

Purpose

This cross-sectional study determines the number of quadrants treated in a single visit by pediatric dentists in children aged 6-11. The purpose of this study was to determine if employing basic behavior management techniques will reduce the need for multiple restorative appointments and general anesthesia.

Introduction

The study discusses reducing untreated cavities in children by overcoming challenges in dental care delivery.

- Untreated cavities are a major problem affecting up to 60% of children by age 5.
- Traditional quadrant dentistry can lead to multiple appointments, causing fatigue and increasing infection risk due to the delay in treatment.
- To reduce these issues, multiple quadrants may be treated in one visit by using basic behavior management methods such as nitrous oxide.
- Longer appointments are also recommended as studies haven't shown a link between appointment duration and child behavior.
- Effective communication with children can improve their cooperation during treatment.
- By overcoming these challenges, dentists can improve treatment outcomes and reduce reliance on general anesthesia/sedation in children.

Methods

An anonymous survey with 10 questions was sent out to active pediatric dentist members of the AAPD.

- The questions included demographic information.
- The choices of behavior management techniques employed during restorative of appointments.
- Length of restorative appointments
- Anesthesia types and number of teeth treated during restorative appointments.
- One hundred and fifty surveys were collected and analyzed.

Results

- The most common behavior management technique employed by 94% of participants (n=141) reported for restorative appointments was nitrous oxide inhalation.
- Sixty-three percent of participants (N=94) reported restorative appointments were one hour long.
- 53% (N=80) treated at least two quadrants per appointment.
- Only 29% (N=44) of participants reported using bilateral mandibular blocks with 21% (N=32) of participants report the use of local infiltrations

