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FACTORS AFFECTING THE PATIENT DISSATISFACTION WITH ANESTHESIA CARE SERVICES IN LADY READING HOSPITAL, PESHAWAR, PAKISTAN: A CROSS-SECTIONAL STUDY

Original Research

Nayab Nawab Khan[1], Muhmmad Abbas[1], Mukhtair Ahmad[2]*

[1]Institute of Paramedical Sciences, Khyber Medical University, Peshawar, Pakistan.

[2]Lecturer, Anesthesia, Institute of Paramedical Sciences, Khyber Medical University, Peshawar, Pakistan.

Corresponding Author: Mukhtair Ahmad, Lecturer, Anesthesia, Institute of Paramedical Sciences, Khyber Medical University, Peshawar, Pakistan, mukhtiar.pgmi@gmail.com

Acknowledgement: The authors acknowledge the cooperation of all patients who participated in this study.

Conflict of Interest: None

Grant Support & Financial Support: None

ABSTRACT

Background: Patient satisfaction serves as an essential quality indicator in anesthesia services, where preoperative counseling, intraoperative interaction, and postoperative symptom management collectively shape the overall experience. Dissatisfaction often arises when communication is unclear, expectations are unmet, or postoperative discomfort is inadequately controlled. In resource-constrained settings, limited time for counseling and diverse patient literacy levels may further influence perceptions of care. Understanding these determinants is crucial for designing targeted interventions to enhance the perioperative experience.

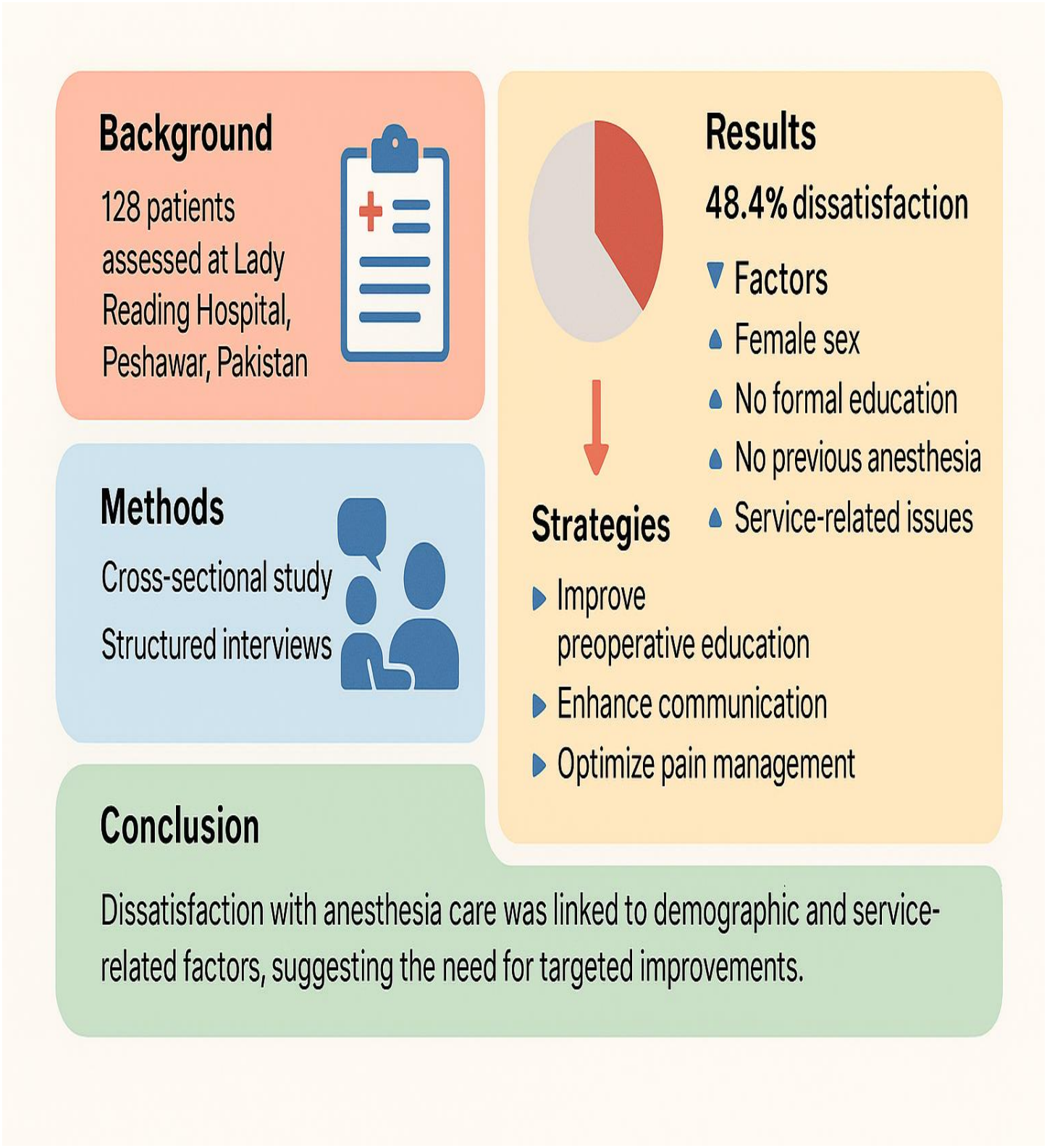
Objective: To assess the prevalence of and factors associated with patient dissatisfaction with anesthesia care at Lady Reading Hospital, Peshawar.

