

# The impact of mental health on concussion management

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# Mental health of athletes

- Developing athletes experience unique pressures that place them at higher risk for mental health difficulties.
- 50% of high-performance athletes face some type of mental health problem during their careers.
- Of those, approximately 48% meet criteria for clinical anxiety and/or depression.

Akesdotter et al., 2020; Foskett & Longstaff, 2018 Wolanin et al., 2015

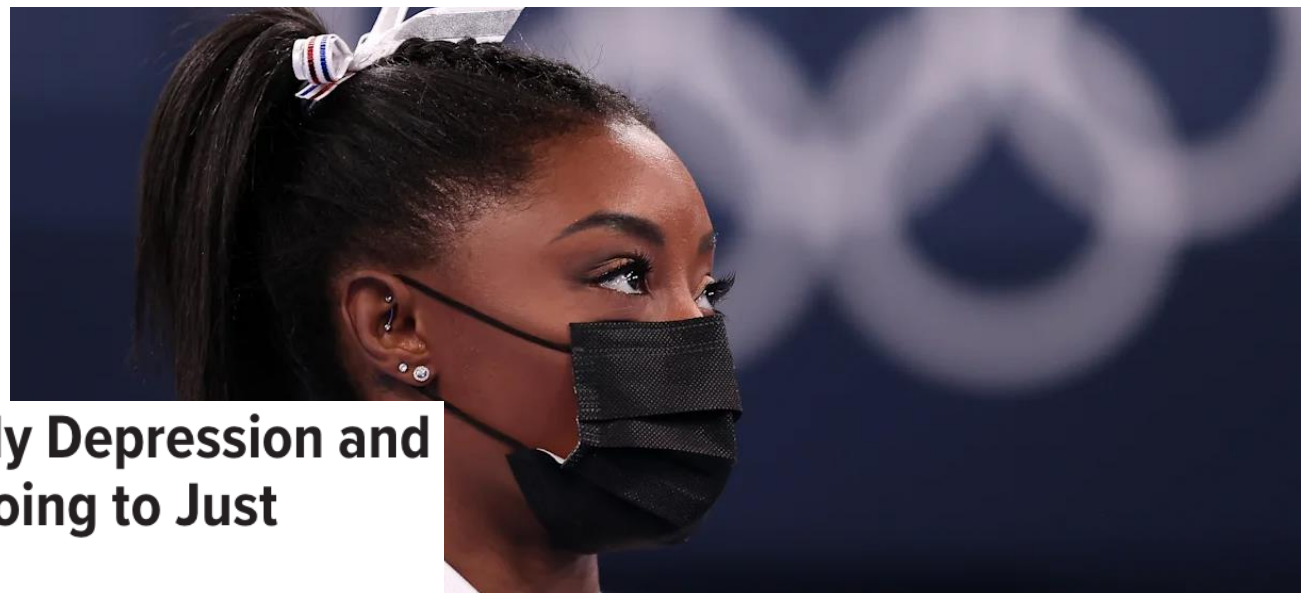
**NEWS**

## Bianca Andreescu Skipping Australian Open Over Mental Health Concerns



December 2021

