



IMPACT OF PREOPERATIVE COUNSELLING ON ANXIETY AND POSTOPERATIVE RECOVERY: A CASE SERIES ANALYSIS

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ABSTRACT

Background: Preoperative anxiety is a common issue among surgical patients, leading to adverse effects on both psychological and physiological postoperative outcomes, such as prolonged hospital stays, increased pain, and delayed recovery. Preoperative counselling has been shown to alleviate anxiety by providing patients with comprehensive information about their procedure, which may improve recovery outcomes. **Objective:** This study aims to evaluate the impact of preoperative counselling on anxiety levels and postoperative recovery outcomes in patients undergoing elective surgery. **Methods:** This case series included 10 adult patients scheduled for elective surgeries, divided into two groups. The intervention group received detailed preoperative counselling, while the control group received routine information. Anxiety levels were measured using the State-Trait Anxiety Inventory (STAI) before and after the counselling session. Postoperative outcomes assessed included pain levels using the Visual Analogue Scale (VAS) on days 1, 3, and 7, length of hospital stay (LOS), and patient satisfaction using the EORTC In-Patsat32 questionnaire at discharge. **Results:** Patients in the intervention group exhibited significantly lower anxiety levels on the day of surgery compared to the control group. The intervention group also reported lower pain levels on all measured postoperative days ($p < 0.05$), a shorter hospital stays (average LOS: 4.6 ± 1.1 days vs. 6.8 ± 1.5 days), and higher satisfaction scores (92 ± 5.8 vs. 76 ± 7.2 , $p < 0.05$). **Conclusion:** Preoperative counselling effectively reduces anxiety and enhances postoperative outcomes in patients undergoing elective surgery. Integrating structured preoperative counselling into standard practice may improve patient experience and recovery, supporting both clinical and economic benefits.

KEYWORDS : crumb rubber, utilization, compressive strength, low cost, sustainable

INTRODUCTION

Preoperative anxiety is a common phenomenon among patients awaiting surgery, often leading to adverse psychological and physiological outcomes that can negatively impact postoperative recovery. The anticipation of surgery, anaesthesia, and the potential outcomes can induce significant stress, which may prolong hospital stays, increase postoperative pain, and delay overall recovery. Addressing this anxiety through preoperative counselling and education has been shown to be beneficial in mitigating these negative effects.

Preoperative counselling involves providing patients with detailed information about their diagnosis, the surgical procedure, and the anaesthesia process. This approach aims to reduce the fear of the unknown and empower patients with knowledge, thereby alleviating anxiety. Studies have demonstrated that patients who receive comprehensive preoperative counselling report lower levels of anxiety compared to those who receive routine information. For instance, a randomized controlled trial found that patients who were counselled about their surgery and anaesthesia had significantly reduced anxiety levels compared to those who received standard preoperative information. The impact of preoperative counseling extends beyond anxiety reduction. It has been associated with improved postoperative pain management, reduced opioid consumption, and enhanced patient satisfaction. For example, a narrative review found that preoperative education significantly reduced postoperative opioid use and improved psychological outcomes, including reduced anxiety and depression. Furthermore, psychological counseling has been shown to positively influence neuroendocrine and immune functions, which are critical for recovery, particularly in cancer patients.

METHODOLOGY

Study Design

This study is a case series analysis aimed at evaluating the impact of preoperative counselling on anxiety levels and postoperative recovery in patients undergoing surgery. The study involves a sample of 10 patients who were scheduled for

elective surgeries.

Participants

Ten patients scheduled for elective surgeries were recruited for this study. Inclusion criteria were:

- Adults aged 18-65 years.
- Scheduled for elective surgery.
- Able to provide informed consent.
- No history of psychiatric disorders or current use of anxiolytic medications.

Preoperative Counselling Intervention

The intervention group received detailed preoperative counselling, which included:

- Explanation of the surgical procedure, diagnosis, and anaesthesia plan.
- Addressing any questions or concerns the patients had about the surgery.
- Providing information on postoperative care and recovery expectations.

The control group received routine preoperative information without the detailed counselling session.

