

# Oral Health and Pain in Pediatric Dental Patients



- In 2022 the WHO estimated that over 514 million children have caries in their primary teeth, making dental caries one of the most common global diseases.
- Oral pain significantly impacts children's daily lives by impairing their ability to eat and sleep.
- Dental pain can be assessed through self-reports, behavior evaluations, and physiological measures. Often, providers rely on parents' reports of pain intensity to determine treatment.
- Tools such as the Pediatric Pain Screening Tool (PPST), and Parent Risk Screening Measure (PRISM) have been used to predict outcomes of children with pain. Utility of these measures in assessing pain-related risk in the context of pediatric dental pain has not been examined.

## Purpose



> Describe parent and child pain characteristics and associations with caregiver factors.

> Examine the utility of screening measures in characterizing child pain risk.

# Materials and Methods

- This cross-sectional study is being conducted at a pediatric residency dental clinic. Caregivers of patients (ages 1-18) presenting with dental pain were invited to participate.
- The following information was gathered via a RedCap Survey via parent report:
  - Demographic information on parent and child.
  - Parent's report of their own pain and their child's pain including pain intensity, frequency and location.
  - Caregiver and child's medical history.
  - Caregiver's dental history.
  - The 9-item Pediatric Pain Screening Tool (PPST) and 12-item Parent Risk Screening Measure (PRISM).
- Information was analyzed with descriptive statistics and correlations using SPSS.

Kailey Thomsen, DDS,<sup>1</sup>Jessica Heierle, MBA,<sup>2</sup>Dongseok Choi, PhD,<sup>3</sup>Anna Wilson, PhD,<sup>2</sup>Amy Holley, PhD,<sup>2</sup>Elizabeth A Palmer, MS, DMD<sup>1</sup> <sup>1</sup>OHSU Pediatric Dentistry,<sup>2</sup> Division of Psychology, Department of Pediatrics,<sup>3</sup>OHSU-PSU School of Public Health



Measure	Percentage	
Current chronic pain	29.4%	
Current mouth pain	41.2%	
Current jaw pain	29.4%	
Measure (0-10 NRS)	Mean (SD)	
Pain intensity (last 7 days)	4.3 (1.7)	
Mouth pain intensity	2.6 (2.6)	
Stress related to child pain	5.8 (2.8)	

**Table 2:** Parent proxy-report of child pain and stress

Measure (0-10 NRS)	Mean (SD)	
Days w/ pain (last 7 days)	3.4 (1.4)	
Pain intensity	5.31 (2.5)	
Child stress due to pain	5.8 (2.8)	

**35.3%** of caregivers reported their child experienced daily pain

### Pain Screening Tools in Dental Sample

Table 3: Risk groups for the Parent Risk Screening Measure (PRISM) and Pediatric Pain Screening Tool (PPST)

Risk Groups	PRISM	PPST		
<b>Risk</b> Total ≤ 5 ,PPST: Total ≤ 2	31.3%	70.6%		
<b>erate Risk</b> Total 6-8, PPST: Total ≤ 2 and psych subscale ≤ 2	18.8%	6.3%		
<b>Risk</b> Total 9-12, PPST: Total > 2 and psych subscale > 2	50.0%	18.8%		

Low I PRISM: Mode

PRISM:

High PRISM:

**Table 4:** Correlations between the PRISM, PPST, parent pain, parent stress, and child pain \*\*=p<0.05

**PPST Total Score** PRISM Total Score

"Being a single mom and keeping on top of my child's pain relief medication and caring for my other 3 children"

"It's difficult to see him in pain when I can't provide relief"

"Trying to control her cavities. We brush and floss and she still seems to get cavities"

	Parent pain intensity	Parent stress	Child pain intensity
	-0.19	0.58**	0.45
e	0.43	-0.77**	-0.82**

Parent's response to "Please share what has been most challenging or stressful about your child's mouth pain"

### Discussion

• Findings examine how parent factors are associated with child pain and point to the utility of pain screening tools in the pediatric dental patients.

 While parental perception of their child's dental pain has been previously evaluated, examining associations with pain screening tools is a novel contribution.

 Data collection is ongoing; however, the results of this study will help dentists understand relevant caregiver factors associated with child dental pain that may inform development of interventions for youth with pain identified as at elevated risk.

 Future directions can analyze associations between perceived child pain and treatment modalities.