## Simone Biles withdraws from women's all-around final

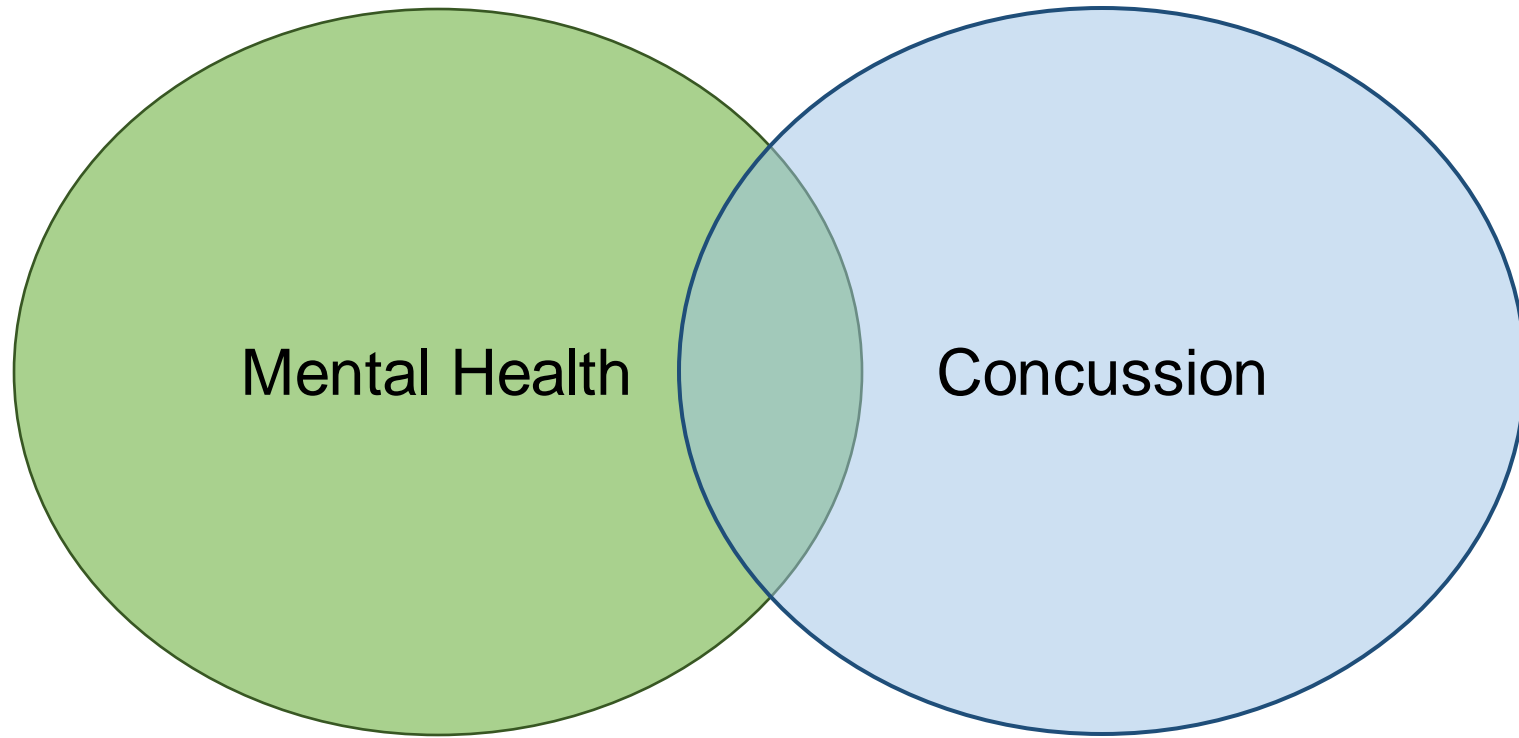


October 2021

## Michael Phelps: 'My Depression and Anxiety Is Never Going to Just Disappear'



May 2022



Mental health represents a person's overall wellness in how they can think, regulate their emotions, and behave.

Mental health disorders are clinical level disturbances to mental health.

# Concussion Symptoms



## Thinking/Remembering

Difficulty thinking clearly ■ Feeling slowed down  
Trouble concentrating ■ Difficulty remembering new information



## Physical

Headache ■ Balance problems ■ Blurred vision ■ Dizziness  
Nausea or vomiting ■ Lack of energy ■ Sensitivity to noise or light



