Childhood-Diagnosed ADHD, Symptom Progression, and Reversal Learning in Adulthood

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Abstract

Objective:
ADHD persists in up to 60% into adulthood, and the reasons for persistence are not fully understood. The objective of this study was to characterize the neurofunctional basis of decision making in those with a childhood diagnosis of ADHD with either persistent or remitted symptoms in adulthood versus healthy control participants.

Method:
Thirty-two adults diagnosed with ADHD as children were split into persistent (n = 18) or remitted (n = 14) ADHD groups. Their neural activity and neurofunctional connectivity during a probabilistic reversal learning task were compared with 32 healthy controls.

Results:
Remitters showed significantly higher neural connectivity in final reversal error and probabilistic error conditions, and persisters depict higher neural connectivity in reversal errors than controls at a family-wise error (FWE) corrected whole-brain corrected threshold.

Conclusion:
Remitters may have utilized higher neural connectivity than controls to make successful decisions. Also, remitters may have utilized compensatory strategies to override any potential underlying ADHD deficits.