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ORIGINAL ARTICLE

Parental anxiety, knowledge, and satisfaction regarding pediatric sedation and anesthesia for magnetic resonance imaging: a cross-sectional study at King Fahad Hospital, Al-Baha, Saudi Arabia

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ABSTRACT

Background: Parental anxiety surrounding pediatric magnetic resonance imaging (MRI) under sedation or anesthesia is poorly characterized, and its relationship with parental satisfaction is unclear. Understanding these constructs is essential to refining pre-procedural counseling.

Methods: A single-center, cross-sectional survey was conducted among parents or guardians of pediatric patients (aged < 18 years) who underwent MRI requiring sedation or general anesthesia. Of the 211 questionnaires distributed, 153 were completed (response rate, 72.5%). The investigator-developed questionnaire was pilot-tested for face validity in five parents who were not part of the final sample. On the collected data, internal consistency was good for the six-item anxiety subscale (Cronbach's α = 0.859). Anxiety was measured with the six-item Likert subscale and overall satisfaction with a single five-point item. Mann-Whitney *U*, Kruskal-Wallis, chi-square or Fisher's exact tests, and Spearman correlations were used; no a priori sample-size calculation was performed.

Results: Composite anxiety was moderate to high (mean, 3.22 ± 0.85). Mothers reported higher anxiety than fathers (3.54 ± 0.70 *vs.* 3.08 ± 0.87; $p = 0.002$). Leading drivers were fear of anesthetic risks (56.9%) and the child's young age (49.0%). Most parents (91.5%) did not know the planned anesthetic type, and 29.4% incorrectly believed MRI involves radiation. Satisfaction was high (4.53 ± 0.82; 88.9% satisfied or very satisfied) and was associated, in unadjusted analyses, with being adequately informed (odds ratio [OR], 13.52; $p < 0.001$) and feeling comfortable asking questions (OR, 18.00; $p < 0.001$). Composite anxiety was not correlated with satisfaction ($r_s = 0.004$; $p = 0.965$).

Conclusions: Parental anxiety and satisfaction appear to operate as independent constructs in pediatric MRI sedation. Structured pre-procedural communication and targeted education are needed to close knowledge gaps and reduce anxiety without compromising satisfaction.

Keywords: Parental anxiety, parental satisfaction, pediatric sedation, anesthesia, magnetic resonance imaging, family-centered care.

Introduction

Magnetic resonance imaging (MRI) is a cornerstone of pediatric diagnostic imaging because it provides high-resolution anatomical detail without ionizing radiation [1,2]. The prolonged scan duration, confining bore, and acoustic noise frequently necessitate sedation or general anesthesia to achieve diagnostic-quality immobility [2]. The Pediatric Sedation Research Consortium documented

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approximately109,947 MRI sedations - 66% in children 5 years of age or younger - with adverse airway events in 8.4% of cases [3]. Regulatory bodies have also cautioned about potential neurodevelopmental effects of repeated anesthetic exposure in young children [2,3].

Pediatric procedural sedation also generates substantial parental distress. Between 60% and 75% of parents report clinically significant anxiety before their child's anesthesia [4,5], and this state can transfer to the child and complicate procedural outcomes [6]. Commonly cited drivers include fear of anesthetic risks, the child's young age, limited procedural information, recovery concerns, and worries about neurodevelopmental sequelae [4,5]. In the MRI setting, anxiety is amplified by unfamiliarity with the scanner, examination length, and the requirement that parents remain outside the scan room [1,7].

Maternal anxiety has consistently exceeded paternal anxiety in pediatric surgical and procedural cohorts, a pattern attributed to caregiving roles and sociocultural norms [8-10]. The child's age also moderates parental response, with those of younger children reporting greater anxiety than parents of school-aged children [6,11].

Parental satisfaction is an important quality indicator in family-centered pediatric anesthesia [12,13]. Reported satisfaction with pediatric anesthesia and sedation services is generally high, and the strongest predictors tend to be communication quality, information provision, and opportunities to ask questions [12,14,15]. The relationship between parental anxiety and satisfaction is less clear: some adult studies report a weak inverse association, while others find the two constructs to be independent [16-18].