## Emotional/Mood

Irritability ■ Nervousness ■ Sadness ■ More emotional

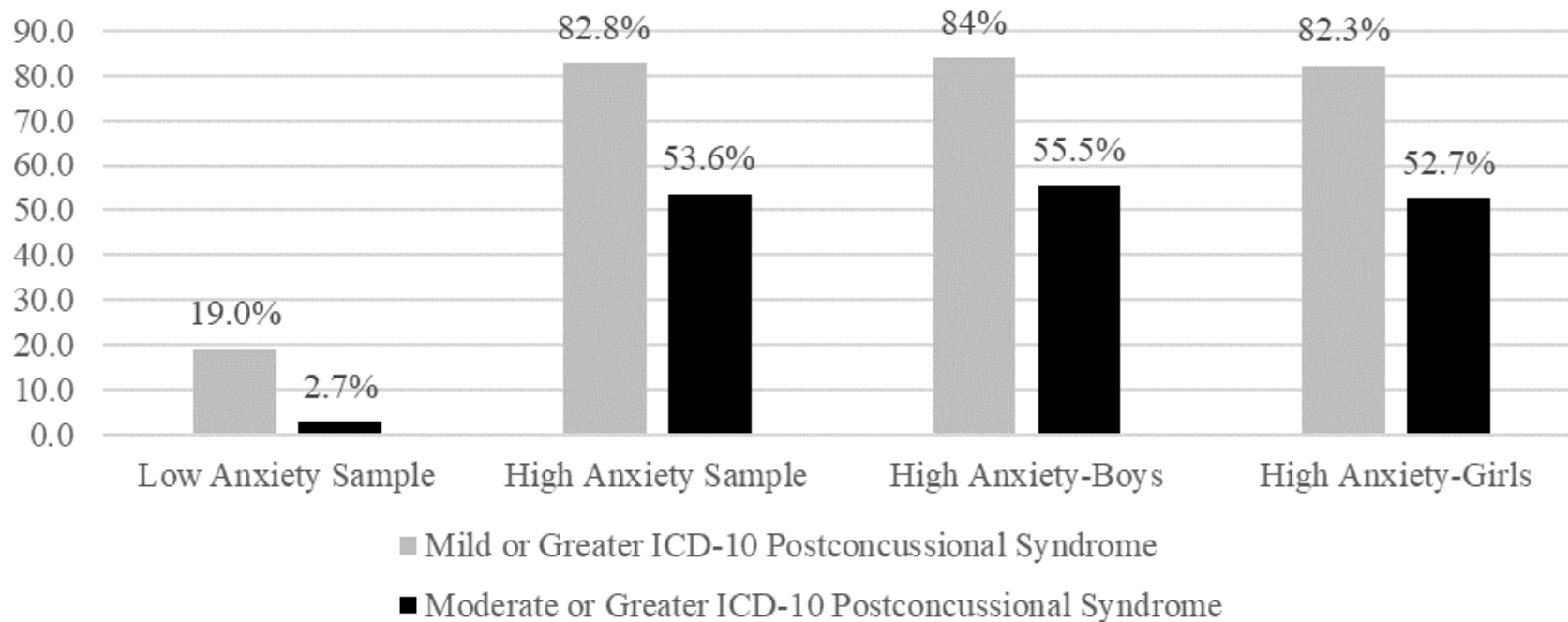


## Sleep

Sleeping more than usual ■ Sleeping less than usual ■ Trouble falling asleep

Adapted from Lowell 2006

