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Persistent Snoring in Preschool Children: Predictors and Behavioral and Developmental Correlates

. Dean W. Beebe, PhD^{a,b}, Joseph Rausch, PhD^{a,b}, Kelly C. Byars, PsyD^{a,b,c}, Bruce Lanphear, MD, MPH^d, and Kimberly Yolton, PhD^{b,e}

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Author Affiliations

- . Divisions of ^aBehavioral Medicine and Clinical Psychology,
- . ^cPulmonary Medicine, and
- . ^eGeneral and Community Pediatrics, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio;
- . ^dFaculty of Health Sciences, Simon Fraser University and Child and Family Research Institute, British Columbia Children's Hospital, Vancouver, British Columbia, Canada; and
- . ^bDepartment of Pediatrics, University of Cincinnati College of Medicine, Cincinnati, Ohio

ABSTRACT

OBJECTIVE: To clarify whether persistent snoring in 2- to 3-year-olds is associated with behavioral and cognitive development, and to identify predictors of transient and persistent snoring.

METHODS: Two hundred forty-nine mother/child pairs participated in a prospective birth cohort study. Based upon parental report of loud snoring ≥ 2 times weekly at 2 and 3 years of age, children were designated as nonsnorers, transient snorers (snored at 2 or 3 years of age, but not both), or persistent snorers (snored at both ages). We compared groups by using validated measures of behavioral and

cognitive functioning. Potential predictors of snoring included child race and gender, socioeconomic status (parent education and income), birth weight, prenatal tobacco exposure (maternal serum cotinine), childhood tobacco exposure (serum cotinine), history and duration of breast milk feeding, and body mass relative to norms.

RESULTS: In multivariable analyses, persistent snorers had significantly higher reported overall behavior problems, particularly hyperactivity, depression, and inattention. Nonsnorers had significantly stronger cognitive development than transient and persistent snorers in unadjusted analyses, but not after demographic adjustment. The strongest predictors of the presence and persistence of snoring were lower socioeconomic status and the absence or shorter duration of breast milk feeding. Secondary analyses suggested that race may modify the association of childhood tobacco smoke exposure and snoring.