

COMPARATIVE EFFICACY OF YOGA VS. COGNITIVE BEHAVIORAL THERAPY (CBT) FOR TREATING CHRONIC PAIN IN GULF WAR ILLNESS: PRELIMINARY FINDINGS

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Background: Many military personnel who participated in the Gulf War in 1990-1991 reported negative health consequences following their deployment. The most common of these health concerns involves a triad of unexplained chronic physical symptoms (fatigue, pain, and cognitive disturbances) commonly referred to as "Gulf War Illness" (GWI). No clear cause of GWI has yet been identified. Previous research supports the view that veterans with GWI are medically ill, but their physical abnormalities are not currently well treated by medical interventions. Yoga offers a potentially effective treatment for GWI; clinical trials demonstrate efficacy for treating some of the most common symptoms of GWI, especially chronic musculoskeletal pain. The **objective** of this project was to evaluate yoga as treatment for chronic pain in veterans with GWI. **Design:** A 10-week yoga program was developed using a broad range of yoga techniques, including controlled breathing, postures, and meditation. A control intervention was also developed and consisted of a 10-week cognitive behavioral therapy (CBT) protocol focused on the treatment of pain. **Results:** Seventy-five veterans with GWI were randomized to one of the two treatment groups. Sixty-eight veterans attended at least one class of yoga ($n = 37$) or CBT ($n = 31$). Participants in the yoga group attended significantly more classes ($M = 7.22$, $SD = 2.85$) than the CBT group ($M = 5.48$, $SD = 3.56$, $p = .03$). At end of treatment, the yoga group showed a significant reduction in pain relative to baseline ratings, as measured by the Brief Pain Inventory-SF (mean \pm SD; pre- 5.44 ± 2.00 vs. post- 4.00 ± 2.08 , $p < .001$). In contrast, no significant reduction in pain was observed in the CBT group (pre- 5.09 ± 1.62 vs. post- 4.95 ± 2.35 , $p > .05$). Pain reduction in the yoga group was maintained at the six-month follow-up (4.70 ± 2.17 , $p = .02$). No serious adverse events were reported in either group. **Conclusion:** Results are preliminary and data analysis is ongoing into the treatment effects on pain, mood, quality of life, and autonomic nervous system function. However, these initial findings indicate that yoga is a safe and effective treatment for pain in GWI. The development of complementary and integrative health for the treatment of chronic conditions including pain is a growing trend in healthcare. This approach could be rapidly adopted by healthcare providers who may be attracted by the relatively low cost and minimal resources needed to provide such yoga programs in a group class setting.

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