

Poster Presentations

Title: Neurodiverse Markers of Concealed Face Recognition in Neurotypical and Autistic Individuals.

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Abstract: Suspects sometimes lie about recognising criminal associates, making the detection of concealed face recognition an important area for policing research. Previous studies have shown that concealed recognition can be detected using eye-tracking Concealed Information Tests (CITs), but evidence in neurodiverse populations is limited. This study aimed to assess eye-tracking markers of concealed face recognition in neurotypical and autistic-identifying individuals (N = 44), comparing the efficacy of sequential and simultaneous CIT formats. Each participant completed both a sequential CIT, in which faces were presented one at a time, and a simultaneous CIT, where six-face arrays were shown. In both formats, participants were instructed to deny recognition of one familiar face, identify another familiar face, and correctly reject unfamiliar faces. Eye movements (e.g., number of fixations, dwell time) were recorded while participants made yes/no recognition responses (simultaneous verbal and button response). Concealed recognition was detected by differences in fixations and dwell times on familiar faces. The most reliable marker of concealed recognition was dwell time on familiar faces in the simultaneous CIT, with consistent patterns across both neurotypical and autistic-identifying participants. These findings provide evidence that the simultaneous eye-tracking CIT outperforms the sequential format and offer the first evidence of reliable markers of concealed recognition in autistic individuals, advancing understanding of credibility assessment in neurodiverse populations.