Methods: A cross-sectional study was conducted among 128 postoperative patients admitted to the Post-Anesthesia Care Units. Data were collected through structured interviews assessing demographic characteristics, previous anesthesia exposure, communication with the anesthetist, preoperative explanation, understanding of information, waiting times, and postoperative pain management. Descriptive statistics summarized patient characteristics. Associations were examined using chi-square tests, and multivariate logistic regression identified independent predictors of dissatisfaction. Adjusted odds ratios (AOR) with 95% confidence intervals (CI) were reported, and statistical significance was set at $p < 0.05$.

Results: Out of 128 patients, 62 (48.4%) reported dissatisfaction. Significant predictors included female gender (AOR = 1.92; CI: 1.08–3.42), no formal education (AOR = 2.84; CI: 1.10–7.33), and lack of previous anesthesia experience (AOR = 2.95; CI: 1.52–5.70). Service-related predictors comprised poor preoperative explanation (AOR = 3.42; CI: 1.62–7.20), inadequate understanding (AOR = 2.85; CI: 1.38–5.88), poor communication with the anesthetist (AOR = 4.92; CI: 2.11–11.48), and dissatisfaction with postoperative pain management (AOR = 6.75; CI: 2.84–16.02).

Conclusion: Dissatisfaction with anesthesia care was strongly influenced by demographic variables, the quality of communication, the adequacy of preoperative explanations, and the effectiveness of postoperative pain management. Strengthening patient education, improving communication skills among anesthetists, and enhancing pain management protocols may substantially improve patient experiences in similar healthcare settings.

Keywords: Anesthesia; Communication, Cross-Sectional Studies, Pain Management, Patient Satisfaction, Perioperative Care, Preoperative Education.



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INTRODUCTION

Patient satisfaction with anesthesia care has increasingly been recognized as a key indicator of healthcare quality, reflecting not only the technical success of anesthetic procedures but also the interpersonal dynamics and communication provided throughout the perioperative period (1). Modern healthcare systems emphasize patient-centered care, making anesthesia-related satisfaction an essential metric that captures emotional experiences, comprehension of risks, and perceptions of postoperative recovery. Existing literature consistently highlights that modifiable factors such as inadequate preoperative information, insufficient communication with anesthesia providers, and poorly managed postoperative pain remain strong predictors of dissatisfaction across diverse clinical settings (2,3). Preoperative evaluation and counseling play a central role in shaping patient expectations, reducing anxiety, and improving satisfaction. When anesthetists clearly explain the anesthesia plan, associated risks, and potential side effects, patients feel more informed and reassured, which strengthens their trust in the care team (4,5). Conversely, unclear or rushed counseling may heighten fear and confusion, particularly in resource-limited environments where heavy caseloads restrict meaningful patient–provider interaction (6). Evidence from Pakistani tertiary hospitals demonstrates that incomplete consent procedures, inadequate risk disclosure, and limited health information provision are frequent contributors to dissatisfaction (7). These concerns may be further amplified among patients with lower educational levels, who may struggle to interpret medical information or formulate questions during consultations (8).

