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EVALUATIONOFPATIENT SATISFACTION BETWEEN SPINAL VERSUS GENERAL ANESTHESIA

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ABSTRACT

Patient satisfaction is a crucial indicator of the quality of surgical care that can be influenced by the type of anesthesia used as well. Spinal anesthesia (SA) and general anesthesia (GA) are widely used in elective surgery, and each has its advantages and disadvantages. This study aimed to compare patient satisfaction with spinal versus general anesthesia during preoperative, intraoperative, and postoperative care, as well as overall satisfaction after the anesthesia experience. A total of 66 patients were enrolled, of whom 33 received spinal anesthesia and 33 received general anesthesia. Spinal anesthesia demonstrated improved patient satisfaction after a risk-benefit analysis ($p = 0.025$), intraoperative comfort ($p < 0.001$), intraoperative and postoperative pain control ($p < 0.001$ and $p = 0.011$, respectively), minimal recovery of alertness ($p = 0.02$), and overall willingness to choose the option ($p = 0.003$). Binary logistic regression analysis showed that higher education level was the only significant predictor of satisfaction (OR = 1.964, $p = 0.042$). We concluded that

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Spinal anesthesia demonstrated greater patient satisfaction than general anesthesia in the studies reviewed. It should be considered the preferred option, when clinically appropriate, complemented by comprehensive preoperative counseling and shared decision-making to further improve the patient experience.

Keywords: Spinal anesthesia; general anesthesia; patient satisfaction; elective surgery; postoperative outcomes

INTRODUCTION

Modern surgical practice relies heavily on anesthesia, which not only enables a wide range of surgical procedures but also ensures patient comfort, mobilization, and optimal surgical outcomes (Coonan *et al.*, 2015). General anesthesia (GA) and spinal anesthesia (SA) are the two primary types of anesthesia, each with distinct physiological effects, mechanisms of action, and implications for patient outcomes (Baenziger *et al.*, 2020). To achieve reversible anesthesia, GA requires airway control and systemic hemodynamics (Miller *et al.*, 2023). In contrast, regional anesthesia uses specific blockade of neural pathways (e.g., peripheral nerve blocks or neuromodulation procedures such as spinal or epidural anesthesia) to control local pain while maintaining the patient's consciousness (Folino *et al.*, 2023).

Research suggests that regional anesthesia is a better option for certain surgical procedures because it can reduce postoperative pain, episodes of nausea and vomiting, respiratory problems, and hospital stays (Lee *et al.*, 2022). However, regional anesthesia also has disadvantages, such as the need for specialized skills, the risk of nerve injury, and the inability to perform long or complex procedures that require deep sedation or extensive surgery (Radkowski *et al.*, 2024).

Regional anesthesia techniques are also associated with rare, life-threatening complications. The most serious of these complications include inappropriate intravenous administration of local anesthetic, overdose of intrathecal (whole spinal) local anesthetic, misplacement of subarachnoid or epidural catheters, or displacement of epidural catheters. In addition to these serious complications, regional anesthesia can also be associated with more common, less serious complications and side effects during and after surgery, such as inadequate analgesia, hypotension, nausea, tremors, urinary retention, limited mobility, hyperthermia, and prolonged anesthesia. More

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serious postoperative complications, such as meningitis, epidural hematoma, and nerve or spinal cord damage, are extremely rare (Moen *et al.*, 2004).

General anesthesia remains the preferred option for many major surgeries, especially those that require long procedures, controlled breathing, and complete muscle relaxation (Alnsour *et al.*, 2025). Despite its widespread use, general anesthesia carries certain risks, including hemodynamic instability, impaired postoperative cognitive function, and a higher incidence of nausea and vomiting compared to rheumatoid arthritis (Hutton *et al.*, 2018).

The choice of anesthetic method is influenced by several factors, including the type and duration of surgery, patient morbidity, surgeon and anesthesiologist preferences, and institutional protocols (Biro *et al.*, 2022). Regional anesthesia offers various advantages like reducing intraoperative blood loss, improved surgical conditions, significant postoperative analgesia, reduced intraoperative myocardial ischemia, avoidance of postoperative hypoxia, and prevention of arterial and venous thromboembolism (Capuzzo *et al.*, 2007). On the other hand, general anesthesia can cause loss of consciousness and is therefore preferred in some cases requiring emergency surgery. General anesthesia may also be recommended when regional anesthesia cannot guarantee a rapid onset and reduced surgical stress. However, each technology has its own benefits, risks, and potential impacts on patient satisfaction (Lee *et al.*, 2021).

