

# Diagnosing Obstructive Sleep Apnea in Pediatrics

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## Editorial

Obstructive sleep apnea has been linked to behavioural and neurocognitive issues, stunted growth, cardiovascular morbidity, and metabolic consequences in children. Diagnosis of OSA in children at a young age has the potential to prevent significant morbidity. Despite the importance of taking a thorough sleep history and performing a thorough physical examination to screen for signs and symptoms of OSA, these findings are insufficient for conclusively diagnosing OSA. The gold standard for diagnosing paediatric OSA is in-laboratory polysomnography (PSG). However, there are some drawbacks to attending in-lab polysomnography, such as limited access to a sleep centre, the specialised training required to study children, the laborious nature of the test, and social/economic barriers that can delay diagnosis and treatment [1]. With the advent of wearable technology, there has been an increase in research into alternative methods of diagnosing OSA in children, such as home sleep testing.

Although obtaining the prevalence of obstructive sleep apnea (OSA) in the paediatric population is difficult, the current literature reports rates ranging from 0.7 percent to 13 percent [2]. The wide range can be attributed to the various thresholds for defining OSA in children and methods used in OSA diagnosis, such as the use of haemoglobin oxygen saturation (SpO<sub>2</sub>) alone, SpO<sub>2</sub> with airflow, and SpO<sub>2</sub> with airflow and respiratory effort. Only a few studies have used polysomnography (PSG) to help better quantify prevalence, and even those reports had small subject populations (n = 12–50).

Regardless of how widespread the prevalence may be, it is well established that OSA, a type of Sleep Related Breathing Disorder (SRBD), can cause gas exchange abnormalities as well as fragmented and insufficient sleep. Untreated OSA in children is associated with behavioural and neurocognitive problems, impaired growth, and, in the long run, cardiovascular and metabolic consequences, according to the literature. According to recent newborn data, a lack of sleep can lead to obesity and obesity-related illnesses [3]. Aside from the health risks associated with OSA in paediatrics, the social consequences can be extremely burdensome, causing disruptions in the child's familial, educational, and psychological development.

Infants, children, and adults have significantly different sleep stages for

scoring sleep studies. Infant criteria are used for children less than 2 months post term, referred to as infants and children are used for children 2 months post term to 18 years of age. For a more detailed explanation of staging and scoring, the reader is directed to the AASM scoring manual. Children and adults are scored differently when it comes to respiratory events. The criteria for scoring respiratory events in paediatrics can be applied to patients over the age of 18. However, clinicians can use adult criteria to score respiratory events in children aged 13 years [4].

According to the most recent literature, PSG has been and continues to be the gold standard for diagnosing OSA in children. There are new tools being developed to help with the timely diagnosis of paediatric OSA. The majority of the tools used as alternatives to PSG are useful for diagnosing severe OSA in children, but their role in otherwise healthy children with mild OSA is unknown [5].

## Conflict of Interest

None.

## References

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