

## BACKGROUND

- Autistic children experience well-documented oral health disparities and the current literature regarding oral health status of this population is conflicting and inconclusive.<sup>1</sup>
- Challenges both with providing in home care and professional clinical oral care have been linked to:<sup>1,2,3</sup>
  - Sensory processing sensitivities (hyper responsivity to tactile touch and proprioception)
  - Communication barriers
  - Behavioral challenges affecting oral hygiene
  - Barriers to care due to behavior management challenges and lack of providers trained and willing to provide care
- There is no current consensus on the oral health of this population. Which may be due to:<sup>1</sup>
  - small mixed age sample sizes, heterogeneous methodologies, and inconsistent use of standardized clinical measures
- As the prevalence of autism within the United States increases, currently estimated at 1 in 31 children, it is essential to understand the oral health status of this population to better address and tailor oral health care.<sup>4</sup>

## PURPOSE

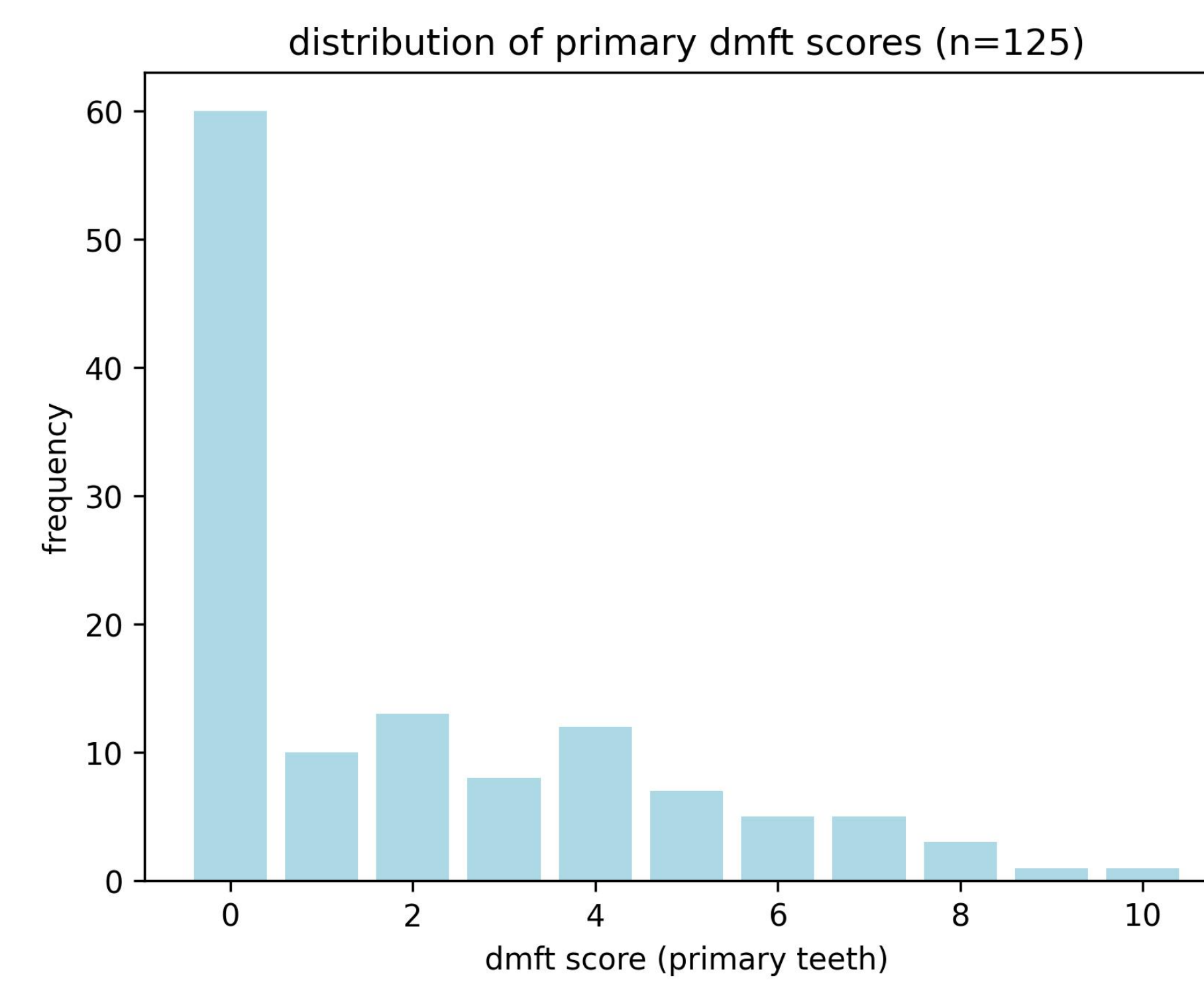
- Using a large sample and standardized outcome measures, this study provides a comprehensive characterization of oral health status in children with ASD aged 6-12yrs old.
- Findings from this study have the potential to inform prevention strategies, clinical care planning, and future interventions aimed at reducing oral health disparities for autistic children.