Patient satisfaction in healthcare settings often encompasses both psychological and technical aspects of care, which are strongly associated with effective pain management (Lee *et al.*, 2020). Low patient satisfaction with postoperative pain management remains a common problem in healthcare (Miller *et al.*, 2014). A comprehensive understanding of the variables that influence patient satisfaction in specific settings is essential for improving perioperative care (Anas *et al.*, 2024). During surgery, the primary goal for patients is effective pain control. Rheumatoid arthritis (RA) has been associated with improved pain control, as personalized analgesia can reduce early postoperative pain scores and reduce opioid use (Huang *et al.*, 2016). Some studies have shown that patient satisfaction with postoperative pain management is related to the perception of care and patient

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engagement in pain management rather than the actual pain experience (Schwenkglenks *et al.*, 2014). A review of the international literature found conflicting accounts of patient satisfaction with pain management (Shoqirat *et al.*, 2020).

Postoperative nausea and vomiting (PONV) is another common problem, especially after general anesthesia. Studies have shown that patients who receive general anesthesia are more likely to develop pulmonary artery stenosis after surgery, which may affect patient satisfaction (Kehlet *et al.*, 2019).

Satisfaction among patients undergoing ASA class I and II anesthesia is significantly lower than that of patients undergoing ASA class III anesthesia. Postoperative visits by an anesthesiologist and provision of appropriate information can improve patient satisfaction (Saal *et al.*, 2011). In Ethiopia, studies examining patient satisfaction with anesthesia services have shown low patient satisfaction (Lorato *et al.*, 2020). Shorter hospital stays and faster return to normal activities are common goals of rheumatoid arthritis surgery, which can improve patient satisfaction. Several studies have examined patient satisfaction with rheumatoid arthritis surgery and laparoscopic abdominal surgery. Patients undergoing laparoscopic surgery report greater satisfaction with pain management and a faster return to daily activities than those undergoing laparoscopic surgery. This is important because the type of anesthesia used can affect the patient's experience before, during, and after lower abdominal surgery (Smith *et al.*, 2018).

Several studies have found that the following variables are associated with patient satisfaction with anesthesia services: age, education, marital status, and expectations. Information provided, emotional support, duration of anesthesia, physical discomfort, postoperative complications, postoperative pain, perioperative anesthesia care, postoperative visits, and patient communication all affect patient satisfaction (Cheung *et al.*, 2020).

Some studies have demonstrated a direct relationship between improved clinical outcomes and higher patient satisfaction scores (Prabhu *et al.*, 2018). However, other studies have found that patients who experience postoperative complications are not always less satisfied with their treatment (Schmocker ,

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2019). Notably, many of these studies have used hospital-level overall postoperative complication rates and satisfaction scores rather than examining the relationship between patient satisfaction and clinical outcomes (Howard *et al.*, 2019). Relatively few studies have used patient satisfaction and outcome data from a single institution (Schmocker *et al.*, 2019). Although patients develop loyalty to professionals and the quality of care in hospitals, in today's rapidly evolving world, they are seeking comfortable care (Wang *et al.*, 2009). In developing countries, patients' expectations from the healthcare system are largely ignored due to factors such as medical quality, staff behavior, waiting times, cost of care, hospital infrastructure, physical comfort, emotional support, and respect forpatient preferences (Woji *et al.*, 2017).

Anesthesia care, a core component of modern medicine, has seen significant growth and development over the past century. It has evolved from basic monitoring and pain relief to a specialized system of care that involves multidisciplinary collaboration. Despite these achievements, anesthesia care still faces several challenges. Chief among these is the high rate of intraoperative complications, which can be caused by a variety of factors, including surgical complexity, patient comorbidities, and anesthesia administration itself (Dogan *et al.*, 2023). The severity of these complications ranges from minor to life-threatening, making intraoperative management a major concern for anesthesiologists (Heinke *et al.*, 2023). Patient safety issues encompass all phases of the preoperative period, including preoperative preparation, intraoperative management, and postoperative recovery. Postoperative recovery issues, such as poor pain management, risk of infection, and delayed recovery, continue to concern healthcare professionals and patients, affecting patient outcomes and increasing the burden on healthcare resources (Myles *et al.*, 2022).