Perioperative communication—including preoperative interactions, intraoperative rapport, and postoperative follow-up—remains another critical determinant of patient experience. Effective communication enhances trust, addresses concerns promptly, and aligns postoperative expectations related to pain, nausea, and other discomforts (9). In addition, prolonged waiting times before surgery have been associated with heightened anxiety, reduced perceptions of system efficiency, and diminished confidence in the anesthetic care process (10). Postoperative symptoms, especially unmanaged pain and nausea/vomiting, are repeatedly cited in global and regional literature as leading causes of poor patient evaluations of anesthesia services (11). In Lady Reading Hospital, Peshawar—one of the largest and busiest tertiary care centers in the region—there is a notable lack of systematically collected data regarding patient dissatisfaction with anesthesia care. The hospital's diverse patient population, varying levels of health literacy, and potential resource constraints highlight the importance of understanding the local determinants of dissatisfaction to guide service improvements. Addressing these factors may enhance patient outcomes, strengthen communication strategies, improve perioperative counseling, and optimize postoperative pain management. Against this backdrop, the current study aims to determine the prevalence of patient dissatisfaction with anesthesia services among surgical patients at Lady Reading Hospital, Peshawar, and to identify the demographic, clinical, and service-related factors associated with this dissatisfaction, thereby providing an evidence-based foundation for targeted quality improvement initiatives.

METHODS

This study adopted a cross-sectional design to evaluate patient satisfaction and experiences related to anesthesia care among individuals recovering from elective surgical procedures. The research was conducted in the Post-Anesthesia Care Units (PACUs) of Lady Reading Hospital, Peshawar, a high-volume tertiary care facility serving a large and diverse population. Data were collected over a four-month period, from September 2024 to December 2024, allowing for the inclusion of patients undergoing a variety of elective procedures under general or regional anesthesia. Convenience sampling was used, and all patients present in the PACUs during data collection who met the eligibility criteria were approached consecutively. Participants were adults aged 18–65 years classified as ASA physical status I or II and undergoing elective surgery. Patients with cognitive impairment, diagnosed dementia, or any condition that compromised their ability to provide informed and reliable responses were excluded to ensure data accuracy. Eligible patients were identified once they were alert, stable, and medically cleared to engage in the interview process. The study operated under ethical approval granted by the Clinical Research Ethics Committee of the Institute of Paramedical Sciences, Khyber Medical University (KMU), Peshawar, and permission from the Institutional Review Board of Lady Reading Hospital. All participants were briefed about the objectives and procedures of the study, and written informed consent was obtained. Principles of autonomy, confidentiality, and voluntary participation were strictly upheld throughout data collection.

Data were gathered using a structured, close-ended questionnaire designed to assess satisfaction with preoperative communication, intraoperative experience, and postoperative care. The instrument focused on patient comfort, adequacy of information, waiting times, communication clarity, and postoperative symptom management. To ensure inclusivity, patients with limited literacy were assisted through interviewer-administered questionnaires in their native language, facilitating accurate interpretation and response.

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Questionnaires were reviewed on the spot to check for completeness before data entry. The sample size was determined using the OpenEpi calculator, with assumptions of a 2.5% prevalence, a 97% confidence level, and a 3% margin of error, resulting in a minimum required sample of 128 participants. Data analysis was conducted using descriptive and inferential statistics. Frequencies and percentages were used to summarize demographic and clinical characteristics, while associations between dissatisfaction and categorical variables—such as age, gender, education, residence, previous anesthesia experience, preoperative explanation, quality of communication, waiting time, and postoperative pain management—were evaluated using chi-square (χ^2) tests, with p-values <0.05 indicating statistical significance. Variables demonstrating significant associations were further analyzed using multivariate logistic regression to identify independent predictors of dissatisfaction. Results were expressed as adjusted odds ratios with corresponding 95% confidence intervals, allowing for the interpretation of both isolated and combined effects of determinants on patient dissatisfaction with anesthesia care.

