

BACKGROUND

- Oral health is essential for both physical and psychological health.<sup>1</sup>
- Children with special healthcare needs (SHCNs) and/or dental fear/anxiety (DFA) experience poor oral health and oral care challenges at the dentist, leading to oral health disparities.<sup>2</sup>
- Many of these challenges have been linked to sensory over-responsivity.<sup>2,3</sup>
- In recent years, sensory-based interventions in dentistry have become more common, with a sensory-adapted dental environment (SADE) – developed by OTs – now included in the American Academy of Pediatric Dentistry’s Best Practices.<sup>4</sup>
- However, little is known about the familiarity and utilization of these sensory-based strategies in dental practice.

PURPOSE

To examine dental professionals’ knowledge, utilization, and perceived effectiveness of sensory-based strategies during pediatric dental care.

METHODS / RESULTS

Participants

- Dental professionals currently treating children
- Recruited nationally utilizing convenience and snowball sampling
- Participants (n=550) were primarily: female (62%), White (75%), not Hispanic/Latino (88%), pediatric dentists (76%), treating children with SHCNs often/very often (70%), with a mean age of 45 years old

Tool: Sensory-Based Strategies in Dental Care Survey

- Developed by dentists and OTs
- Online survey
  - 46 items presented to all respondents
  - Up to 98 additional items presented as follow-up
- Dichotomous yes/no and Likert-scale based questions

Analysis

- Descriptive statistics using SAS computing package
- n=550 surveys included in analyses