Anesthesia training is a core component of medical education, typically undertaken by medical students during their final years. Across all training systems, anesthesia training includes supervised clinical practice, during which trainees are expected to acquire competencies in six areas: clinical knowledge, patient-centered care, practice-based learning and improvement, professional competence, interpersonal and communication skills, and systems-based practice (Dobson, 2020). During practice, trainees are exposed to a variety of clinical situations and learn how

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to care for patients (Mitchell, 2018)

METHODOLOGY

This comparative and cross-sectional study was carried out to evaluate and compare the patient satisfaction level after facing General anesthesia and Spinal anesthesia 24 hours after an elective surgical procedure.

Study Setting

This study was conducted in Fauji Foundation Hospital, Peshawar, which is one of the charitable institutions for the families of people who belong to the army forces. This hospital provides surgical and anesthesia services, with one operating theater featuring three operating rooms, each designed for surgical procedures. The operating theater was well-equipped and maintained up to date.

Duration of Study

Data collection was conducted over a four-month period, from March to June 2025.

Study Population

Participants included just the female patients aged more than 18 years who underwent elective surgeries under spinal or general anesthesia.

Sampling Technique

A convenient non-probability sampling method was employed to select participants who met the inclusion criteria and were available during the study period.

Sample Size

Thestudy involved a total of 66 patients, with 33 individuals in each of the spinal and general anesthesia groups.

Inclusion and Exclusion Criteria

Inclusion Criteria:

1. Patients aged more than 18 years.
2. Female patients.
3. Undergoing elective surgical procedures with spinal or general anesthesia.
4. Provided informed consent.

Exclusion Criteria:

1. Patients who received combined anesthesia techniques. Those undergoing Emergency surgeries.

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2. Patients are unable to provide postoperative feedback.

Data Collection Tool

A structured questionnaire was utilized, adapted from validated tools used in previous studies, to better measure patient satisfaction levels across different dimensions. The questionnaire is divided into four sections: preoperative, intraoperative, postoperative, and overall experience with anesthesia type.

Data Analysis

Collected data were entered and analyzed using SPSS version 26. Descriptive statistics were calculated, including counts and percentages for each of 15 questions. A chi-square test and a binary logistic regression test were applied to determine differences in satisfaction levels between the two anesthesia groups, with significance set at $p < 0.05$.

Ethical Considerations

Before initiating the study, ethical approval was obtained from the Institutional Review Board (IRB) of Sarhad Institute of Allied Health Sciences. All of the participants were made satisfied with oral informed consent.

RESULTS

The study included 66 participants, with a balanced distribution: 33 received spinal anesthesia and 33 received general anesthesia. Although demographic variables such as patient identity, age (over 18 years), gender (all female), and type of surgical procedure were recorded, they were excluded from further analysis as they were not relevant to the study objectives. Other demographic characteristics of the participants, including educational level, previous anesthesia experience, and type of previous anesthesia, were categorized and analyzed with their corresponding frequencies and percentages.

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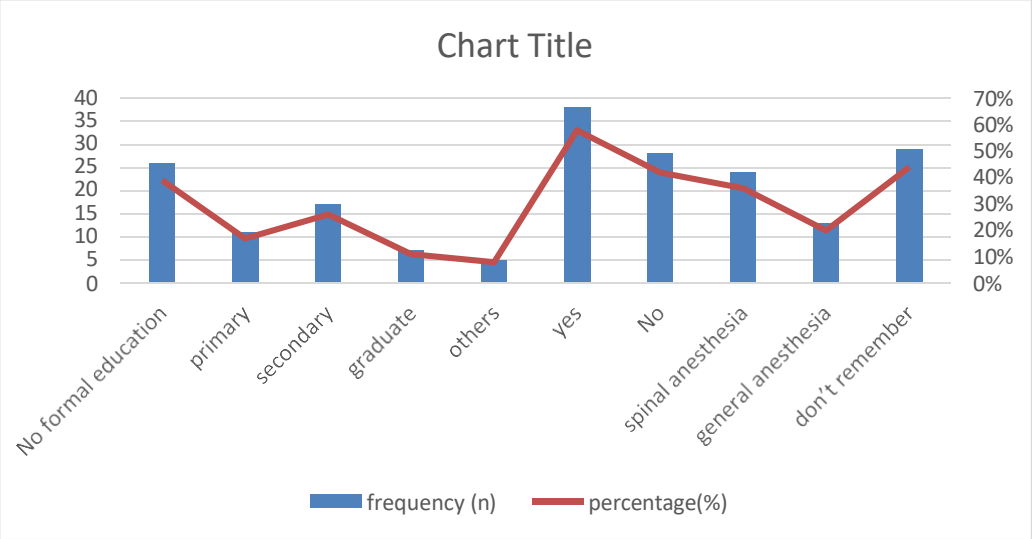


Figure 1: Demographic characteristics of the patients.