Anxiety Measurement

Anxiety levels were measured using the State-Trait Anxiety Inventory (STAI). This self-reported questionnaire was administered at two time points:

1. Before the preoperative counselling session.
2. On the day of surgery, prior to the operation.

Postoperative Recovery Assessment

Postoperative recovery was assessed using the following parameters:

- Pain levels measured using the Visual Analogue Scale (VAS) on postoperative days 1, 3, and 7
- Length of hospital stay (LOS).
- Patient satisfaction assessed using the European Organization for Research and Treatment of Cancer (EORTC) In-Patsat32 questionnaire at discharge

Data Analysis

A total of 10 patients were included in the study, with 5 patients in the preoperative counselling (intervention) group and 5 in the control group. The demographic characteristics, including age, gender, and type of elective surgery, were comparable between the two groups.

Group	Age (Mean ± SD)	Gender (Male/Female)	Type of Surgery
Intervention Group	45 ± 8.2	3/2	Abdominal (3), Non-Abdominal (2)
Control Group	46 ± 7.9	4/1	Abdominal (2), Non-Abdominal (3)

Anxiety Levels

Anxiety was measured using the State-Trait Anxiety Inventory (STAI) at two time points: before counselling and on the day of surgery.

Findings:

Pre-Counselling: The mean STAI score was comparable between the two groups, with the intervention group scoring 46.8 ± 5.1 and the control group scoring 47.2 ± 4.8.

Post-Counselling: On the day of surgery, the intervention group's mean STAI score significantly reduced to 32.4 ± 3.7, compared to the control group, which remained high at 46.1 ± 5.3 (p < 0.05).

Group	Pre-Counseling STAI Score (Mean ± SD)	Day of Surgery STAI Score (Mean ± SD)
Intervention Group	46.8 ± 5.1	32.4 ± 3.7
Control Group	47.2 ± 4.8	46.1 ± 5.3

Pain Levels

Pain was assessed using the Visual Analogue Scale (VAS) on postoperative days 1, 3, and 7.

Findings:

Day 1: Patients in the intervention group reported lower pain levels (3.8 ± 1.2) compared to the control group (5.6 ± 1.3).

Day 3: Pain scores continued to be lower in the intervention group (2.5 ± 1.1) compared to the control group (4.1 ± 1.4).

Day 7: By the seventh day, pain scores in the intervention group reduced to 1.5 ± 0.9, while the control group's scores remained higher at 3.2 ± 1.2.

Group	Day 1 VAS (Mean ± SD)	Day 3 VAS (Mean ± SD)	Day 7 VAS (Mean ± SD)
Intervention Group	3.8 ± 1.2	2.5 ± 1.1	1.5 ± 0.9
Control Group	5.6 ± 1.3	4.1 ± 1.4	3.2 ± 1.2

Length of Hospital Stay (LOS)

The intervention group exhibited a shorter hospital stay on average compared to the control group.

Findings:

Intervention Group: Average LOS was 4.6 ± 1.1 days.

Control Group: Average LOS was 6.8 ± 1.5 days, indicating a significant reduction in LOS for the group that received preoperative counselling (p < 0.05).

Group	Length of Hospital Stay (Mean ± SD)
Intervention Group	4.6 ± 1.1 days
Control Group	6.8 ± 1.5 days

Patient Satisfaction

Patient satisfaction was assessed at discharge using the EORTC In-Patsat32 questionnaire. The intervention group reported higher satisfaction scores, particularly in areas related to information provision and emotional support.

Findings:

Intervention Group: The average satisfaction score was 92 ± 5.8.

Control Group: The average satisfaction score was 76 ± 7.2, indicating significantly higher satisfaction in the intervention group (p < 0.05).

Group	Patient Satisfaction Score (Mean ± SD)
Intervention Group	92 ± 5.8
Control Group	76 ± 7.2

Summary of Key Findings

Reduced Anxiety: Patients receiving preoperative counselling exhibited significantly lower anxiety levels on the day of surgery compared to the control group.

Pain Reduction: The intervention group reported consistently lower pain levels on postoperative days 1, 3, and 7.

Shorter Hospital Stay: The intervention group had a shorter hospital stay, demonstrating faster recovery.

Higher Satisfaction: Patients in the intervention group expressed greater satisfaction with their care, reflecting the value of detailed preoperative counselling.

DISCUSSION

This case series evaluated the impact of preoperative counselling on anxiety levels and postoperative outcomes in patients undergoing elective surgery. Our findings indicate that preoperative counselling not only reduces preoperative anxiety but also contributes to improved postoperative pain management, a shorter hospital stay, and greater patient satisfaction.

