

**Objective:** To assess the diagnostic test accuracy of questionnaire and clinical examination-based scoring tools in the diagnosis of pediatric OSA.

**Study Selection:** All studies including children <18 y of age, from 1960–2018, comparing clinical scoring tool with an observed polysomnography (PSG) for OSA were included without language restriction.

**Data Extraction:** Two reviewers independently reviewed all the studies. Outcome measures: Outcomes measures were diagnostic test accuracy (DTA) statistics.

# ACADEMIC P.E.A.R.L.S

Pediatric Evidence And Research Learning Snippet



## Are Clinical Scoring Tools Accurate For Diagnosis Of Pediatric OSA?

Accuracy of Clinical Scoring Tools for the Diagnosis of Pediatric Obstructive Sleep Apnea (OSA). Laryngoscope 2020.

### Results

- Twenty seven studies met the inclusion criteria.
- 15 scoring tools were found. 4 scoring tools were assessed by >3 authors & further 11 were assessed by a single author.
- Most common scoring tools were: OSA Score, Sleep-Related Breathing Disorder [SRBD] scale, Severity Score, and OSA-18
- None of the 15 scoring tools performed well enough to be considered accurate diagnostic tests for pediatric OSA.
- The Pediatric Sleep Questionnaire SRBD scale, which is widely used, has a sensitivity of 71% to 84% in included studies, but specificity as low as 13% and a low AUC of 0.57–0.69

### Conclusions and Key Messages:

- 1.DTA results indicate that published clinical scoring tools do not accurately predict diagnosis of pediatric OSA as defined by polysomnography outcome measures.
- 2.As sensitivity and specificity of Questionnaires for OSA diagnosis is poor, questionnaires cannot be used as a surrogate for Sleep Study.
- 3.PSG is the gold-standard objective test for pediatric OSA diagnosis & to assess its severity.
- 4.Questionnaires provide crucial information on the impact of sleep-disordered breathing on a child's physical and psychological health, which are not adequately reflected in PSG outcomes measures.
- 5.Questionnaires provide complementary information and should be used in association with a sleep study.

## EXPERT COMMENT



### Indications of Sleep Study in Children

- Suspected sleep apnea with
  - Adenotonsillar hypertrophy
- Complicated sleep apnea with
  - Obesity
  - Craniofacial syndromes, Down's syndrome, Obesity syndromes (eg Prader Willi), Pierre Robin sequence
  - Neuromuscular Disorders like DMD, SMA, congenital myopathy
- Suspected narcolepsy
- To differentiate Parasomnia vs Nocturnal Seizures [expanded EEG montage]
- Periodic limb movement disorder (PLMD)

DR ANKIT PARAKH Consultant, Pediatric Pulmonology, Allergy & Sleep Medicine  
BLK Center for Child Health, BLK Super Specialty Hospital, New Delhi.  
Director, Children's Chest Clinic, Delhi

**DR MANINDER S DHALIWAL**

Editor – Academic Pearls  
pedpearls@gmail.com

**DR BAKUL JAYANT PAREKH**

National President 2020

**DR G.V. BASAVARAJ**

Hon. Secretary Gen. 2020-21

### Reference

Reference : Anant P. Patel, Sheneen Meghji, John S. Phillips. Accuracy of clinical scoring tools for the diagnosis of pediatric obstructive sleep apnea. Laryngoscope, 130:1034–1043, 2020. DOI: 10.1002/lary.28146