

## BACKGROUND

Sedation is an advanced behavioral guidance technique with several goals in the treatment of the pediatric patient, some of which include modifying patient behavior for safe completion of procedure and minimizing physical discomfort and pain. In addition to successful completion of treatment, sedation is also utilized to control patient anxiety, minimize psychological trauma, and maximize the potential for amnesia.<sup>1</sup> Patient fear and anxiety can manifest itself in the form of uncooperative behavior in the dental setting and avoidance of necessary dental treatment.<sup>2</sup> Previous studies found the use of an oral sedative to be an acceptable form of treatment by parents as well as improving the child's behavior at follow-up visits.<sup>3,4</sup> One study found significantly improved appointment behaviors in patients who received an oral sedative for treatment compared to patients who were treated under general anesthesia.<sup>5</sup> Updated research is necessary to reaffirm the findings in the literature regarding child behavior and dental sedation. It is also imperative to investigate how sedation affects the child's developing psyche as this aspect in pediatric dental care has yet to be explored.

## PURPOSE

The study aims to assess the effect of dental sedation on the child's behavior in the dental setting. The goal of the study is to determine if dental sedation improves patient cooperation and protects their developing psyche at subsequent dental appointments

## METHODS

An observational cross-sectional study was conducted at the Children's Dental Health Clinic at Miller Children's & Women's Hospital and at the Advanced Pediatric Dental Clinic at the Herman Ostrow School of Dentistry. Patients were screened at recall appointments or post-operative appointments within 1 year of a sedation appointment. Patients who are ASA 1 or 2 and who had one form of sedation at the respective clinic were recruited. Along with chart information and sedation notes, the following information was gathered:

- Age at time of sedation work-up, Gender, Ethnicity
- Parent reported Sedation Experience Survey
- Provider Behavior/Temperament Assessment Survey
- Type of Sedation and number of sedation appointments

## RESULTS

Of 19 patient charts surveyed, 57% were male and 43% were female. By ethnicity, 73% were Hispanic and the age range of patients was 3 to 9 years old. Parents and providers of 11 general anesthesia cases and 8 moderate sedation cases were surveyed. Most patients who had either form of sedation did not report any post-operative symptoms. Pain and excessive sleepiness was reported by patients who had general anesthesia while nausea and excessive sleepiness was reported by those who received moderate sedation. Parents of patients who had general anesthesia reported their children showed more confidence in the dental setting after sedation compared to children who had moderate sedation. Parents of patients who received moderate sedation were more likely to report their child's confidence as neutral after sedation. Providers reported that patients who received either form of sedation tended to show improvement in their subsequent dental visit.

## CONCLUSIONS

Most patients who received general anesthesia or moderate sedation did not experience any post-operative symptoms. Parents of patients who were treated under general anesthesia reported their children being more confident in the dental setting than those treated with moderate sedation. Overall providers reported patients had generally improved their dental setting behavior at subsequent visits after sedation. A larger sample size is necessary to obtain more valid results regarding the effect of dental sedation on the child's dental setting behavior. Additionally, survey and observation of the child's behavior at future appointments can be useful to determine the long-term effects of dental sedation on the dental experience.

## REFERENCES:

1. American Academy of Pediatric Dentistry. Behavior guidance for the pediatric dental patient. The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 2024:358-78.
2. Nelson T, Xu Z. Pediatric dental sedation: challenges and opportunities. *Clinical, cosmetic and investigational dentistry*. 2015.
3. Patel M, McTigue DJ, Thikkurissy S, Fields HW. Parental Attitudes Toward Advanced Behavior Guidance Techniques Used in Pediatric Dentistry. *Pediatric dentistry*. 2016;38(1):30-36.
4. Rodrigues VBM, Costa LR, Corrêa de Faria P. Parents' satisfaction with paediatric dental treatment under sedation: A cross-sectional study. *International journal of paediatric dentistry*. 2021;31(3):337-343.
5. Antunes DE, Viana KA, Costa PS, Costa LR. Moderate sedation helps improve future behavior in pediatric dental patients - a prospective study. *Brazilian oral research*. 2016;30(1):1-9.

