Social Cognition in Children with High-Functioning Autism Spectrum Disorder and Attention-Deficit/Hyperactivity Disorder. Associations with Executive Functions

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Autism spectrum disorder (ASD) and attention deficit hyperactivity disorder (ADHD) are neurodevelopmental disorders characterized by social impairments. The first objective of this study was to analyze social cognition deficits of children with ADHD, high-functioning ASD (HFASD), and typical development (TD) in their performance on explicit and applied measures of theory of mind (ToM). The second objective was to investigate the relationships between executive functions and social cognition in HFASD and ADHD. One hundred and twenty-six 7- to 11-year old children, 52 with HFASD, 35 with ADHD, and 39 with TD, performed the NEPSY-II social perception subtests. Parents estimated their children's ToM skills using the Theory of Mind Inventory (ToMI). Teacher-reported data from the Behavior Rating Inventory of Executive Function (BRIEF) were also obtained. The HFASD and ADHD groups showed worse performance on the verbal ToM task than the TD group, and only the performance of the HFASD group was significantly lower than the TD group on the contextual ToM task. Parents also estimated that the HFASD group had more difficulties on the applied ToM than the ADHD and TD groups. Furthermore, there is a different executive function-theory of mind link in the HFASD and ADHD groups: behavioral regulation processes such as inhibition and emotional control are more associated with social cognition in children with ADHD, whereas metacognitive processes such as initiation and planning have a strong association with social cognition in children with HFASD. These findings have implications for understanding social perception deficits in neurodevelopmental disorders, highlighting the need for early intervention.