Behavioural problems and executive functioning characteristics in children with borderline intellectual functioning and attention deficit hyperactivity disorder

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Resumen

Objective
To investigate the behavioural problems, intellectual ability and executive functioning characteristics as well as their correlations in children with borderline intellectual functioning (BIF) and attention deficit hyperactivity disorder (ADHD).

Methods
60 children with BIF, 60 children with ADHD and 60 typical developing children (TDC) participated in this study. Parental report measures of behavioural problems were administrated using the Conners' Parent Symptom Questionnaire (PSQ) and Achenbach Children Behavior Checklist Scale (CBCL). All the participants performed the Chinese Revised Wechsler Intelligence Scale for Children (C-WISC) and a neuropsychological test named integrated visual and auditory continuous performance test (IVA-CPT). Comparison of cognitive profiles and correlation between psychological features were carried out to test the differences and commons among the groups.

Results
(1) Behavioural problems: the children with BIF had higher scores (3.68±2.85) in withdrawal factor than the children with ADHD (2.82±2.24) and TDC (1.03±1.59). The children with ADHD had higher scores in conduct, impulsivity, aggressive and delinquent behaviour than the children with BIF and TDC. The children with BIF/ADHD had higher scores in learning, anxiety, depression, somatic complaint and hyperactivity than the TDC.

(2) Executive functioning: the children with BIF had more visual omission error (12.17±10.48) than the children with ADHD (6.95±7.20) and TDC (2.33±2.48). The children with BIF and ADHD had lower auditory accuracy and higher visual reaction time, visual/auditory response variability, visual/auditory misrepresentation and auditory omission numbers than the TDC. There were no group differences in auditory reaction time.

(3) Correlation analysis: intellectual ability was correlated with behaviour problems and neurophysiological indexes such as conduct, learning, impulsivity, anxiety, depression factors, visual/auditory accuracy, visual reaction time and visual/auditory response variability.

Conclusion
BIF and ADHD is associated with poor executive functioning and increased behaviour problems. The cognitive deficit may be a marker of the vulnerability of poor academic and social outcomes in children with BIF and/or ADHD.