RESULTS

A total of 128 patients participated in the study, with the majority aged between 31–60 years (64.0%) and predominantly male (60.9%). Most participants had secondary-level education (37.5%), while 17.2% reported no formal education. Urban residents accounted for 64.1% of the sample, and 75.0% were married. Regarding occupational status, 43.8% were employed, 26.6% unemployed, 14.1% students, and 15.6% retired. Previous exposure to anesthesia was reported by 56.2% of the participants. General surgery constituted the most frequent type of procedure (34.4%), followed by orthopedic (25.0%), gynecology/obstetrics (15.6%), ENT (14.1%), and other surgeries (10.9%). General anesthesia was administered to 56.2% of the patients, spinal anesthesia to 32.8%, and local/regional anesthesia to 10.9%. Based on ASA classification, 43.8% were ASA II, 29.7% ASA III, 17.2% ASA I, and 9.4% ASA IV. Postoperative complications were documented in nearly half of the patients, with nausea/vomiting (21.9%) and pain (15.6%) being the most frequently reported, while 51.6% experienced no complications. Analysis of dissatisfaction showed statistically significant associations with gender, education level, and previous anesthesia exposure. Female patients demonstrated higher dissatisfaction (60.0%) compared to males (41.0%) ($p = 0.023$). Dissatisfaction decreased progressively with higher educational attainment, ranging from 72.7% among those with no formal education to 35.7% among graduates ($p = 0.038$). Patients without prior anesthesia experience had significantly higher dissatisfaction (64.3%) than those previously exposed (36.1%) ($p = 0.002$). Although dissatisfaction was higher among rural residents (60.9%) compared to urban residents (41.5%), the difference did not reach statistical significance ($p = 0.073$). No significant association was found between age groups and dissatisfaction ($p = 0.78$).

Service-related factors showed strong associations with dissatisfaction. Patients who did not receive a preoperative explanation exhibited markedly higher dissatisfaction (77.3%) compared to those who did (33.3%) ($p = 0.001$). Similarly, poor understanding of the explanation resulted in higher dissatisfaction (73.1%) relative to those reporting understanding (31.6%) ($p = 0.0003$). Communication quality with the anesthetist demonstrated a strong gradient, with dissatisfaction increasing from 24.1% among those reporting good communication to 87.5% among those reporting poor communication ($p < 0.001$). Waiting time before surgery also affected satisfaction, with the highest dissatisfaction observed among those waiting more than 60 minutes (76.5%) compared to those waiting less than 30 minutes (30.4%) ($p = 0.042$). Postoperative pain management showed the strongest association; all patients dissatisfied with pain control (100%) also reported dissatisfaction with anesthesia care ($p < 0.001$). Multivariate logistic regression confirmed that absence of a preoperative explanation (AOR 3.42; 95% CI: 1.62–7.20), lack of understanding (AOR 2.85; 95% CI: 1.38–5.88), poor communication with the anesthetist (AOR 4.92; 95% CI: 2.11–11.48), and postoperative pain management dissatisfaction (AOR 6.75; 95% CI: 2.84–16.02) were the strongest independent predictors of overall dissatisfaction. Extended waiting time (>60 minutes) also remained significant (AOR 2.68; $p = 0.027$).

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Table 1: Demographic characteristics of study participants (n = 128)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	18–30	18	14.1
	31–45	42	32.8
	46–60	40	31.2
	> 60	28	21.9
Gender	Male	78	60.9
	Female	50	39.1
Education	No formal education	22	17.2
	Primary	30	23.4
	Secondary	48	37.5
	Graduate or higher	28	21.9
Marital status	Married	96	75.0
	Single	24	18.8
	Widowed / Divorced	8	6.2
Residence	Urban	82	64.1
	Rural	46	35.9
Occupation	Unemployed	34	26.6
	Employed	56	43.8
	Student	18	14.1
	Retired	20	15.6
Previous anesthesia experience	Yes	72	56.2
	No	56	43.8
Type of Surgery	General surgery	44	34.4
	Orthopedic	32	25.0
	ENT	18	14.1
	Gynecology/Obstetrics	20	15.6
	Others	14	10.9
Type of Anesthesia	General Anesthesia	72	56.2
	Spinal Anesthesia	42	32.8
	Local / Regional	14	10.9
ASA Physical Status	I	22	17.2
	II	56	43.8

Variable	Category	Frequency (n)	Percentage (%)
	III	38	29.7
	IV	12	9.4
Post-Anesthesia Complications	None	66	51.6
	Nausea/Vomiting	28	21.9
	Pain	20	15.6
	Shivering	8	6.2
	Others	6	4.7

Table 2: Combined Cross-Tabulation of Demographic Variables with Patient Dissatisfaction (n = 128)

