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The Activation of the Right Inferior Orbitofrontal Cortex in Individuals with Eating Disorders during Administration of Conners' Continuous Performance Task

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Objective: To investigate the blood flow to the right inferior orbitofrontal cortex in eating disorders during administration of SPECT scans while performing the Conners' Continuous Performance Task (CPT-I or CPT-II). Method: Data were collected from the self-reports of clients seen at the Amen Clinic. Participants included 396 individuals with a self-reported diagnosis of an eating disorder, with an average age of 34.41 ($SD = 14.03$), and 83 normals, with an average age of 41.73 ($SD = 16.43$). The sample was mostly female, and subtypes of eating disorders were not identified. Participants underwent SPECT scans during performance of the CPT. Results: Independent *t*-tests were used to analyze mean differences in blood flow between normals and eating disorders. Results revealed differences in blood flow of the cerebellum and the right inferior orbitofrontal cortex, $p < 0.047$. No other areas of the brain revealed differences in blood flow while performing the CPT. Conclusion(s): Individuals with eating disorders showed more blood flow to the right inferior orbitofrontal cortex and cerebellum during the performance of the CPT. Increased blood flow to the right inferior orbitofrontal cortex during the CPT may suggest that individuals with eating disorders may attend more to decision-making in relation to all visual stimuli, not just food and other body-related visual stimuli. Increased blood flow to the cerebellum may suggest that individuals with eating disorders have increased motor control and attention.

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