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# Does affective touch promote autonomic self-regulation after emotional distress?

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## Abstract

Affective touch, mediated by activation of C-tactile afferents, has been shown to foster autonomic self-regulation and modulate affective states in situations of distress in early infancy (Feldman et al., 2010) and across the lifespan (Fotopolou et al., 2022). In the present study we presented adults (N=95) with emotion-eliciting videos of an infant babbling (positive affect) and an infant crying (negative affect; Ruffman et al., 2019). Each video lasted 2min and was followed by 2min of touch (either affective - slow stroking with a brush or non-affective - gentle tapping with the brush handle as between-subject condition). Participants were also presented with a neutral video of babbles (2min) as baseline (before stimulation) and recovery (after stimulation). During the experiment we measured heart rate variability (HRV), which reflects oscillations of heart rate associated with autonomic regulation and it is considered an index of the parasympathetic activity. Results revealed a decrease of HRV during video presentation and an increase of HRV during tactile stimulation. Moreover, the relative increase of HRV during the touch phase compared to the video phase was higher in the affective touch group than in the non-affective touch group, but only after viewing an infant crying. These results suggest that affective touch promotes autonomic self-regulation and it may be more effective than non-affective touch in a situation of emotional distress.

**Keywords:** Affective touch, autonomic regulation, heart rate variability, emotional distress

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