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# Posttraumatic stress disorder and chronic musculoskeletal pain : how are they related?

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**Abstract:**

Symptoms of post-traumatic stress disorder (PTSD) are a common comorbidity in veterans seeking treatment of chronic musculoskeletal pain (CMP). However, little is known regarding the mutual influence of PTSD and CMP in this population. Using cross-sectional and longitudinal data from a randomized clinical trial evaluating a stepped care intervention for CMP in Iraq/Afghanistan

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veterans (ESCAPE), this dissertation examined the relationships between PTSD and CMP along with other factors including depression, anxiety, catastrophizing and health-related quality of life. The Classification and Regression Tree (CART) analysis was conducted to identify key factors associated with baseline PTSD besides CMP severity. A series of statistical analyses including logistical regression analysis, mixed model repeated measure analysis, confirmatory factor analysis and cross-lagged panel analysis via structural equation modeling were conducted to test five competing models of PTSD symptom clusters, and to examine the mutual influences of PTSD symptom clusters and CMP outcomes. Results showed baseline pain intensity and pain disability predicted PTSD at 9 months. And baseline PTSD predicted improvement of pain disability at 9 months. Moreover, direct relationships were found between PTSD and the disability component of CMP, and indirect relationships were found between PTSD, CMP and CMP components (intensity and disability) mediated by depression, anxiety and pain catastrophizing. Finally, the coexistence of PTSD and more severe pain was associated with worse SF-36 Physical Component Summary (PCS) and Mental Component Summary (MCS) scores. Together these findings provided empirical support for the mutual maintenance theory.

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