Variable	Category	Dissatisfied n (%)	Satisfied n (%)	Total (n)	χ^2	df	p-value
Gender	Male	32 (41.0%)	46 (59.0%)	78	5.12	1	0.023*
	Female	30 (60.0%)	20 (40.0%)	50			
Age Group (years)	18–30	10 (55.6%)	8 (44.4%)	18	1.09	3	0.78
	31–45	18 (42.9%)	24 (57.1%)	42			
	46–60	20 (50.0%)	20 (50.0%)	40			
	>60	14 (50.0%)	14 (50.0%)	28			
Education	No formal education	16 (72.7%)	6 (27.3%)	22	8.45	3	0.038*
	Primary	16 (53.3%)	14 (46.7%)	30			
	Secondary	20 (41.7%)	28 (58.3%)	48			
	Graduate or higher	10 (35.7%)	18 (64.3%)	28			
Residence	Urban	34 (41.5%)	48 (58.5%)	82	3.21	1	0.073
	Rural	28 (60.9%)	18 (39.1%)	46			
Previous Anesthesia Experience	Yes	26 (36.1%)	46 (63.9%)	72	9.62	1	0.002*
	No	36 (64.3%)	20 (35.7%)	56			

Table 3: Factors Affecting Patient Dissatisfaction with Anesthesia Care (n = 128)

Factor	Category	Dissatisfied n (%)	Satisfied n (%)	Total (n)	χ^2	p-value
Preoperative Explanation Provided	Yes	28 (33.3%)	56 (66.7%)	84	10.52	0.001*
	No	34 (77.3%)	10 (22.7%)	44		
Patient Understanding of Explanation	Yes	24 (31.6%)	52 (68.4%)	76	12.88	0.0003*
	No	38 (73.1%)	14 (26.9%)	52		

Factor	Category	Dissatisfied n (%)	Satisfied n (%)	Total (n)	χ^2	p-value
Communication With Anesthetist	Good	14 (24.1%)	44 (75.9%)	58	22.16	<0.001*
	Satisfactory	20 (52.6%)	18 (47.4%)	38		
	Poor	28 (87.5%)	4 (12.5%)	32		
Waiting Time Before Surgery	<30 min	14 (30.4%)	32 (69.6%)	46	6.32	0.042*
	30–60 min	22 (45.8%)	26 (54.2%)	48		
	>60 min	26 (76.5%)	8 (23.5%)	34		
Postoperative Pain Management Satisfaction	Satisfied	10 (14.3%)	60 (85.7%)	70	39.47	<0.001*
	Neutral	18 (60.0%)	12 (40.0%)	30		
	Dissatisfied	34 (100%)	0 (0%)	34		

Table 4: Multivariate Logistic Regression Analysis for Factors Associated With Patient Dissatisfaction (n = 128)

Factor	Category (Reference)	Adjusted Odds Ratio (AOR)	95% Confidence Interval (CI)	p-value
Preoperative Explanation Provided	No vs. Yes	3.42	1.62 – 7.20	0.001*
Patient Understanding of Explanation	No vs. Yes	2.85	1.38 – 5.88	0.004*
Communication With Anesthetist	Poor vs. Good	4.92	2.11 – 11.48	<0.001*
	Satisfactory vs. Good	2.14	1.02 – 4.48	0.044*
Waiting Time Before Surgery	>60 min vs. <30 min	2.68	1.12 – 6.40	0.027*
	30–60 min vs. <30 min	1.42	0.62 – 3.27	0.40
Postoperative Pain Management Satisfaction	Dissatisfied vs. Satisfied	6.75	2.84 – 16.02	<0.001*
	Neutral vs. Satisfied	2.88	1.24 – 6.71	0.014*