## METHODS

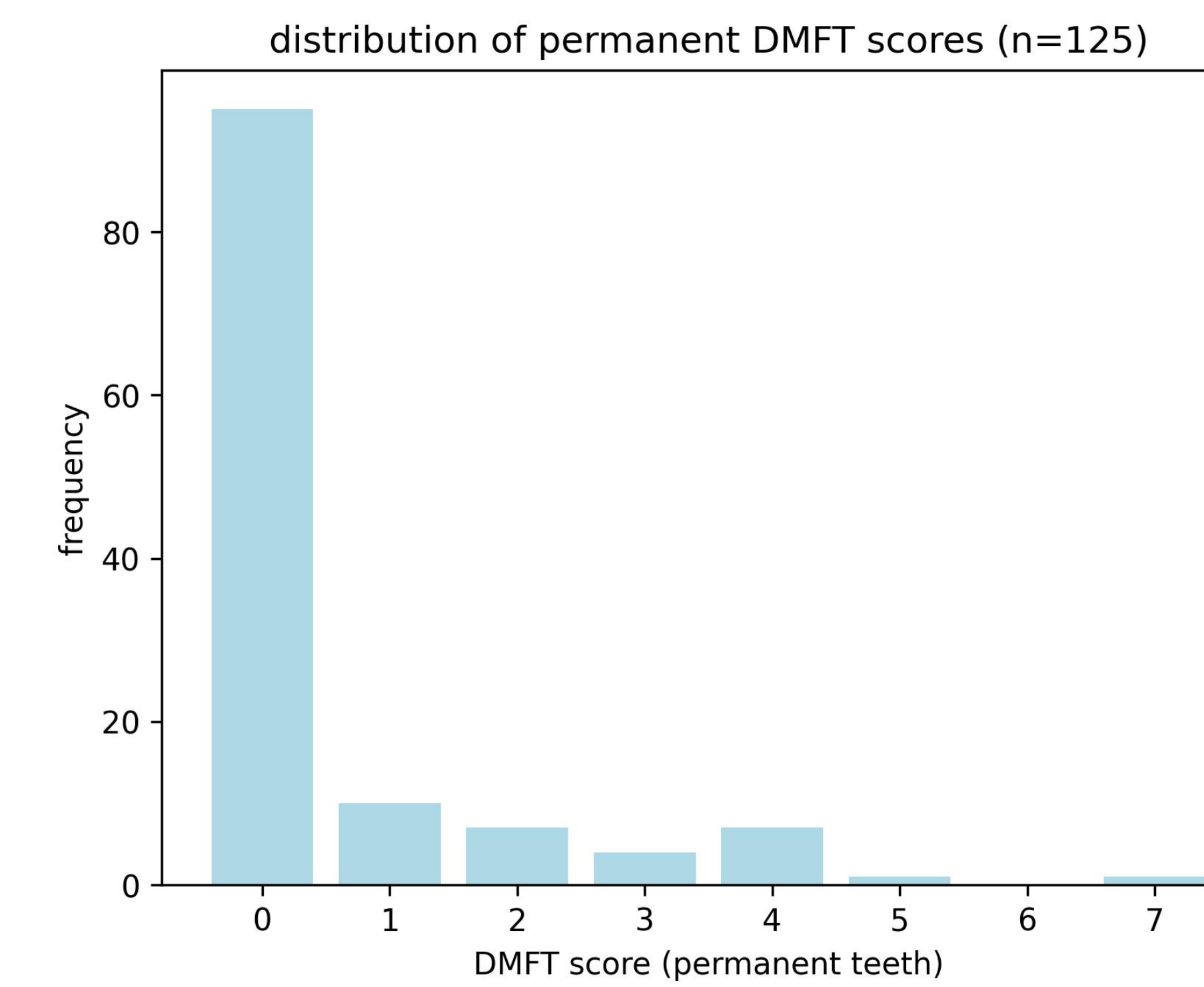
- Participants were children diagnosed with ASD (n=220; 6-12 yrs at time of enrollment) participating in a large RCT.
- Widely accepted measures of oral health, including decayed, missing, and filled teeth (dmft: reporting primary teeth and DMFT: reporting permanent teeth) scores, Plaque Index, Gingival Index, and the Oral Hygiene Index were assessed at the first of two study-related dental cleanings and used in these analyses.
- Parent-reported measures of toothbrushing frequency and independence level were also collected.

