Increased microsaccade rate in individuals with ADHD traits

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Abstract

Microsaccades are involuntary, small, jerk-like eye-movements with high-velocity that are observed during fixation. Abnormal microsaccade rates and characteristics have been observed in a number of psychiatric and developmental disorders. In this study, we examine microsaccade differences in 43 non-clinical participants with high and low levels of ADHD-like traits, assessed with the Adult ADHD Self-Report Scale (ASRS, Kessler, Adler, et al., 2005). A simple sustained attention paradigm, which has been previously shown to elicit microsaccades, was employed. A positive correlation was found between ADHD-like traits and binocular and monocular microsaccade rates. No other differences in microsaccade properties were observed. The relationship between ADHD traits and microsaccades suggests that abnormal oculomotor behaviour is a core deficit in ADHD and could potentially lead to the development of a biomarker for the disorder.