OXFORD
UNIVERSITY PRESS

Archives of Clinical Neuropsychology 35 (2020) 608

Archives of CLINICAL NEUROPSYCHOLOGY

Abstract

Poster Session A

ABSTRACTS FROM THE 8TH ANNUAL CONFERENCE OF THE SPORTS NEUROPSYCHOLOGY SOCIETY

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Differential Effects of Symptom Clusters at Baseline on Cognitive Performance

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Objective: The purpose of this study was to observe the effects of self-reported affective, sleep, and vestibular-somatic symptomatology on cognitive performance at baseline as measured by ImPACT. Method: Participants were selected from a de-identified archival database of high school athletes aged 13–18. Symptom clusters included affective (N = 435, 61.7% female, Mage = 15.46), sleep (N = 435, 53.8% female, Mage = 15.49), and vestibular-somatic (N = 435, 52.2% male, Mage = 15.31). Three One-Way ANOVAs compared baseline composite scores between athletes who reported varying levels of symptomatology within each symptom cluster. Athletes were divided into groups based on their reported symptoms: None (n = 145), Mild (n = 145), and Moderate/Severe (n = 145). Significance was found at p = 0.01. Results: No significant relationship between self-reported affective or sleep symptomatology and cognitive performance was observed. A significant relationship was shown between self-reported vestibular-somatic symptomatology regarding the Visual-Motor composite [F (2,432) = 5.925, p = .003]. Bonferroni pairwise comparisons revealed athletes with no reported vestibular-somatic symptoms performed significantly better on Visual-Motor tasks than those with Mild and Moderate/Severe symptoms. Conclusions: These results may assist in the understanding of the influence of symptoms reported by athletes' post-concussion. While those with varying levels of vestibular-somatic symptomatology were found to have significantly different performance on Visual-Motor tasks, this cluster of symptoms was not found to impact other domains of cognitive functioning. The influence of symptoms on cognitive performance likely varies between individual athletes, which can have implications on return-to-play decisions. This highlights the critical need for an individualized approach to be utilized when evaluating athletes post-concussion considering the current literature to date.

doi:10.1093/arclin/acaa036.12