Sleep Disordered Breathing and Risk for ADHD: Review of Supportive Evidence and Proposed Underlying Mechanisms

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Abstract

Background: Accumulating evidence suggests that sleep disordered breathing (SDB) is under-recognized in youth and adults with ADHD. SDB may contribute to exacerbating pre-existing ADHD symptoms and may play a role in the development of cognitive deficits that may mimic ADHD symptoms.

Method: We conducted a focused review of publications on cross-prevalence, overlapping clinical and neurobiological characteristics and possible mechanisms linking SDB and ADHD.

Results: Exiting studies suggest that co-occurrence of SDB and ADHD is as high as 50%, with frequent overlap of clinical symptoms such as distractibility and inattention. Mechanisms linking these conditions may include hypoxia during sleep, sleep fragmentation and activation of inflammation, all of which may affect brain structure and physiology to produce disturbances in attention.

Conclusions: The relationship between SDB and ADHD symptoms appear well-supported and suggests that more research is needed to better optimize procedures for SDB assessment in youth being evaluated and/or treated for ADHD.

Conflict of interest statement

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