Abstract

Posters

NEUROLOGICAL AND NEUROPSYCHIATRIC DISORDERS: TRAUMATIC BRAIN INJURY

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Are Invalid Baselines More Frequent in those with Concussion History?
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Objective: The Immediate Post-concussion Assessment and Cognitive Testing (ImPACT) is a commonly utilized measure for sports concussion. Across the literature we have reviewed there is an abundance of information that focuses on invalid baselines and the effects of concussions. Yet, no previous studies have investigated the effect of a history of concussion on frequency of invalid baselines. The current study examined these effects within high school athletes. Methods: Participants included 47,874 high school athletes (mean age = 15.0, SD = 1.2; mean education = 9.0; SD = 1.5; 42.6% female). These athletes were selected from a larger database of athletes who completed baseline ImPACT testing from 2008–2016. Self-reported history of concussion (none vs. 1+) was obtained from the demographic section of the ImPACT. Invalid performance was based on standard ImPACT criteria ("Baseline++"). Results: Chi-square tests of homogeneity were performed to assess differences in invalid baselines between those with and without a history of concussion. Results revealed significantly more invalid baselines for those with a history of concussion (p < .01). Conclusions: Results indicate that high school athletes with a self-reported history of concussion may be more likely to have invalid baseline test performance. Based on these preliminary results, clinicians who are managing return-to-play decisions may want to take into account concussion history when interpreting baseline data. Future research should, of course, investigate whether this result is consistent in other samples and, if so, whether alternative validity criteria may be needed. Future investigations of athletes with confirmed clinical diagnosis of concussion is an important next step in investigating differences in rates of invalid baselines.