Intelligence profiles of Chinese school-aged boys with high-functioning ASD and ADHD.

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Abstract

PURPOSE:
This study aimed to explore the intelligence profiles of Chinese school-aged boys with high-functioning autism spectrum disorder (HFASD) and attention-deficit/hyperactivity disorder (ADHD). Additionally, differences in intelligence quotient (IQ) between the HFASD group and the ADHD group were examined.

PATIENTS AND METHODS:
Thirty-two boys with HFASD, 58 boys with ADHD, and 39 typically developing (TD) boys aged 6-16 years participated in this study. The ADHD group was divided into subgroups: ADHD-I (predominantly inattentive) and ADHD-C (combined type). (The ADHD-H [hyperactive] group was excluded because of small sample size). The Wechsler Intelligence Scale for Children-IV Chinese version was administered to every participant, and the FSIQ (Full-Scale IQ) score was used as the measure of IQ.

RESULTS:
Both boys with HFASD and ADHD (ADHD-I and ADHD-C) showed impairments in Processing Speed Index and FSIQ, as compared to the TD group. Lower Verbal Comprehension Index scores were found in the ASD and ADHD-I groups. Interestingly, Working Memory Index was only impaired in children with ADHD. Additionally, equivalent Perceptual Reasoning Index (PRI) scores were found among the HFASD, ADHD, and TD groups.

CONCLUSION:
Results indicated that both children with ADHD and HFASD have difficulty in processing speed, which may be explained by these children having neurodevelopmental disorders. These results also indicated that working memory appears to only be impacted by having ADHD. Children with ASD are known to have language difficulties while children with ADHD typically display working memory deficits; thus, these findings were expected.