



US DEPARTMENT OF DEFENSE
BLAST INJURY RESEARCH PROGRAM
COORDINATING OFFICE

Neurocognitive and Psychological Health Treatment Strategies

Canine Companionship is Associated with Modification of Attentional Bias in Posttraumatic Stress Disorder

Researchers at the Palo Alto Veterans Institute for Research (Palo Alto, California), conducted a study to determine the impact of canine companionship on cardiac autonomic regulation, mood, social experience, and social cognition in U.S. Military Veterans undergoing inpatient treatment for deployment-related posttraumatic stress disorder (PTSD). In one sub-study, twenty-three Veterans with chronic military-related PTSD were assessed for attentional bias towards aversive and pleasant visual imagery in the presence or absence of a familiar service canine (Woodward *et al.* 2017). The use of eye-tracking software enabled relatively direct estimation of visual attention, in contrast to dot-probe methodology. The difference in visual attention directed to each image was analyzed as a function of the valence of the emotive stimulus and presence/absence of the canine. In a scenes task, the presence of a familiar service canine attenuated the normative attentional bias towards aversive scene content. In a facial task, presence of the service canine specifically reduced attention toward angry faces. More aggregated time spent with the service canine was also associated with modification of attentional bias toward emotive faces, and specifically increased time spent looking at pleasant facial expressions (Figure 1). The attenuation of attention toward social threat, associated with the presence and familiarity of a service canine, is compatible with reports suggesting service canines promote sociality.

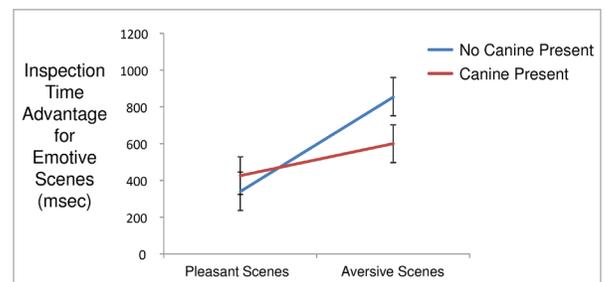


FIGURE 1: Effect of canine presence on inspection time differences favoring aversive over pleasant scenes. (Figure 1 from Woodward *et al.* (2017) used with permission from the authors)

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REFERENCES:

Woodward, S. H., Jamison, A. L., Gala, S., and Holmes, T. H. 2017. "Canine Companionship Is Associated with Modification of Attentional Bias in Posttraumatic Stress Disorder." *PLoS One* 12 (10):e0179912. doi: 10.1371/journal.pone.0179912.

