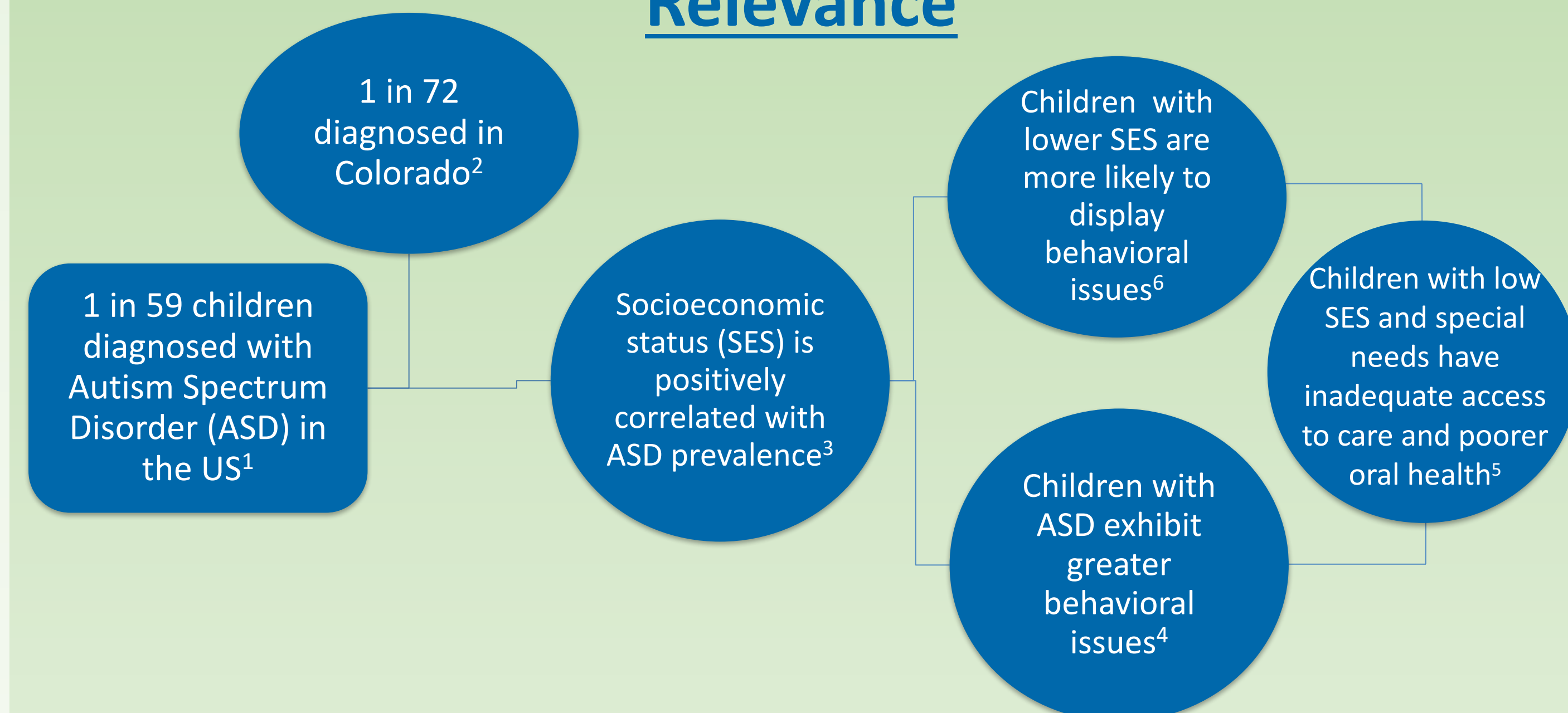


Hidden Links: The Relationship Between Autism Spectrum Disorder, Socioeconomic Status, and Dental Care Outcomes