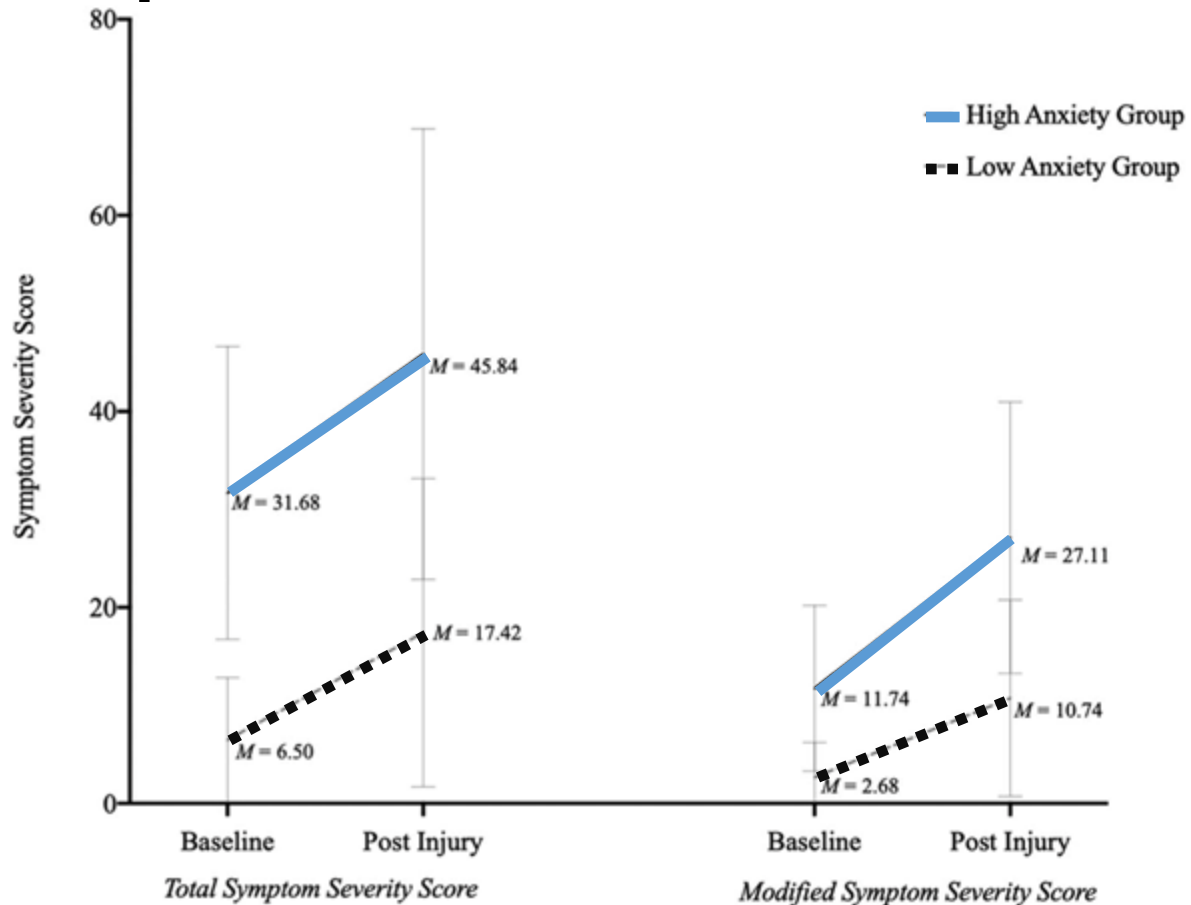
# Anxiety influences symptom presentation in the absence of concussion



Controlling for concussion history, **8 of 10 youth** met criteria for ICD-10 postconcussional syndrome compared to **2 of 10** without anxiety.

