
Processing of self-related information in autism

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Abstract

Abundant work in the field of autism research has been devoted to emotional processing, social interactions, executive functions etc. However, recent studies suggest that self-related information processing in Autism Spectrum Disorder (ASD) may also be altered. The aim of this study was to investigate whether subjects with ASD show different pattern of brain activity in response to their own name when compared to controls. This stimulus has been chosen because of its close relation to the ‘inner sense of self’. Sixteen ASD and sixteen controls participated in this study (they were all young adults and adolescents). The groups were matched in terms of age, gender, handedness and IQ scores. Clinical diagnosis was confirmed by standardized tests such as ADOS and ADI-R. We investigated event-related potentials to self-name, significant other’s name (e.g., a family member or a friend), famous name and unknown name. All stimuli were presented visually. The ASD group showed significantly higher P300 response to self- than to significant other’s name, whereas no such effect was found for the controls, who showed similar responses to both of these names. This pattern of results might suggest that controls have a partly shared neural representation of self and close other, while this feature might be attenuated in autism.

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