

Research Article**THE ROLE OF PARENTAL PRESENCE IN ALLEVIATING ANXIETY IN CHILDREN UNDERGOING ELECTIVE SURGERIES****Dr. Vijayamahantesh S. Kunnur¹, Dr. P. G. Raghavendra², Dr. Sahana P R³**¹Associate Professor, Department of Pediatric Surgery, RIMS / RGSSH (OPEC), Raichur, Karnataka, India.²Associate Professor, Department of Anaesthesiology, Raichur Institute of Medical Sciences (RIMS), Raichur, Karnataka, India.³Consultant Gynecologist, Raichur, Karnataka, India.**Corresponding Author: Dr. P. G. Raghavendra****Received: 19-07-2025/ Revised: 27-08-2025/Accepted Date: 20-09-2025****ABSTRACT**

Background: Preoperative anxiety is a common concern among pediatric patients undergoing surgical procedures. Heightened anxiety may lead to difficult anesthesia induction, increased postoperative pain, and longer recovery times. Parental presence during anesthesia induction has been increasingly considered as a non-pharmacological strategy to minimize anxiety in children.

Objective: To evaluate the effectiveness of parental presence during anesthesia induction in reducing anxiety among children undergoing elective surgeries.

Methods: A prospective observational study was conducted including children aged 4–12 years scheduled for elective surgeries. The Modified Yale Preoperative Anxiety Scale (mYPAS) was used to evaluate the level of anxiety. Children were assigned to either the parental presence group or the standard care group without parental presence. Anxiety scores were recorded at three points: preoperative holding area, during induction, and immediately after induction.

Results: Children in the parental presence group demonstrated significantly lower mYPAS anxiety scores during induction compared to those without parental presence. A notable positive emotional impact was observed among children accompanied by their parents.

Conclusion: Parental presence during anesthesia induction effectively reduces anxiety in pediatric patients undergoing elective surgery. Incorporating parental presence as part of routine perioperative care may improve emotional comfort and induction quality.

Keywords: Pediatric anesthesia, Perioperative anxiety, Parental presence, Elective surgery, Child psychology.

INTRODUCTION

Preoperative anxiety among children is a well-recognized clinical issue, with reported incidence ranging from 50% to 75% among pediatric surgical patients. Anxiety at this stage can cause psychological distress, emergence delirium, and postoperative behavioral problems. Factors contributing to anxiety include fear of separation from parents, unfamiliar hospital environment, and the anticipation of pain.

Traditionally, pharmacological anxiolytics such as midazolam have been used to manage anxiety, but concerns regarding sedation, prolonged recovery, and paradoxical reactions have shifted attention toward

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non-pharmacological methods. Parental presence during induction of anesthesia (PPIA) is one such strategy aimed at providing emotional comfort and reducing anxiety by minimizing separation distress.

This research aims to explore the effectiveness of parental presence in mitigating anxiety among children undergoing elective surgeries in a tertiary care teaching hospital setting.

AIMS AND OBJECTIVES

1. To evaluate the level of preoperative anxiety in children undergoing elective surgeries.
2. To assess the impact of parental presence during anesthesia induction on preoperative anxiety levels.
3. To compare anxiety scores between children undergoing induction with and without parental presence.

REVIEW OF LITERATURE

Anxiety in children prior to surgery has been correlated with negative postoperative behavioral changes, including nightmares, aggression, enuresis, and feeding difficulties.(1)
Separation from parents is identified as one of the most significant triggers of anxiety in young children.(2)

Parental presence during induction has been advocated as a means of reducing this stress. Kain et al. demonstrated that PPIA significantly reduces anxiety when parents themselves are calm and emotionally supportive.(3) Another study suggested that parental presence may be as effective as low-dose anxiolytic medication in selected children.(4)

However, Hasanpour et al. noted that anxious or distressed parents may inadvertently increase the child's anxiety.(5). Therefore, parental emotional preparedness plays a critical role.

Overall, literature supports PPIA as a beneficial non-pharmacological intervention when appropriately implemented.

MATERIALS AND METHODS

Study Design: Prospective observational study
Study Site: Department of Anaesthesiology, RIMS Raichur
Study Duration: 6 months
Study Population: Children aged 4–12 years undergoing elective surgeries

Inclusion Criteria:

ASA physical status I or II
Willing parent available to accompany the child

Exclusion Criteria:

Children with cognitive or developmental delay
Emergency surgeries

Parents unwilling to participate

Study Groups:

Group Description

Group A Parental presence during induction
Group B Standard care without parental presence

Assessment Tool: Modified Yale Preoperative Anxiety Scale (mYPAS), scored at:

Preoperative waiting area
During anesthesia induction
Post-induction (first 5 minutes)

Statistical Analysis: Mean $\pm$ SD, Student's t-test, $p < 0.05$ considered significant.

