

Caregiver Perceptions of Animal Assisted Therapy for Pediatric Dental Patients with Special Healthcare Needs

Valentina Roa¹, McKenzie Castro¹, Linda Sangalli², Laura Jacox^{1,4,5}, Caroline Sawicki^{1,3}

ADAMS SCHOOL OF DENTISTRY

¹Adams School of Dentistry, University of North Carolina, Chapel Hill, NC, ²College of Dental Medicine, Midwestem University, Downers Grover, IL, ³Department of Pediatric Dentistry and Dental Public Health, Adams School of Dentistry, University of North Carolina, Chapel Hill, NC, ⁴Department of Orthodontics, Adams School of Dentistry, Chapel Hill, NC, ⁵Department of Biomedical Sciences, Adams School of Dentistry, Chapel Hill, NC

RESULTS



ABSTRACT

Purpose: Determine how care givers of patients with special health care needs (SHCN) view animal assisted therapy (AAT) in pediatric dental clinics and gather input from caregivers on using AAT to address dental anxiety and fear.

Methods: Caregivers of patients with SHCN completed an online survey assessing their desire for and concerns regarding therapy animals in pediatric dentistry clinics. Chi-square tests examined differences in anticipated improvement based on child anxiety and distress.

Results: 100 caregivers completed the survey. Respondents indicated that 63.0% and 50.0% of their children experienced dental anxiety and fear, respectively. 53.1% and 65.3% of caregivers believed that a therapy dog's presence would greatly/slightly improve their child's anxiety, especially those with anxious child (p=0.006), and communication skills, respectively. Notably, 68.4% of parents expected a therapy dog to enhance their child's overall dental care experience.

Conclusions: Findings suggest that that caregivers perceive AAT during dental visits as highly beneficial, expecting it to significantly reduce their child's anxiety, enhance communication and social skills, and contribute to a more positive and supportive experience overall.

INTRODUCTION

 Nearly 20% of children in the United States have a SHCN, which may include cognitive, developmental, and/or physical disabilities¹.

 Children with SHCN, including cognitive, develop mental, and/or physical disabilities, typically experience life with different challenges, obstacles, and anxieties compared to neurotypical children, thus impacting access to care².

 A previous national survey of general dentists demonstrated that patient behavior was the most significant barrier in their willingness to treat patients with SHCN, with over 60% of respondents stating that they would be unwilling to treat patients with developmental disabilities due to uncooperative behavior³.

 AAT is a non-pharmacological, low-risk intervention designed to reduce anxiety, stress, and pain perception, typically involving trained dogs that provide obedience, calmness, and comfort⁴.

 AAT has been shown to reduce behavioral distress and decrease physiological arousal in pediatric dental patients undergoing anxietyprovoking procedures, particularly among those verbalizing distress⁵.

 Although research indicates AAT's promise for behavior management in pediatric dentistry, clinical adoption by practitioners depends on patient/caregiver interest and acceptance.

OBJECTIVES:

- 1. Determine the perceived potential benefits of using AAT in dentistry for children with SHCN
- 2. Evaluate caregiver concerns for the use of AAT in the pediatric dentistry setting
- 3. Explore the impact of AAT on caregivers' pediatric dental office selection

Table 1. Patient Demographics	
	Frequency (%)
Age (mean, SD)	14.4 ± 10.4
Sex	
Male	71 (71.0%)
Female	28 (28.0%)
Prefer not to say	1 (1.0%)
Special health care need diagnosis*	
Autism Spectrum Disorders	53 (53.0%)
ADHD	26 (26.0%)
Down syndrome	9 (9.0%)
Cerebral Palsy	14 (14.0%)
Seizures	27 (27.0%)
Development and/or intellectual disability	50 (50.0%)
Speech or other language disorder	46 (46.0%)
Hearing impairment	2 (2.0%)
Other syndrome or condition	6 (6.0%)

Figure 3. Anticipated Impact on Experience and Anxiety



Caregivers who reported that their child experienced anxiety in going to the dental office were significantly more likely to believe that a therapy dog would slightly or greatly improve their child's anxiety (**Fig. 3A**, 76.5% vs. 35.3%, p = 0.006, Cramer's V = 0.39) and overall experience during dental care (**Fig. 3B**, 75.8% vs. 44.0%, p = 0.016, Cramer's = 0.31) compared to parents of non-anxious children.



