



Enhancing Mental and Physical Fitness for U.S. Army Success



Lauren Lamoreaux, Department of Kinesiology and Health Promotion

Mentor: Dr. Zakkoyya Lewis-Trammell

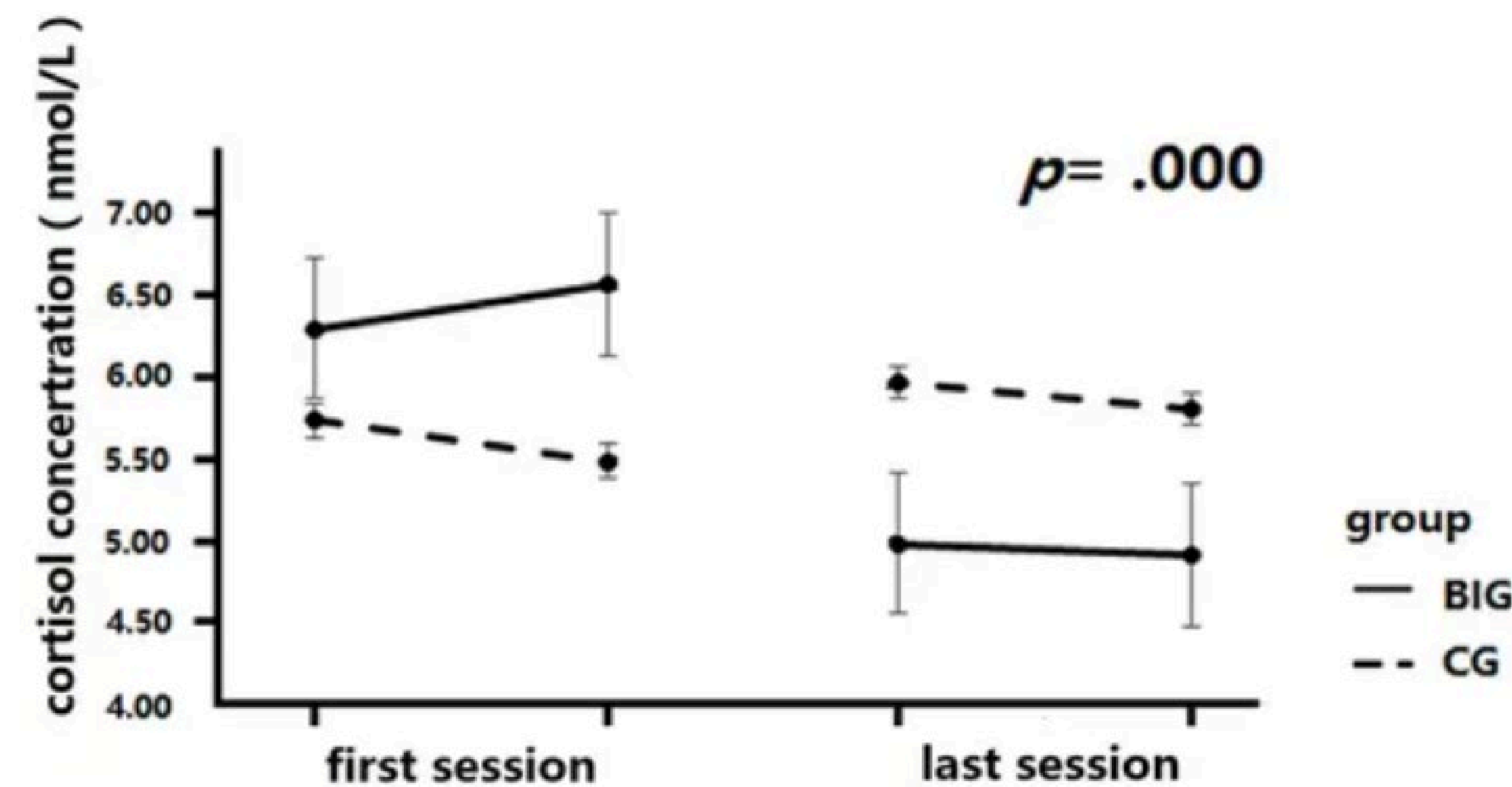
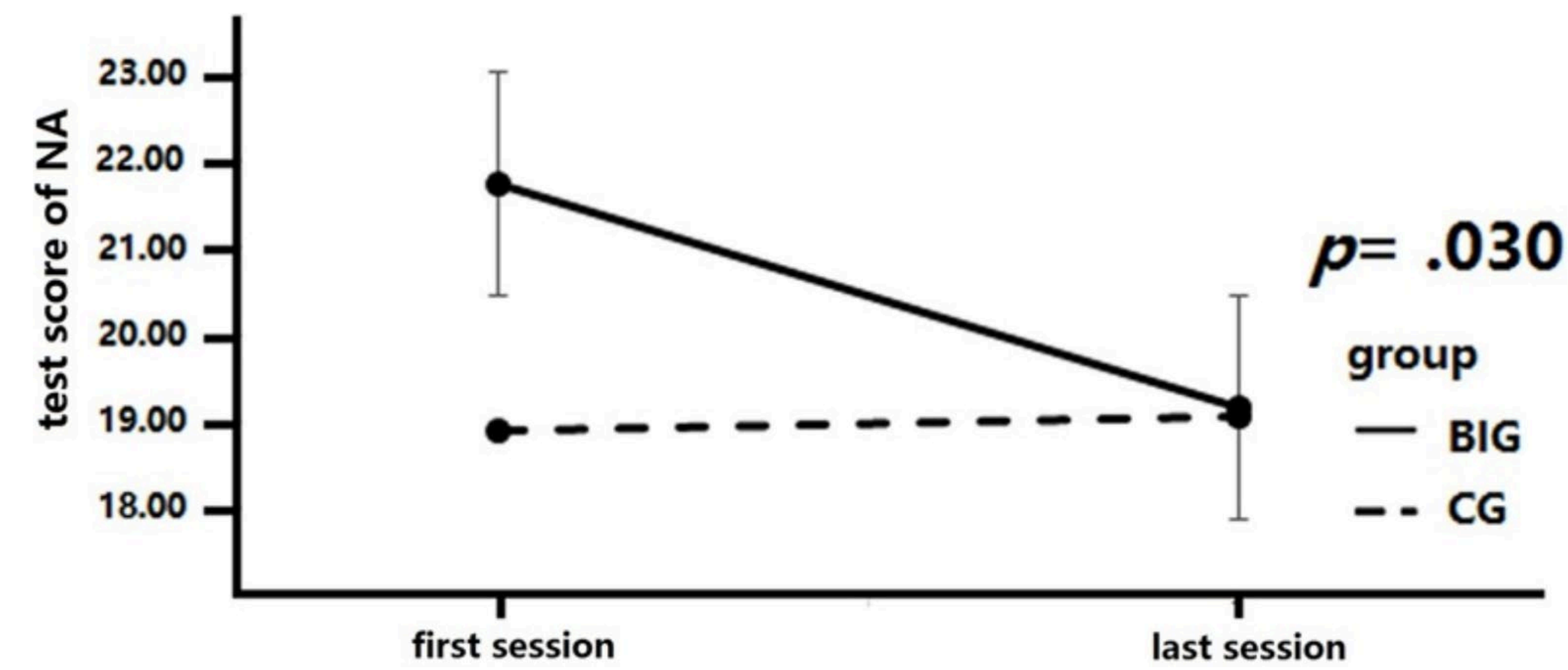
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Background

