

# Animals in the Treatment of Post-Traumatic Stress Disorder

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## Abstract

*The percentage of veterans who experience post-traumatic stress disorder (PTSD) is as high as 29%. nurse practitioners are well-positioned to evaluate and treat patients with PTSD, but need information on effective treatments that are practical and have few side effects. In this paper, I attempted to answer the question: For veterans with PTSD, does the use of an animal-assisted intervention (AAI) decrease PTSD symptoms compared with standard treatment alone (medication)? Using the McNairy Library, 15 electronic databases were accessed, and 10 articles were chosen for a literature review. The articles were analyzed using the Johns Hopkins Evidence-Based Practice model. I found that qualitative research using AAI showed themes of decreased isolation, feeling happy/safe, symptom management, unconditional acceptance/companionship, renewed sense of purpose, participant-therapist bond, improved mental health/self-image and coping/relationship skills, and increased physical activity. Quantitative research showed changes on the Post-traumatic Stress Disorder Checklist (PCL) of  $p \leq .05$  in 6/7 studies; changes on other measuring tools of PTSD of  $p \leq .05$  in 6/6 studies; decreases in: depression, anxiety, negative affect, intrusive thoughts, avoidance of areas/people, arousal/reactivity, self-judgement; and increases in: positive affect and self-compassion. This review showed that AAI can reduce PTSD symptoms, helping patients to attend therapy and do the work necessary to heal. Further research is needed to address whether it is the animal itself causing a decrease in symptoms or some other factors (sense of purpose, time, physical activity outdoors) and how to incorporate these findings into practice.*

## Introduction

In my full-length family nurse practitioner student research project, I attempted to answer the question: For veterans with post-traumatic stress disorder (PTSD), does the use of an animal-assisted intervention (AAI) decrease symptoms

compared with standard treatment alone? I undertook this project to further the body of research available to healthcare personnel, including nurse practitioners (NPs). As primary care providers, NPs are in a position to evaluate and treat veterans with PTSD. Practitioners need information on which

treatments are the most effective in terms of decreasing PTSD symptoms while also being cost-effective, practical, and widely applicable, with the fewest adverse effects.

According to Courtois et al. (2017), PTSD is defined as a mental health condition resulting from a life-threatening or traumatic event, either experienced or witnessed, with symptoms lasting longer than three months. It has four categories of symptoms: re-experiencing of the event (through nightmares, flashbacks, and the like); hyperarousal (for example, anger over minor incidences; having to be constantly vigilant); mood or cognition changes (anxiety, depression); and avoidance (of situations or reminders of the trauma). In former military personnel, PTSD can be caused by experiences in deployment or combat and, unfortunately, can also be the result of sexual trauma, such as that experienced by a veteran caused by other military personnel during service (US Department of Veterans Affairs, 2023). PTSD, although prevalent in combat military veterans, is not limited to this population and can also be seen in others, including school shooting victims or victims of mass-casualty incidents. For this project, I defined AAI as any treatment of PTSD that involved interacting with an animal. In my search, I was able to locate articles concerning PTSD interventions with horses, dogs, and one cat.

## Methods

Because PTSD research with animal assistive therapy is an area of emerging research (Jensen et al., 2021), a literature review was undertaken to address the research question. Databases of the Francine G. McNairy Library at Millersville University were accessed for research articles. Ten articles that addressed the research question and fit the inclusion/exclusion criteria (English language, publishing date last 5 years,

peer-reviewed) were selected for this review and critically appraised according to the Johns Hopkins Evidence-Based Practice (EBP) model (Dang et al., 2022). In these 10 studies, there were several different measuring tools for the presence, severity, and fluctuation of PTSD symptoms. According to the American Psychiatric Association (n.d.), the Clinician Administered PTSD Scale (CAPS-5) is the gold standard for providing a diagnosis of and changes to PTSD. Due to its length, time to complete, and the need for a clinician/psychiatrist to administer, the CAPS-5 is difficult to use for study purposes. The Veterans Administration developed a self-administered version of this scale, which was easier to use and considered reliable for both diagnosis and measuring change in symptomology, called the Posttraumatic Stress Disorder Check List (PCL-M, military version, and the PCL-C, civilian version). The measuring tool used most often in the studies of this literature review (7 out of 10 studies) was the PCL.

## Results

I found that studies measuring the qualitative outcomes of AAI showed themes of decreased isolation, feelings of being happy/safe, symptom management, unconditional acceptance/companionship, renewed sense of purpose, good participant-therapist bond, improved mental health/self-image, improved coping/relationship skills, and increased physical activity.

Studies utilizing quantitative research showed changes on the PCL of  $p \leq .05$  in 6/7 studies; changes on other measuring tools of PTSD of  $p \leq .05$  in 6/6 studies, with findings of  $p$  less than or equal to .05 being significant for the AAI to have brought about the change. AAI was also responsible for significant quantitative decreases in depression, anxiety, negative affect, intrusive thoughts, avoidance of

areas/people, arousal/reactivity, self-judgement, and increases in positive affect and self-compassion.

The overall analysis of the results is that almost all of the studies showed a significant reduction of PTSD symptoms with the introduction of AAI, suggesting that animals significantly reduced PTSD symptoms. Service dogs, in particular, were the most successful in helping patients get back to living their lives, functioning in family life, work life, and social life. Having AAI allowed veterans to attend therapy, which is the gold standard in treating PTSD.

### **Implications**

Animals can act as the bridge to help veterans open up to therapy and the work required (going out in public, being in groups, talking to people, being in relationships) (Krause-Parello et al., 2020; Bergen-Cico et al., 2018; Whitworth et al., 2019; Shelef et al., 2019). However, training a service animal is expensive (not for the veteran, but for the training institution), and waitlists are long (Jensen et al., 2021 and Rodriguez et al., 2022). Other

interventions that would work as well and cost less should be explored. For example, rather than highly trained service dogs, using therapy dogs during a therapy session might bring the same results, or using gardening as an intervention may bring similar results. If other ways of incorporating AAI or the benefits of an AAI-like program (like gardening) could be obtained at a lower cost with easier implementation, more patients could be reached, or alternatively, these activities could be used while patients were waiting for a service dog. With the results from this literature review being almost overwhelmingly positive in support of using AAI to lessen the symptoms of PTSD, practice providers should recommend AAI, whether through a service dog or another form of AAI. Further study in this field should be encouraged to find other types of AAI or AAI-like programs that are more easily accessible and, therefore, able to reach a greater number of patients. (Copies of the full-length research paper are available by contacting the author at [stgramba@millersville.edu](mailto:stgramba@millersville.edu).)

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