The psychophysiology of human attachment and stress

ABSTRACT:

Anxious attachment style is associated with poor health outcomes. A proposed pathway implicates the hypothalamic-pituitary-adrenal (HPA) axis, over-activity of which is associated with a wide range of mental and physical ill-health. However data on stress reactivity in relation to attachment style is scarce and contradictory. This was examined using the novel Trier Social Stress Test for groups (TSST-G): a group-based acute psychosocial stressor. Each participant, in the presence of other group members, individually performed public speaking and mental arithmetic tasks. Eighty-one females $(20.1 \pm 3.1 \text{ years})$, in groups of up to 6 participants completed demographic information, the Perceived Stress Scale and the Vulnerable Attachment Style Questionnaire and were exposed to the TSST-G. Stress reactivity was measured using the stress-arousal checklist immediately before and after the TSST-G and salivary cortisol concentrations, which were measured on 7 occasions at 10-minute intervals. Stress reactivity of the anxious attachment style group was compared to the secure and insecure avoidant groups. Participants in the secure and avoidant group exhibited a significant reduction in state psychological stress after the TSST-G, whereas those in the anxious attachment style group did not. Participants in the anxious attachment group showed a greater increase in cortisol levels than the secure and avoidant participants. Although not related to current self-reported health status, BMI or trait stress such enhanced stress reactivity may lead to reported aberrant basal patterns of HPA axis activity and underlie future health vulnerability in this group.

Keywords

Attachment style, Psychosocial stress reactivity, Cortisol, TSST-G

Published Work:

Ramachandran, N., Smyth, N., Thorn, L., Eardley, A., Evans, P., & Clow, A. (2016). Relationship between post-awakening salivary cortisol and melatonin secretion in healthy participants. *Stress*, *19*(2), 260-263. doi: 10.3109/10253890.2016.1146671

Smyth, N., Thorn, L., Oskis, A., Hucklebridge, F., Evans, P., & Clow, A. (2015). Anxious attachment style predicts an enhanced cortisol response to group psychosocial stress. *Stress*, *18*(2), 143-148. doi: 10.3109/10253890.2015.1021676

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