

Observing emotional touching gestures in infancy.

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Abstract

It is known that, by observing their surrounding environment, infants are capable to process social signals that are crucial to build infants' bodily self. Touch is at the core of the developing bodily self, being an essential means that connects infants' internal states to the external environment. Nonetheless, it remains largely unexplored whether and how observed emotional touching gestures are processed during the first year of life. The talk will address this issue by exploring infants' neural and facial responses to observed emotional tactile gestures. In a first study, we measured 6-month-olds ERP (Event-Related Potential) activity while infants observed a potentially painful (a poke in the eye) and a neutral (touch on the eyebrow) touch. Results have shown that the Nc (300-500 ms) was larger in response to a painful compared to a neutral touch, while a reversed activity was visible over the early (550-750 ms) and late (800-1000 ms) LPP. Thus, infants paid more attention to the painful compared to the neutral touch. Analysis of the attenuation of the mu rhythm is still ongoing to explore the involvement of somatosensory areas during painful and neutral touch observation. In a second study, we explored 11-month-olds facial electromyographic (EMG) activity in response to the observation of positive (a caress) and negative (a scratch) touches. Results showed increased activation of the ZM muscle in response to caresses compared to scratches, while none of the two emotional tactile interactions activated the CS muscle. Infants' have shown to be sensitive to the emotional information conveyed in others' affective tactile gestures. Overall, our results suggest that infants might have some knowledge about the sensory consequences of different types of touches and might have detected the link between self and others' bodily sensory experiences.