Parent Emotion Expression and Autonomic-Linked Emotion Dysregulation in Childhood ADHD

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Abstract

Despite evidence that ADHD is associated with disruptions in emotion regulation, few studies have examined the biological correlates of emotion dysregulation among children with this disorder. Prior work has pointed to roles of the parasympathetic and sympathetic nervous system, as indexed via respiratory sinus arrhythmia (RSA) and cardiac pre-ejection period (PEP), respectively. Work in typically developing populations suggests that parenting behavior and parental emotion expression may shape the development of these systems. To date, a single study has examined the independent and interactive roles of autonomic nervous system functioning and parent emotion expression in youth with ADHD. This study seeks to extend that work. 86 children (42 with ADHD), aged 8–12 years, and a parent completed a parent-child interaction task, while electrocardiography and impedance cardiography data were recorded to derive RSA and PEP. Parent and child emotion word use (positive and negative valence) were coded from recordings of the task. Parents of youth with ADHD used fewer positive emotion words throughout the task. Additionally, throughout the task, children with ADHD engaged in excessive RSA withdrawal from baseline. Further, the association between RSA reactivity and ADHD diagnosis was moderated by parent positive emotion word use. Specifically, those with RSA augmentation and parents displaying high positive affect across the task conditions were least likely to have an ADHD diagnosis. If replicated and extended, these results support the use of interventions specifically designed to increase parental modeling of positive emotions, while simultaneously focusing on building emotion regulation skills in youth with ADHD.