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Relevance



Research Questions

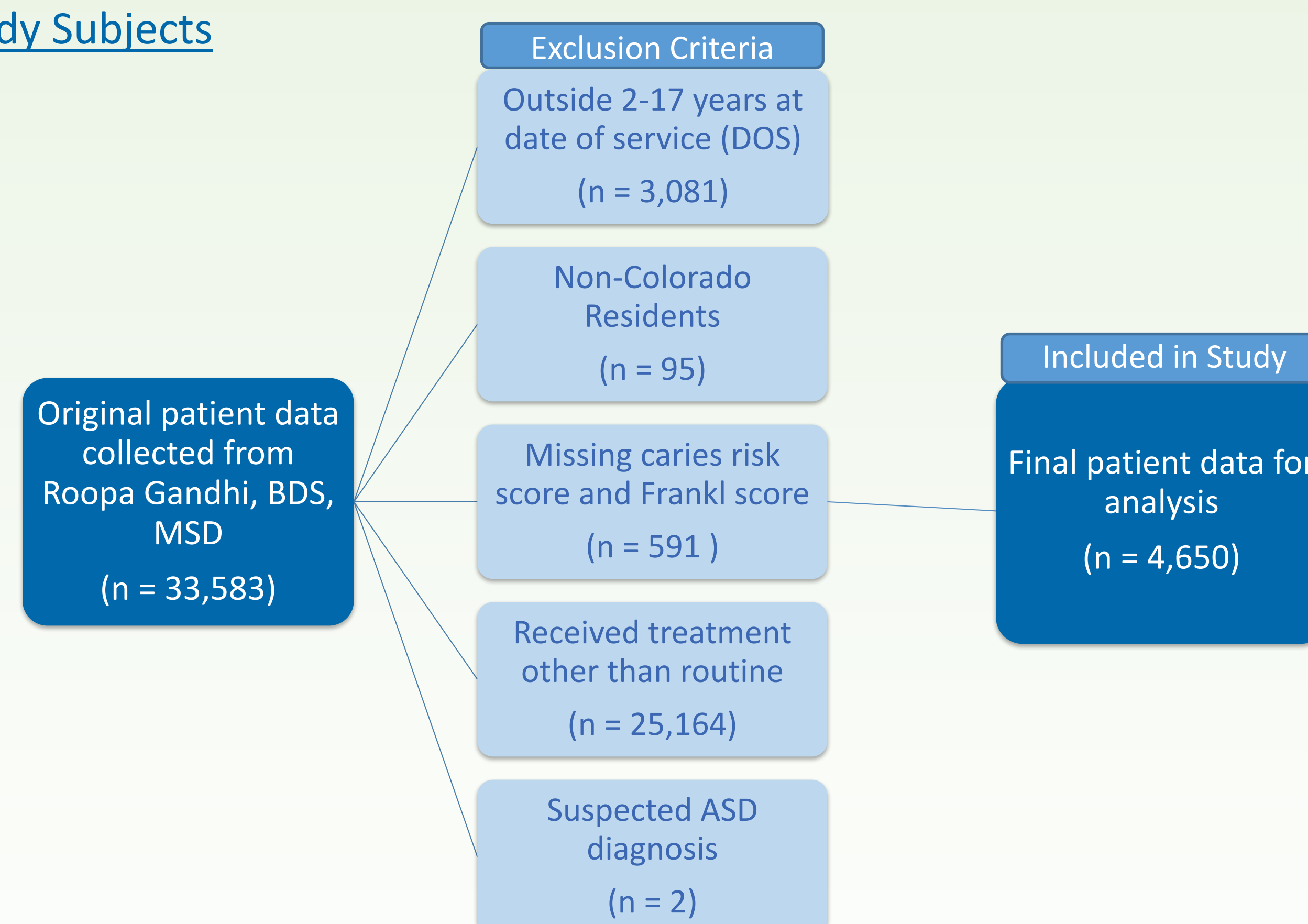
Is **oral health** influenced by **ASD diagnosis** and/or **socioeconomic status**?

Is **behavior during a dental visit** influenced by **ASD diagnosis** and/or **socioeconomic status**?

Methods

- Retrospective study with data collected between May 1, 2016 and April 26, 2018 from the Dental Center at Children's Hospital Colorado