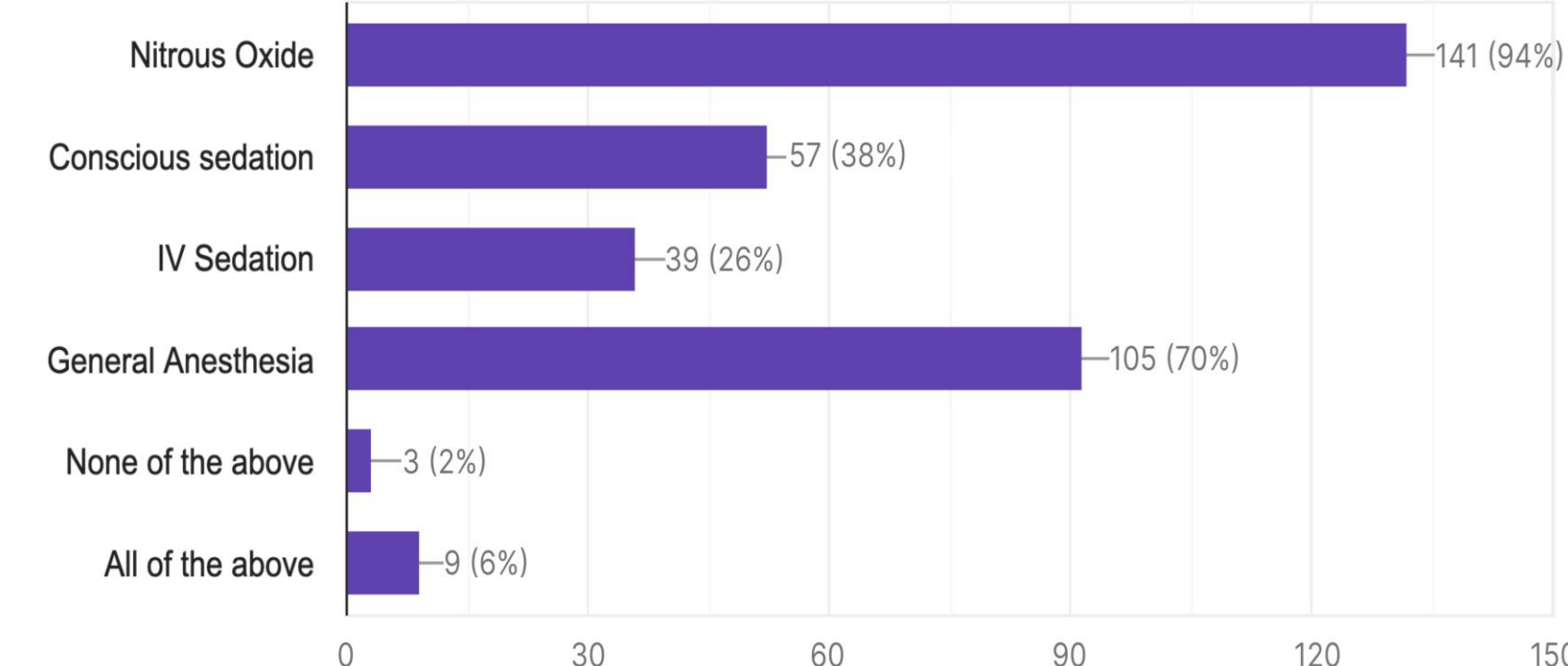


Figure 1. The different behavior management techniques used

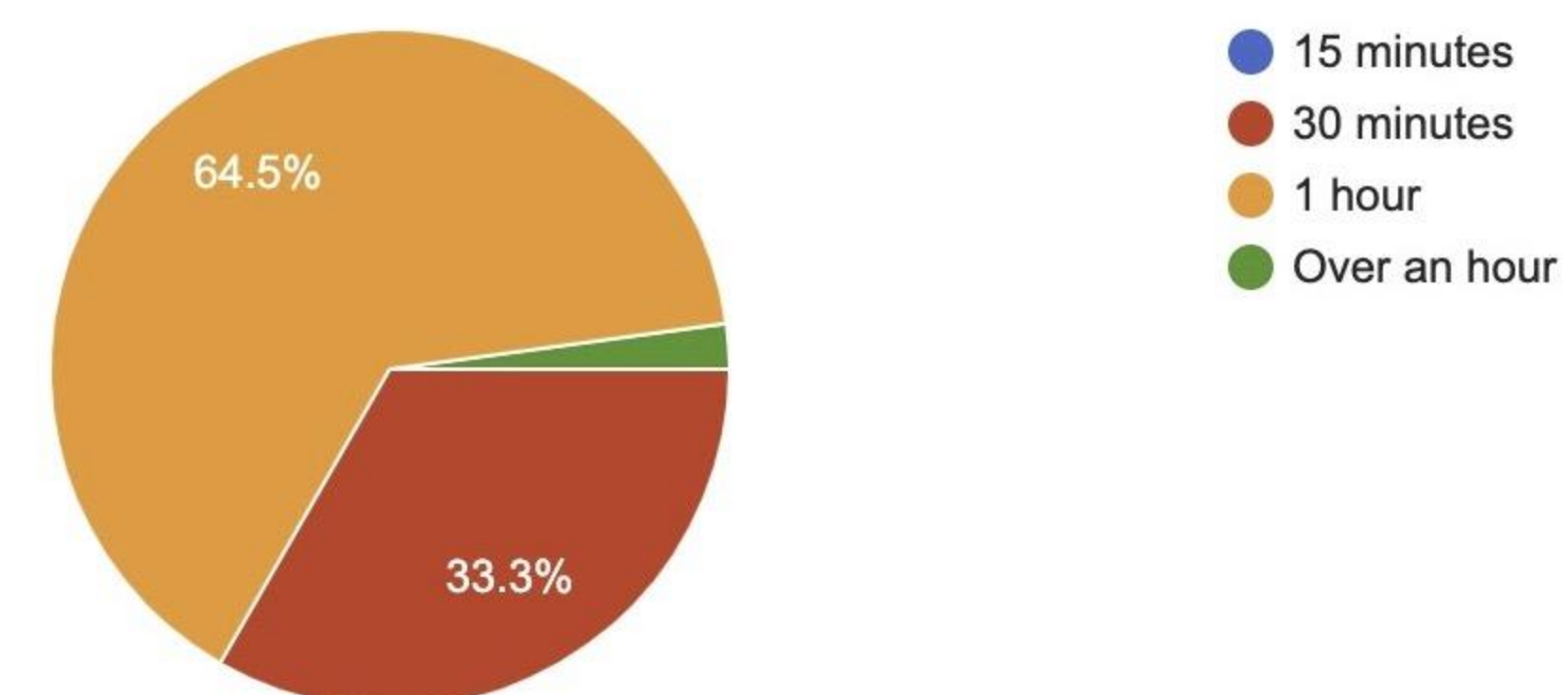


Figure 2. Time in minutes of restorative appointments

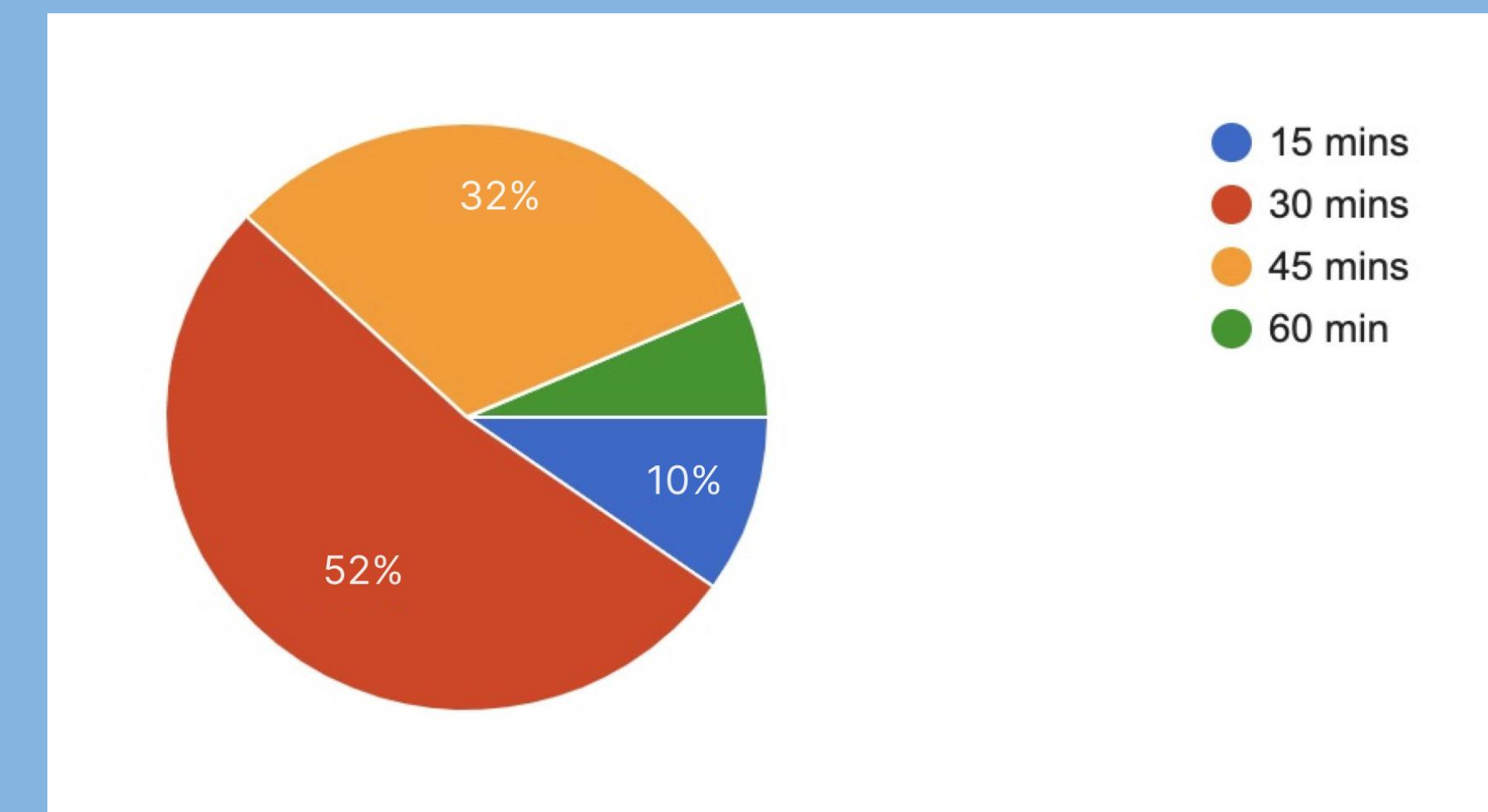


Figure 3. Time in minutes of nitrous oxide operative appointments

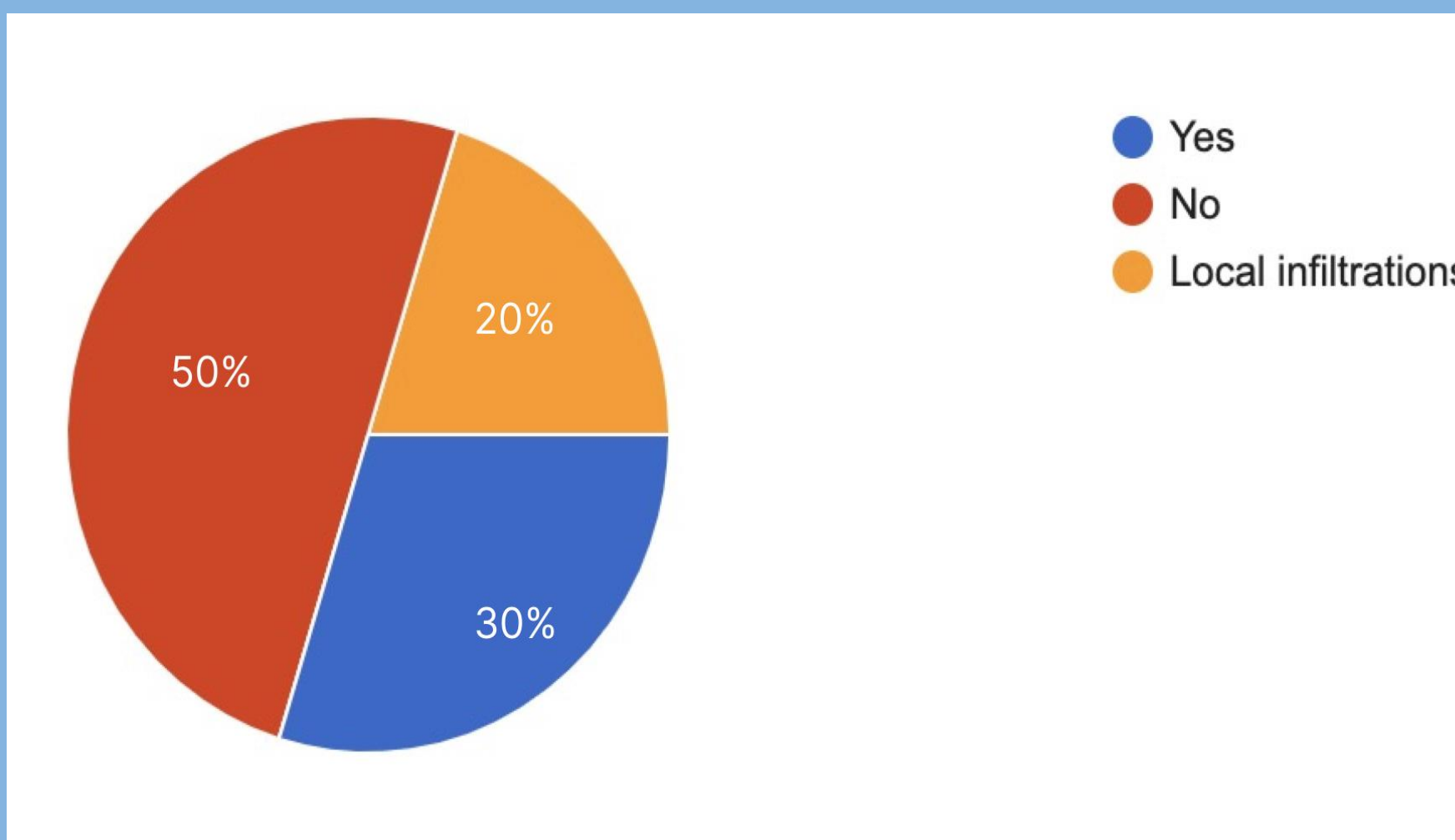


Figure 4. The use of bilateral mandibular blocks

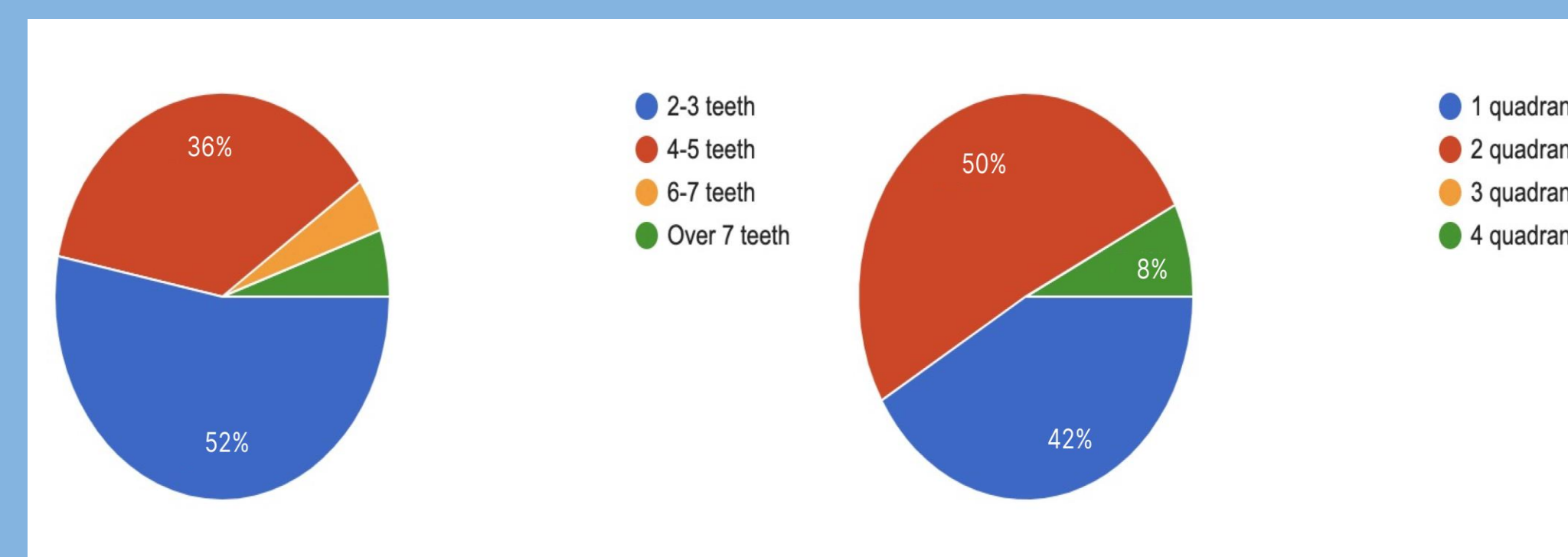


Figure 5. Number of quadrants and teeth treated per visit

Discussion

This study investigated the prevalence of multiple quadrant restorations in a single visit among pediatric dentists treating children aged 6-11. The findings indicate that majority of surveyed pediatric dentists feel comfortable performing multi-quadrant restorative procedures and frequently employ nitrous oxide inhalation as a behavior