Parental understanding of pediatric anesthesia remains limited globally. Many parents cannot identify the planned anesthetic type or recall the principal risks, despite signing consent [19-21]. There is often a gap between the information parents wish to receive and the information actually conveyed [22,23]. In the Saudi Arabian context, prior work has examined preoperative anxiety-reduction strategies [24] and parental presence during induction [25], but no study has simultaneously assessed parental anxiety, knowledge, and satisfaction in pediatric MRI sedation. Cultural expectations regarding communication and caregiving in this region may further shape these experiences.

This study aimed to quantify parental anxiety, identify knowledge gaps, measure satisfaction, and examine the anxiety-satisfaction relationship among parents of children undergoing sedation or anesthesia for MRI at a tertiary hospital in Saudi Arabia.

Materials and Methods

Study design and setting

A single-center, cross-sectional observational survey was conducted at a tertiary referral hospital in Saudi Arabia (Institutional identifiers are provided on the title page to maintain blinded review).

Participants

The sampling frame comprised all pediatric patients (aged < 18 years) who underwent MRI requiring sedation or general anesthesia at the study hospital during 2022, 2023, 2024, and 2025. For each eligible child, the accompanying parent or legal guardian (≥18 years) was invited to participate. Patients who underwent MRI without sedation or anesthesia were excluded. Guardians who declined participation, who could not understand the survey language, or who returned incomplete questionnaires were also excluded.

Sampling and data collection

A pragmatic, consecutive-sampling approach was used: self-administered questionnaires were distributed to all eligible guardians who presented during the study period, rather than to a sample derived from an a priori power calculation. Of the 211 distributed questionnaires, 153 were returned fully completed (response rate, 72.5%); only completed questionnaires were analyzed to minimize missing-data bias. No formal sample size or power calculation was performed; the achieved sample reflects all eligible respondents during the enrollment window (see Strengths and limitations).

Questionnaire

The investigator-developed questionnaire was informed by the pediatric perioperative anxiety and satisfaction literature and contained the following domains: demographics; parental knowledge and awareness (prior anesthesia exposure, awareness of anesthetic type, perceived MRI purpose and procedure, perceived monitoring, and comfort asking questions); six anxiety items rated on a 5-point Likert scale (pre-MRI anxiety, anesthesia worry, complication fear, waking concern, worry about the child being alone in the MRI room, and confidence in the medical team); and overall satisfaction on a single 5-point item, together with preferred anesthetic type and anticipated or feared complications. A composite anxiety score was computed as the mean of the six anxiety items, with team confidence reverse-coded; higher scores indicate greater anxiety.

Before the main study, the questionnaire was pilot-tested for face validity with five parents/guardians who were not included in the final sample; they assessed the clarity, simplicity, and comprehensibility of the items, and minor wording adjustments were made accordingly. These pilot responses were not included in the analyzed data, and the questionnaire was not formally validated against an established instrument.

Internal consistency (reliability) was assessed using Cronbach's a computed on the actual study data. Domain-specific values were as follows: awareness of anesthesia and sedation, $\alpha = 0.502$; awareness of possible complications, $\alpha = 0.726$; parental anxiety (six items), $\alpha = 0.859$; and satisfaction and communication, $\alpha = 0.606$.

Ethics

The study was conducted in accordance with the Declaration of Helsinki and was approved by the

Table 1. *Demographic characteristics of participants (N = 153).*

Variable	*n*	%
Guardian relationship		
Father	106	69.3
Mother	47	30.7
Guardian age, years		
20-29	8	5.2
30-39	71	46.4
40-49	65	42.5
≥50	9	5.9
Child age		
<1 year	15	9.8
1-5 years	91	59.5
6-10 years	40	26.1
>10 years	7	4.6
Educational level		
Primary	12	7.8
Secondary	51	33.3
University	90	58.8

Institutional Review Board (ethical approval details on title page). Written informed consent was obtained from all participants; participation was voluntary, and data were kept confidential.

