

n=39 controls). UFOV was administered either in-person (n=18) using manual guidelines or virtually (n=35) on the participant's computer using video-conference screen-share and a secondary device for an additional view of the participant and their keyboard/mouse. For virtual visits, the examiner recorded concerns about the remote testing environment (e.g., screen glare, viewing distance not measured appropriately), and analyses were conducted with and without cases with concerns. Between-group (in-person vs virtual administration) demographic differences were examined using chi-square tests/t-tests. Mann-Whitney U tests were used to examine for differences in UFOV scores (ms; higher scores are worse) by administration context (in-person vs. virtual) given threats to normality.

Results: For virtual administrations, the most commonly reported concerns about the remote testing environment were related to lighting (n=12) and viewing distance (n=3). There were no significant differences in age, sex, concussion history, sport participation history, or IQ by administration context (in-person vs. virtual). UFOV performance did not vary significantly by administration context for processing speed or divided attention subtests, but performance on the selective attention subtest was significantly better in the virtual administration group (Median_{in-person}=93.33; Median_{virtual}=63.33; U=203.00, p=0.035). This trend persisted after removing an outlier (>2SD; p=0.065) and after removing cases where lighting (p=0.060) and screen-viewing distance (p=0.085) were not adequately controlled.

Conclusions: Though preliminary, results suggest that UFOV can be administered virtually, in youth with and without a history of concussion, but that those assessed virtually using their home computer may have an advantage, particularly for the selective attention subtest. This may be due to comfort level within the home environment or subtle differences in viewing distance that were not appreciated by the examiner remotely. Importantly, not all participants were able to complete the assessment virtually due to computer limitations. Future work with larger samples size should examine the extent to which completers vary from non-completers in terms of sociodemographic variables.

Categories: Concussion/Mild TBI (Child)

Keyword 1: concussion/ mild traumatic brain injury

Keyword 2: cognitive functioning

Keyword 3: teleneuropsychology

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72 Neurocognitive and Emotional Symptoms of Pediatric Concussion Due to Physical Assault: A Case Series

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Objective: Much of the pediatric concussion literature focuses on sports and recreation related injuries, while there is a relative paucity of research on the cognitive and psychological sequelae associated with assault. However, it is understood that children with assault-related injuries demonstrate a longer recovery time. This case series reviews the data of four teenagers who were administered cognitive, emotional, and behavioral screeners after sustaining an assault related concussion.

Participants and Methods: Four pediatric female patients (ages 13,14,15,15) with a recent history of concussion due to physical assault presented for evaluation at a hospital-based concussion clinic. All four patients were administered a computerized cognitive screener as well as self-report measures for mood, anxiety, post-traumatic stress disorder (PTSD), and sleep disturbance.

Results: All four of the pediatric cases reported significant symptoms of PTSD, depression, anxiety, and sleep disturbance. For all four patients, the most notable problems across cognitive performance measures were observed in the areas of simple and complex attention.

Conclusions: Results of this case series revealed clinically significant anxiety, depression, PTSD-symptoms, and sleep disturbance in conjunction with poor simple and complex attention. These pediatric cases illustrate the potential link between assault-related concussions, emotional and behavioral symptoms, and cognitive functioning. Furthermore, assault-related concussions may

elevate risk toward attentional problems associated with psychological distress. Early evaluation of PTSD and mood related symptomatology is suggested to best support treatment planning and recovery in this population. Future studies are needed to explore the nature of the relationship between cognitive and emotional sequelae in patients who present with assault-related concussions.

Categories: Concussion/Mild TBI (Child)

Keyword 1: concussion/ mild traumatic brain injury

Keyword 2: pediatric neuropsychology

Keyword 3: post-traumatic stress disorder

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73 Sex and Race/Ethnicity in Reporting of Lingering Concussion Symptoms by Adolescents

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Objective: Consideration of individual differences in recovery after concussion has become a focus of concussion research. Sex and racial/ethnic identity as they may affect reporting of concussion symptoms have been studied at single time points but not over time. Our objective was to investigate the factors of self-defined sex and race/ethnicity in reporting of lingering concussion symptoms in a large sample of adolescents.

Participants and Methods: Concussed, symptomatic adolescents (n=849; Female=464, Male=385) aged 13-18 years were evaluated within 30 days of injury at a North Texas Concussion Registry (ConTex) clinic. Participants were grouped by self-defined race/ethnicity into three groups: Non-Hispanic

Caucasian (n=570), Hispanic Caucasian (n=157), and African American (n=122). Measures collected at the initial visit included medical history, injury related information, and the Sport Concussion Assessment Tool-5 Symptom Evaluation (SCAT-5SE). At a three-month follow-up, participants completed the SCAT-5SE. Pearson's Chi-Square analyses examined differences in categorical measures of demographics, medical history, and injury characteristics. Prior to analysis, statistical assumptions were examined, and log base 10 transformations were performed to address issues of unequal group variances and non-normal distributions. A three-way repeated measures ANOVA (Sex x Race/Ethnicity x Time) was conducted to examine total severity scores on the SCAT-5SE. Bonferroni post-hoc tests were performed to determine specific group differences. SPSS V28 was used for analysis with $p < 0.05$ for significance. Data reported below has been back transformed.

Results: A significant interaction of Time by Race/Ethnicity was found for SCAT-5SE scores reported at initial visit and three-month follow-up ($F(2, 843) = 7.362, p < 0.001$). To understand this interaction, at initial visit, Race/Ethnicity groups reported similar levels of severity for concussion symptoms. At three month follow-up, African Americans reported the highest level of severity of lingering symptoms ($M = 3.925, 95\% \text{ CIs } [2.938-5.158]$) followed by Hispanic Caucasians ($M = 2.978, 95\% \text{ CIs } [2.266-3.845]$) and Non-Hispanic Caucasians who were the lowest ($M = 1.915, 95\% \text{ CIs } [1.626-2.237]$). There were significant main effects for Time, Sex, and Race/Ethnicity. Average symptom levels were higher at initial visit compared to three-month follow-up ($F(1, 843) = 1531.526, p < 0.001$). Females had higher average symptom levels compared to males ($F(1, 843) = 35.58, p < 0.001$). For Race/Ethnicity ($F(2, 843) = 9.236, p < 0.001$), Non-Hispanic Caucasians were significantly different than African Americans ($p < 0.001$) and Hispanic Caucasians ($p = 0.021$) in reported levels of concussion symptom severity.

Conclusions: Data from a large sample of concussed adolescents supported a higher level of reported symptoms by females, but there were no significant differences in symptom reporting between sexes across racial/ethnic groups. Overall, at three-months, the African American and Hispanic Caucasians participants reported a higher level of lingering symptoms than Non-Hispanic Caucasians. In order to