**Positive emotional style and subjective, cardiovascular and cortisol responses to acute laboratory stress**

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**Abstract**

The relationships between positive emotional style and acute salivary cortisol and cardiovascular responses to laboratory stress tasks were examined in 40 young women (mean age=28.8 years). Positive emotional style (PES) was measured by aggregating daily positive mood rating scales over one week. Negative affect was assessed with the short form Profile of Mood States. Salivary cortisol was measured in response to two behavioural tasks, a 5 min speech task and a 5 min mirror tracing task. Blood pressure (BP) and heart rate responses were monitored using a Finometer during baseline, tasks and recovery. Higher PES was associated with more complete diastolic BP recovery (p=0.027) and lower acute cortisol response to stress (p=0.018), after adjusting for baseline measures, age, BMI and negative affect. Individuals with higher PES reported lower subjective tension during the tasks and perceived the tasks as more controllable. There were no differences in ratings of task involvement or in objective measures of task performance. A retrospective measure of positive affect (POMS vigour) was associated with diastolic BP recovery but not cortisol responses or subjective tension. The findings suggest that positive affective traits, assessed using repeated assessments of daily mood, are related to adaptive recovery from acute psychological stress. Our results reinforce evidence linking positive affect with adaptive diastolic BP recovery, while extending the results to cortisol. Investigations into the biological correlates of affective traits should consider utilising repeated measures of experienced affect.