



Abstract

The Influence of Body Processing in the Development of Empathy in Early Adolescence: A Preliminary Study [†]

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Abstract: Mental representations in various bodily formats (e.g., somatosensory, interoceptive, motoric) have been suggested to play a pivotal role in social cognition. However, data on children and adolescents are lacking. This study aims to investigate whether individual differences in the sensing of the internal body state, in terms of interoceptive accuracy (IAcc) and sensibility (IS), and in the action-oriented (i.e., body schema) and non-action-oriented (i.e., visuo-spatial body map) body representations (BR) influence a core component of social cognition, namely empathy, during early adolescence. A total of 30 healthy teens (mean age 13.2 years) completed an empathy questionnaire, a heartbeat tracking task probing IAcc, an IS questionnaire including visceral and somatosensorial factors, and a computerized battery consisting of action-oriented and non-action-oriented BR tasks. The correlational analysis showed that as IAcc increased, empathy levels decreased, while as IS increased, empathy levels increased, especially when the visceral factor was taken into account. No association was found between action/non-action-oriented BR and empathy. These preliminary results suggest that teens with a higher sensibility towards visceral body changes also show a higher tendency to feel and understand another's emotional state. In contrast, teens with higher IAcc for cardiac signals show a lower empathy level, possibly due to a more stable body self-representation that prevents the self–other overlap necessary in some forms of empathy. As a corollary finding, the opposed relationship between these interoceptive dimensions and empathy confirms that IS and IA are two distinct constructs that can impact cognitive and affective abilities differently.

Keywords: interoception; body representation; empathy



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