical outcomes.

CONCLUSION

Research shows that preoperative anxiety is a common, multifaceted problem in patients undergoing TKR surgery that affects their mental, emotional, and physical health. Managing anxiety through patient education, emotional support, and possibly psychological intervention can significantly improve the preoperative experience and postoperative healing outcomes. Healthcare providers must recognise the importance of anxiety management during surgery to improve patient care and improve overall surgical success.

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Conflict of Interest

The author(s) declared no conflict of interest.

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