Reviewing the background of the participants, it was found that the majority, approximately two-fifths of the participants, had never received formal education. Participants with secondary or primary education were the second most common, with only a minority having completed school or falling into other categories. The average educational level indicates a generally low level of educational experience within this group. When asked about their previous anesthesia experiences, more than half of the participants confirmed that they had previously undergone some type of anesthesia, indicating familiarity with the anesthesia procedure. Regarding the type of anesthesia they had previously used, spinal anesthesia was easier to remember than general anesthesia. However, a significant number of participants were unsure of what type of anesthesia they had received. The mean scores on this variable suggest that participants preferred spinal anesthesia or lacked a clear memory. Together, these trends reflect the limited educational background and varying levels of previous anesthesia experience among the study sample, which may have influenced their overall understanding and perception of anesthesia care. As shown in **fig no. 1.**

Section 1: Preoperative Experience

Informed about anesthesia:

The majority of participants undergoing spinal anesthesia reported being "satisfied"

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(48.5%) or "neutral" (39.4%) with the information provided. In contrast, a significant number of participants in the general anesthesia group reported being "very satisfied" (15.2%). However, the relationship between anesthesia type and satisfaction with preoperative information was not statistically significant (χ^2 = 6.975, p = 0.073).

Given a Choice:

Responses were similar in both groups, with the majority of participants expressing a neutral attitude—81.8% in the spinal anesthesia group and 84.8% in the general anesthesia group. This relationship was also not statistically significant (χ^2 = 0.852, p = 0.653).

Risk-benefit explained:

The majority of participants undergoing spinal anesthesia (78.8%) reported being neutral regarding the surgical outcome, while dissatisfaction was higher in the general anesthesia group. This difference was statistically significant (χ^2 = 9.354, p = 0.025), indicating that there was more favorable communication regarding risks and benefits in the spinal anesthesia group.

Communication with anesthesia team:

Spinal anesthesia patients (87.9%) reported higher satisfaction than the general anesthesia group (78.8%). However, this difference was not statistically significant (χ^2 = 1.664, p = 0.645). All of these preoperative patients responses regarding the type of anesthesia are given below in Table No. 1.

Table No.1: Preoperative Patient Satisfaction Comparison.

Question	Response	Spinal (Count & %)	General (Count & %)	Chi-Square Value	p-Value
Informed about anesthesia	Very Satisfied	0 (0.00%)	5 (15.20%)	6.975	0.073
	Satisfied	16 (48.50%)	18 (54.50%)		
	Neutral	13 (39.40%)	8 (24.20%)		
	Dissatisfied	4 (12.10%)	2 (6.10%)		
Given a choice	Satisfied	5 (15.20%)	3 (9.10%)		

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	Neutral	27 (81.80%)	28 (84.80%)	0.852	0.653
	Dissatisfied	1 (3.00%)	2 (6.10%)		
Risks and Benefits explained	Very Satisfied	3 (9.10%)	0 (0.00%)		
	Satisfied	4 (12.10%)	10 (30.30%)	9.354	0.025
	Neutral	26 (78.80%)	20 (60.60%)		
	Dissatisfied	0 (0.00%)	3 (9.10%)		
Communication by the anesthesia team	Very Satisfied	3 (9.10%)	5 (15.20%)		
	Satisfied	29 (87.90%)	26 (78.80%)	1.664	0.645
	Neutral	1 (3.00%)	1 (3.00%)		

Section 2: Intraoperative Experience

Anxiety before/during anesthesia:

Patient satisfaction was moderate in both groups. Patient satisfaction rates were 60.6% in the spinal anesthesia group and 36.4% in the general anesthesia group. The difference between the two groups was not statistically significant ($\chi^2 = 6.381$, $p = 0.172$).

