

Exploratory Study of StressBuffering Response Patterns from Interaction with a Therapy Dog

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Abstract:

This exploratory study builds on existing research on the physiological stress response to human-animal interactions in a non-clinical sample of adult dog-owners interacting with their own or an unfamiliar therapy dog under similar conditions. Participants were therapy-dog owners (TDO group; $n = 5$) interacting with their own dogs and dog owners interacting with an unfamiliar therapy dog (AAA group; $n = 5$). Following a 30minute baseline period, participants completed a stress task followed by a 30-minute dog interaction and then watched a neutral video for 60 minutes. The outcome variable of interest was the bio-behavioral stress response, measured by

systolic and diastolic blood pressure (SBP, DBP), heart rate (HR), salivary cortisol, salivary alpha-amylase, and self-report. Trait anxiety and attitudes toward pets were assessed as moderating variables. Results revealed consistent physiological patterns, showing modest increases with the stressor and decreases from baseline following the intervention, for salivary cortisol, SBP, DBP, HR, and self reported anxiety and stress for both groups. In general, although the TDO group tended to perceive less stress and anxiety during the intervention than the AAA group, greater reductions in physiological measures were observed in the AAA group. Positive attitudes toward pets in the total sample of dog owners were associated with decreased levels of self-reported stress ($p < 0.05$), salivary cortisol, and SBP, while higher levels of trait anxiety were associated with higher levels of salivary cortisol ($p < 0.05$). In addition, higher levels of trait anxiety were associated with lower levels of autonomic nervous system indicators of stress (HR; SBP, $p < 0.05$; DBP, $p < 0.05$). Results support a buffering effect on the stress response associated with owners interacting with their dogs that may extend to interactions with unfamiliar therapy dogs in AAA, and supports the need for replication studies with larger sample sizes.

Keywords: [ANIMAL-ASSISTED THERAPY](#); [HUMAN-ANIMAL INTERACTION](#); [STRESS](#); [THERAPY DOGS](#)

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