Champigny, Rawana, Iverson, Maxwell, Buckner & Wojtowicz, 2020

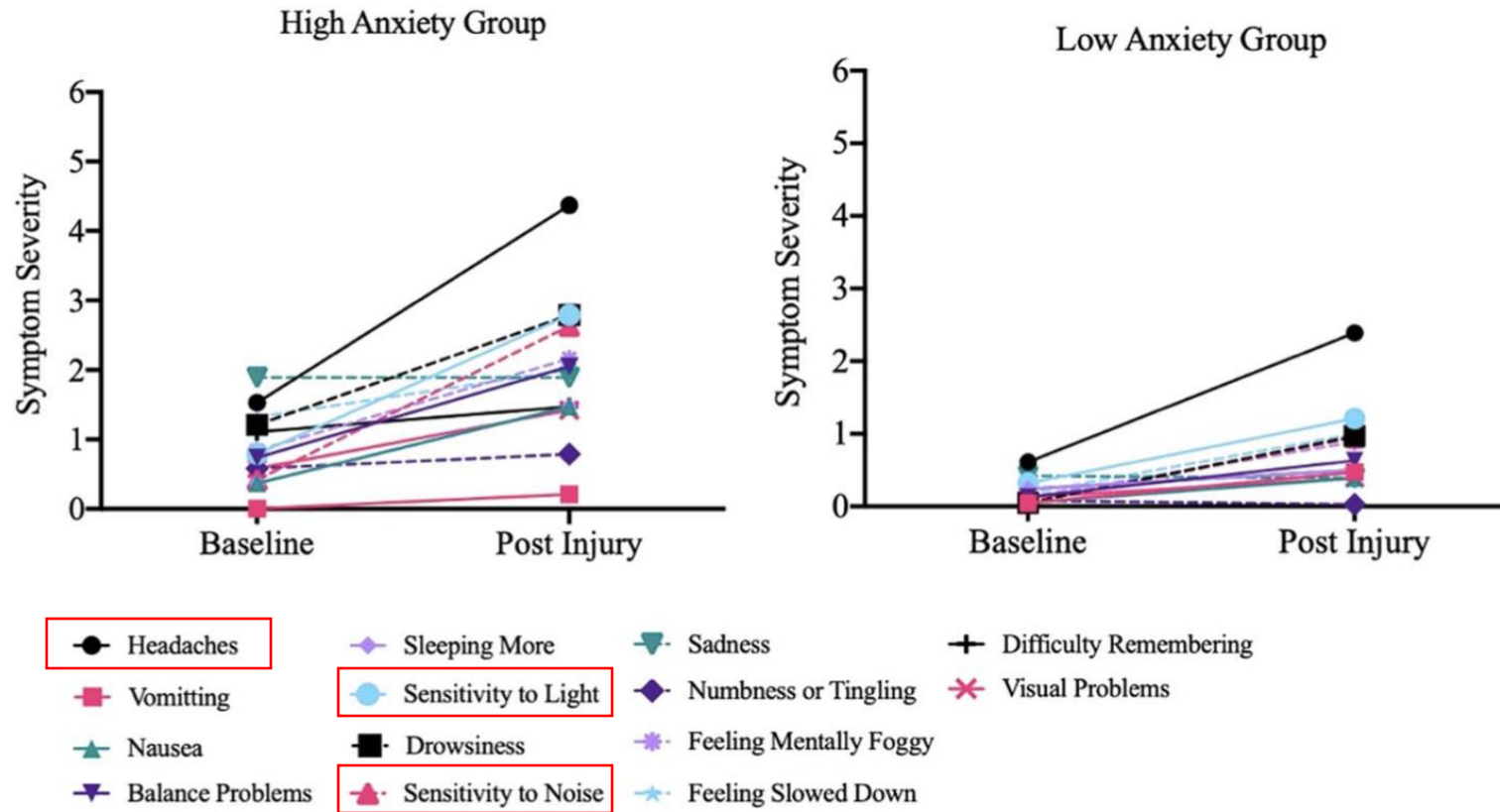
# Pre-injury anxiety influences symptom presentation following concussion



- High baseline anxiety associated with greater and more severe symptoms at pre-injury and post-injury.
- Control for symptoms associated with anxiety, and you see a higher symptom profile.

