

OSA Screening in the Pediatric Dental Office

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OBJECTIVE

The purpose of this study was to evaluate the effectiveness of an OSA screening questionnaire in identifying pediatric dental patients at risk for obstructive sleep apnea and its association with ENT referral outcomes, including polysomnography and surgical intervention.

BACKGROUND

Pediatric obesity has increased in prevalence in the United States and is associated with a higher risk of sleep-disordered breathing (SDB), including obstructive sleep apnea (OSA). OSA in pediatric patients involves repeated episodes of upper airway obstruction during sleep and may contribute to significant perioperative respiratory complications during moderate sedation and general anesthesia.

Early identification of at-risk patients is therefore critical in the pediatric dental setting to minimize adverse airway events.

Polysomnography (PSG) remains the gold standard for diagnosing OSA; however, access is often limited. As a result, clinical screening tools such as OSA questionnaires are commonly used in pediatric dental practices to identify patients who may require referral to otolaryngology (ENT) for further evaluation prior to sedation or general anesthesia.

Despite their widespread use, these screening tools rely on subjective reporting, and the predictive value of individual questionnaire items remains unclear. In addition, patient-specific factors such as body mass index (BMI), age, gender, race, and underlying medical conditions may influence both the risk of OSA and clinical decision-making. Understanding how screening responses and patient characteristics relate to ENT evaluation, PSG recommendation, and treatment decisions may improve screening effectiveness and enhance patient safety.

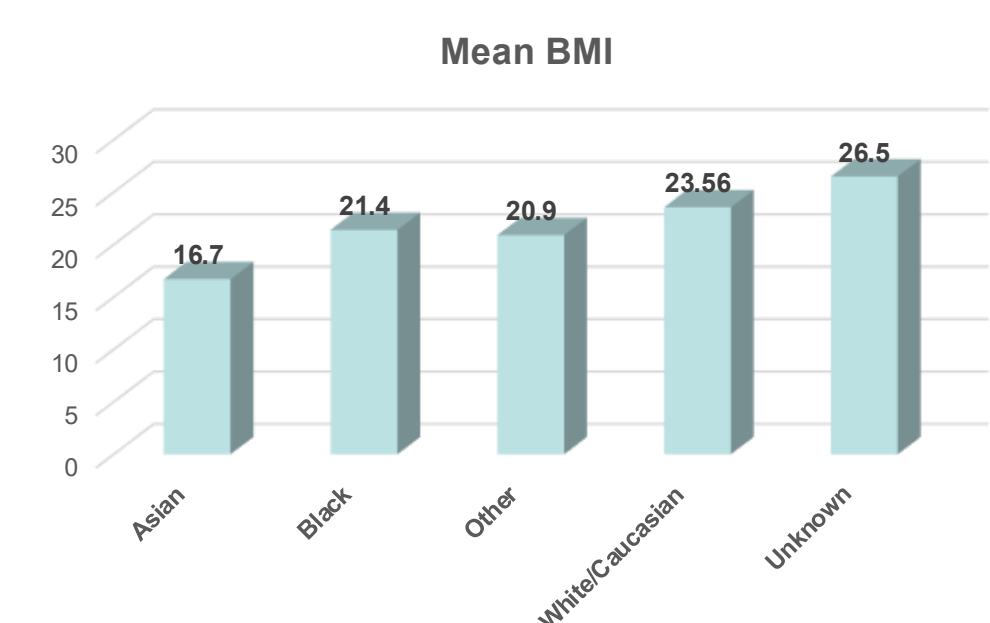
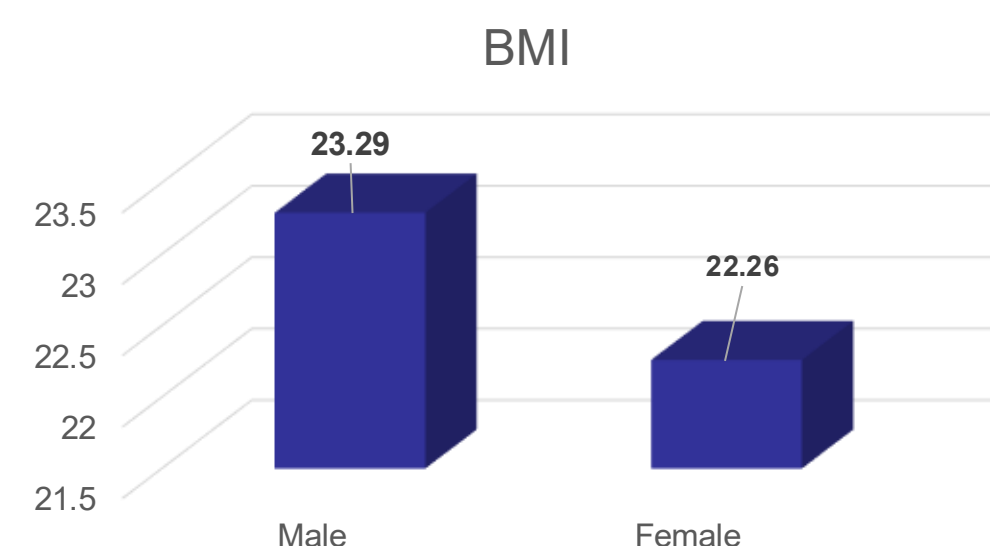
MATERIALS AND METHODS