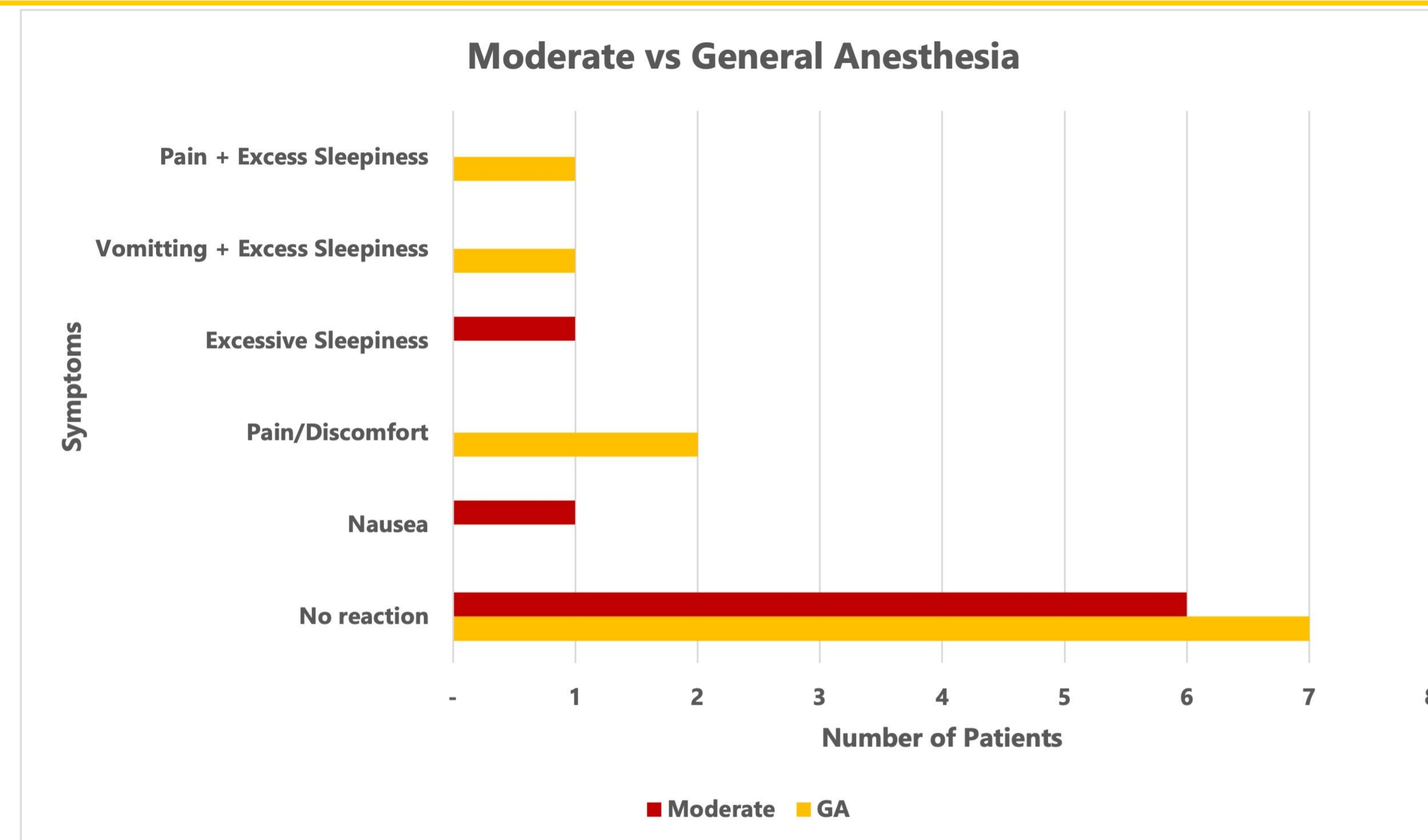


Figure 1. Parent reported events post-sedation. Moderate vs General Anesthesia

