

INTRODUCTION

Major depression is one of the most common mental disorders in the United States and can interfere with one's ability to carry out major life activities.¹ The National Institute of Health (NIH) reports over four million adolescents aged 12 to 17 have had at least one major depressive episode, with the prevalence being higher for adolescent females and those with multiracial backgrounds.¹ Adults with major depressive disorder are frequently associated with a disinterest in appropriate oral hygiene techniques, higher sugar intake, periodontal disease, tooth loss and more frequent emergency room visits.²

Aim: To understand the impacts of a positive depression screening score among adolescents seeking care at a community health center and its impact on health outcomes.

METHODS

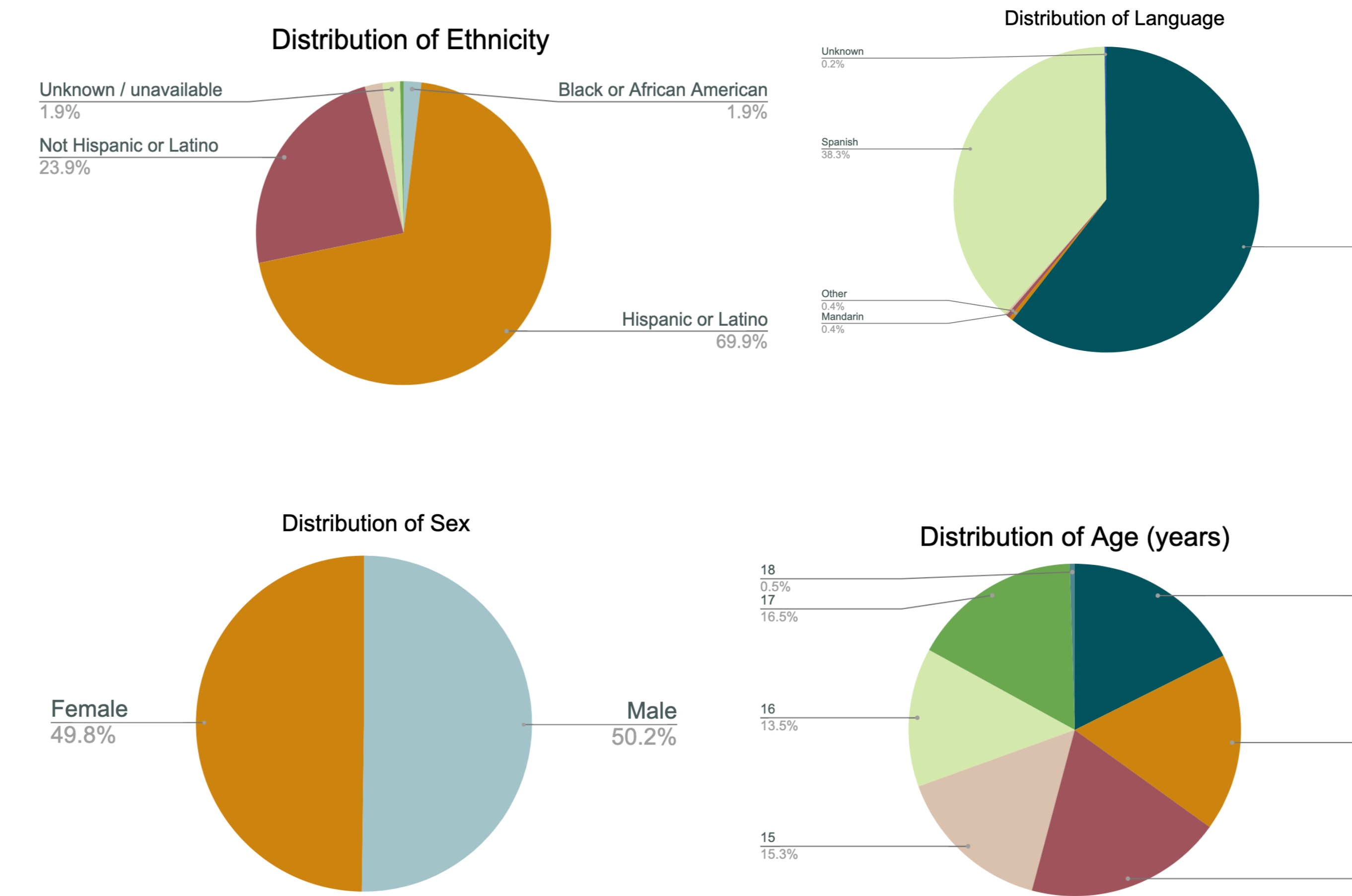
- The sample consisted of 556 adolescents (aged 12- 17) at Star Community Health Center who were seen for medical and dental needs from May 2021 to August 2022.
- The Patient Health Questionnaire for Adolescents (PHQ-A) depression screening questionnaire scores were recorded from the patient's annual pediatrician visit. See Table 1.
- Retrospective chart review included a review of the dental visit note to collect data points on oral hygiene (excellent, good, fair, poor), caries risk assessment (low, moderate, high), number of hygiene visits attended and demographic information (including age, gender, preferred language, race and ethnicity).
- Analysis included: descriptives to see how depressions were distributed among study variables and patient demographics and correlations to examine how depression was associated with oral health outcomes.