management technique during these longer appointments. This suggests the possibility of reducing the need for multiple dental visits and potentially decreasing reliance on general anesthesia for young patients.

By consolidating treatment, pediatric dentists may improve efficiency, minimize repeated trauma for the child, and potentially create more positive experiences that foster long-term dental health. This approach aligns with the stated goal of reducing untreated cavities in children.

The preference for nitrous oxide inhalation over more invasive techniques like bilateral mandibular blocks highlights the evolving focus on minimally invasive pain management in pediatric dentistry. Nitrous oxide provides an effective means for reducing anxiety and enhancing comfort during procedures, potentially leading to improved cooperation from the child.

The finding that most surveyed dentists used hour-long appointments supports the idea that appointment length may not correlate directly with challenging child behavior. This has implications for scheduling; practices can consider longer appointments to facilitate more comprehensive treatment.

This study relied on a self-reported survey, which introduces potential for bias. Future research might involve direct observation of pediatric dental appointments to gain a more objective understanding of practices and outcomes related to multiple quadrant restorations. Additionally, this study focused primarily on dentists' perspectives; subsequent investigations should explore parent and patient experiences with this treatment approach.

The results suggest that pediatric dentists are moving toward a model of care that prioritizes efficient, minimally invasive treatment to improve overall oral health outcomes for young children. Further studies evaluating the cost-effectiveness, long-term success rates, and patient/parent satisfaction with multi-quadrant restorations would be valuable. Additionally, research examining effective communication techniques to prepare children and parents for this approach can promote its acceptance and success.

Conclusion

- This study offers insights into the current practices of pediatric dentists, highlighting the growing trend of performing multiple quadrant restorations in single visits with a focus on nitrous oxide for behavior management.
- These findings support a shift towards a patient-centered, efficient model of care with potential benefits for young children's dental health and overall well-being.

References

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