Visual and auditory emotion recognition problems as familial cross-disorder phenomenon in ASD and ADHD


doi: 10.1016/j.euroneuro.2018.06.009.

Abstract

Autism spectrum disorder (ASD) and attention-deficit/hyperactivity disorder (ADHD) are frequently comorbid disorders. Emotion recognition problems are considered an important familial deficit in ASD, but this is unknown in ADHD. Very few studies have directly compared emotion recognition performance of youth with ASD and/or ADHD and of their unaffected siblings across age to quantify the contribution of emotion recognition problems to the ADHD phenotype. We therefore devised a study of 64 ASD+ADHD participants, 89 ASD-only participants, 111 ADHD-only participants, 122 unaffected ASD(+ADHD) siblings, 69 unaffected ADHD-only siblings and 220 controls aged 7-18 years, who had completed two tasks assessing auditory and visual emotion recognition. Factor analysis was used to detect underlying dimensions of emotion recognition capacity. Linear mixed models were used to compare performance across groups and to assess age effects. The factor-analysis revealed four factors separating speed and accuracy regarding visual and auditory emotion recognition. ASD+ADHD, ASD-only, and ADHD-only participants all performed worse than controls. ASD+ADHD, ASD-only, and ADHD-only participants did not differ in the severity of their emotion recognition problems. Both unaffected sibling groups performed intermediate between patients and controls. For ASD+ADHD and ADHD-only participants, group differences were more marked in adolescence than childhood, whereas in ASD participants this was not observed. We conclude that emotion recognition problems are a familial deficit in ADHD to a similar extent as in ASD. Emotion recognition problems specifically - and social cognition problems more generally - should be assessed in clinical practice for ADHD.