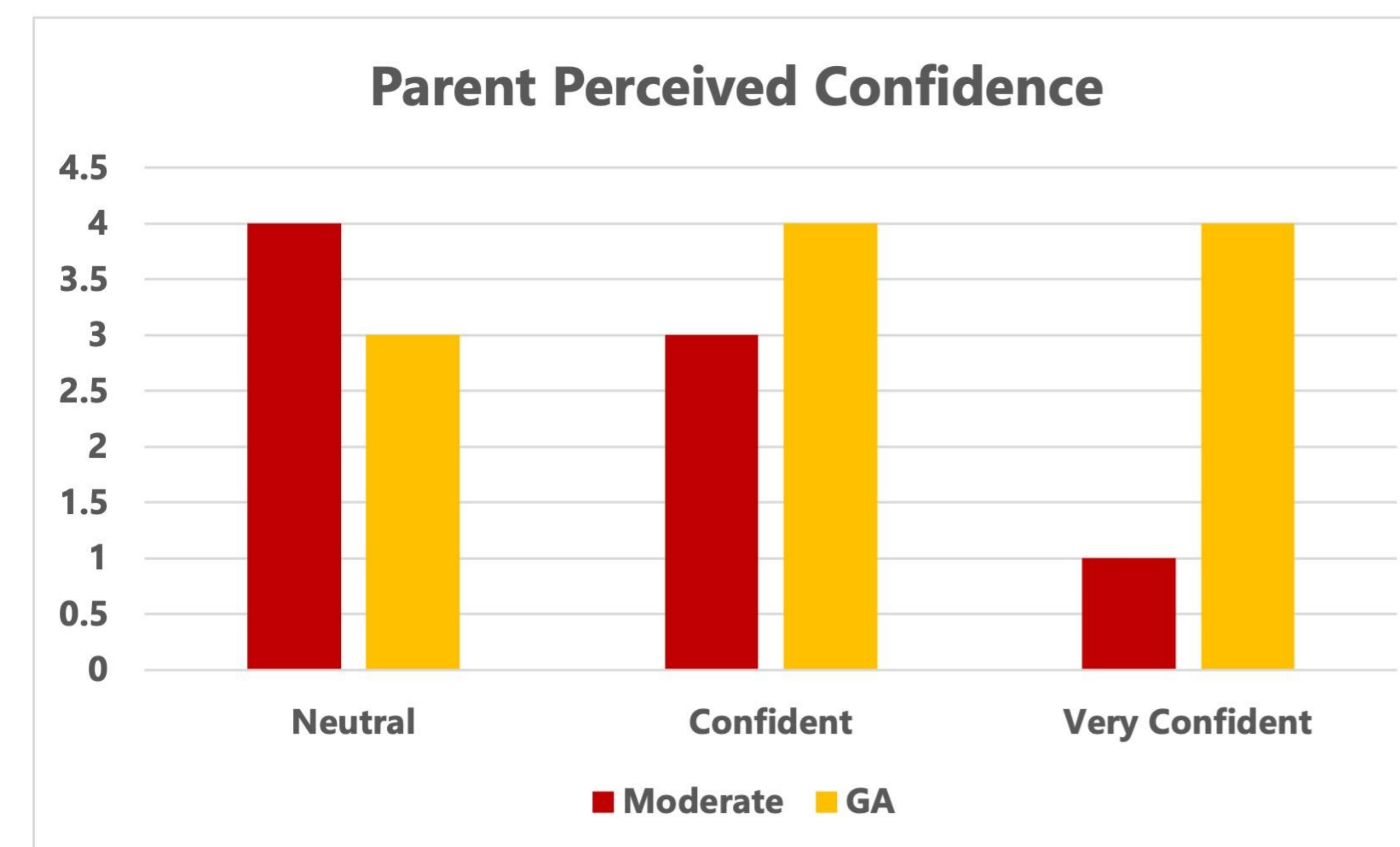


Figure 2. Parent perceived confidence improvement in their child.