QUESTIONNAIRE

Table 1: PHQ-A Questionnaire sample questions out of 9 total questions. Major depressive disorder is suggested if 5 or more of the shaded areas are selected.

	Not at all	Several days	More than half the days	Nearly Every day
1. Little interest or pleasure in doing things				
2. Feeling down, depressed or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3

PARTICIPANTS



RESULTS

Figure 1. PHQ-A scores in Males and Females

	None or Minimal depressive symptoms (0-4)	Mild Depressive Symptoms (5-9)	Moderate Depressive Symptoms (10-14)	Moderately Severe Depressive Symptoms (>15)
Female	164	62	36	15
Male	229	27	16	7
Total	393	89	52	22

Figure 3. Percentage of Adolescents Medicated for Depression versus Caries Risk Assessment

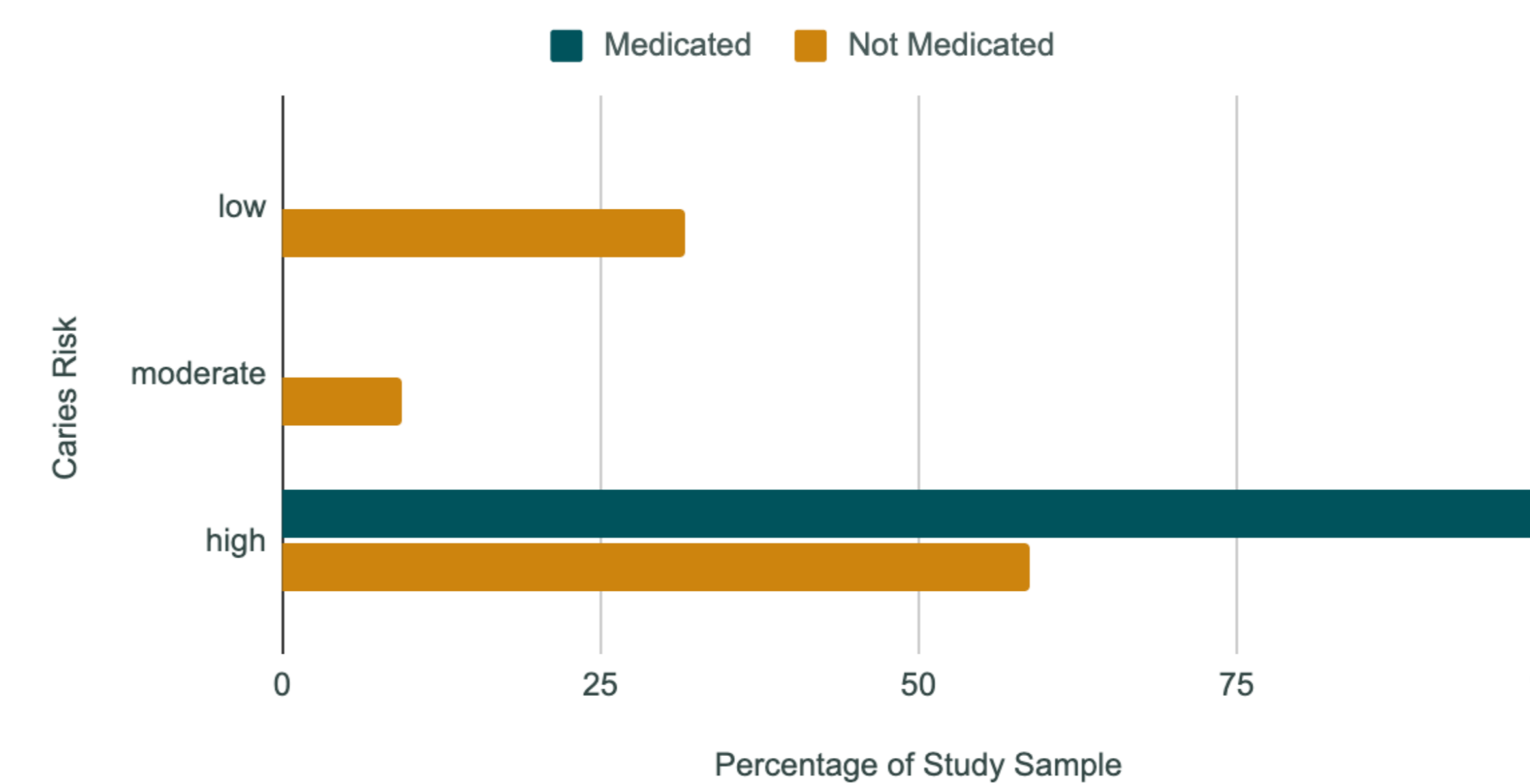


Figure 2. Caries Risk versus PHQ-A Scores

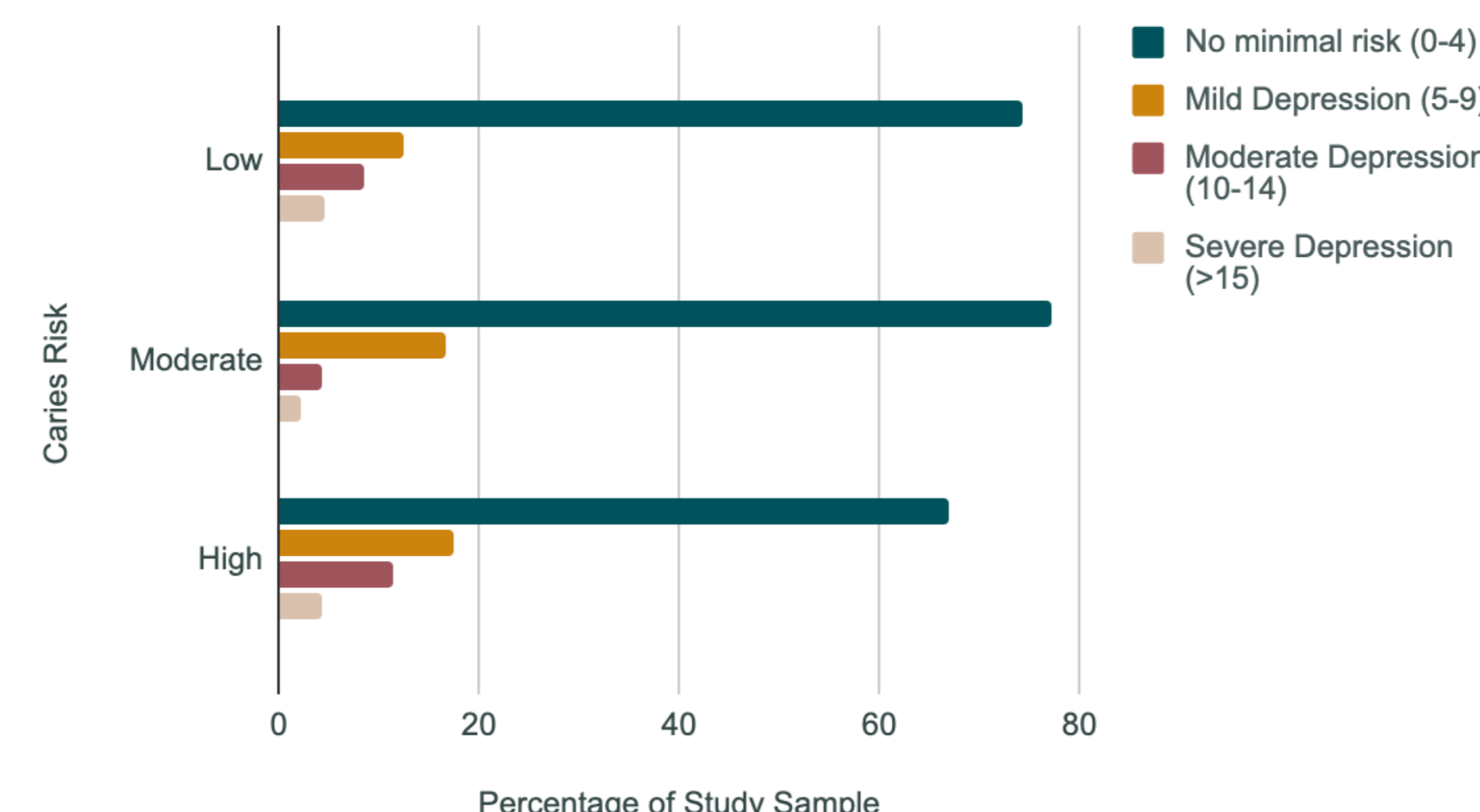
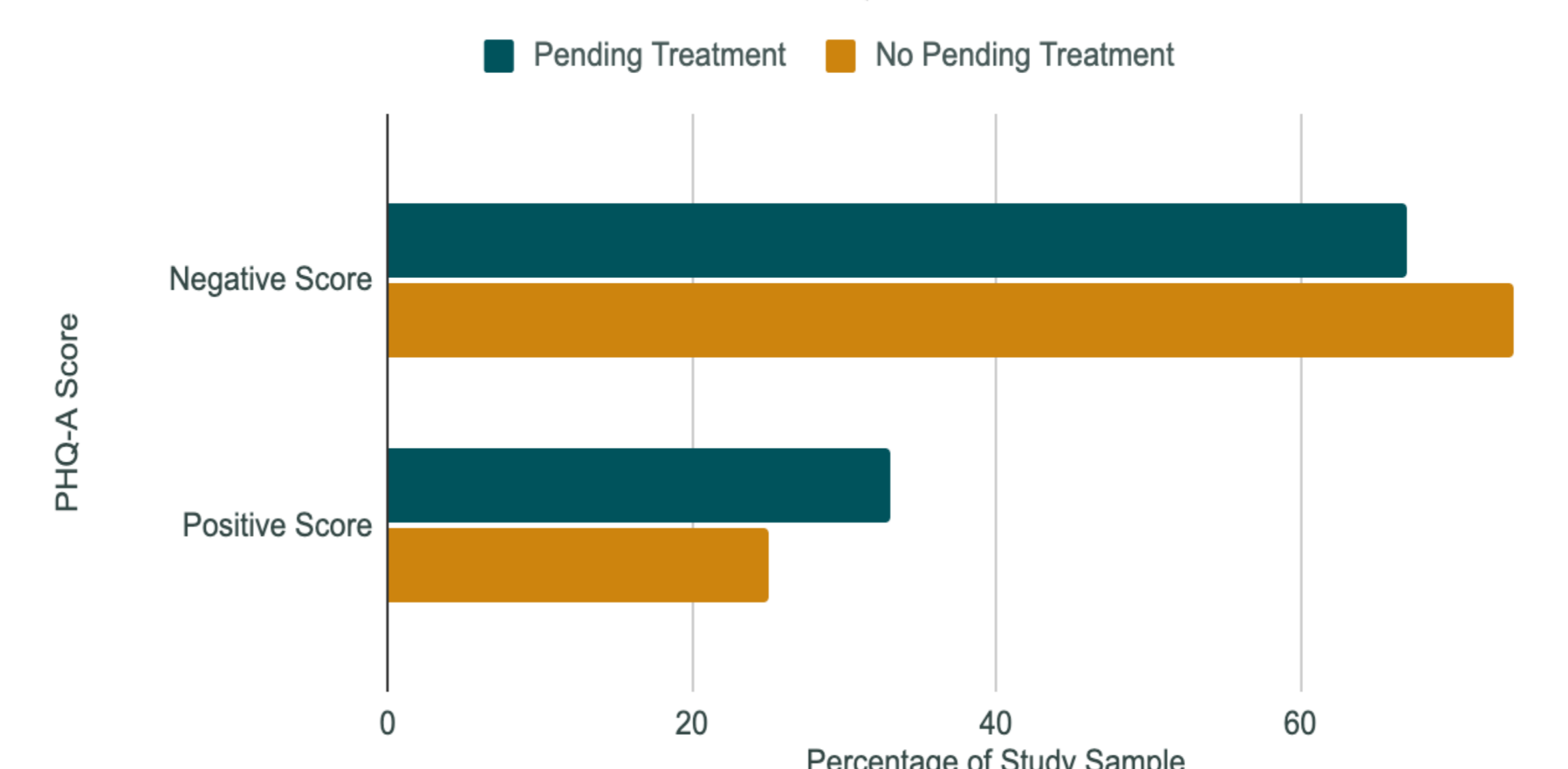