Figure 1 – Familiarity

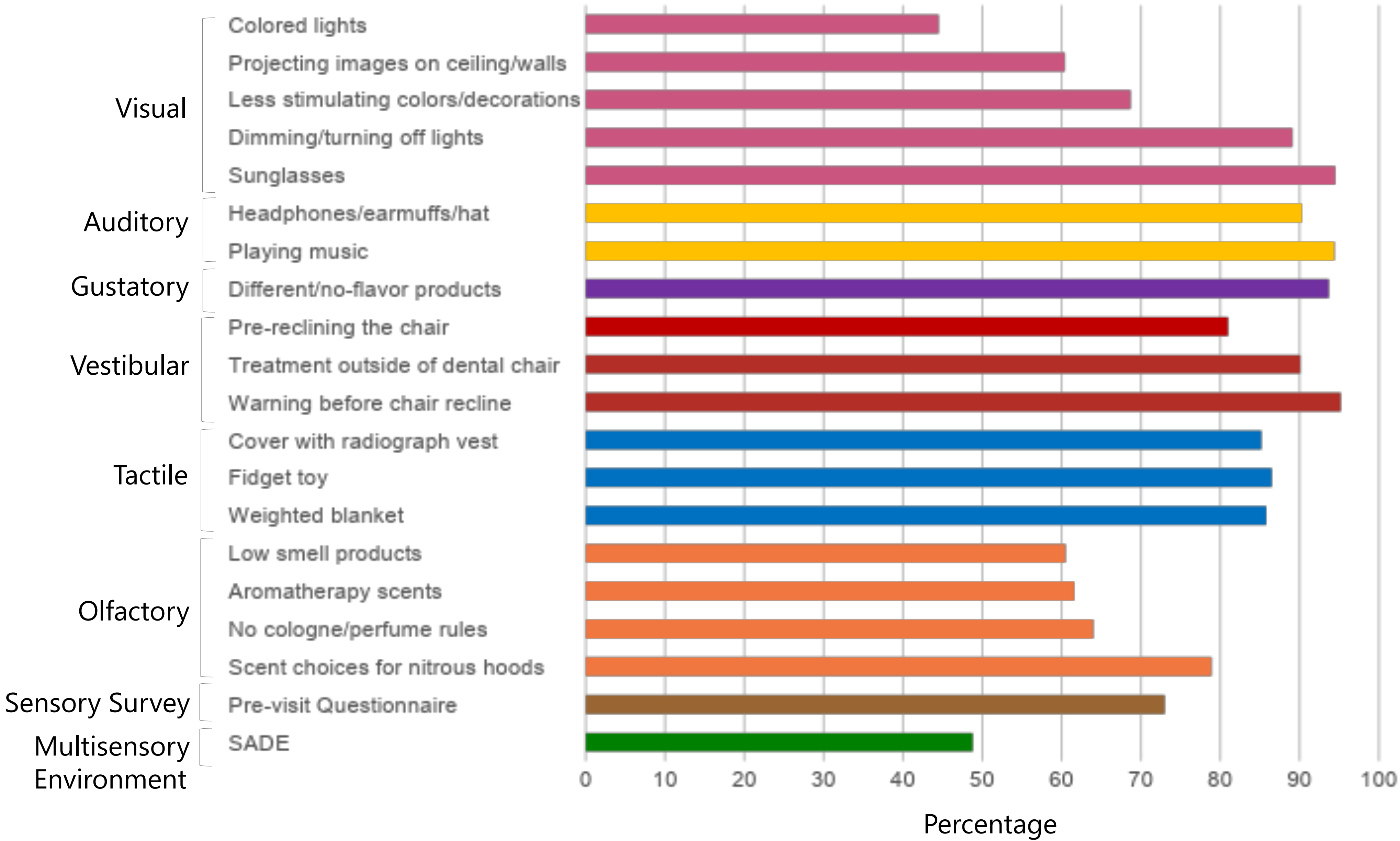


Figure 2 – Provider Utilization (≥50% of the time)

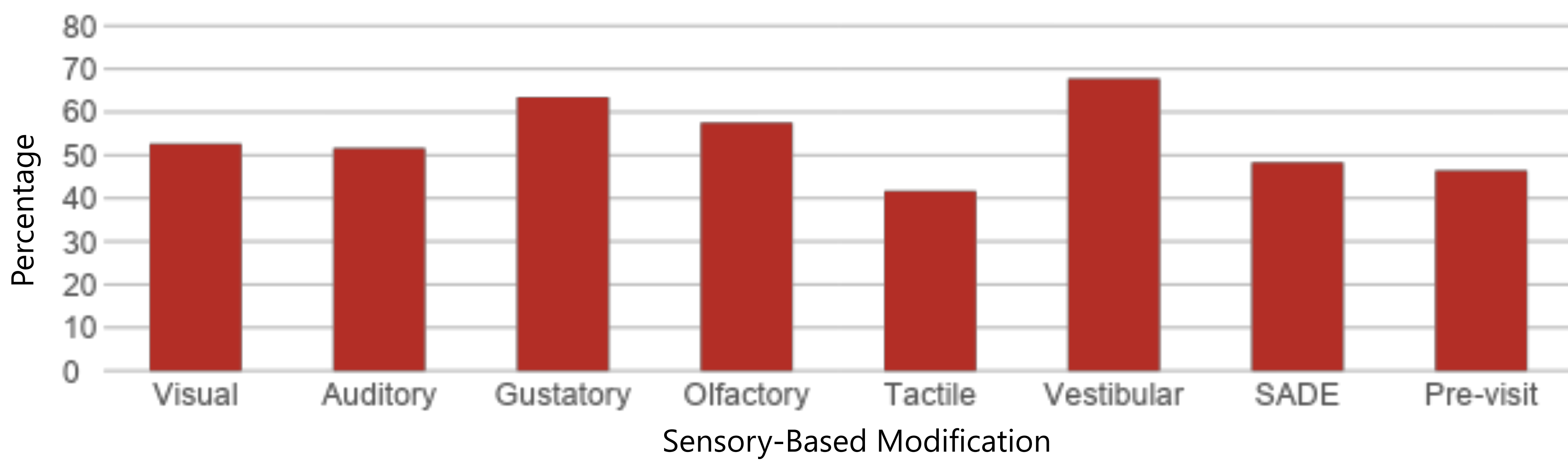
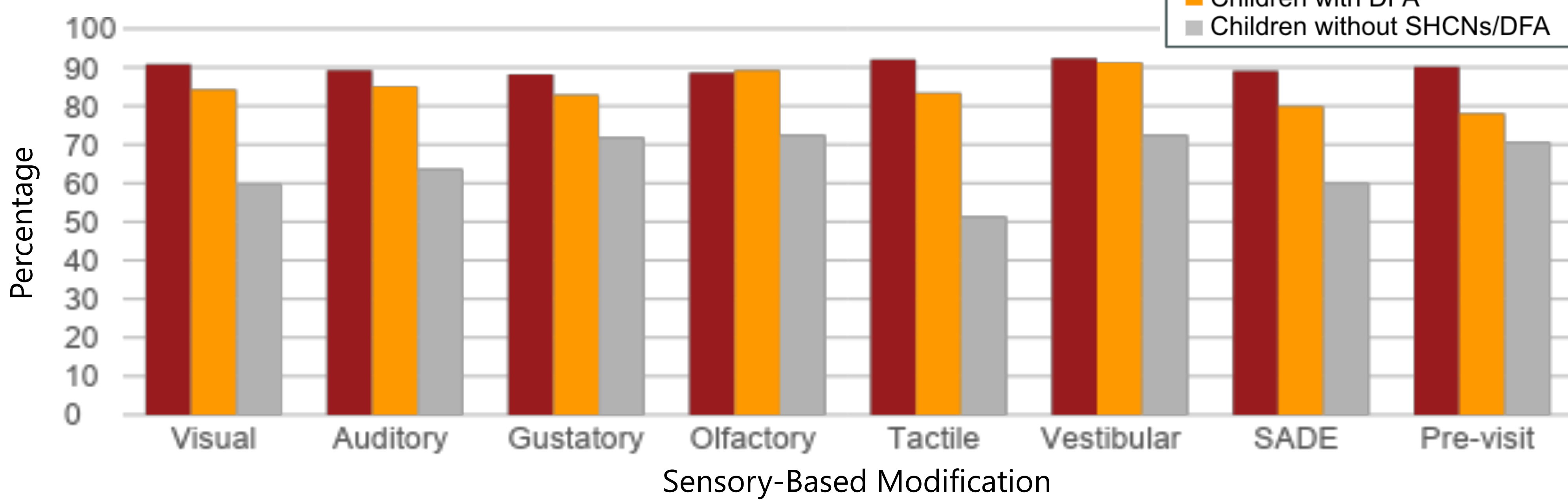


