Infant temperament reactivity and early maternal caregiving: independent and interactive links to later childhood attention-deficit/hyperactivity disorder symptoms

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Abstract

BACKGROUND:
Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder with origins early in life. There is growing evidence that individual differences in temperament reactivity are predictive of ADHD symptoms, yet little is known about the relations between temperament reactivity in early infancy and later ADHD symptoms or the combined effect of reactivity with early environmental factors on ADHD symptom development. Using a 9-year prospective longitudinal design, this study tested the independent and interactive contributions of infant reactivity and maternal caregiving behaviors (MCB) on parent- and teacher-reported childhood ADHD symptoms.

METHODS:
Participants included 291 children (132 male; 159 female) who participated in a larger study of temperament and social-emotional development. Reactivity was assessed by behavioral observation of negative affect, positive affect, and motor activity during novel stimuli presentations at 4 months of age. MCB were observed during a series of semistructured mother-infant tasks at 9 months of age. Finally, ADHD symptoms were assessed by parent- and teacher-report questionnaires at 7 and 9 years, respectively.

RESULTS:
Reactivity was predictive of ADHD symptoms, but results were sex specific. For boys, infant motor activity was positively predictive of later ADHD symptoms, but only at lower quality MCB. For girls, infant positive affect was positively predictive of later ADHD symptoms at lower quality MCB, and unexpectedly-infant positive affect and motor activity were negatively predictive of later ADHD symptoms at higher quality MCB.

CONCLUSIONS:
These results point to early parenting as a moderating factor to mitigate temperament-related risk for later ADHD, suggesting this as a potential intervention target to mitigate risk for ADHD among reactive infants.