Figure 4. Percentage of Adolescents With Pending Dental Treatment versus PHQ-A Score



RESULTS & DISCUSSIONS

- Figure 1: Female adolescents are statistically more significant to score higher on the PHQ-A questionnaire than males ($p<.001$).
- Figure 2: Adolescents with a positive PHQ-A score showed a higher caries risk assessment score when compared to adolescents with a negative depression screening score ($p=.08$).
- Figure 3: Adolescents taking medication for depression showed high caries risk scores than those who were not taking medications ($p=.055$).
- Figure 4: A greater amount of pending treatment was found in adolescent individuals with a positive PHQ-A score ($p=.066$).

Several global studies have reported an increased self-reporting of dental pain, as well as various dental, periodontal and other oral conditions in adolescents suffering from mental health conditions such as depression and anxiety relative to healthy counterparts.^{3,4} Women in particular have had more lifetime depression compared to men and depression has associations with oral health behaviors and oral health status.⁵ Children of women at risk for depression are more likely to fail to attend their dental appointment, which may increase the risk of oral health conditions in those children.⁶ While there is no causal relation between symptoms of depression and oral health conditions, there is a strong evidence that screening for depression early on can have positive effects. Our study demonstrated that females have higher rates of depression suggesting that depression screenings at an earlier age may be warranted.

CONCLUSIONS

- With increasing social awareness on mental health among adolescents, it is important to explore the effects of common mental health conditions such as depression on oral health.
- Female adolescents present with higher prevalence of depression screening scores.
- Associations with some oral health outcomes are trending towards significance which reveal the importance of ongoing screening and monitoring of depressive symptoms in dental care settings.
- Dental providers have the potential to play a role in helping identify patients at risk for negative health outcomes.

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