A retrospective chart review was conducted of pediatric patients (ages 1–18) who presented to Children's Medical Center Dallas Dental Clinic for treatment under moderate sedation or general anesthesia and underwent OSA screening. Patients with an OSA screening questionnaire score ≥ 6 who were referred to otolaryngology (ENT) for further evaluation were included.

Patient data was obtained from the EPIC electronic medical record system and included age, race, gender, BMI, medical history, total OSA score, and individual questionnaire responses. ENT records were reviewed to determine subsequent OSA diagnoses and recommended treatments.

Patients with a prior diagnosis of OSA or previous surgical intervention (e.g., tonsillectomy and adenoidectomy) were excluded. A comparison group included patients with OSA screening scores ≤ 5 who were not referred to ENT.

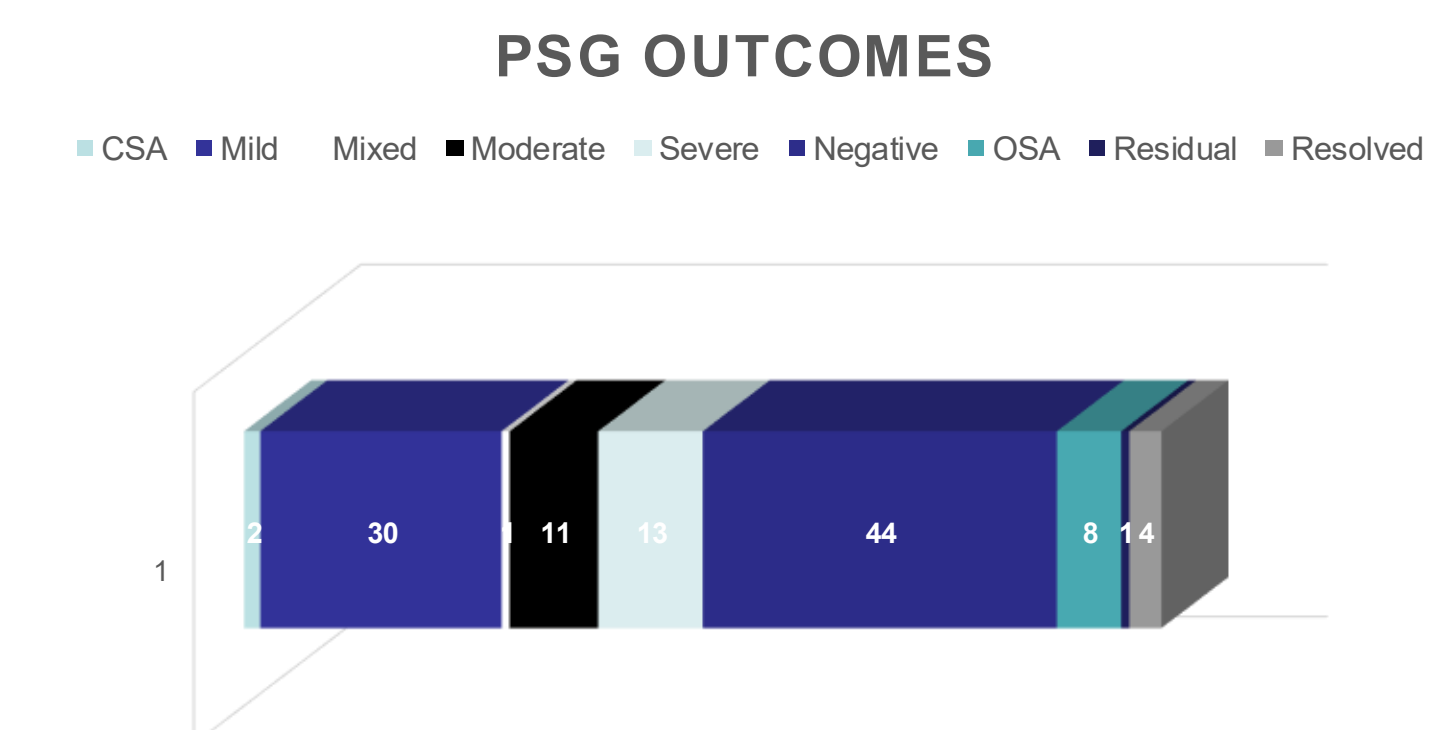
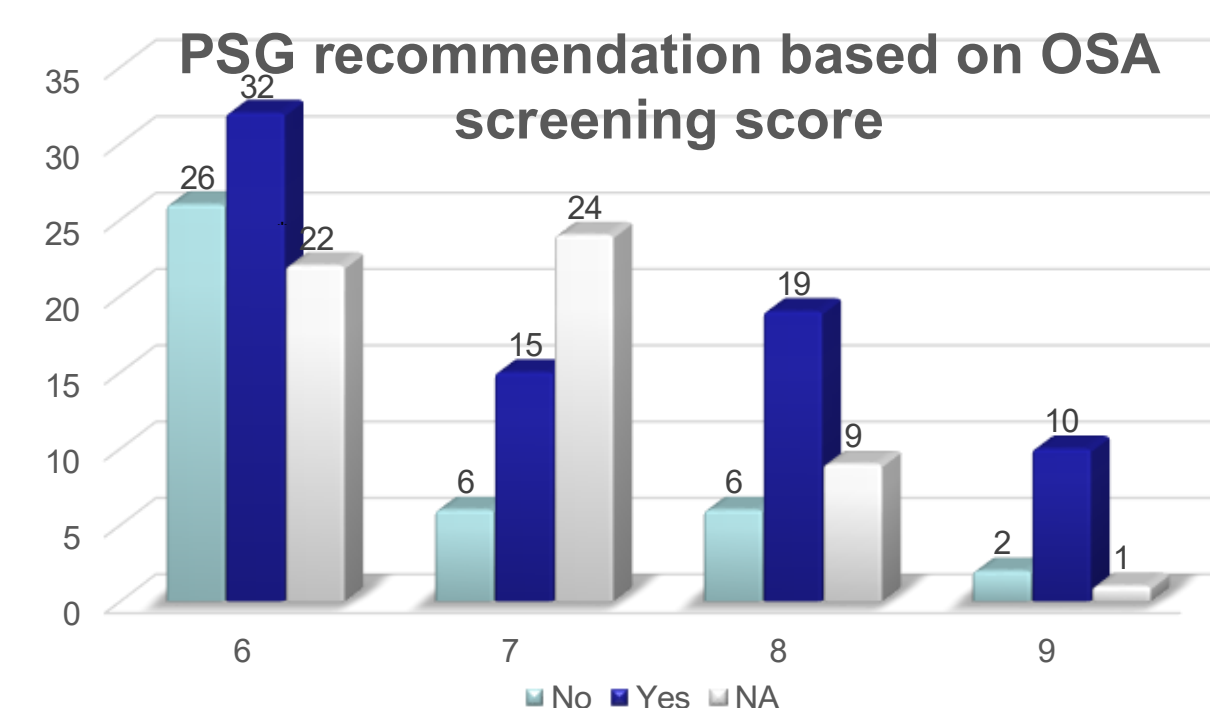
Descriptive statistics were performed to evaluate associations between individual screening questions, patient characteristics, and confirmed OSA diagnosis.



