

RESULTS CONTINUED

- **Parents are key decision-makers** in managing children's postoperative pain but may hesitate to give opioids due to fear of side effects and addiction.¹
- **Pain perception is subjective and error-prone**,^{2,3} risking over- or undertreatment.
- This study explores factors influencing **real-world, real-time opioid decision-making**, including affect and child subjective opioid effects, with implications for future opioid misuse risk^{4,5} or personalized pain management.
- **Hypothesis:** *Increased negative affect and decreased positive affect in both parent and child will lower opioid-pain relief and helpfulness.*

METHODS



01

Children, aged 7-12, who were prescribed opioids after a routine tonsillectomy, were chosen for this study



02

Child and Parent dyads were measured at baseline and assessed 7 days postoperatively 3x daily



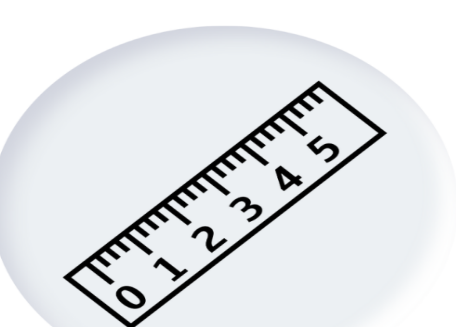
03

Event-based electronic diaries were completed by parents when an opioid was given



Optional

Follow-up diary report was automatically triggered 30 minutes after initial opioid administration



Outcomes

Opioid helpfulness: 1-5 numeric scale
Average opioid-related pain relief: (Pain before opioid - pain after opioid) averaged for all uses

RESULTS

Table 1. Participant Characteristics (N = 82).

Characteristic	Parent	Child
Sex, N (%)		
Male	4 (4.8)	35 (42.7)
Female	78 (95.2)	47 (57.3)
Age		
Mean (SD)	38.5 (6.4)	9.7 (1.7)
Race, N (%)		
Non-Hispanic White	73 (89.0)	61 (74.4)

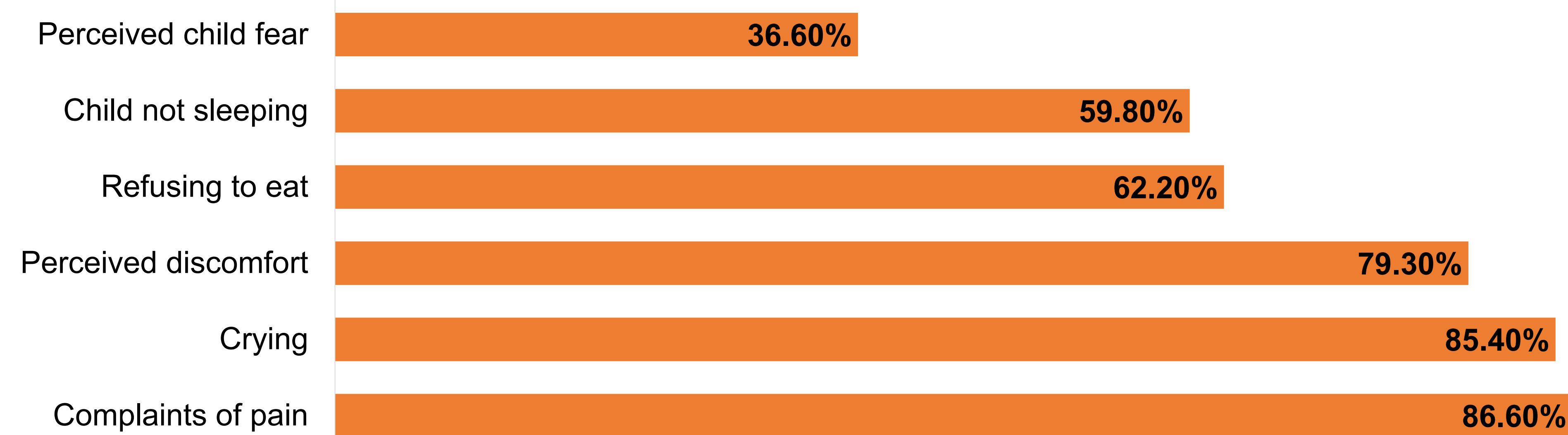
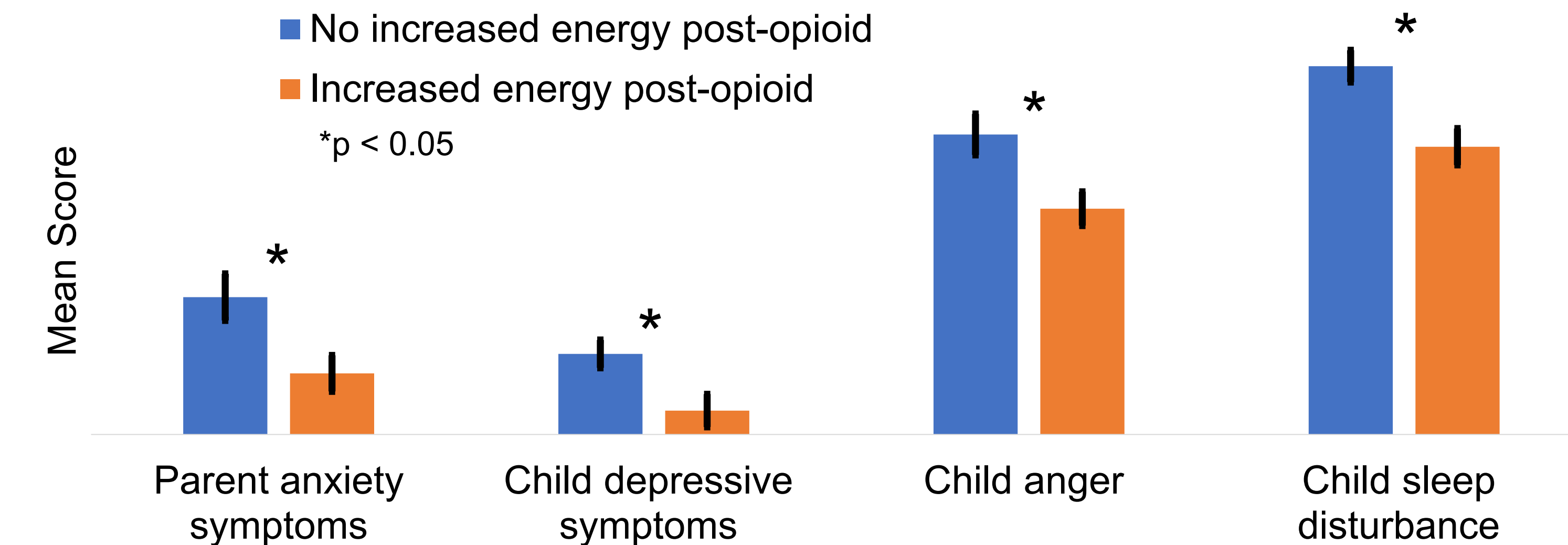


