**////Title: Can Assistance Dogs Help Military Veterans with Posttraumatic Stress Disorder?**

**////Stand-first**:

Military veterans are diagnosed with posttraumatic stress disorder at a much higher rate than civilians. There is a growing interest in psychiatric assistance dog placements to help veterans cope with their symptoms, however research into their effectiveness is limited. Sarah Leighton and her colleagues from Purdue University and the University of Arizona have undertaken a review of the existing evidence surrounding these partnerships to determine their efficacy. Whilst more detailed and robust research is still needed, they found positive support for this intervention.

**////Body text:**

Military personnel risk witnessing or experiencing traumatic events that can have negative and long-lasting impacts on their lives outside of their military service. This can lead to a diagnosis of posttraumatic stress disorder, known as PTSD. Symptoms can include flashbacks of the trauma, sleep disturbances, and intrusive memories. PTSD is linked with increased anxiety, depression, substance use and even suicide. PTSD is particularly common amongst military personnel; it is diagnosed in 1 in 14 non-veterans, compared to as many as 1 in 4 post-9/11 veterans and 1 in 3 Vietnam-era veterans.

Although several potential treatments are available for PTSD, the nature of the condition makes it very hard to cure. Up to half of those who begin treatment will drop out, and of those who remain in treatment, more than half will still have a diagnosis of PTSD.

In recent years, there has been an increased emphasis on finding an effective solution to help treat PTSD. An important area of focus has been assistance dogs. Much like guide dogs who help people to navigate their surroundings and hearing dogs who alert their handlers to sounds, psychiatric assistance dogs are specifically trained to help with mental health symptoms.

These dogs might help a handler with PTSD by waking them from a nightmare, interrupting their anxiety, or creating space in a crowded environment. They can go with their handler in public spaces and environments where pet dogs are not normally allowed such as on public transport, in restaurants or shops, and at appointments. It is estimated that worldwide, there are over 16,000 assistance dog partnerships and around 19% of these are psychiatric assistance dogs supporting military personnel and veterans suffering from PTSD.

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As the use of psychiatric assistance dogs for PTSD grows in popularity, there is a need to investigate the effectiveness of these partnerships. This knowledge gap was recognised by Sarah Leighton and her colleagues from Purdue University and the University of Arizona in the USA. The researchers undertook a comprehensive review with three key aims: to understand more about the nature and characteristics of these partnerships, to evaluate the quality of existing evidence, and finally, to summarise the findings reported in the literature so far.

By searching databases for research relating to assistance animals partnered with military personnel and veterans with PTSD, the researchers found 41 relevant articles, containing research on a total of 1,765 veterans and 1,200 assistance dogs. The researchers read the articles, which included 29 peer-reviewed papers and 12 unpublished dissertations, extracting important data to address their research aims.

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The review revealed that this is a new area of research, with all of the articles published in 2014 or later. Most research was conducted in the USA. The military veterans included in the research were on average white, male, veterans of the United States Army, and an average of 42 years old. The dogs came from 19 unique assistance dog organisations and were mostly Labrador retrievers, Golden retrievers, and German Shepherds. Less than a third of the dogs appeared to be purpose bred for their working role, which is unusual compared to other assistance dog categories. In addition, black and Hispanic veterans, who are more likely to experience PTSD, were under-represented. As such, the researchers noted that further research is needed to address concerns surrounding a lack of equity in terms of access to psychiatric assistance dogs.

The researchers also noted that the quality of the research conducted varied greatly, with larger studies being more likely to comply with higher, more rigorous, standards. One of the main areas identified for improvement was the lack of randomised controlled trials. In particular, randomised controlled trials with a ‘no dog’ comparison group are needed.

The researchers conducted a meta-analysis to examine the impact of psychiatric assistance dog placement on PTSD symptoms, finding that placements were associated with a significant, large, clinically meaningful improvement in symptoms. Assistance dogs also appear to improve other areas of mental health and social health. While these impacts overall seem to be positive, challenges also exist; for example, some veterans experience increased stigma in public, since partnership with an assistance dog is effectively a disclosure of disability status.

Sarah Leighton and her colleagues agree that further research is needed to determine which factors are most effective within these partnerships. Specifics such as trauma origin, canine training process, and the dog’s trained tasks could all have different effects on outcomes for veterans.

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Ultimately, the researchers indicate that based on this study, there is support for the positive impact of psychiatric assistance dog partnerships. At the current time, however, these partnerships should not be considered a standalone treatment, but rather a complementary intervention for veterans with PTSD.

This SciPod is a summary of the paper ‘Assistance dogs for military veterans with PTSD: A systematic review, meta-analysis, and meta-synthesis’, published in *PLoS ONE.* DOI: https://doi.org/10.1371/journal.pone.0274960.

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