Comfort during awake surgery:

Patient satisfaction during awake surgery was very high in those receiving spinal anesthesia (78.8%), while satisfaction was moderate in those receiving general anesthesia (90.9%). The difference between the two groups was statistically significant ($\chi^2 = 55.241$, $p < 0.001$), indicating that patients in the spinal anesthesia group reported greater comfort during awake surgery.

Pain during surgery:

Patient satisfaction with pain control was significantly higher in the spinal anesthesia group (78.8%) than in the general anesthesia group (27.3%). The difference was statistically significant ($\chi^2 = 31.873$, $p < 0.001$).

Monitoring during surgery:

Both groups generally felt that they received adequate monitoring during surgery. Although satisfaction was higher in the spinal anesthesia group, the difference was not statistically significant ($\chi^2 = 4.776$, $p = 0.311$). All of these intraoperative responses

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are given in the table no.2.

Table No. 2: Intraoperative Patient Satisfaction Comparison

Question	Response	Spinal (Count & %)	General (Count & %)	Chi-Square Value	p-Value
Anxiety before/during anesthesia	Very Satisfied	2 (6.10%)	4 (12.10%)	6.381	0.172
	Satisfied	20 (60.60%)	12 (36.40%)		
	Neutral	0 (0.00%)	1 (3.00%)		
	Dissatisfied	10 (30.30%)	11 (33.30%)		
Comfort during awake surgery	Very Satisfied	3 (9.10%)	0 (0.00%)	55.241	0.000
	Satisfied	26 (78.80%)	3 (9.10%)		
	Neutral	0 (0.00%)	30 (90.90%)		
	Dissatisfied	4 (12.10%)	0 (0.00%)		
Pain during surgery	Very Satisfied	3 (9.10%)	0 (0.00%)	31.873	0.000
	Satisfied	26 (78.80%)	9 (27.30%)		
	Neutral	2 (6.10%)	24 (72.70%)		
	Dissatisfied	2 (6.10%)	0 (0.00%)		
Adequate monitoring during surgery	Very Satisfied	1 (3.00%)	4 (12.10%)	4.776	0.311
	Satisfied	31 (93.90%)	25 (75.80%)		
	Neutral	1 (3.00%)	2 (6.10%)		
	Dissatisfied	0 (0.00%)	1 (3.00%)		

Section 3: Postoperative Experience

Postoperative pain control:

While both groups expressed dissatisfaction with postoperative pain management, a higher percentage of patients in the general anesthesia group (27.3%) were "very dissatisfied". This difference was statistically significant ($\chi^2 = 11.057$, $p = 0.011$).

Postoperative nausea/vomiting:

Satisfaction was higher in the spinal anesthesia group (78.8%) than in the general anesthesia group (39.4%). This difference was statistically significant ($\chi^2 = 10.889$, $p = 0.012$).

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Time to become alert:

Patients in the spinal anesthesia group recovered faster, with 81.8% expressing satisfaction. This difference was statistically significant ($\chi^2 = 14.451$, $p = 0.002$).

Comfort during surgery:

Satisfaction with comfort was higher in the spinal anesthesia group (87.9%) than in the general anesthesia group (57.6%). This result was statistically significant ($\chi^2 = 11.017$, $p = 0.012$). These responses of patients regarding postoperative are shown in Table 3.

Table no. 3: Postoperative Patient Satisfaction Comparison experience.

Question	Response	Spinal (Count & %)	General (Count & %)	Chi-Square Value	p- Value
Pain control after surgery	Very Satisfied	1 (3.00%)	1 (3.00%)		
	Satisfied	13 (39.40%)	7 (21.20%)		
	Dissatisfied	19 (57.60%)	16 (48.50%)	11.057	0.011
	Very Dissatisfied	0 (0.00%)	9 (27.30%)		
Nausea and vomiting after anesthesia	Very Satisfied	1 (3.00%)	2 (6.10%)		
	Satisfied	26 (78.80%)	13 (39.40%)		
	Dissatisfied	5 (15.20%)	13 (39.40%)	10.889	0.012
	Very Dissatisfied	1 (3.00%)	5 (15.20%)		
Time to become alert	Very Satisfied	3 (9.10%)	0 (0.00%)		
	Satisfied	27 (81.80%)	17 (51.50%)	14.451	0.002
	Neutral	1 (3.00%)	9 (27.30%)		
	Dissatisfied	2 (6.10%)	7 (21.20%)		
Comfort during surgery	Very Satisfied	2 (6.10%)	1 (3.00%)		
	Satisfied	29 (87.90%)	19 (57.60%)	11.017	0.012
	Neutral	0 (0.00%)	5 (15.20%)		
	Dissatisfied	2 (6.10%)	8 (24.20%)		