## RESULTS

**Figure 1:** Reported frequency of dmft scores for primary teeth



**Figure 2:** Reported frequency of DMFT scores for permanent teeth



**Table 1:** Reported frequency of toothbrushing per week

Times brush teeth per week	frequency	percent %
0	4	2.47
2	1	0.62
3	1	0.62
4	2	1.23
5	10	6.17
6	4	2.47
7	27	16.67
8	2	1.23
9	1	0.62
10	9	5.56
12	3	1.85
14	91	56.17
21	7	4.32

**Table 2:** Reported range and mean for PI, GI, and OHI-S

Variable	Range	Mean	SD
PI (plaque index)	0.04-2.2	0.78	0.43
GI (gingival index)	0-2.45	0.53	0.48
OHI-S (oral hygiene index-simplified)	0-4	1.02	0.85

**Table 3:** Reported brushing habits of participants

Brushing habits	Frequency	Percent (%)
I or a family member always brushes my child's teeth	58	35.8
I or a family member provides some physical assistance to my child	56	34.57
I or a family member stands near my child and provides verbal reminders	28	17.28
My child is independent in brushing his or her own teeth	20	12.35

## DISCUSSION & CONCLUSIONS

- A study of autistic children 5-11yrs old reported similar dmft and DMFT means as our study.<sup>5</sup>
  - Our reported dmft mean = 2 with standard deviation (SD) of 2.5 and DMFT mean= 0.6 with SD of 1.3
  - Kuter et al. reported dmft mean = 1.6 with SD of 2 and DMFT mean= 0.5 with SD 1.2
- A meta-analysis of oral health status in children (ages 5-16yo) concluded that the DMFT score and Plaque Index were higher in children with ASD versus healthy children.<sup>6</sup>
- A high carbohydrate diet combined with retaining food within the mouth and poor oral hygiene routine can further increase caries risk in this population.<sup>7</sup>
  - 56.17% of patients in our study brushed 14 times per week and 16.67% of patients brushed only 7 times per week
  - A linear regression analysis was completed in our study with brushing frequency and dmft/DMFT scores. It was noted that brushing frequency does not meaningfully predict dmft/DMFT.

## Future directions

- Evaluate co-morbidities and medication usage in relation to gingival index
- Evaluate dmft and DMFT scores in relation to autism severity score and socioeconomic status

## ACKNOWLEDGEMENTS

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