Statistical analysis

Data were cleaned in Microsoft Excel (Microsoft Corp., Redmond, WA) and analyzed in SAS (version 9.4; SAS Institute Inc., Cary, NC). Categorical variables were summarized as frequencies and percentages and continuous variables as mean ± SD. Likert items were treated as ordinal. Two-group comparisons used the Mann-Whitney *U* test; comparisons across >2 groups used the Kruskal-Wallis test with Dunn's post-hoc test and Bonferroni correction. Associations between categorical variables were tested with the chi-square test, or Fisher's exact test when expected counts were below five, and unadjusted odds ratios (OR) were calculated where cell counts permitted. Spearman's rank-correlation coefficient (r_s) examined associations between anxiety items and overall satisfaction. Multivariable logistic regression was not performed (see Strengths and limitations). All tests were two-tailed, and $p < 0.05$ was considered statistically significant.

Results

Participant characteristics

Of the 211 distributed questionnaires, 153 were returned fully completed (response rate 72.5%) and analyzed. Most respondents were fathers (*n* = 106; 69.3%); mothers accounted for 47 (30.7%). Guardians aged 30-39 years (*n* = 71; 46.4%) and 40-49 years (*n* = 65; 42.5%) predominated. Most children were 1-5 years of age (*n* = 91; 59.5%), and 58.8% of guardians (*n* = 90) had a university education (Table 1).

Table 2. *Parental knowledge and awareness regarding MRI and anesthesia (N = 153).*

Item	*n*	%
Knowledge and awareness		
Concerned about the MRI itself (yes)	78	51.0
Prior anesthesia/sedation in child (yes)	79	51.6
Aware of planned anesthetic type (yes)	13	8.5
Reassured about monitoring/support (yes)	140	91.5
Well-informed by medical team (yes)	130	85.0
Comfortable asking questions (yes)	143	93.5
Perceived purpose of MRI a		
To diagnose a specific condition	81	52.9
To check the brain or spine	64	41.8
To follow up on a previous issue	46	30.1
Knowledge about the MRI procedure		
Child must stay completely still	88	57.5
Child goes inside a tube-shaped machine	81	52.9
Machine makes loud noises	54	35.3
Child receives radiation b	45	29.4
Not sure	27	17.6

a Multi-select item; percentages do not sum to 100%. b Incorrect belief about MRI.

Parental knowledge and awareness

Approximately half of parents (*n* = 78; 51.0%) reported concern about the MRI itself, and 51.6% (*n* = 79) reported that their child had previously received anesthesia or sedation. Notably, 91.5% (*n* = 140) did not know the specific anesthetic type planned for their child, although 91.5% felt reassured about monitoring and 85.0% felt well-informed by the medical team. The most commonly perceived purposes of MRI were diagnosis of a specific condition (52.9%) and evaluation of the brain or spine (41.8%). Misconceptions were also evident: 29.4% (*n* = 45) incorrectly believed MRI involves radiation, and 17.6% (*n* = 27) reported not knowing what happens during the procedure (Table 2).

Parental anxiety levels

Pre-MRI anxiety was the most strongly endorsed item (mean, 3.67 ± 1.36; 69.2% agreed or strongly agreed), followed by concern about waking from sedation (3.58 ± 1.25), anesthesia worry (3.51 ± 1.35), fear of complications (3.49 ± 1.30), and worry about the child being alone in the MRI room (3.46 ± 1.40). Confidence in the medical team was high (4.38 ± 0.80; 91.5% agreed or strongly agreed). The composite anxiety score was 3.22 ± 0.85 (median, 3.50), indicating moderate-to-high anxiety. Internal consistency of the six-item anxiety scale, computed on the study data, was good (Cronbach's $\alpha = 0.859$) (Table 3).

Drivers of anxiety and anticipated complications

The leading self-reported drivers of anxiety were fear of anesthesia or sedation risks (56.9%) and the

Table 3. *Parental anxiety: Likert scale items (N = 153).*

Item	Mean	SD	SD	D (%)	*N* (%)	A (%)	SA (%)
Felt anxious before the MRI	3.67	1.36	11.8	12.4	6.5	35.9	33.3
More worried about anesthesia	3.51	1.35	9.2	20.9	9.2	31.4	29.4
Afraid of complications	3.49	1.30	9.8	18.3	9.2	38.6	24.2
Concerned about waking up	3.58	1.25	7.2	18.3	9.2	39.9	25.5
Worried child alone in MRI	3.46	1.40	11.8	21.6	3.3	35.9	27.5
Confident in the medical team	4.38	0.80	1.3	2.6	4.6	39.9	51.6
Composite anxiety score a	3.22	0.85	–	–	–	–	–

SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree. a Mean of six items with team confidence reverse-coded (Cronbach's α = 0.859); higher scores indicate greater anxiety.