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Section 4: Overall Experience with Anesthesia and Preferences

Overall Satisfaction with the Anesthesia Experience:

Overall satisfaction was higher among patients who received spinal anesthesia (81.8%) compared to those who received general anesthesia (57.6%). This difference was statistically significant ($\chi^2 = 14.422$, $p = 0.002$).

Willingness to Choose the Same Anesthesia Method in the Future:

A higher percentage of patients who received spinal anesthesia (87.9%) expressed a desire to choose the same anesthesia method again compared to those who received general anesthesia (45.5%). This result was statistically significant ($\chi^2 = 16.818$, $p = 0.002$).

Willingness to Recommend:

Patients recommended spinal anesthesia more frequently (84.8%) compared to general anesthesia (54.5%), a statistically significant difference ($\chi^2 = 15.745$, $p = 0.003$). All of the above responses were categorized in detail in Table No. 4.

Table no.4: Overall Patient Satisfaction Comparison with anesthesia type.

Question	Response	Spinal (Count & %)	General (Count & %)	Chi-Square Value	p-Value
Overall satisfaction with anesthesia experience	Very Satisfied	5 (15.20%)	1 (3.00%)		
	Satisfied	27 (81.80%)	19 (57.60%)		
	Dissatisfied	1 (3.00%)	10 (30.30%)	14.422	0.002
	Very Dissatisfied	0 (0.00%)	3 (9.10%)		
	Very Satisfied	2 (6.10%)	2 (6.10%)		
Willingness to choose the same anesthesia in future	Satisfied	29 (87.90%)	15 (45.50%)	16.818	0.002
	Neutral	1 (3.00%)	1 (3.00%)		
	Dissatisfied	1 (3.00%)	10 (30.30%)		
	Very	3 (9.10%)	1 (3.00%)		

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Willingness to recommend this anesthesia to others	Satisfied				
	Satisfied	28 (84.80%)	18 (54.50%)	15.745	0.003
	Neutral	1 (3.00%)	0 (0.00%)		
	Dissatisfied	1 (3.00%)	6 (18.20%)		

Binary Logistic Regression Analysis

Binary logistic regression was conducted to evaluate factors associated with patient satisfaction. The analysis showed that educational level was a significant predictor of patient satisfaction. Patients with a higher educational level were almost twice as likely to report satisfaction as patients with a lower educational level (odds ratio = 1.964, 95% confidence interval: 1.026–3.759, p-value = 0.042). Other variables, including age (odds ratio = 1.024, 95% confidence interval (CI): 0.989–1.061, p = 0.182), previous anesthesia experience (odds ratio = 1.389, 95% CI: 0.570–3.38s), and type of anesthesia = 3.86, odds ratio = 0.809, 95% CI: 0.305–2.147, p = 0.671), did not show statistically significant associations with satisfaction levels. This suggests that higher education was the only variable significantly associated with increased patient satisfaction in the study sample, while demographic factors and type of anesthesia had no significant effect, as shown in **Table 5**.

Table no.5: Binary logistic regression

Variable	B(Regression Coefficient)	SE	OR(95% CI)	p- value
Age (years)	0.024	0.018	1.024 (0.989 – 1.061)	0.182
Education Level (Higher)	0.675	0.332	1.964 (1.026 – 3.759)	0.042*
Previous Anesthesia Experience (Yes)	0.328	0.455	1.389 (0.570 – 3.388)	0.468
Type of Anesthesia (General)	-0.212	0.498	0.809 (0.305 – 2.147)	0.671

DISCUSSION

This study aimed to find out the patient satisfaction with two different types of anesthesia (general anesthesia and spinal anesthesia) before, during, and after

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surgery. A total of 66 subjects were enrolled, of whom 33 received general anesthesia and 33 received spinal anesthesia. Descriptive statistics were used, presenting data as frequencies and percentages, to help patients determine their level of satisfaction. Further statistical tests, such as the chi-square test and binary logistic regression, were then performed using SPSS software version 26 to analyze the data and identify significant and non-significant relationships between the type of anesthesia and patient satisfaction.

