



US DEPARTMENT OF DEFENSE BLAST INJURY RESEARCH PROGRAM COORDINATING OFFICE

Psychological and Quality of Life Outcomes

An Evaluation of Gender Differences in Postconcussion Symptoms and Mid-term Quality of Life Following Combat-related Traumatic Brain Injury

Investigators at the Naval Health Research Center (NHRC; San Diego, CA) examined differences in post-concussion syndrome (PCS) symptoms and quality of life (QOL) between men and women in combat following traumatic brain injury (TBI). To this end, the Expeditionary Medical Encounter Database (EMED), a clinical data repository containing point-of-injury information on all casualties sustained between 2001 and 2016 during military deployment, was queried for Service members with provider-diagnosed TBI sustained in Iraq. Service members also had to have enrolled in the NHRC's Wounded Warrior Recovery Program, an ongoing cohort study incorporating an online survey assessment evaluating QOL for military casualties. Symptoms of PCS were abstracted from electronic medical databases within one-year post-injury and included five categories previously identified by the Defense Veterans Brain Injury Center (DVBIC): psychiatric, neurologic, vision, sleep, and auditory.

A total of 1,414 men and 82 women were included in the study. The only PCS symptoms that significantly differed by gender were auditory symptoms, with higher rates in men (26 percent vs. 12 percent, $p = 0.02$). In gender-specific analyses, men with at least one PCS symptom had significantly lower QOL scores than those with no symptoms, as did women reporting two or more PCS symptoms (Figure 1).

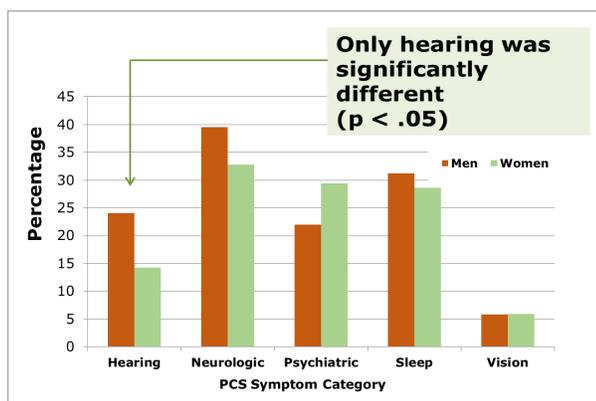


FIGURE 1: Post-concussion Syndrome (PCS) Symptom Rates (Figure used with permission from the authors).

Identification of significant PCS symptoms may lead to a clinical algorithm that can predict those at greater risk for reduction in QOL, which could identify areas for refinement in resource allocation and clinical treatment protocols.

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