

## Mood Symptom Severity in Service Members with Posttraumatic Stress Symptoms after Service Dog Training

**Authors :** Tiffany Riggleman, Andrea Schultheis, Kalyn Jannace, Jerika Taylor, Michelle Nordstrom, Paul F. Pasquina

**Abstract :** Introduction: Posttraumatic Stress (PTS) and Posttraumatic Stress Disorder (PTSD) remain significant problems for military and veteran communities. Symptoms of PTSD often include poor sleep, intrusive thoughts, difficulty concentrating, and trouble with emotional regulation. Unfortunately, despite its high prevalence, service members diagnosed with PTSD often do not seek help, usually because of the perceived stigma surrounding behavioral health care. To help address these challenges, non-pharmacological, therapeutic approaches are being developed to help improve care and enhance compliance. The Service Dog Training Program (SDTP), which involves teaching patients how to train puppies to become mobility service dogs, has been successfully implemented into PTS/PTSD care programs with anecdotal reports of improved outcomes. This study was designed to assess the biopsychosocial effects of SDTP from military beneficiaries with PTS symptoms. Methods: Individuals between the ages of 18 and 65 with PTS symptom were recruited to participate in this prospective study. Each subject completes 4 weeks of baseline testing, followed by 6 weeks of active service dog training (twice per week for one hour sessions) with a professional service dog trainer. Outcome measures included the Posttraumatic Stress Checklist for the DSM-5 (PCL-5), Generalized Anxiety Disorder questionnaire-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), social support/interaction, anthropometrics, blood/serum biomarkers, and qualitative interviews. Preliminary analysis of 17 participants examined mean scores on the GAD-7, PCL-5, and PHQ-9, pre- and post-SDTP, and changes were assessed using Wilcoxon Signed-Rank tests. Results: Post-SDTP, there was a statistically significant mean decrease in PCL-5 scores of 13.5 on an 80-point scale ( $p=0.03$ ) and a significant mean decrease of 2.2 in PHQ-9 scores on a 27 point scale ( $p=0.04$ ), suggestive of decreased PTSD and depression symptoms. While there was a decrease in mean GAD-7 scores post-SDTP, the difference was not significant ( $p=0.20$ ). Recurring themes among results from the qualitative interviews include decreased pain, forgetting about stressors, improved sense of calm, increased confidence, improved communication, and establishing a connection with the service dog. Conclusion: Preliminary results of the first 17 participants in this study suggest that individuals who received SDTP had a statistically significant decrease in PTS symptom, as measured by the PCL-5 and PHQ-9. This ongoing study seeks to enroll a total of 156 military beneficiaries with PTS symptoms. Future analyses will include additional psychological outcomes, pain scores, blood/serum biomarkers, and other measures of the social aspects of PTSD, such as relationship satisfaction and sleep hygiene.

**Keywords :** post-concussive syndrome, posttraumatic stress, service dog, service dog training program, traumatic brain injury

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