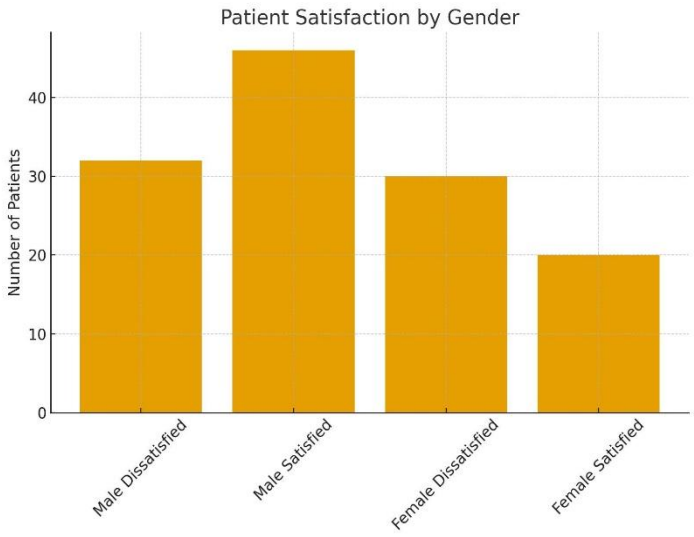

Figure 2 Patient Satisfaction by Gender

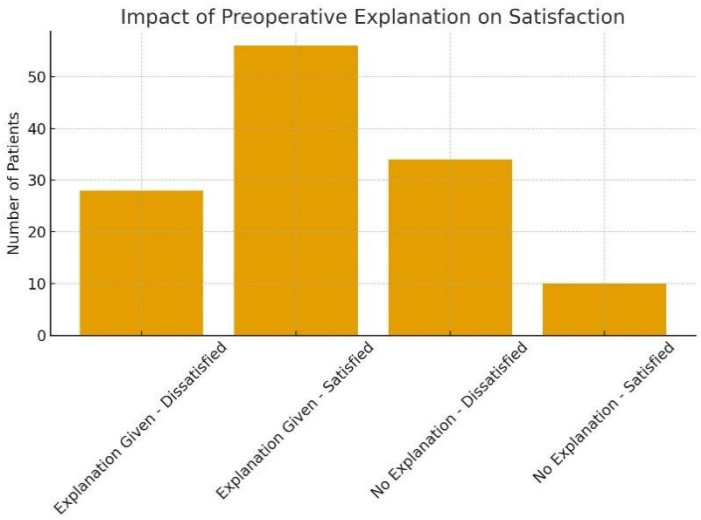

Figure 2 Impact of Preoperative Explanation on Satisfaction

DISCUSSION

The findings of this study demonstrated that nearly half of the surgical patients at Lady Reading Hospital expressed dissatisfaction with anesthesia care, underscoring the multidimensional nature of patient experience within perioperative services. Several modifiable factors emerged as significant contributors, emphasizing the importance of strengthening communication, enhancing preoperative education, and improving postoperative symptom management. These observations aligned closely with earlier investigations that described patient satisfaction with anesthesia as a composite outcome of both technical care and interpersonal quality (11,12). Inadequate preoperative explanation appeared as a central determinant of dissatisfaction, with those who did not receive information experiencing more than a three-fold increase in dissatisfaction. This pattern was consistent with previous literature suggesting that insufficient counseling elevates anxiety, reduces trust, and complicates patients' ability to anticipate postoperative experiences (13,14). The clarity of information was equally important; limited understanding of the preoperative explanation increased dissatisfaction, reinforcing the significance of tailored communication strategies, especially for populations with lower levels of health literacy (15). These findings indicated that effective preoperative counseling required not only delivery of information but also assurance of comprehension, potentially through simplified explanations, visual aids, or culturally adapted communication practices. Communication with anesthetists emerged as a powerful independent predictor of satisfaction, confirming evidence from international studies that emphasized the centrality of rapport, empathy, and interpersonal engagement in shaping perceptions of anesthetic care (16,17). The substantially higher odds of dissatisfaction among those reporting poor or even merely satisfactory communication highlighted the need for structured communication training among anesthesia providers. Strengthening these skills may improve patient confidence, reduce perioperative distress, and foster a safer and more trusting care environment.

Operational aspects, such as waiting time prior to surgery, also influenced satisfaction. Patients who waited longer than 60 minutes showed significantly higher dissatisfaction, an association previously documented in studies demonstrating that prolonged waiting amplifies preoperative stress and erodes perceptions of institutional efficiency (18,19). These findings suggested that optimization of surgical scheduling, improved patient flow systems, and clearer communication regarding delays may contribute to more positive patient experiences. Postoperative pain management surfaced as the most influential factor, with dissatisfied patients demonstrating a more than six-fold increase in overall dissatisfaction. This confirmed a substantial body of evidence identifying postoperative pain as one of the most important predictors of satisfaction in perioperative care (20-22). Effective pain control not only reduces physical discomfort but also enhances psychological well-being, supports early mobilization, and reinforces trust in the anesthesia team. These findings indicated that standardized pain assessment protocols, multimodal analgesia strategies, and improved monitoring of postoperative symptoms should be prioritized to raise satisfaction levels. The study offered important strengths, including the use of a structured questionnaire,