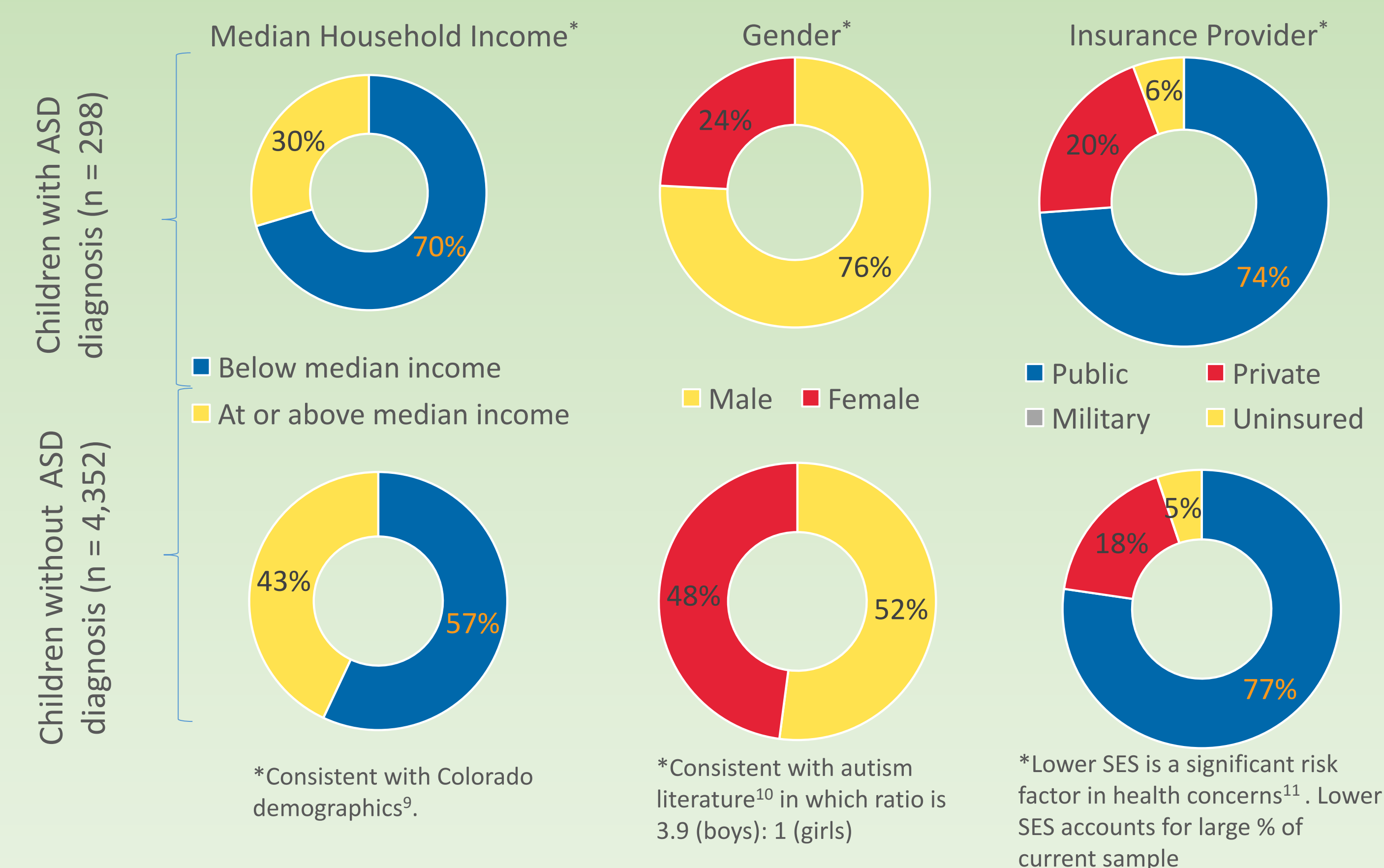
Study Subjects



Data Sources

Dental Electronic Medical Records (AxiUm)	CHCO Electronic Medical Records (EPIC)
Socioeconomic status (SES) Zip code and insurance provider	Problem list ASD diagnoses
Frankl score ⁷ (<i>measure of behavior</i>) 1(↓)= interfering behavior 2(↑)= non-interfering behavior	
Caries risk score ⁸ (<i>measure of oral health</i>) 1=low Caries risk score → ↓ risk for poor oral health 2=high Caries risk score → ↑ risk for poor oral health	

