

## RESEARCH QUESTION

Does the delivery of Boot Campaign’s existing novel, holistic virtual Resilience and Recovery result in an increase in overall well-being and specifically an increase in quality and/or quantity of sleep?

## BACKGROUND

Because many veterans living with PTSD and TBI experience drastic disturbances in their sleep habits, they can have trouble with processing memories, have flashbacks of traumatic events, and can have irrational emotional responses to small disruptions in their daily lives and social relationships. A lack of sleep can also result in decreased testosterone levels, contributing to lower muscle mass, slower metabolism and uneven body fat distribution, and overall decreased self-confidence. There is also evidence to suggest a correlation between insomnia and suicidality, which remains a problem that plagues the military and veteran community.

## METHODS

We collected data through the standardized, self-reporting Pittsburgh Sleep Quality Index (PSQI) questionnaire for each participant both pre- and post-training of the Resilience and Recovery Program. We then used a paired t-test to analyze changes in the rate of improvement of each of the above components in the veterans undergoing training. These groups were assessed for their rates of improvement at two different time points (baseline and post-training). Significant results were assessed using a p-value = 0.05.

**Ariel Woods, MS4 Burnett SOM at TCU**  
**Jenny Howland, PsyD, Boot Campaign**

Boot Campaign is a national 501(c)(3) non-profit organization with a mission to unite Americans to honor and restore the lives of Veterans and military families through individualized, life-improving programs. Boot Campaign launched a virtual Resilience and Recovery holistic health coaching program in 2020. Thus far, positive results have been obtained, showing overall decrease in suicidal ideation, physical and emotional distress, and stress related to financial stance, work, and social relationships as well as increases in adaptability, resilience and vitality in veterans. However, veterans continue to report difficulties in sleep quality and/or quantity that significantly impact their quality of life when meeting with their virtual coaches.

Analysis of the results from the currently existing Resilience and Recovery Virtual Program identified that while successful in multiple areas of wellness, the comparison of pre- and post-training sleep shows less of an improvement in our population. Because of this gap in efficient improvement of sleep with the current program, we will use this research to create our new, targeted sleep curriculum. Upon completion of the Virtual Sleep Program, we anticipate that veterans will experience an increase in self-reported overall well-being and quality of life, including decreases in stress, improved social relationships, improved sleep quality and/or quantity, and improved physical and emotional health. We hope this will help improve relationships and possibly stress levels in those surrounding the veterans, including adult family members, caregivers, physicians and friends.

## RESULTS

Components	Means	Two-sided p value
global overall	10.33 – 8.367	<.001**
subjective sleep quality	1.933 – 1.633	.048
sleep latency	1.633 – 1.533	0.501
sleep duration	2.033 – 1.867	.169
habitual sleep efficiency	1.400 – 0.733	<.001**
sleep disturbances	1.933 – 1.700	.109
use of sleeping medication	0.633 – 0.533	.264
daytime dysfunction	.767 -- .367	.005**

Most components did not have a statistically significant improvement from baseline to post-training after completing the Resilience and Recovery Program. While comparing means, it does initially look as if each component improved. However, the decrease in mean score for most areas is not statistically significant. The results support our hypothesis that the currently existing R&R program, while improving overall veteran well-being in a variety of areas, is not sufficiently addressing sleep as a very important independent factor.

## FUTURE DIRECTIONS

Future study direction includes piloting and exploring objective measures of our newly designed Sleep Program on physiology. Boot Campaign has received \$100,000 in grant money to fully develop and conduct a pilot program of our proposed virtual sleep curriculum.