Table 2. *Correlations Between Psychosocial Factors and Opioid-Related Outcomes.* Notable trends are negative association between Parent and Child Negative affect and Average opioid-related pain relief, as well as Opioid helpfulness.

	Child's pain at time of opioid administration	Average opioid-related pain relief	Opioid helpfulness
Control Values			
Child age at surgery	0.27 *	-0.47 **	-0.23
Child pain after opioid	0.41 **	-0.83 **	-0.45 **
Opioid helpfulness	-0.45 **	0.55 **	-
Parent catastrophizing (diary)	0.21	-0.09	-0.05
Parent positive affect (diary)	-0.30 **	-0.08	0.08
Parent negative affect (diary)	0.10	-0.02	0.01
Parent Baseline Negative Affect			
Parent anxiety symptoms	0.28 *	-0.31 *	-0.26 *
Parent protective responses to child pain	0.32 *	-0.38 **	-0.21
Parent fatigue	0.44 **	-0.27 *	-0.11
Child Baseline Negative Affect			
Child anger (PP)	0.33 *	-0.28 *	-0.27 *
Child anxiety (PP)	0.23	-0.20	-0.29 *
Child depressive symptoms	0.09	-0.12	-0.36 **
Child sleep disturbance	0.2	-0.18	-0.27 *

**p < 0.01, *p < 0.05. = positive correlation, = negative correlation, PP = parent-proxy.



DISCUSSION

- Parental opioid decisions were triggered by **child behavioral distress** (e.g., pain, crying, refusal to eat, fear).
- **Higher baseline negative affect** (in both parent and child) predicted **lower opioid-pain relief and helpfulness**.
- In contrast, **lower baseline child negative affect** and **parental anxiety** predicted increased energy post-opioid, suggesting **reward sensitivity**.
- **Limitations:** Possible response bias as more vigilant parents may be more likely to report.
- **Future direction:** Examine the socioeconomic and demographics factors that affect opioid decision-making.

REFERENCES



ACKNOWLEDGEMENTS

We gratefully acknowledge the families who participated in this study and the Pain Research Group for their support throughout this project. This research was conducted as part of the Vanderbilt Anesthesiology Summer Research program led by Dr. Grueter. This project was funded by Dr. Stone's K23 HD103183 grant. Special thanks to Dr. Stone and Dr. Bruehl for their guidance and support throughout the study.