Demographics

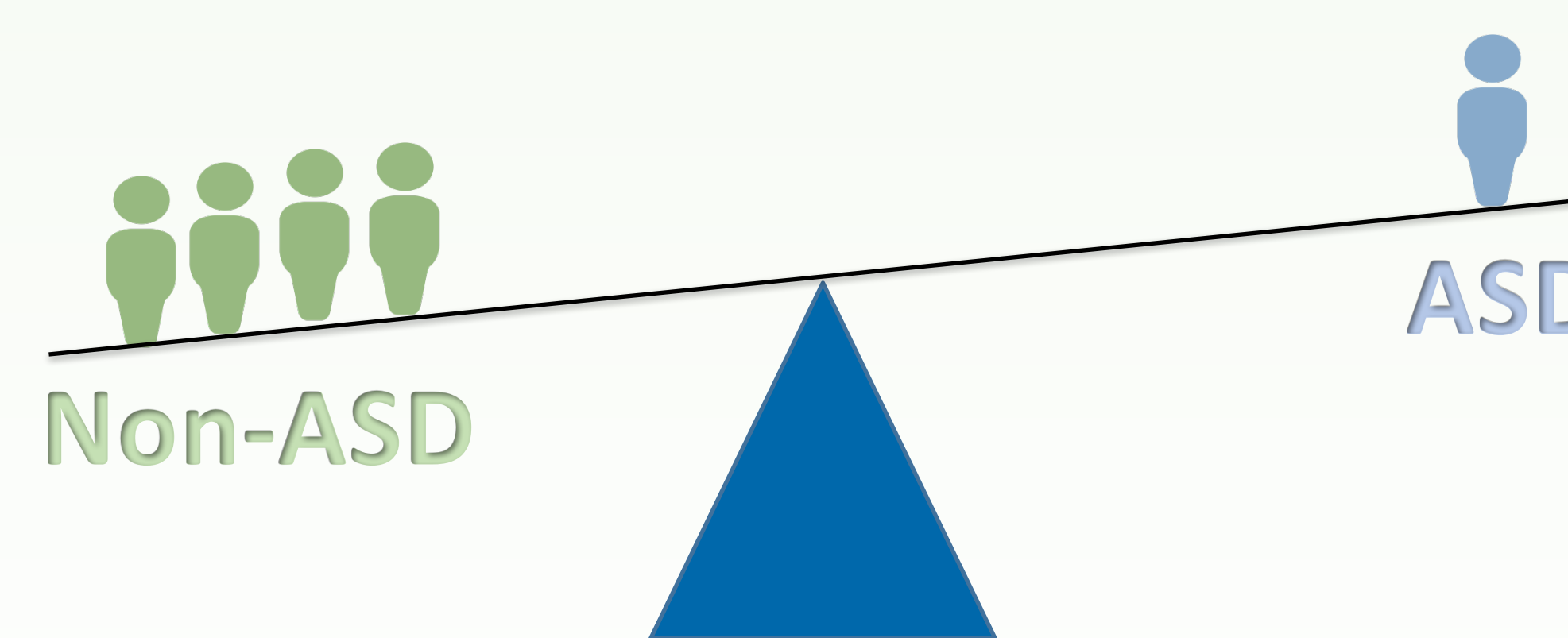


Results

Oral Health

Pediatric patients whose families have **low SES** are **32% more likely** to have a **higher risk of caries** than those with **high SES** regardless of ASD diagnosis (OR = 1.32; 95% CI = 1.129 to 1.544).

Behavior During Dental Visit



Pediatric patients **with ASD** are **4 times less likely** to exhibit **non-interfering behavior** during a dental visit than those patients **without ASD** regardless of SES (OR = 5.08; 95% CI = 3.911 to 6.605).

Conclusions

- Risk of caries** among pediatric dental patients is driven by **levels of family income**, and not by whether the patient has **ASD diagnosis** or not.

↓SES = ↑ Caries Risk
ASD Diagnosis ≠ ↑ Caries Risk

- Tendency of pediatric dental patients exhibiting **behavioral problems during their dental visit** is driven by their **ASD diagnosis**, and not by whether the patient's family is earning below or above median.

ASD Diagnosis = ↓ Frankl Score
↑ or ↓ SES ≠ ↓ Frankl Score

Limitations

- Level of severity of patient's ASD unknown
- ASD diagnoses are provider report, not a confirmatory assessment
- SES based on zip code, government data reports which is a rough estimate
- Zip codes provided for patients may not be their actual residence
- Subjects selected only from Pediatric Dental Care at Children's Hospital, so not representative of the general population and prone to selection bias
- Subject to confounding (other risk factors may be present that were not measured)

Implications/Further Research

- Lower SES puts patients at risk for poorer oral health regardless of diagnosis
 - How can we improve access to dental care for lower SES families at CHCO?
- An Autism diagnosis is correlated with more challenging behavior
 - Does the severity of the Autism diagnosis affect the prevalence of interfering behavior?
- Do lower Frankl scores predict poorer oral health outcomes?

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