Table 4. *Self-reported reasons for parental anxiety (multi-select; N = 153).*

Reason	*n*	%
Fear of anesthesia/sedation risks	87	56.9
Child's young age	75	49.0
Fear of abnormal MRI results	51	33.3
Fear of the child being alone in the MRI room	51	33.3
Lack of information about the procedure	41	26.8
Long waiting time or delay	27	17.6
Child's previous medical conditions	20	13.1
Worry about behavior after sedation	19	12.4
Noise or discomfort during MRI	14	9.2

Percentages do not sum to 100%.

Table 5. *Expected and most feared complications of sedation or anesthesia (N = 153).*

Complication	Expected *n*	Expected %	Feared *n*	Feared %
Delayed waking	78	51.0	68	44.4
Nausea and vomiting	69	45.1	24	15.7
Breathing difficulties	44	28.8	40	26.1
Heart-rate changes	30	19.6	34	22.2
Confusion/behavioral changes	32	20.9	21	13.7
Blood pressure drop	21	13.7	13	8.5
Allergic reaction	–	–	14	9.2
None	31	20.3	20	13.1

Multi-select item; percentages do not sum to 100%. – = not assessed in this category.

child's young age (49.0%). One in three parents feared abnormal MRI results (33.3%) or worried about the child being unaccompanied in the scanner (33.3%). Insufficient procedural information was cited by 26.8% (Table 4).

Delayed waking was the most commonly anticipated complication (51.0%) and the most feared (44.4%). Nausea and vomiting were expected by 45.1% but feared by only 15.7%. Breathing difficulties were expected (28.8%) and feared (26.1%) in comparable proportions, while heart-rate changes were feared by 22.2% despite being expected by only 19.6% (Table 5).

Overall satisfaction

Overall satisfaction was high (mean, 4.53 ± 0.82): 68.6% (n = 105) were very satisfied, and 20.3% (n = 31) were satisfied, while only 4.0% (n = 6) were dissatisfied or very dissatisfied. Among parents expressing a preference (n = 122), general anesthesia was considered safer than sedation by 56.6% (n = 69).

Inferential analyses

Mothers had higher composite anxiety than fathers (3.54 ± 0.70 *vs.* 3.08 ± 0.87; U = 1,708.0; p = 0.002), with significantly higher scores on four of the five anxiety items (pre-MRI anxiety; p = 0.005; complication fear, p = 0.014; waking concern, p = 0.029; alone-in-MRI worry, p = 0.027). Anesthesia worry and team confidence did not differ between mothers and fathers, and overall satisfaction was similar (4.70 ± 0.59 *vs.* 4.45 ± 0.90; p = 0.126) (Table 6).

By child age, pre-MRI anxiety (Kruskal-Wallis H = 8.76; p = 0.033), complication fear (H = 8.28; p = 0.041), and waking concern (H = 8.27; p = 0.041) differed significantly; the composite anxiety score showed a borderline trend (H = 7.79; p = 0.051). Parents of children aged 1-5 years reported significantly higher pre-MRI anxiety than parents of children aged 6-10 years (3.80 *vs.* 3.12; p = 0.015). Guardian age (H = 2.31; p = 0.512) and educational level (H = 0.33; p = 0.848) were not significantly associated with composite anxiety. Parents who were concerned about the MRI itself had higher composite anxiety than those who were not (3.53 ± 0.66 *vs.* 2.90 ± 0.91; p < 0.001), whereas prior anesthesia exposure, awareness of anesthetic type, perceived information, and comfort asking questions were not associated with composite anxiety (all p > 0.05).

