

Handwriting assessment to distinguish comorbid learning difficulties from attention deficit hyperactivity disorder in Chinese adolescents: A case-control study

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Abstract

OBJECTIVES:

Attention deficit hyperactivity disorder (ADHD) and learning difficulties (LDs) are proposed as 2 overlapping disorders. The objective of this study was to investigate the handwriting performance in ADHD and comorbid ADHD-LD adolescents.

METHODS:

The study examined the Chinese and English handwriting performance and sensorimotor skills of 32 ADHD, 12 ADHD-LD, and their matched controls.

RESULTS:

Participants with ADHD had comparable writing time and speed, but the readability was lower than their controls. Participants with ADHD-LD had lower writing speeds in both Chinese and English handwriting than their controls. The ADHD and ADHD-LD groups also showed larger variations in either speed or pen pressure than their controls. Chinese handwriting assessment effectively classified ADHD and ADHD-LD with good sensitivity and positive predictive value.

CONCLUSIONS:

Clinicians should be aware of the fundamental difference between the 2 disorders and make good use of handwriting assessment as a reference to deliver effective therapies and trainings.