RESULTS

A total of 172 pediatric patients with OSA screening scores ≥ 6 were referred to otolaryngology (ENT) for evaluation.

- T&A was recommended in 49 patients (28%), not recommended in 57 (33%), and previously recommended and completed in 25 (15%) patients;
- The remaining patients were not recommended for PSG or intervention based on ENT clinical assessment.
- The most frequently reported screening symptoms were restlessness (83%), habitual snoring (82%), loud snoring (79%), difficulty focusing (78%), and mouth breathing (73%).
- PSG outcomes were variable, with negative studies most common, followed by mild, moderate, and severe OSA, without a consistent relationship between screening score and OSA severity.
- PSG recommendation increased with higher screening scores ($p < 0.003$).
- Mean BMI was 23.29 in males and 22.26 in females, with variation across racial groups.



DISCUSSION/CONCLUSION

This study evaluated the use of an OSA screening questionnaire to identify pediatric dental patients at risk for sleep-disordered breathing prior to sedation or general anesthesia.

The screening tool identified a high proportion of patients with common OSA symptoms, particularly snoring, restlessness, and mouth breathing.

Although higher screening scores were associated with increased PSG recommendation, they did not consistently correlate with confirmed OSA diagnosis or severity.

Many patients were not recommended for PSG or surgical intervention despite elevated scores, suggesting limited alignment between screening results and ENT clinical assessment. The variability in PSG outcomes, including a high number of negative studies, further highlights the limitations of subjective screening tools.

These findings suggest that OSA screening questionnaires are useful for initial risk stratification. However, they should be used in conjunction with clinical judgment and specialist evaluation to guide patient management and optimize perioperative safety during moderate sedation or general anesthesia.

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