

Student-athletes with self-reported autism more likely to score low on common concussion test

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Schools and colleges across the country rely on Immediate Post-Concussion Assessment and Cognitive Testing (ImPACT) evaluations to

assess and manage student-athlete concussions on the sidelines. However, this FDA-cleared tool is not recommended for student-athletes with neurodevelopmental disorders, who often score significantly lower than neurotypical individuals.

New research published in the [*Archives of Clinical Neuropsychology*](#) demonstrates the need for alternative or modified concussion assessment norms and the need for baseline testing for autistic athletes.

"Given the findings of the current study and other recent studies, there is a clear need for ImPACT normative reference data specifically for [student-athletes](#) with [autism spectrum disorder](#) (ASD)," says Philip Schatz, Ph.D., principal investigator and professor of psychology at Saint Joseph's University.

"The [neuropsychology] field needs to expand assessment and interpretation practices and procedures for people with ASD and related developmental conditions."

Individuals with [attention deficit hyperactivity disorder](#) (ADHD), learning disorder (LD) and ASD are not included in normative reference data. This means when autistic athletes are assessed for a concussion, their data is compared to age- and gender-similar neurotypical individuals. Therefore, the utility and accuracy of widely used test measures like the ImPACT test decreases.

Within the United States, the prevalence of ASD has increased over the past 20 years, from 1-in-150 children in 2000 to 1-in-36 children in 2020. Nearly 91% of adolescents with ASD reported liking sports and exercise, meaning the potential for concussive injuries in this population is high. Furthermore, previous research at Saint Joseph's University has shown that exercise can be helpful in treatment for ASD.

"This is a medical accessibility issue," says Joseph McCleery, Ph.D., assistant professor of psychology and executive director of academic programs in the Kinney Center for Autism Education and Support and co-author on the study. "We need to make medicine more neurodivergence friendly. Research like this is an important first step toward fixing the problem."

The research team points to the study as a critical first step in creating normative reference values for young athletes with ASD, and looks forward to continuing their research as part of a larger conversation of neuroinclusive care.

"Athletes' developmental diagnosis was self-reported in this study," says Schatz.

"Moving forward, we will need a more objective way of measuring this factor. We also will need to evaluate the utility of various concussion assessment measures. I look forward to the future, as it is important everyone receives effective concussion management, including people who are on the autism spectrum."

More information: Joseph Fontanals et al, Neurocognitive Concussion Test Performance for Student Athletes on the Autism Spectrum, *Archives of Clinical Neuropsychology* (2024). [DOI: 10.1093/arclin/aca004](https://doi.org/10.1093/arclin/aca004)

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