Figure 1. Prevalence of Dental Anxiety and Fear

Yes No Unsure

of their children were anxious (Fig. 1A) and fearful (Fig. 1B) about going to the dentist.

Figure 2A. Perceived Impact of AAT on Child Behavior



More than half of the parents (53.1%) believed that a therapy dog's presence would greatly or slightly improve their child's anxiety. 65.3% anticipated greatly or slightly improvements in their communication and social skills (Fig. 2A).

Figure 2B. Potential Caregiver Concerns with AAT



Parents expressed positive attitudes about the presence of a therapy dog during dental appointment, with minimal concerns about office cleanliness (88.8%), allergies (89.8%), and safety (66.3%) (**Fig 2B**).

METHODS & MATERIALS

- The University of North Carolina Institutional Review Board (IRB) and Office of Human Research ethics determined this study to be exempt from IRB review (6 June 2024, #24-1231).
- An electronic survey was distributed to caregivers of patients with SHCN presenting to the UNC Adams School of Dentistry Pediatric Clinic.
- The 20-item question naire included 1) the perceived potential benefits of using AAT in dentistry for their child; 2) concerns for the use of AAT in pediatric dentistry settings; and 3) the impact of AAT on caregivers' pediatric dental office selection.
- Chi-square tests compared respondents' expectations of a therapy dog on their child's anxiety and experience and in their pediatric dentistry practice selection. The analyses were repeated by comparing respondents reporting fear in their child about going to the dental office.
 Effect sizes were calculated with Cramer's V.
- A logistic regression analysis was conducted to identify predictors of caregivers' preference for a dental practice with a therapy dog, entering child anxiety and prior experience with therapy animals as predictors, and age and fear of dogs as covariate.

CONCLUSIONS

- Caregivers expressed positive attitudes toward the presence of therapy dogs in pediatric dental settings, especially those with anxious children or prior therapy animal experience.
- Dental anxiety was as a significant predictor of caregivers' preference for dental practices incorporating therapy dogs.
- Highlighting the potential of AAT to improve the dental experience for children with SHCN who experience dental anxiety.
- AAT has the potential to transform dental experiences and improve oral health outcomes for this vulnerable population.
- Future research should center on the longitudinal impact of AAT on dental anxiety, care compliance, and oral health outcomes in children with SHCN.

REFERENCES

- 1. Children and youth with special heath care needs data brief.
- (n.d.).https://mchb.hrsa.gov/sites/default/files/mchb/programs-impact/nsch-data-briefchildren-youth-special-health-care-needs.pdf
- 2.Definition of special health care needs. AAPD. (n.d.).

https://www.aapd.org/research/oral-health-policies--recommendations/special-healthcareneeds/#: --text=

Special%20health%20care%20needs%20include.of%20specialized%20services%20or %20programs

3.Casamassimo, P. S., Seale, N. S., & Ruehs, K. (2004). General dentists' perceptions of educational and treatment issues affecting access to care for children with special health care needs. Journal of dental education, 68(1), 23-28.

4.Bert, F., Gualano, M. R., Camussi, E., Pieve, G., Voglino, G., & Siliquini, R. (2016). Animal Assisted Intervention: A systematic review of benefits and risks. European Journal of Integrative Medicine, 8(5), 695–706. https://doi.org/10.1016/j.eujim.2016.05.005

5.Havener, L.; Gentes, L.; Thaler, B.; Megel, M.E.; Baun, M.M.; Driscoll, F.A.; Beiraghi, S.; Agrawal, S. The Effects of a Companion Animal on Distress in Children Undergoing Dental Procedures. Issues Compr. Pediatr. Nurs. 2001. 24. 137–152.