

## **Challenges in Project Development for Adolescent Sports-Related Concussion Baseline Testing**

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**Background:** There are a variety of tests available to determine the severity of sports-related concussions (SRC). The primary project aim was to determine a battery of baseline concussion assessments for youth athletes, which could be used by clinicians in diagnosing SRC. Through project development, certain challenges were encountered, delaying the process. The secondary aim was to evaluate an engaging neuro-cognitive tool (BlazePods™) to enhance athlete motivation during testing.

**Methods:** A literature review was completed to evaluate the psychometrics of available concussion and neuro-cognitive tests. Medline and CINAHL were searched using the terms: “concussion”, “neurocognitive”, “diagnosis”, “sports”, and “athletes”. Delimiters included 2000-2022 and the English language. Protocol development included pilot testing concussion assessments with college-aged individuals and high school athletes in clinical settings.

**Outcomes:** Literature identified a battery of tests assessing oculomotor, cognitive ability, response time, and symptoms in participants to determine if further assessment would be necessary. The delays in project progression were due to the timeline in the IRB approval process, scheduling conflict with education delivery for parental consent and participant assent, and the perception of combining research and athletic training services.

**Future Work:** Additional work will include investigating the feasibility of determining the reliability and validity of available tests for baseline concussion testing using a retrospective methodology. Ongoing efforts continue to mitigate challenges associated with testing adolescents.