Champigny, Roberts, Terry, Maxwell, Buckner, Iverson & Wojtowicz, 2021

# Pre-injury anxiety influences symptom presentation following concussion

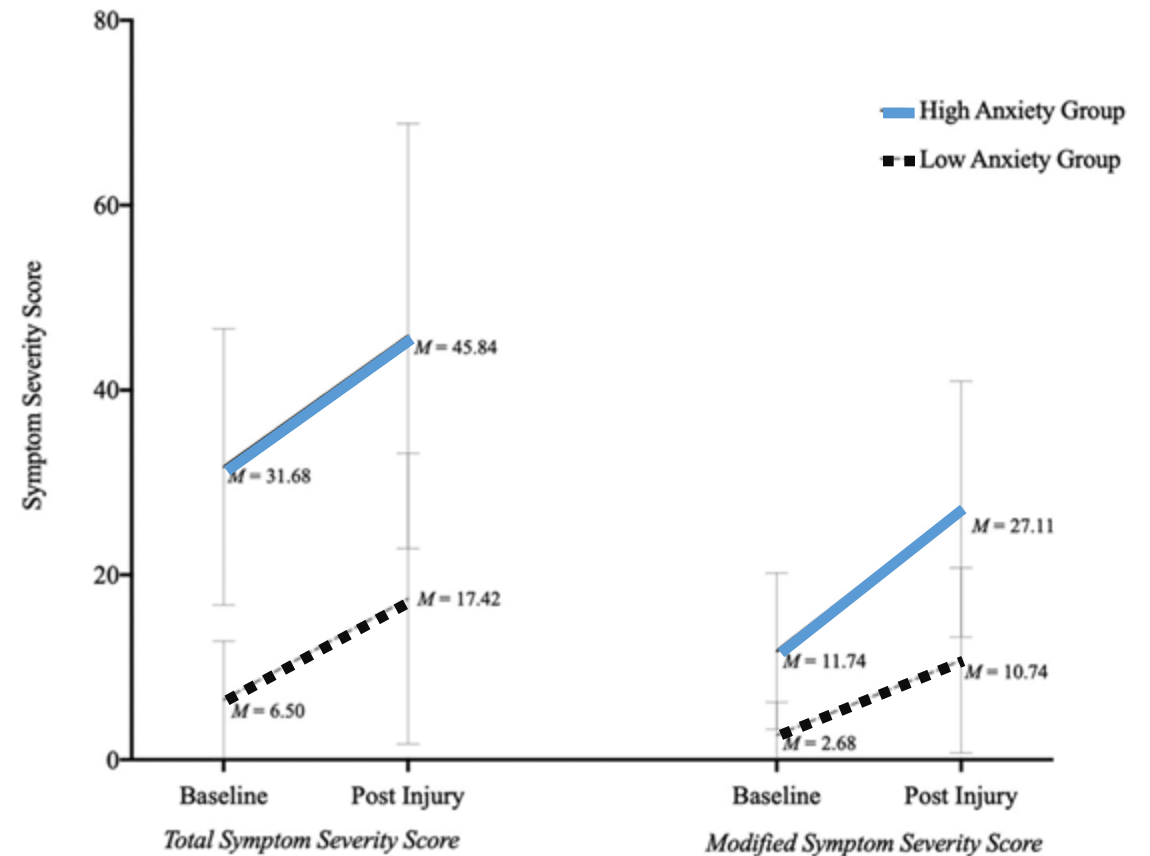


Champigny, Roberts, Terry, Maxwell, Buckner, Iverson & Wojtowicz, 2021



# What an athlete brings into the injury with them affects the outcome

- Acute symptom severity associated with longer time to symptom resolution and return-to-play.
- Possibly due to more significant injury or other factors that influence symptom presentation (e.g., mental health)



# Next steps: Identify, manage, collaborate

- Identify athletes that are at risk prior to injury.
  - This can be done with pre-existing baseline symptom measures (e.g., **SCAT-5**) Roberts, Champigny, Feldman, Flora & Wojtowicz, Under Review
- Interventions to improve mental health will likely improve management of concussion and alter recovery trajectories.
- Integration of multi-disciplinary teams within sport organizations is critical to improving management (i.e., clinical psychology, neuropsychology, physical therapy, clinical researchers).

# SPARC: Sport Assessment and Research Combine



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Dr. Kathryn Robinson

# Take Home Points

- Mental health difficulties affect symptom presentation and recovery of athletes following concussion.
- Identification is key and should be continuously monitored.
- Focus on multidisciplinary approaches and care within sport is critical to improving management.

# Thank you



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