

Pilot Study of Mixed Light Touch Manual Therapies on Soldiers with Chronic Post-Traumatic Stress Disorder and Injury to the Head

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BACKGROUND: Post-Traumatic Stress Disorder (PTSD) and mild Traumatic Brain Injury (mTBI) are pervasive in military and general populations. There is an overlap in some PTSD and mTBI symptomatology (e.g. anxiety, depression, fatigue, etc.); persistent headache is prevalent in mTBI. Treatment for PTSD and mTBI symptoms is often ineffective and accompanied by side effects.

METHODS: Active Duty United States Service Members diagnosed with PTSD and accepted into an intensive outpatient program were screened for having a self-reported injury to the head at least two years prior. The ten participants with a positive screen were enrolled in our pilot study [1]. After obtaining IRB informed consent, participants received two 60-minute sessions (one week apart) of mixed Light Touch Manual Therapies (LTMT), including Craniosacral Therapy (Upledger) and Brain Curriculum (Chikly). Self-reported data collected by paper and computer surveys (Patient-Reported Outcomes Measurement Information System [PROMIS] and Quality of Life in Neurological Diseases [Neuro-QoL]) were gathered before and after LTMT sessions. Twenty variables were examined for change.

RESULTS: Headache, anxiety, and pain interference each significantly decreased (p -values range from 0.008-0.039, Cohen's d ranges from 0.82-1.27, $N=10$). PTSD Checklist-Military version scores significantly increased ($p=0.013$, $d=1.21$, $N=9$) possibly indicating exacerbated PTSD symptoms, not uncommon at the start of a treatment program. The other comparisons were not statistically significant.

CONCLUSIONS: Mixed LTMT may be helpful in reducing some symptoms of PTSD and injury to the head. Further investigation is warranted to determine if LTMT is an effective treatment for headache, anxiety, or other problems associated with PTSD or injury to the head. Also worth future investigation is whether or how changes in neuronal shape, a potential mechanism underlying effects of LTMT, cause long-term changes in the central nervous system, which in turn may affect symptoms such as headache, anxiety, or other physiological processes.

REFERENCE: [1] Davis, L., et al., Pilot study of the effects of mixed light touch manual therapies on active duty soldiers with chronic post-traumatic stress disorder and injury to the head, *Journal of Bodywork and Movement Therapies* (2015)

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