Reduced Anxiety Levels

Patients in the intervention group, who received detailed preoperative counselling, reported significantly lower anxiety levels on the day of surgery compared to those in the control group. This reduction in anxiety is consistent with previous studies, which highlight the effectiveness of preoperative counselling in alleviating patient fears and uncertainties about surgery and anaesthesia. Anxiety is known to activate the sympathetic nervous system, resulting in elevated stress hormone levels that can compromise immune function and impair postoperative recovery. By reducing anxiety, preoperative counselling may mitigate these physiological stress responses, supporting faster and less complicated recoveries.

Improved Pain Management

Postoperative pain scores were consistently lower in the intervention group on days 1, 3, and 7 compared to the control group. Pain is a complex, multifactorial experience, and anxiety can amplify pain perception. The lower anxiety levels in the intervention group likely contributed to the observed reduction in pain scores, as reduced anxiety has been associated with lower pain sensitivity. Furthermore, lower pain levels may lead to reduced opioid consumption, a factor not directly measured in this study but noted in the literature as a secondary benefit of preoperative counselling. This has implications for minimizing opioid-related side effects and fostering a smoother recovery.

Reduced Length of Hospital Stay

Patients who received preoperative counselling experienced a shorter average hospital stay compared to those in the control group. Length of hospital stay (LOS) is a key indicator of recovery efficiency and healthcare resource utilization. A reduced LOS implies that patients in the intervention group achieved the recovery milestones required for discharge sooner. This can be attributed to the positive effects of reduced anxiety and better pain management, as well as the psychological readiness of patients who were well-informed about their recovery process. The shortened LOS not only benefits patients by reducing the risk of hospital-acquired infections and complications but also has potential economic advantages by reducing healthcare costs.

Enhanced Patient Satisfaction

Patient satisfaction scores were significantly higher in the intervention group, especially in areas related to the provision of information and emotional support. Satisfaction is a critical

outcome that reflects the quality of care and the patient's overall experience. Patients who receive clear, comprehensive information about their procedure and recovery expectations are likely to feel more in control and confident in the healthcare process, enhancing their satisfaction with the care provided. Higher satisfaction has been linked to better adherence to postoperative instructions, further supporting improved recovery outcomes.

Implications and Future Directions

The findings of this study suggest that preoperative counselling should be considered an integral component of the surgical care pathway. By addressing patients' emotional and informational needs, healthcare providers can potentially improve both psychological and physiological recovery outcomes. Future studies with larger sample sizes and a more diverse patient population could further validate these findings. Additionally, exploring the impact of preoperative counselling on opioid use and specific immune responses may provide further insights into the underlying mechanisms of its benefits.

Limitations

This study is limited by its small sample size and the case series design, which may restrict the generalizability of the findings. Furthermore, while the STAI and VAS scores provide valuable insights into anxiety and pain levels, the subjective nature of these measures may introduce bias. Despite these limitations, the study provides meaningful preliminary evidence supporting the role of preoperative counselling in enhancing postoperative outcomes.

REFERENCES:

1. Matthias AT, Samarasekera DN. Preoperative counselling in reducing preoperative anxiety: A patient perspective. *Indian J Annabeth.* 2012;56(6):573-577. doi:10.4103/0019-5049.104574.
2. Montgomery GH, Schnur JB, Kravits K, Bovbjerg DH. The impact of improved preoperative information on patients' preoperative anxiety and postoperative recovery: A systematic review. *Patient Educ Couns.* 2013;84(3):319-325. doi:10.1016/j.pec.2011.06.015.
3. Guo P. Preoperative education interventions to reduce anxiety and improve recovery among cardiac surgery patients: A review of randomised controlled trials. *J Clin Nurs.* 2015;24(1-2):34-46. doi:10.1111/jocn.12610.
4. Tsimopoulou I, Pasquali S, Howard R, Desai A, van Dellen D, Gourevitch D. Psychological prehabilitation before cancer surgery: A systematic review. *Ann Surg Oncol.* 2015;22(13):4117-4123. doi:10.1245/s10434-015-4550-z.
5. Schupp W, Berbaum M, Berbaum K. The effect of preoperative instruction on patient satisfaction, anxiety, and pain. *Patient Educ Couns.* 2005;59(1):34-41. doi:10.1016/j.pec.2004.10.005.
6. Doering S, Katzlberger F, Rumpold G, et al. Videotape preparation of patients before hip replacement surgery reduces stress. *Psychosom Med.* 2000;62(3):365-373. doi:10.1097/00006842-200005000-00009.