

Abstract

Deficits in 'executive function' (EF) are the main characteristic of several clinical disorders which include Autism Spectrum Disorders (ASD) and Attention-Deficit/Hyperactivity Disorder (ADHD). In the present study, IQ-matched groups with ASD, ADHD, or typical development (TD) children were tested over a cognitive flexibility task – The Wisconsin Card Sorting Test (WCST). Relations between cognitive flexibility and age-related improvements were also examined. Literatures suggested that both ASD and ADHD group would show significant cognitive flexibility impairments compared with TD children and age-related improvements were more prominent in ASD and TD than in ADHD which implied that at older (but not younger) ages, the group with ASD should outperformed the ADHD group. However, results varies in the research field. This study is to find out, if any, the underlying interaction between age and cognitive flexibility among children with ASD or ADHD. Children with ASD (n=39), ADHD (n=22) and TD children (n=25) were studied, significant group differences were found in various indicators in WCST, showing that children with ASD and ADHD do have cognitive flexibility impairment. Further regression analysis also revealed significant age-related improvement in children with ADHD but not ASD, which disagree with the literatures.

Keywords: Cognitive flexibility, Autism spectrum disorders, Attention-deficit/hyperactivity disorders, WCST, age-related Improvement