Figure 3 – Populations Served by Providers



PERCEPTION & EXPERIENCE

- Over 95% of participants reported:
  - It is moderately-extremely important to consider sensory-focused barriers to care for *all* pediatric patients.
  - Sensory-based strategies are compatible with other behavior guidance techniques.
- Over 85% of participants utilizing sensory-based strategies perceived that they were moderately-extremely effective for their pediatric patients.

DISCUSSION / CONCLUSION

- Evidence supports the efficacy of a structured combination of sensory-based strategies (SADE) to improve child and caregiver experiences during dental care.<sup>5,6</sup>
  - Although our data suggests growing familiarity and utilization of single-modality strategies, little is known about the effectiveness of these strategies in real-world clinical practice.
  - Based on prior research, utilization of sensory-based strategies are likely to improve behavioral and physiological distress, as well as patient and family experience, thereby reducing health disparities for children with SHCNs and/or DFA.<sup>5-7</sup>
- Future Research:
  - Identify methods to overcome practical challenges to implementing sensory-based strategies and facilitate their adoption. For example, training to:
    - Address gap between familiarity & utilization of techniques.
    - Address practical challenges (e.g., cost, time constraints).
    - Support tailored and individualized care to improve health outcomes for children with SHCNs and/or DFA.
  - Evaluate the effectiveness of tailored sensory-based strategies on pediatric and adult dental experiences.

ACKNOWLEDGEMENTS

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REFERENCES

1. National Institutes of Health. (2021). Oral Health in America: Advances and Challenges. Retrieved from <https://www.nidcr.nih.gov/research/oralhealthinamerica>
2. Stein Duker, L.L., Grager, M., Giffin, W., Hikita, N., & Polido, J.C. (2022). The Relationship between Dental Fear and Anxiety, General Anxiety/Fear, Sensory Over-Responsivity, and Oral Health Behaviors and Outcomes: A Conceptual Model. *International Journal of Environmental Research and Public Health*, 19(4), 2380.
3. Stein, L.L., Polido, J.C., & Cermak, S.A. (2013). Oral care and sensory over-responsivity in children with autism spectrum disorders. *Pediatric Dentistry*, 35, 230–235.
4. American Academy of Pediatric Dentistry. Behavior guidance for the pediatric dental patient. (2024). The Reference Manual of Pediatric Dentistry. Chicago, Ill.: American Academy of Pediatric Dentistry; 358-78.
5. Stein Duker, L.L., Como, D.H., Jolette, C., Vigen, C., Gong, C.L., Williams, M.E., ... & Cermak, S. A. (2023). Sensory adaptations to improve physiological and behavioral distress during dental visits in autistic children: a randomized crossover trial. *JAMA Network Open*, 6(6), e2316346-e2316346.
6. Fallea, A., Zuccarello, R., Roccella, M., Quatrosi, G., Donadio, S., Vetri, L., & Cali, F. (2022). Sensory-adapted dental environment for the treatment of patients with autism spectrum disorder. *Children*, 9(3), 393.
7. Stein Duker, L.L. (2019). Adapting oral care protocols to support children with sensory sensitivities: Occupational Therapy and Dentistry. In T. Nelson & J.R. De Bord (Eds.), *Dental care for children with special needs: A clinical guide* (pp. 77-98). Switzerland: Springer.