ABSTRACT

PAIN IN ACTIVE DUTY MILITARY MEMBERS: THE RELATIONSHIP OF PERSISTENT ACUTE AND CHRONIC PAIN WITH PHYSICAL, MENTAL, AND SOCIAL HEALTH

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Pain is a major health problem in the United States (U.S.), and early effective pain relief is a national priority. The U.S. military population shares in the burden through pain experienced in military- and nonmilitary-related duties. Although precise estimates of pain in military service members are not available, studies document that many military members receive treatment for pain. Because of the burden of pain in this population it is essential to understand pain-specific interrelated physical, mental, and social health outcomes to improve pain management for military personnel. To accomplish this, a standardized pain assessment system of patient-reported outcomes, the Pain Assessment Screening Tool and Outcomes Registry (PASTOR), was developed incorporating the Defense and Veterans Pain Rating scale (DVPRS) and the National Institutes of Health Patient Reported Outcomes Measurement Information System (PROMIS®). Information gathered from routine PASTOR assessments, coupled with a physical examination, can be used to guide clinical pain care tailored to each patient. PASTOR measures enable clinicians and researchers to obtain valuable data to improve communication, inform clinical decision making, and track the effectiveness of pain interventions.

The three papers developed for this dissertation examined the magnitude of pain in military personnel, and explored pain-related outcomes in physical, mental, and social health. A comprehensive integrative review highlighted the challenges surrounding pain in the military population, and identified how factors such as demographics, training, and deployment are associated with acute and chronic pain. The synthesis of research findings on the prevalence, incidence, and risks for pain served as the foundation for conducting an analysis on the biopsychosocial aspects of pain in this unique population. A secondary analysis was conducted
using comprehensive PASTOR data collected over time from a sample population (N=190) receiving specialty care in a military interdisciplinary pain management center. Results revealed that military service members with neuropathic pain may experience more sleep-related impairment compared to those with nonneuropathic pain. Further, the analysis of percent change from the first PASTOR assessment to the third assessment (minimum of at least 14 days between each assessment) showed improvement in pain intensity, pain interference, physical function, fatigue, sleep-related impairment, anxiety, and anger. However, higher levels of depression were evident over time. Additional multilevel modeling demonstrated that as pain intensity and pain interference increased, there was a small but statistically significant decrease in satisfaction with social roles.

This study elucidated the complexities of pain by identifying associations between pain intensity and pain interference, and pain-related outcomes. It supports the growing body of evidence demonstrating that the use of a standardized patient-reported outcomes system, such as PASTOR, captures the interacting physical, mental, and social health problems encountered with acute and chronic pain. A systematic and comprehensive point of care collection of pain-related outcomes is central to effective pain management across the continuum of care with the overall goal of improving quality of life and returning military personnel to optimal functioning.