Satisfaction was most strongly associated with being well-informed by the medical team (4.68 ± 0.63 *vs.* 3.70 ± 1.22; p < 0.001) and feeling comfortable asking questions (4.62 ± 0.67 *vs.* 3.20 ± 1.48; p < 0.001). On Fisher's exact test, dichotomized satisfaction (satisfied or very satisfied *vs.* other) was strongly associated, in unadjusted analyses, with being well-informed (OR, 13.52; p < 0.001) and with comfort asking questions (OR, 18.00; p < 0.001) (Table 7). Because these odds ratios are unadjusted and were derived from 2 × 2 tables, and because no multivariable model was fitted, they should

Table 6. *Anxiety and satisfaction scores by guardian relationship: Mann-Whitney U test.*

Item	Father (*n* = 106), Mean ± SD	Mother (*n* = 47), Mean ± SD	U	*p*
Pre-MRI anxiety	3.44 ± 1.44	4.17 ± 1.01	1,815.0	0.005 *
Anesthesia worry	3.42 ± 1.34	3.72 ± 1.35	2,158.0	0.173
Complication fear	3.31 ± 1.35	3.89 ± 1.09	1,892.0	0.014 *
Waking concern	3.42 ± 1.33	3.96 ± 0.95	1,963.0	0.029 *
Alone-in-MRI worry	3.27 ± 1.44	3.87 ± 1.19	1,952.0	0.027 *
Team confidence	4.39 ± 0.86	4.36 ± 0.67	2,679.5	0.406
Composite anxiety a	3.08 ± 0.87	3.54 ± 0.70	1,708.0	0.002 *
Overall satisfaction	4.45 ± 0.90	4.70 ± 0.59	2,174.0	0.126

*Statistically significant at $p < 0.05$. a Mean of six items with team confidence reverse-coded.

Table 7. *Unadjusted associations with composite parental anxiety and overall satisfaction.*

Predictor	Outcome	Subgroup (*n*)	Mean ± SD	Test	*p* (OR)
Concerned about the MRI itself	Composite anxiety	Yes (78) *vs.* No (75)	3.53 ± 0.66 *vs.* 2.90 ± 0.91	Mann–Whitney *U*	<0.001 *
Prior anesthesia/sedation	Composite anxiety	Yes (79) *vs.* No (74)	3.27 ± 0.81 *vs.* 3.16 ± 0.89	Mann–Whitney *U*	0.370
Aware of anesthetic type	Composite anxiety	Yes (13) *vs.* No (140)	2.97 ± 0.94 *vs.* 3.24 ± 0.84	Mann–Whitney *U*	0.333
Well-informed by team	Overall satisfaction	Yes (130) *vs.* No (23)	4.68 ± 0.63 *vs.* 3.70 ± 1.22	Mann–Whitney *U*	<0.001 *
Comfortable asking questions	Overall satisfaction	Yes (143) *vs.* No (10)	4.62 ± 0.67 *vs.* 3.20 ± 1.48	Mann–Whitney *U*	<0.001 *
Well-informed × satisfied a	Satisfaction (dichotomized)	—	—	Fisher's exact	<0.001 * (OR, 13.52)
Comfortable asking × satisfied a	Satisfaction (dichotomized)	—	—	Fisher's exact	<0.001 * (OR, 18.00)
Guardian relationship × satisfied	Satisfaction (dichotomized)	—	—	Chi-square	0.337
Education level × satisfied	Satisfaction (dichotomized)	—	—	Chi-square	0.578

*Statistically significant at $p < 0.05$. a Satisfaction dichotomized as satisfied or very satisfied *vs.* all others. Odds ratios are unadjusted and derived from 2 × 2 Fisher's exact analyses.

be interpreted as associations rather than independent predictors. Satisfaction did not vary significantly by guardian age, child age, educational level, prior anesthesia, awareness of anesthetic type, or guardian relationship (all $p > 0.05$).

Spearman correlations among the five anxiety items were positive and moderate to strong (r_s 0.32-0.65; all $p < 0.001$), with the strongest correlation between complication fear and waking concern ($r_s = 0.646$; $p < 0.001$). Confidence in the medical team was uncorrelated with the other anxiety items but was the only variable positively correlated with overall satisfaction ($r_s = 0.175$; $p = 0.030$). Composite anxiety was not correlated with overall satisfaction ($r_s = 0.004$; $p = 0.965$), indicating that the two constructs operate independently in this cohort (Figure 1).

