

Effects of Equine Assisted Activities on PTSD Symptoms, Coping Self-Efficacy, Emotion Regulation, and Social Engagement in Military Veterans

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Summary of research project results and findings.

Project Description

The study investigated to what extent participation in a structured, six-week therapeutic horseback riding (THR) program was associated with decreased Post-Traumatic Stress Disorder (PTSD) symptoms, as well as improved self-efficacy, emotion regulation, and social engagement among veterans. Veterans were randomly assigned to participate in the six-week THR program either without a wait control period or assigned to a six-week wait control period prior to the six weeks of riding. We expected that no changes would occur during the six-week wait control period. We hypothesized that compared with their baseline levels; participants in the six-week THR program would have decreased PTSD symptoms, as well as improved self-efficacy, emotion regulation, and social engagement after the six-weeks.

Data Collection Instruments

Post-Traumatic Stress Disorder (PTSD) was measured using the PTSD Checklist – Military Version (PTSD; Weathers et al., 1999). It measures major symptoms of PTSD including anxiety and re-experiencing of traumatic situations. Self-efficacy was measured using the Coping-Self Efficacy Scale (CSES; Chesney, Neilands, Chambers, Taylor & Folkman, 2006). The CSES measures the use of problem-centered coping, belief in the ability to stop unpleasant emotions and thoughts, and praying and/or meditative behaviors. Emotion regulation was measured using the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). The DERS measures non-acceptance, goals, impulse, awareness, strategies, and clarity. Social engagement was measured with the Social and Emotional Loneliness Scale for Adults – Short Version (SELSA; DiTommaso, Brannen & Best, 2004). The SELSA includes three subscales for romantic, family, and social loneliness. The scores for the outcome measures are presented in Table 1 below.

Progress and Findings

The study is completed and quantitative data analysis has been conducted. The sample was comprised of 32 males (84.21%) and six females (15.79%).

As predicted, no significant changes were found for any outcome measure during the wait control period, indicating that changes in outcome measures were due to the THR rather than other extraneous factors.

Veterans participating in the THR had statistically significant decreases in their PTSD symptoms over the six-week THR program. Symptoms significantly decreased between baseline and week three, and also between week three and week six of riding. Eighteen of the 23 veterans (78%) who completed data collection at baseline and after three weeks of THR showed a decrease in PTSD symptoms, while 18 out of 19 (94.74%) who completed data collection at baseline and six weeks showed a decrease (thus in the predicted direction but not reaching statistical significance). The decrease in numbers of veterans completing data collection was caused by drop-out of participants due to health issues, moving their residence, or changes in life schedules preventing them from continuing in the study. One participant dropped out because she thought that the horse she was matched with did not like her.

The results of this study provide evidence that a THR program contributed to a decrease in PTSD symptoms. Veterans benefited by decreasing their PTSD throughout the study period; and the benefit increased the longer an individual was in the riding period. Further investigation is needed to learn more about the changes we saw in self-efficacy and emotional regulation.

We continue to analyze the extensive and very rich array of qualitative data from the participants' weekly riding diaries, which we think may help to shed light on the trends we found in these outcome variables. Qualitative analysis is an incredibly laborious and time consuming task. We will share these findings with HHRF when this analysis is completed.

One universal finding was that all participants who completed the study thoroughly enjoyed the THR experience, interaction with the horses, camaraderie with other veterans, and interaction with the study volunteers, staff, and staff of the riding centers. The VA is funding THR for veterans through their recreation therapy program. Several participants from our study have continued THR through this mechanism and others are now doing volunteer work as side walkers or leaders at the riding center where we conducted the study. These are also very gratifying outcomes.

Final:

While PTSD symptoms decreased from the very beginning of the THR program, the most significant decreases over the six-week THR program occurred between the third and 6th weeks of the program. While there were no statistically significant changes in self-efficacy, emotion regulation, or social engagement during the riding period, changes in these factors were in the hypothesized directions. The results of this study provide clear evidence that a THR program contributed to a decrease in PTSD symptoms. Veterans benefited by decreasing their PTSD throughout the study period; and the benefit increased the longer an individual was in the riding period. They also expressed great enjoyment of interacting with the horses, learning to ride, as well as camaraderie with other veterans and with staff of the study and riding center.