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the assessment of both demographic and service-related predictors, and the application of multivariate analysis to identify independent contributors to dissatisfaction. The inclusion of a diverse patient population further strengthened the representativeness of the findings within the hospital context. However, certain limitations were unavoidable. The cross-sectional design restricted causal inference, while reliance on self-reported measures introduced potential recall and social desirability biases. The single-center setting limited generalizability to other regions or healthcare systems. Additionally, the study did not account for factors such as preoperative anxiety, cultural beliefs about anesthesia, or intraoperative awareness, which may also influence satisfaction but were outside the scope of the dataset. ASA classification was included, although the distribution indicated a substantial proportion of patients with higher risk profiles, which may have influenced their perceptions independently of the measured variables.

Future research may benefit from multicenter studies incorporating larger and more varied populations to enhance generalizability. Longitudinal designs could provide insight into how satisfaction evolves across preoperative, intraoperative, and postoperative phases. Interventional trials evaluating structured communication programs, enhanced counseling protocols, or standardized pain management pathways would further clarify the modifiable elements most effective in reducing dissatisfaction. Incorporating qualitative methods may also yield deeper insight into the cultural, emotional, and interpersonal dimensions that shape patient experience. Overall, the findings of this study reinforced the importance of comprehensive perioperative communication, efficient care processes, and attentive postoperative management in optimizing patient satisfaction with anesthesia care. These modifiable factors present realistic opportunities for improving service delivery, strengthening patient trust, and elevating the overall quality of anesthetic care in similar tertiary care environments.

CONCLUSION

This study demonstrated that patient dissatisfaction with anesthesia care at Lady Reading Hospital stemmed largely from modifiable factors related to communication, information provision, and postoperative symptom management. Insufficient preoperative explanation, poor understanding of provided information, limited interaction with the anesthetist, prolonged waiting periods, and inadequate pain control emerged as key contributors to negative patient experiences. These findings underscore the need for targeted, patient-centered improvements within anesthesia services, particularly in strengthening preoperative counseling, enhancing communication skills among anesthesia providers, reducing procedural delays, and prioritizing effective postoperative pain management. By addressing these areas, healthcare teams can meaningfully improve patient experiences, foster trust in perioperative care, and support better overall clinical outcomes.

AUTHOR CONTRIBUTION

Author	Contribution
Nayab Nawab Khan	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Muhmmad Abbas	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Mukhtair Ahmad*	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published

REFERENCES

1. Ahmad I, Gohar E, Iqbal Noor MB, Rehman N, Tayyeb M. 18. Patient satisfaction with anesthesia care services and associated factors in AHQ Hospital Bajaur Agency, KP, Pakistan. Pure and Applied Biology (PAB). 2021 Dec 30;11(2):592-9.

2. Lakshminarasimhan A, Pilendran S. Assessment of Patients' Satisfaction with Anesthesia Services and Its Associated Factors at a Teaching Hospital in South India: A Cross-Sectional Study. Archives of Anesthesiology and Critical Care. 2022 Jul 29;8(4):280-7.

3. Baig UA, Shafiq F. A survey related to patients' satisfaction about anaesthetic care at a tertiary care center in Pakistan. Pakistan Journal of Medical Sciences. 2025 Nov 3;41(11):3234-9.

4. Alnashri YM, Alfaqih OY, Buhaliyqh MA, Mossery RA, Alamri IR, Mahfouz NA, Alsifsafi NH, Alzubaidi ZA, Alfaifi SS, Sadaqa AS, Alnashri SM. Patient satisfaction and its predictors with perioperative anesthesia care at two general hospitals in Southwestern Saudi Arabia. Cureus. 2023 Jan 16;15(1).

5. Shahbaz MA, Abdullah M, Rizwan M, Amin N. Evaluation of Patient satisfaction level and its Predictor with Pre-Operative Anesthesia Careat Ali Fatima Hospital, Lahore. International Journal of Healthcare Professions. 2024 Mar 30:2-6.