Discussion

To our knowledge, this is the first study from this region of Saudi Arabia to assess parental anxiety, knowledge, and satisfaction concurrently in pediatric MRI under sedation or anesthesia. Three findings stand out. Composite anxiety was moderate to high (3.22 ± 0.85) and was greatest among mothers and parents of younger children, driven chiefly by fear of anesthetic risk (56.9%) and the child's young age (49.0%). Parents showed a marked knowledge gap: 91.5% did not know the planned anesthetic type and 29.4% incorrectly believed MRI involves radiation, even though most felt well-informed. Finally, anxiety and satisfaction were statistically independent (rs = 0.004; $p = 0.965$), with satisfaction dominated by communication-related factors.

These findings align with existing evidence. Our composite anxiety lies in the upper range reported internationally [1,4]; Ayenew et al. [4] found a 74.2% prevalence of significant preoperative parental anxiety, and Güzel et al. [1] documented elevated anxiety specifically in pediatric MRI under anesthesia. The leading driver - fear of anesthetic risk - mirrors the Iranian cohort of Souri et al. [7], in which 75.5% of parents perceived anesthesia as harmful, a concern that is not unfounded given an 8.4% rate of airway-related adverse events in pediatric MRI sedation [3]. The higher maternal anxiety we observed is consistent with Pomicino et al. [8] and Afzal et al. [9] and with the maternal role as an independent predictor of preoperative anxiety [4]. Our knowledge gap echoes Mathew et al., where only 5% of parents knew the anesthetic type [19], and Tait et al. [20], where fewer than one-third recalled being informed of risks; parents also tend to overestimate their understanding [21,26]. High overall satisfaction (88.9%) matches the 85%-95% reported elsewhere [14,15,27], and the dominant predictors -

