

Symptoms of inattention and hyperactivity in children with habitual snoring: evidence from a community-based study in Istanbul.

[Arman AR](#), [Ersu R](#), [Save D](#), [Karadag B](#), [Karaman G](#), [Karabekiroglu K](#), [Karakoc F](#), [Dagli E](#), [Berkem M](#).

Marmara University Child Psychiatry Department, Marmara University, Altunizade, Istanbul, Turkey. aarman@marmara.edu.tr

BACKGROUND: Neurobehavioural symptoms of inattention and hyperactivity are common in children with sleep-disordered breathing (SDB). Prevalence rates of habitual snoring and attention deficit hyperactivity disorder (ADHD) are very similar and both have a substantial negative effect on children's behavioural health. **OBJECTIVE:** We examined the differences for subjective attentional and hyperactivity measures reported by parents and teachers among primary school children with habitual snoring and age- and sex-matched controls in a community-based case-control study in Istanbul. **Methods** In 2002, a survey was carried out to determine the prevalence of snoring in 2147 primary school children. After one year, in 2003, 151 children with habitual snoring and 302 controls from this survey were studied with parental SDB questionnaire, Conners' Parent (Conners-P) and Teacher Scales, and an inattention hyperactivity scale (IHS). Exclusion criteria included history of ADHD diagnosis, controls who started to snore and habitual snorers (HS) who no longer snored in this follow-up study. **RESULTS:** Ninety-six HS and 190 control subjects (mean age: 9.4 +/- 1.3) were evaluated. HS had significantly more symptoms of hyperactivity (Conners-ADHD index) (P: 0.033), attentional (P: 0.019), and conduct and oppositional defiant in subscales (P: 0.001) of Conners-P and IHS-Parents. A pooled score of Conners-P ADHD Index > 60 and IHS-Parent score > 1.25 showed considerable difference in HS when compared with controls (5.1% vs. 1.4%) (P < 0.0001). Daytime hyperactivity and excessive daytime sleepiness reported by parents correlated with scores of Conners-P and IHS-P (P < 0.01). Teachers' observations showed significant correlations with learning disability and the level of academic performance in HS (P < 0.01). Other behavioural parameters related to SDB were not significantly correlated with teachers' ADHD ratings in HS. **CONCLUSION:** Increased rates of moderate hyperactivity as well as conduct and oppositional defiant symptoms in HS reported by the parents might reflect a negative impact on overall neurobehavioural health. The teachers' scores yielded no significant results among HS and controls. This may be caused by the limitation due to shared method variance. The negative effect of crowded classes on teachers' evaluations must be also taken into consideration. After exclusion of a diagnosis of ADHD in children presenting with hyperactivity and inattention, children with habitual snoring with prominent scores of behavioural measures should be considered as candidates for further assessment by a sleep specialist.

PMID: 16207229 [PubMed - indexed for MEDLINE]