Distinguishing between autism spectrum disorder and attention deficit hyperactivity disorder by using behavioral checklists, cognitive assessments, and neuropsychological test battery

Naomi Matsuura, Makoto Ishitobi, Sumiyoshi Arai, Kaori Kawamura, Mizuki Asano, Keisuke Inohara, Tadamasa Narimoto, Yuji Wada, Michio Hiratani, Hirotaka Kosaka

Asian Journal of Psychiatry, Available online 10 July 2014, ISSN 1876-2018
http://dx.doi.org/10.1016/j.ajp.2014.06.011.

Abstract
Children with attention deficit hyperactivity disorder (ADHD) and autism spectrum disorder (ASD) share many common symptoms, including attention deficit, behavioral problems, and difficulties with social skills. The aim of this study is to distinguish between ASD and ADHD by identifying the characteristic features of both the disorders, by using multidimensional assessments, including screening behavioral checklists, cognitive assessments, and comprehensive neurological battery. After screening for comorbid disorders, we carefully selected age-, sex-, IQ-, and socio-economic status-matched children with typical development (TD). In the Wechsler Intelligence Scale for children, a lower score was observed for the ASD group than for the TD group in Picture Concept, which is a subscale of Perceptual Reasoning. A lower score was shown by the ADHD group than by the TD group in the spatial working memory test in the Cambridge Neuropsychological Test Automated Battery (CANTAB®). Although ASD and ADHD have many similar symptoms, they can be differentiated by focusing on the behavioral and cognitive characteristics of executive function.