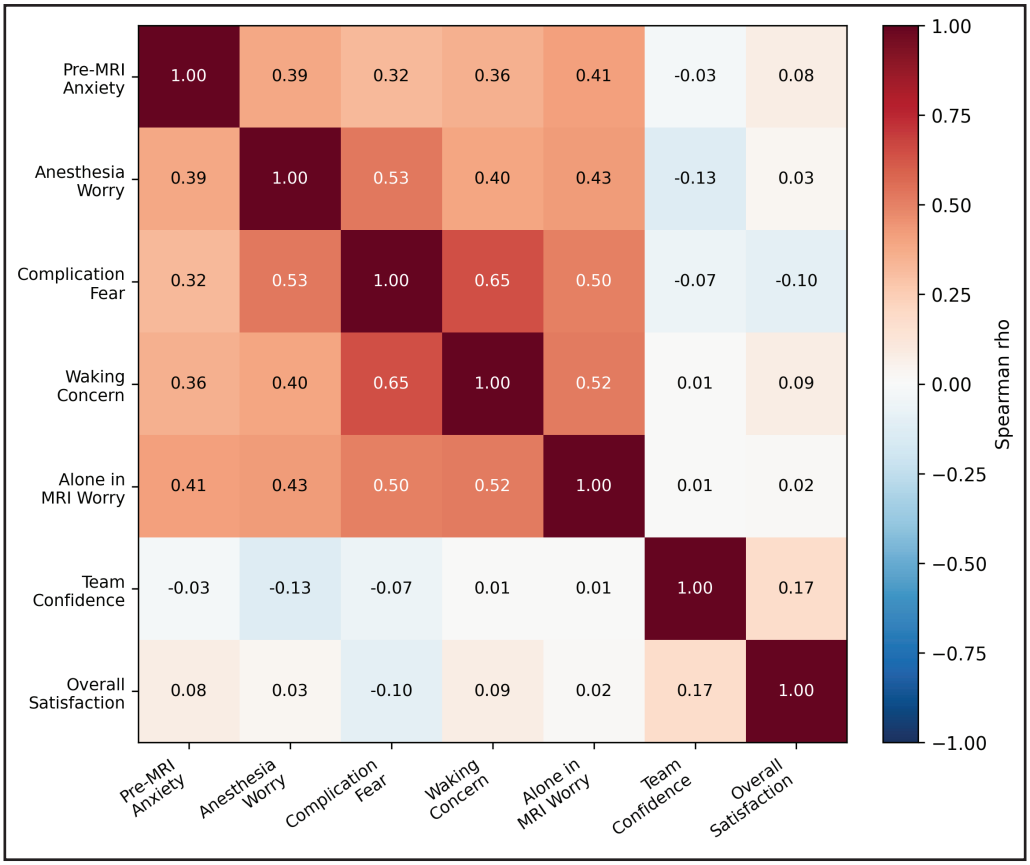

Figure 1. *Spearman rank-correlation matrix of anxiety items, team confidence, and overall satisfaction (N = 153). Composite anxiety was not correlated with overall satisfaction (r_s = 0.004; p = 0.965).*

being well-informed and feeling comfortable asking questions - reinforce that communication drives satisfaction more than procedural factors [12,14].

The most novel finding is the absence of any meaningful correlation between anxiety and satisfaction. This independence is consistent with Gu et al. [17] and Van Ark et al. [18] and contrasts with the inverse or domain-specific associations reported by Bello et al. [16] and Admass et al. [27]. Clinically, the implication is twofold: reducing anxiety remains an important standalone goal because of its effect on parental experience and procedural cooperation, yet satisfaction can be sustained even among highly anxious parents when the team communicates effectively and earns trust [28]. High-quality communication may thus buffer the experiential burden of elevated maternal anxiety, since satisfaction did not differ between mothers and fathers despite higher maternal anxiety.

This study has several strengths and limitations. Strengths include the concurrent assessment of three constructs, appropriate non-parametric statistics, and region-specific data from an under-studied population. Limitations should temper interpretation. The cross-sectional, single-center design with pragmatic, consecutive (convenience) sampling limits causal inference and generalizability. No a priori sample-size or power calculation was performed, so the study may have been underpowered for some subgroup comparisons, and the overrepresentation of fathers (69.3%) further constrains power for maternal subgroups. The questionnaire was investigator-developed and underwent only pilot testing for face validity in five parents - rather than formal validation against an established instrument such as the State-Trait Anxiety Inventory - so its psychometric properties are limited; internal consistency was modest for some domains (awareness of anesthesia and sedation, $\alpha = 0.502$; satisfaction and communication, $\alpha = 0.606$). Overall satisfaction was measured with a single item, which cannot capture its multidimensional structure. Finally, the reported odds ratios are unadjusted associations derived from 2 × 2 Fisher's exact analyses; because no multivariable logistic regression was performed - precluded in part by the small number of dissatisfied respondents - these variables cannot be interpreted as independent predictors.

Future work should include multicenter, prospective studies using validated instruments such as the Pediatric Anesthesia Parent Satisfaction survey, with longitudinal follow-up and multivariable modeling. Randomized trials of structured pre-procedural education - multimedia materials, simulated walkthroughs, or teach-back during consent - should test whether such interventions reduce anxiety, close knowledge gaps, and preserve satisfaction, and qualitative research could clarify culturally specific drivers in Saudi and broader Middle Eastern populations.

Conclusion

Parents of children undergoing MRI with sedation or anesthesia at this tertiary center experienced moderate-to-high anxiety - greatest among mothers and parents of younger children - alongside substantial gaps in knowledge of the planned anesthetic and the MRI modality. Satisfaction was high and was driven chiefly by communication quality rather than demographic or clinical factors, and anxiety and satisfaction behaved as independent constructs. Structured pre-procedural communication, validated comprehension checks, and targeted education - particularly for mothers and parents of younger children - are needed to reduce anxiety and close knowledge gaps while sustaining the high satisfaction already observed.

List of Abbreviations

MRI	magnetic resonance imaging
OR	odds ratio
PAPS	Pediatric Anesthesia Parent Satisfaction
rs	Spearman rank-correlation coefficient
STAI	State-Trait Anxiety Inventory

Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this article.

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None.

Consent to participate

Written informed consent was obtained from all participants prior to data collection.

Consent for publication

Not applicable (no individual identifying data are presented).

Ethical approval

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Scientific and Research Committee, King Fahad Hospital, Al-Baha, Saudi Arabia, via reference/letter number [IRB-KFH14052025/7] dated [14/05/2025].

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Supplementary content (If any) is available online.

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