



Impact of Audiovisual Aid on Parental Anxiety before General Anesthesia

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BACKGROUND

Parental anxiety before pediatric dental procedures under general anesthesia (GETA) can intensify a child's distress, reduce cooperation during induction, and complicate postoperative recovery.

Standard preoperative education often relies on verbal or written instructions, which are difficult to retain in high-stress situations. Evidence suggests audiovisual interventions improve comprehension and reduce anxiety.

No standardized audiovisual pre- and post-operative protocols currently exist for Puerto Rican families whose children receive dental treatment under GETA.

STUDY AIMS

AIM 1

Design and implement an audiovisual aid demonstrating the full process from pre-operative appointment through surgery day (≤5 min Spanish-language video, created in Canva by Dr. Rodríguez Rolón).

AIM 2

Compare parental anxiety levels (APAIS score) between parents receiving the audiovisual aid versus written instructions for GETA oral rehabilitation.

BASELINE COMPARABILITY

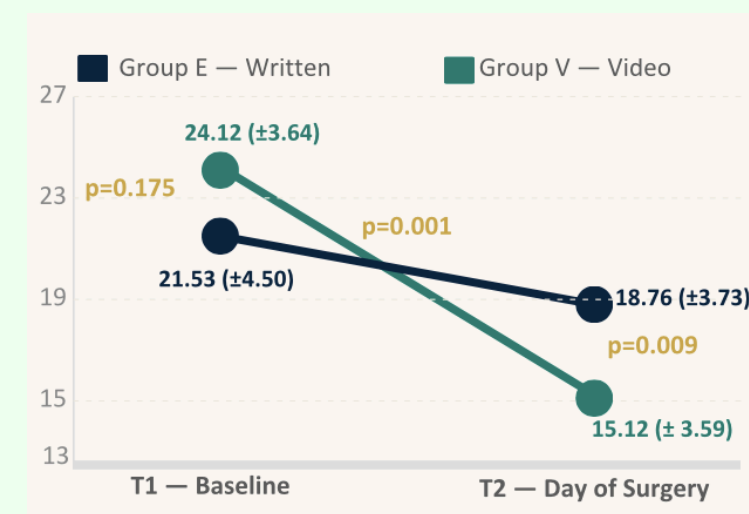
Variable	Group E (written)	Group V (video)	p-value
Patient age, mean (± SD)	9.00 (4.00)	6.53 (3.84)	0.053
Caregiver age, mean (± SD)	34.88 (3.84)	34.76 (6.40)	0.403
Patient sex, female, n (%)	7 (41.18%)	10 (58.82%)	0.304
Caregiver sex, female, n (%)	12 (70.59%)	15 (88.24%)	0.398
Caregiver Educational Level, n (%)			0.456
High School	4 (23.53%)	3 (17.65%)	
Associate's Degree	7 (41.18%)	4 (23.53%)	
Bachelor's Degree +	6 (35.29%)	10 (58.82%)	
Health status, ASA II , n (%)	10 (58.82%)	7 (41.18%)	0.304

P-values were obtained from Mann-Whitney tests for age, chi-square test for patients' sex and health status, and Fisher's exact test for caregiver sex and educational level

PRIMARY & SECONDARY OUTCOME RESULTS

Outcome	Group E (written)	Group V (video)	P-value
APAIS at T1 (baseline), mean (± SD)	21.53 (±4.50)	24.12 (±3.64)	0.175
APAIS at T2 (day of surgery), mean (± SD)	18.76 (±3.73)	15.12 (± 3.59)	0.009
Change in APAIS score (T1-T2), mean (± SD)	2.76 (±4.71)	9.00 (±4.72)	0.001
High anxiety T1 (APAIS >11), %	94.10%	100%	1
High anxiety T2 (APAIS >11), %	100%	88.24%	0.485

P-values were obtained for Mann-Whitney test for continuous and Fisher's chi-square test for categorical variables



There was a significantly reduction in APAIS scores among video group and also compared to written instruction group.

★ KEY FINDINGS

- The video group (V) reduced APAIS scores by an average of **9.0 (±4.72)** points (p-value for Signed Rank sum test for change between T1 and T2 <0.0001) vs. **2.76 (±4.71)** points in the written group (E) (p-value for change = 0.03), with a difference of **6.23** points (95% CI: 2.94–9.53); p-value for Mann-Whitney test between two groups = **0.001**.
- There was no statistical significant difference between groups in terms of high anxiety (APAIS>11) rates at T1 or T2.

DISCUSSION

This study demonstrates that audiovisual education is more effective than traditional written instructions in reducing parental preoperative anxiety. Similar baseline scores between groups support that this effect is attributable to the intervention. These findings align with existing evidence that structured preoperative education reduces uncertainty and anxiety, with potential benefits for child cooperation and recovery. Limitations include small sample size (n = 34), single-site design, and lack of long-term follow-up.

CONCLUSION

Audiovisual education tools significantly reduced parental anxiety prior to pediatric dental general anesthesia and should be considered as part of standard preoperative preparation protocols.

Both groups were demographically similar at baseline, ruling out confounding by age, sex, education, or patient health status.

Post-intervention APAIS scores also differed significantly (p = 0.009), indicating the video group was less anxious on the day of surgery.

REFERENCES



ACKNOWLEDGEMENT

- Dr. Emilio Agrait Defilló
- First Year Residents 2025-2027
- UPRMSC Dr. Antonio Ortiz Hospital

STUDY DESIGN

RCT RANDOMIZED CONTROLLED TRIAL	34 Participants enrolled	2–18 PATIENT AGE RANGE (YRS)	17+17 VIDEO GROUP VS. WRITTEN GROUP
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Conducted at UPRMSC Dr. Antonio Ortiz Hospital. Recruitment period: November 2025 – May 2026.

METHODS & PARTICIPANT TIMELINE