6. Siraneh AG, Dendir G, Paulos K. Factors associated with patient satisfaction in perioperative anesthesia care at Hawassa university comprehensive specialized hospital, Ethiopia. Cross-sectional study design. International Journal of Surgery Open. 2020 Jan 1;26:114-8.

7. Berhanu Y. Satisfaction of patient with anesthetic service provided by health professional. Surgical Department, Dilla University Referal Hospital, Gedeo Zone, South Ethiopia. 2020:1-8.

8. Garaniya RR, Mehta P, Shiyal K, Mehta K. Patient satisfaction with anaesthesia services at the tertiary care hospital, a cross-sectional study patient satisfaction and anesthesia services. Serbian J Anesth Intensive Therapy. 2020;42:139-45.

9. Chalasani SH, Gurudatt CL, Ramesh M. Patient satisfaction, outcomes and experience measures in patients receiving general anaesthesia: A prospective questionnaire based observational study. Indian Journal of Anaesthesia. 2022 Mar 1;66(3):224-8.

10. GEORGE M, Kiran N, Ravi M. Patient Satisfaction with Anaesthesia: Perioperative Questionnaire versus Face-to-face Survey. Journal of Clinical & Diagnostic Research. 2023 Jan 1;17(1).

11. Chua GCC, Cyna AM. Satisfaction measures in pediatric anesthesia and perioperative care. Paediatr Anaesth. 2021;31(7):746-54.

12. Roche A, Simon M, Bouaziz H, Poussel M, Sirveaux F, Adam I, et al. Quality of Preanesthesia Teleconsultation: The TELECAM Randomized Controlled Trial. Telemed J E Health. 2024;30(8):e2300-e10.

13. Muhly WT, Wohler B, Nelson MN, Tan JM, Barg FK, England W, et al. A Qualitative Assessment of Factors That Children, Parents, and Clinicians Prioritize in the Setting of Elective Anesthesia and Surgery. Anesth Analg. 2021;132(4):1067-74.

14. Huang J, Yang J, Han M, Xue Z, Xu M, Qi H, et al. Psychometric evaluation of patient-reported experience measures for peri-anesthesia care: A systematic review based on COSMIN guidelines. Int J Nurs Stud. 2025;161:104930.

15. Ng YL, Segaran S, Yim CCW, Lim BK, Hamdan M, Gan F, et al. Preoperative free access to water compared to fasting for planned cesarean under spinal anesthesia: a randomized controlled trial. Am J Obstet Gynecol. 2024;231(6):651.e1-.e11.

16. Wayesa GA, Dinka GL, Birhanu W, Jambo NR. Patient satisfaction and its associated factors with preoperative anesthetic evaluation services at public hospitals in Nekemte town, Nekemte, Ethiopia 2024: - cross-sectional study. BMC Anesthesiol. 2025;25(1):470.

17. Yahagi M, Hiruta R, Miyauchi C, Tanaka S, Taguchi A, Yaguchi Y. Comparison of Conventional Anesthesia Nurse Education and an Artificial Intelligence Chatbot (ChatGPT) Intervention on Preoperative Anxiety: A Randomized Controlled Trial. J Perianesth Nurs. 2024;39(5):767-71.

18. Osuga A, Abe T, Sato H, Goto T. Association Between Patient Satisfaction and Preoperative Task-Shifting From Anesthesiologists to Perianesthesia Nurses: A Questionnaire Survey Study. J Perianesth Nurs. 2023;38(3):421-6.

19. Verbeek T, Adhikary S, Urman R, Liu H. The Application of Fascia Iliaca Compartment Block for Acute Pain Control of Hip Fracture and Surgery. Curr Pain Headache Rep. 2021;25(4):22.

20. Duroi Q, Baudet JM, Bigoteau M, Slim M, Pichard T, Pisella PJ, et al. Ambulatory cataract surgery centre without perioperative anaesthesia care: a prospective cohort study. Sci Rep. 2021;11(1):8311.

21. Salih YA, Rashid HM, Baeez YK, Hamad KJ. Postoperative Satisfaction of People Attending Kirkuk Hospitals. Bahrain Medical Bulletin. 2022 Sep 1;44(3).

22. Yeung JT, Chan PL, Cheung CH. A survey of patient satisfaction of obstetric anaesthesia service in Tuen Mun Hospital, Hong Kong. Sri Lankan Journal of Anaesthesiology. 2020 Feb 6;28(1).