Patients in the general anesthesia group responded more positively, but satisfaction was higher. However, the overall results showed no significant relationship between satisfaction and anesthesia type. Chung *et al.* (2013) reported similar findings, reporting that patients did not adhere to standard protocols and anesthesia plans. Communication about anesthesia information does not always improve patient satisfaction.

The majority of patients were neutral regarding the choice of anesthesia. These results support a study by Afolabi *et al.* (2017), which found that the choice of anesthesia type is often overlooked in low-resource settings.

Patients receiving spinal anesthesia were significantly more satisfied with their postoperative response ($p = 0.025$). This finding supports the findings of Gawande *et al.* (2020), who noted that regional anesthesia provides more detailed information and a better understanding of the surgical procedure.

Although not statistically significant ($p = 0.645$), patient satisfaction was higher in both groups. This supports the observation of Yousef *et al.* (2019) that patient communication is crucial regardless of the type of anesthesia used.

The results did not reveal a statistically significant difference ($p = 0.172$), although anxiety was more frequently reported by patients with gastritis. A study done by Klopfenstein *et al.* (2000) found that patients receiving spinal anesthesia reported lower levels of both preoperative and postoperative anxiety.

Patients receiving spinal anesthesia reported greater satisfaction ($p = 0.000$). This finding is consistent with the findings of Sharma *et al.* (2022) and Ngwenya *et al.* (2018), who concluded that staying awake during surgery may help reduce pain in rheumatoid arthritis.

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Intraoperative monitoring was satisfactory in both groups, and no statistically significant difference in outcomes was observed (p = 0.311). This is consistent with a previous study by Lee *et al.* (2016) that showed that adequate intraoperative monitoring resulted in similar outcomes in both patient groups.

Patients receiving spinal anesthesia reported greater satisfaction with postoperative pain control, with a p-value of 0.011, indicating a positive relationship between postoperative and intraoperative pain control. Lirk *et al.* (2015) also confirmed the long-term analgesic effect of spinal anesthesia after surgery.

Patients receiving general anesthesia reported greater dissatisfaction, as more patients complained of nausea than those receiving spinal anesthesia. A study by Afpel *et al.* (2010) also found that patients receiving spinal anesthesia were at higher risk of postoperative complications (p = 0.012).

Patients receiving spinal anesthesia were significantly more satisfied with their recovery from anesthesia (p = 0.002) and (p = 0.012). This finding is supported by a previous study, Dexter *et al.* (2003), which showed that patients receiving spinal anesthesia had a faster recovery time after surgery.

CONCLUSION AND RECOMMENDATIONS

CONCLUSION

The study concludes that patients who underwent spinal anesthesia were more satisfied with their anesthesia experience than those who underwent general anesthesia, including preoperative risk-benefit clarification, intraoperative comfort, postoperative pain control, easy postoperative recovery, and fewer side effects, such as fewer medications. Although there were no statistically significant differences between the two groups regarding preoperative information and communication with the anesthesiologist, patients who underwent spinal anesthesia were more satisfied with their overall anesthesia experience. Furthermore, regression analysis showed that patients with higher education were more satisfied with their overall anesthesia experience than those with less education or no formal education.

RECOMMENDATIONS

After the findings, it is recommended that

1. Spinal anesthesia is the most preferred option when it is appropriate,

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especially in lower limb and abdominal surgeries.

2. Hospitals should have proper preoperative anesthetist counselling with the patients so that they can have a better understanding of the risks and benefits of the procedure they will undergo, which can directly or indirectly result in patient satisfaction.

3. Patients should be given a choice about the anesthesia type if appropriate, especially in elective procedures. This shared decision-making process can have a positive impact on the patient's condition, and they will feel confident about the procedure they will undergo.

4. As the general anesthesia is mostly associated with post-operative nausea and vomiting, and less pain control after the surgery. The prophylactic measures should be taken by giving antiemetic and analgesics so that the patient has fewer chances of these side effects with general anesthesia.

5. Since education level plays a major role in patient satisfaction, the anesthetist should have a proper understanding of anesthesia to the patients so that they can have enough knowledge about the procedures they will face in the OR.

6. Even though this study provides valuable information, further studies with larger samples and multicenter studies should be done so that these results can be generalized.

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