RESULTS

Group A showed significantly lower anxiety scores during induction compared to Group B. Children in parental presence group displayed improved cooperation and fewer episodes of crying or agitation. No delay in operating room workflow was observed.

Stage	Group A (Mean mYPAS)	Group B (Mean
Preoperative area	36 $\pm$ 5	37 $\pm$ 6
During induction	45 $\pm$ 7	58 $\pm$ 8
Post-induction	28 $\pm$ 4	34 $\pm$ 6

DISCUSSION

The present study demonstrates that parental presence during induction of anesthesia (PPIA) significantly reduces anxiety in pediatric patients undergoing elective surgeries. The results showed notably lower Modified Yale Preoperative Anxiety Scale (mYPAS) scores during induction among children accompanied by their parents, consistent with findings from multiple previous studies. Preoperative anxiety is a multifactorial emotional response influenced by age, temperament, hospital environment, prior medical experiences, and parental behavior.(1)

The separation of a child from their parent or primary caregiver is recognized as one of the most distressing events during the perioperative process.(2) Attachment theory supports that close caregiver proximity provides emotional security, especially in unfamiliar or threatening situations such as surgery.(3) Therefore, PPIA addresses one of the core psychological stressors contributing to perioperative anxiety.

Research by Kain et al. demonstrated that PPIA can be beneficial, particularly when parents are calm and supportive.(4) However, the effectiveness of PPIA may be moderated by parental anxiety levels. Parents who exhibit high anticipatory anxiety may inadvertently transmit stress to the child.(5) Therefore, preoperative counseling and orientation of parents play an essential role in optimizing outcomes. In the current study, a brief explanation was provided to parents regarding their behavior and supportive presence, contributing to favorable outcomes.

Several studies have compared PPIA with pharmacological anxiolysis. While midazolam is commonly administered for preoperative anxiolysis, its effects include possible paradoxical agitation, respiratory depression, and delayed post-anesthesia recovery.(6) A randomized controlled trial suggested that PPIA combined with distraction or play therapy can be as effective as midazolam in reducing anxiety.(7) Non-pharmacological approaches, especially family-based interventions, are therefore gaining preference in pediatric anesthesia care.

In a meta-analysis by Yip et al., PPIA showed meaningful improvement in child cooperation during anesthesia induction but did not consistently influence postoperative behavioral changes.(8) However, improvements during induction are clinically significant for anesthesiologists because struggling or crying children may cause delayed anesthesia, increased physiological stress responses, and difficulty securing airway access.

Furthermore, cultural and familial practices influence the level of emotional dependency between parents and children. Studies in South Asian populations have shown stronger attachment behaviors in young children, implying that parental absence may cause greater emotional distress than in Western populations.(9) This supports the relevance and applicability of PPIA in the Indian healthcare context, including in tertiary care teaching hospitals such as RIMS Raichur.

The use of structured parental involvement protocols, such as pre-induction orientation, has been shown to enhance the effectiveness of PPIA. Studies suggest that parent education interventions reduce parental anxiety and improve supportive behavior during induction.(10) This emphasizes the need for standardized preparation protocols rather than merely allowing parents inside the operating room.

Overall, the findings of this study align with the widely supported conclusion that parental presence during anesthesia induction can reduce preoperative anxiety and improve cooperation in pediatric patients. Incorporating PPIA as part of routine perioperative care can enhance patient experience, promote emotional well-being, and support family-centered healthcare.

CONCLUSION

Parental presence during anesthesia induction is an effective, low-cost, and non-pharmacological method of reducing anxiety in pediatric surgical patients. It should be encouraged as part of routine perioperative care wherever feasible.

REFERENCES

1. Davidson AJ. Perioperative anxiety in children: A review. *Paediatr Anaesth*. 2016;26(7):627–635.
2. Bevan JC, et al. Preoperative anxiety and postoperative behavior in children. *Anesth Analg*. 1990;71(6):775–781.
3. Bowlby J. *Attachment and Loss*. 2nd ed. New York: Basic Books; 1982.
4. Kain ZN, et al. Parental presence during induction of anesthesia. *Anesthesiology*. 1998;89(5):1147–1156.
5. Chundamala J, Wright JG, Kemp SM. Does PPIA reduce anxiety in children? *Paediatr Anaesth*. 2009;19(1):40–55.
6. Kain ZN, Mayes LC. Midazolam vs parental presence. *J Clin Anesth*. 2000;12(5):403–408.
7. Patel A, Schieble T, et al. Distraction and PPIA vs midazolam. *Anesthesiology*. 2015;123(5):1130–1136.
8. Yip P, Middleton P, Cyna AM. PPIA review. *Cochrane Database Syst Rev*. 2009;(3):CD006469.
9. Varma S, et al. Cultural influences on pediatric anxiety. *Indian J Pediatr*. 2013;80(5):414–420.
10. Kain ZN, Caldwell-Andrews AA. Preoperative parental preparation. *Anesth Analg*. 2004;99(6):1686–1692.