The Army Combat Fitness (ACFT) has undergone several changes in recent years, including changes in performance scoring scales, and the addition of the leg tuck event in replacement to the plank event for the core-strength assessment. Due to this increase in physical fitness standards, some groups are at increased risk of failing the fitness exam. Through my internship with Vistendo, I was a part of a team that helped design a fitness plan for those seeking to increase their physical fitness scores on the ACFT or simply pass the ACFT. My experience with Vistendo led me to interest on alternative ways to maximizing physical fitness amongst Vistendo app users.

Introduction

Research showcases higher ratings of mental health issues such as depression, anxiety, suicide, substance abuse, and more amongst those who join the military as well as veterans, due to working in a high stress environment (Palmer, 2023). It is evident that stressful environments and high physical exertion can exacerbate mental health symptoms, which connects to decreased mental and physical performance. The purpose of my research is to discuss mental health issues and prevalence in those in the army and propose mindfulness and cognitive behavioral techniques that can increase mental productivity and performance among app users, increasing their physical performance and fitness scores. The objective of my research is to design a plan to increase app-users mental productivity, focus, concentration, and performance while reducing anxiety, stress, and mental fatigue through cognitive behavioral and mindfulness exercises.



Discussion

Overall, integrating a portion of Vistendo's app to have available and accessible mindfulness techniques and cognitive-behavioral therapy (CBT) has a clear potential to significantly enhance mental and physical performance for app users. Some of the key reasons include injury prevention and recovery, better sleep quality, enhanced emotional regulation, concentration, focus, and stress reduction. Mindfulness practices can contribute to physical well-being by promoting body awareness and reducing the risk of injuries. Mindfulness-based interventions have shown promise in improving sleep quality, which is also an important factor in preventing injury and having peak concentration. A study by Black et al. (2015) in the journal "JAMA Internal Medicine" found that mindfulness meditation significantly improved sleep quality and reduced symptoms of insomnia. Moreover, I began my work researching and crafting a list of mindfulness-based therapy approaches that would be able to be included in the app and easily followed by app users. Diaphragmatic breathing, progressive muscle relaxation, body scan meditations, and mindful seeing are among several of the practices that I have proposed to be included in the app. Similarly to how the exercise tutorials are presented in the app, I proposed these mindfulness techniques be offered with a written portion and video or picture demonstration. Research clearly showcases that mindfulness techniques may enhance concentration and attention, crucial skills for the U.S. army during critical missions, and improved focus can lead to better decision-making and situational awareness, contributing to overall success and safety. These techniques I propose should increase their physical fitness thus increasing the chance app users pass the ACFT and improve their ACFT scores. Improved cardiovascular health, immune function, and overall well-being can contribute to the overall physical readiness and effectiveness of military personnel. Furthermore, the U.S. army has been shown to have high rates of mental health issues which can impact not only their physical fitness and efficiency but their decision making, mental concentration, wellbeing, focus, attention, and emotional regulation. The inclusion of easily accessible mental wellbeing techniques to the U.S. army may improve these alarming rates of mental issues prevalence across the army.

Literature Review

In The Crisis in Veterans' Mental Health and New Solutions, Palmer discusses the concerning phenomenon of high rates of mental health conditions in veterans, including PTSD, depression, and substance use, noting that suicides among veterans increased "10-fold from 2006 to 2020," showcasing this issue becoming worse, even though we have seemed to make progress in knowledge regarding mental health. Palmer states "addressing mental and metabolic health simultaneously may lead to better outcomes," explaining how veterans are often taxed by the rigorous service, trauma, exposure to stressful environments and sleep disruption, which may connect to a mismatch in energy supply in the brain, and that mind-body practices have the potential to rebalancing that energy to be used in emotion regulation mechanisms. Moreover, A Dual Route Model for Regulating Emotions: Comparing Models, Techniques and Biological Mechanisms (Grecucci, A, et al., 2020) discusses recent applications of emotional regulation theory and practical methods of psychotherapy. Theoretical perspectives including, Cognitive Emotion Regular (CER) model, "views emotional dysregulation as due to a deficit in regulation mechanisms that prioritizes modifying or developing cognitive skills" whereas Experiential-Dynamic Emotion Regulation (EDER) model "posits emotional dysregulation as due to the presence of deregulatory mechanisms that prioritizes restoring natural regulatory processes." The CER model stresses the importance of an appropriate regulatory strategy for intervening and preventing emotional dysregulation, and the EDER model changes from classic cognitive behavioral therapy as it uses specific techniques that work on the emotion regulation itself, for example, focusing on bodily sensations, and experiencing feelings and reactions to prevent avoidance of uncomfortable sensations and stresses. Research shows a dual based approach, with use of mindfulness-based techniques, such as cognitive diffusion, in patients may be particularly helpful. Research conducted by Tang et al. (2007) and published in the "Proceedings of the National Academy of Sciences" demonstrated that mindfulness meditation can lead to increased gray matter density in brain regions associated with attention and sensory processing, further showcasing the benefits of these techniques.

Conclusion and Future Work

Overall, it can be concluded that having a program for the U.S. army that focuses on mental wellbeing techniques may heavily improve their physical fitness, possibly increasing their ACFT scores, as data shows behavioral therapy techniques may improve focus, concentration, sleep quality, emotional regulation, and physical performance and efficiency. However, data shows an alarming rate of mental health issues among the U.S. army, and these issues have a clear negative correlation with physical and mental performance. The U.S. government may see positive benefits from funding mental health services and making these services accessible among the U.S. army, in both cognitive emotional regulation and experiential-dynamic emotion regulation therapies. The high prevalence of mental issues across the U.S. military should be of high concern to the federal government and public, and more funding and research towards this matter should be encouraged. However, having an accessible program on the Vistendo app may be a positive beginning to a greater issue regarding mental wellness in the U.S. army.

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