Secondhand Smoke Exposure and Severity of Attention-Deficit/Hyperactivity Disorder in Preschoolers: A Pilot Investigation

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Background: Less is known about the effects of secondhand smoke (SHS) on mental health as compared with other medical disorders.

Objective: The aims of this study were to examine the following: 1) the association of SHS exposure with childhood attention-deficit/hyperactivity (ADHD) and disruptive disorders; and 2) the association of maternal recall of a child’s SHS exposure and that child’s exposure as measured by bioassay.

Method: Sixty children had their saliva collected and assayed for cotinine when they were 4 years old and again when they were 6 years old. Phone interview data were collected to assess maternal recall of the children’s exposure to SHS at these ages. The children were assessed annually for ADHD and disruptive disorders. Repeated measures analysis of exposure level by child characteristics was performed.

Results: Greater ADHD and conduct disorder severity scores were associated with greater child smoke exposure (ADHD severity, \( P = .043 \); conduct disorder severity, \( P = .035 \)). A large proportion of mothers reported that their children had no exposure to SHS, despite high levels of measured cotinine in the children’s saliva.

Conclusions: An association between SHS exposure and ADHD and conduct disorder symptoms was found. Children and parents may benefit from parent education regarding the deleterious effects of SHS.