



Prevalence and Risk of Anxiety and Depression after Concussion: A TRANSCENDENT Study

van Ierssel JJ, Kutcher SA, Johnston S, Pham NK, Lamoureux M, Dodd AB, Mullan M, Yeates KO, Ledoux A-A, Liu BC, Lalonde C, Master CL, Howell DR, Chintoh A, Mikolić A, Beauchamp MH, Silverberg ND, Zemek R. Journal of Neurotrauma. 2026.

Plain Language Summary created by: Christy Thompson

Why was this work done?

- This study looked at how common anxiety and depression are at the first intake assessment in a specialty concussion clinic.
- The researchers wanted to learn how often people experience these symptoms early after a concussion and how often the symptoms are severe enough to need mental health support or treatment.
- They also wanted to understand which types of people are at higher risk of developing anxiety and depression, and whether certain kinds of injuries are linked with worse symptoms.



What did you do and how did you do it?

The study included 1,639 people who agreed to take part in the TRANSCENDENT Concussion Research Program. They had to be 13 years or older and diagnosed with a concussion at a specialized concussion clinic in Ontario. The concussion diagnosis had to be made within one year from the injury, half of the group presented within the first 3 weeks.

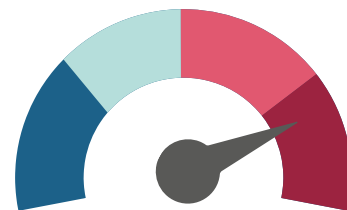


At their first appointment, each person filled out **two mental health** self-assessment screening tools:

- GAD-7 to measure anxiety
- PHQ-9 to measure depression

Higher scores mean worse symptoms.

Scores greater than 10, on either screener indicate a moderate to severe degree of symptoms and a need for further assessment.



The researchers used statistical analyses to see which clinical factors were most strongly linked with the odds of having moderate to severe anxiety or depression symptoms.



What was found

1

Anxiety and depression symptoms are more common than previously thought.

Of those in the study, 45% had moderate to severe anxiety symptoms, 60% had moderate to severe depression symptoms, and 42% had both. This is compared to approximately 7% estimated to suffer from either anxiety or depression in the general population.

2

Women had higher rates than men.

49% of women had moderate to severe anxiety symptoms, and 64% had moderate to severe depression symptoms. Although lower in men, rates were still higher than previously thought.

3

Young and middle-aged adults were at highest risk.

People aged 18 to 59 reported the most mental health symptoms.

4

Non-sport injuries carried the greatest risk.

Compared to sports concussions, people who presented after motor vehicle collisions, workplace injuries, or assault were 2 to 4 times more likely to develop anxiety or depression symptoms.

5

Preinjury mental health played a role.

People who had anxiety before the concussion were more likely to have moderate –to severe anxiety and depression at their clinic visit.

6

Sleep problems made things worse.

Having trouble sleeping after a concussion strongly increased the chance of developing both anxiety and depression.

7

Waiting longer to be seen meant worse symptoms.

The longer the delay between injury and first appointment, the more likely it was to develop moderate to severe anxiety or depression symptoms.

Why this matters



- Untreated anxiety and depression can slow recovery and make it harder to return to school, work, or sports.
- The study shows a need to routinely screen for mental health symptoms at the initial clinic visit and closely follow those at high-risk.
- Timely access to mental health care for concussion patients is important.

Key takeaways



- Screen for mental health symptoms early and routinely using proven screening tools.
- General symptom checklists may miss mental health problems and lead to poor care if proper screening tools aren't used
- Prioritize assessment of higher-risk groups and arrange timely follow up with mental health care.