

Age-related changes in emotional face processing across childhood and into young adulthood : evidence from event-related potentials

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Abstract

Socio-emotional processing is an essential part of development, and age-related changes in its neural correlates can be observed. The late positive potential (LPP) is a measure of motivated attention that can be used to assess emotional processing; however, changes in the LPP elicited by emotional faces have not been assessed across a wide age range in childhood and young adulthood. We used an emotional face matching task to examine behavior and event-related potentials (ERPs) in 33 youth aged 7–19 years old. Younger children were slower when performing the matching task. The LPP elicited by emotional faces but not control stimuli (geometric shapes) decreased with age; by contrast, an earlier ERP (the P1) decreased with age for both faces and shapes, suggesting increased efficiency of early visual processing. Results indicate age-related attenuation in emotional processing that may stem from greater efficiency and regulatory control when performing a socio-emotional task. © 2015 Wiley Periodicals, Inc. *Dev Psychobiol* 58:27–38, 2016.

Keywords

Late positive potential, LPP development, Faces, Emotion affect, P1, Event-related potential, ERP, Children, Neural, Adolescent