



US DEPARTMENT OF DEFENSE

BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Neurocognitive and Psychological Health Treatment Strategies

SMART-CPT Therapy Improves Both Posttraumatic Stress Disorder Symptoms and Performance on Measures of Objective Cognitive Functioning in those with history of Traumatic Brain Injury

Researchers at the U.S. Department of Veterans Affairs San Diego Healthcare System (San Diego, California) conducted a study to evaluate an adaption of cognitive processing therapy (CPT) that also targets the cognitive deficits often observed after traumatic brain injury (TBI). SMART-CPT is a hybrid training program which combines traditional CPT with Cognitive Symptom Management and Rehabilitation Therapy, a manualized treatment approach used to teach Veterans strategies to compensate for cognitive difficulties (Boyd *et al.* 2016, Jak *et al.* 2015). The researchers conducted a randomized trial with this new SMART-CPT therapy in Iraq and Afghanistan Veterans with mild or moderate TBI and posttraumatic stress disorder (PTSD) and compared it to traditional CPT. Forty-nine (49) individuals were randomized to the CPT condition and 51 to the SMART-CPT condition. There were no significant differences between groups on demographic factors, injury variables, symptom measures, neuropsychological measures, or rates of prior treatment at baseline. Findings indicate that individuals in the SMART-CPT group experienced the same PTSD symptom reduction as those in the CPT group, but also showed additional improvements in attention/working memory, learning, memory, and novel problem solving compared to the CPT group (Figure 1). They also found that individuals in the SMART-CPT group expressed more overall satisfaction with treatment than the CPT group (Jak 2017, Jak *et al.* 2017).

This hybrid treatment has the potential to treat Service members with comorbid PTSD and TBI in a more streamlined fashion as opposed to treatment of TBI and PTSD independently, potentially leading to changes in Clinical Practice Guidelines and increased efficiency.

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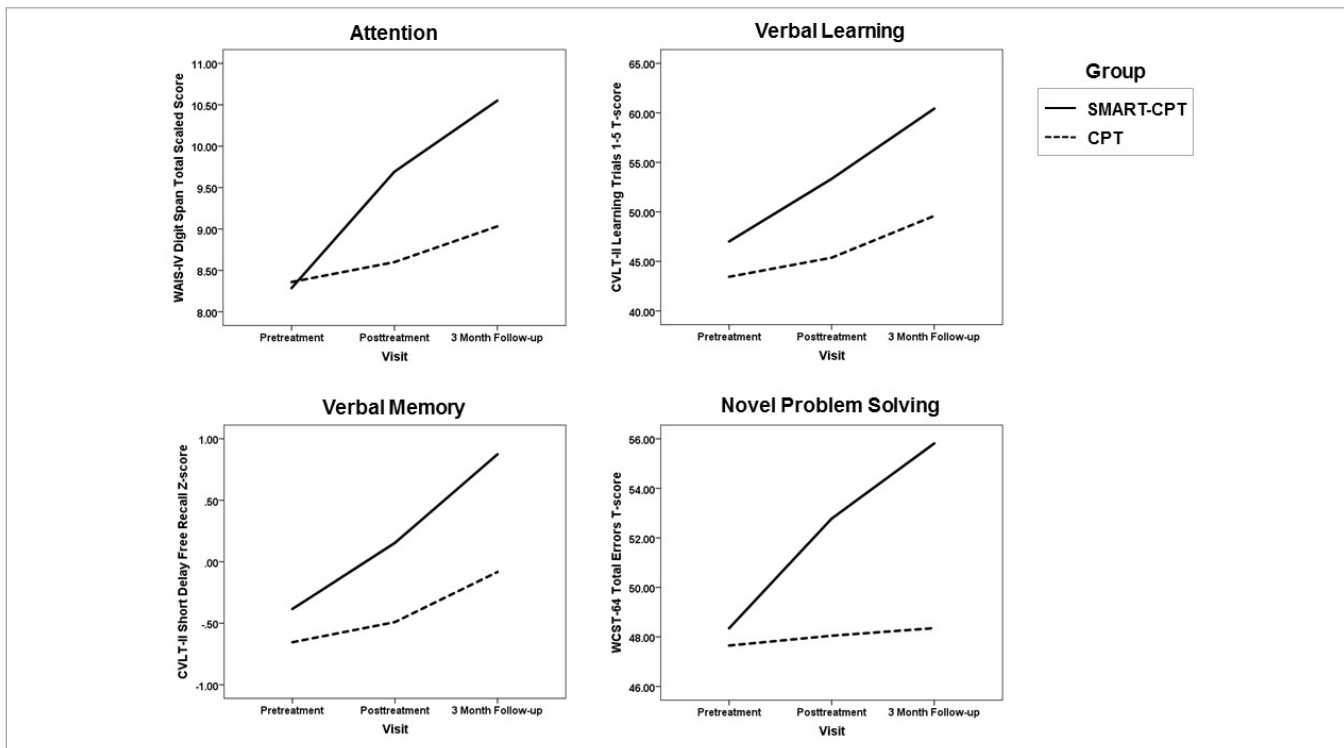


FIGURE 1: Model predicted values of the cognitive outcomes in which there was a significant group by time interaction. Outcomes are in standardized metrics. The means are based on the predicted values from the Multilevel Models, which controlled for TOMM trial 2 scores and baseline PTSD and post-concussive symptoms. CVLT-II = California Verbal Learning Test – Second Edition; TOMM = Test of Memory Malingering; WAIS-IV = Wechsler Adult Intelligence Scale – Fourth Edition; WCST-64 = Wisconsin Card Sorting Test – 64 Card Version. (Figure used with permission from the authors)

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