Investigating the effects of transcranial Direct Current Stimulation (tDCS) on Face Recognition skills as indexed by the Composite Face Effect.

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Abstract

In this study we show that a particular form of neuro-stimulation can affect face recognition skills impairing participants performance on a face recognition task without affecting the composite face effect. Using a Face-Matching task (n=48) traditionally used to study the composite face effect (better recognition of the top half of an upright face when in composite with a congruent vs and incongruent bottom half) we confirm that anodal transcranial Direct Current Stimulation (tDCS; double-blind and between subjects study) delivered over the left DLPFC at Fp3 (10 mins at 1.5mA) affects overall face recognition performance for upright faces. But no effect of the tDCS was found on the composite face effect itself. We interpret our results in the light of previous literature on the tDCS effects on perceptual learning and face recognition, suggesting that different mechanisms are involved in the face inversion effect and the composite face effect.