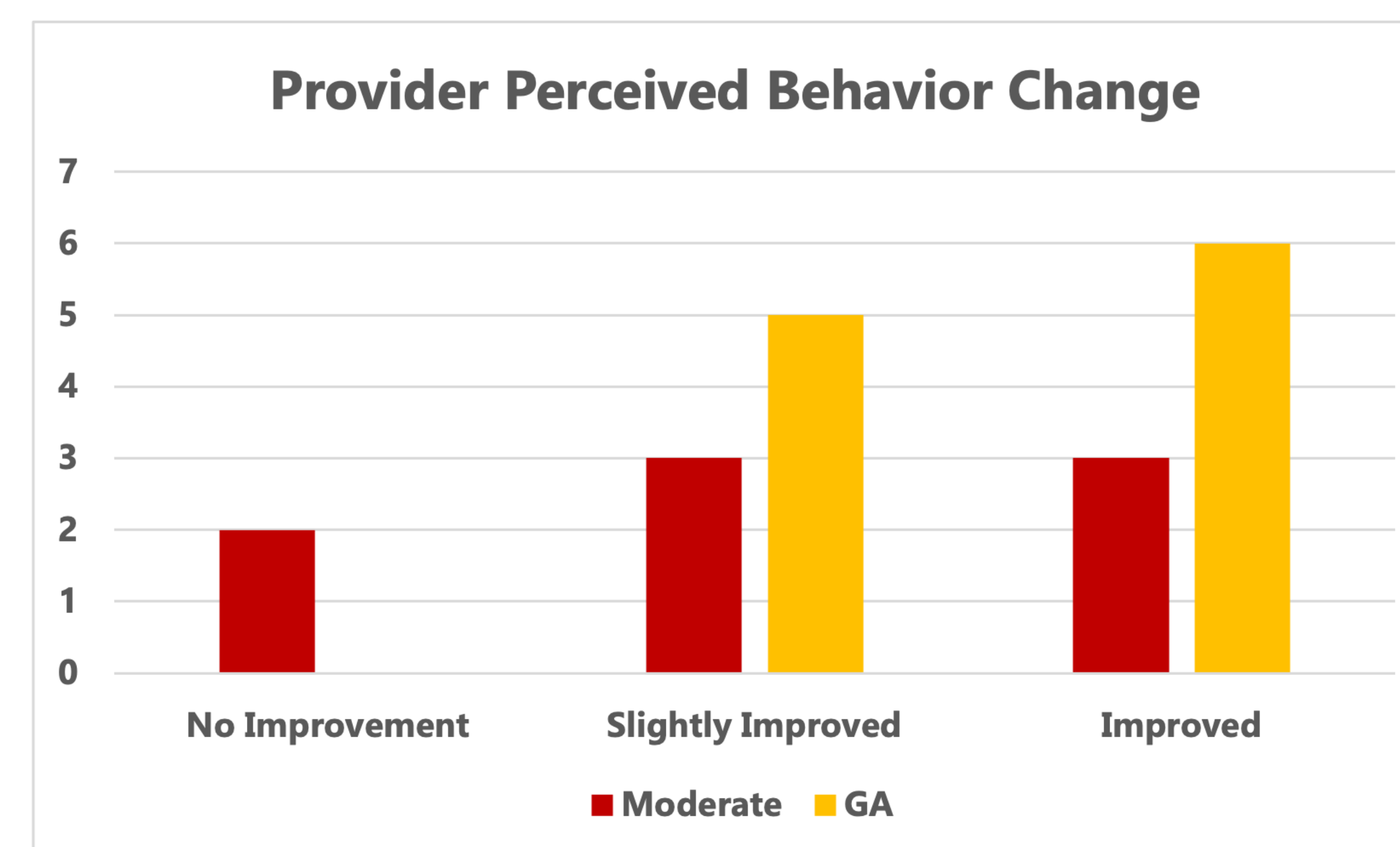


Figure 3. Provider perceived behavior changes.