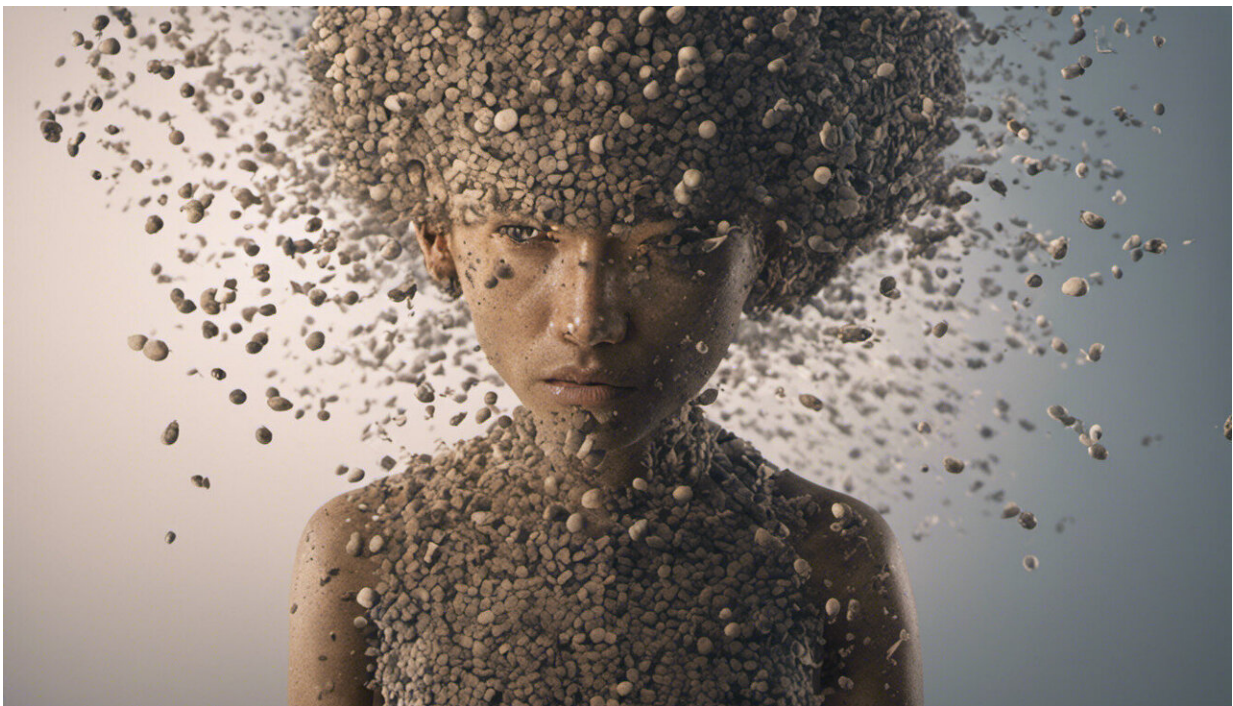


# Hidden epidemic? Childhood concussion may lead to long term cognitive and behavioural problems

June 6 2019, by Mark Linden, Ann Glang And Audrey Mckinlay

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Credit: AI-generated image ([disclaimer](#))

At age 15, Jamie is a keen soccer player who loves nothing more than getting stuck into every tackle, practice and game. As a result, Jamie experiences injury like any young person might do. During a routine sports physical, Jamie complains to the doctor about headaches, sleeping

difficulties and feeling kind of foggy at school. The doctor thinks the young patient is stressed, and recommends ibuprofen and a good night's sleep. The topic of concussion, or brain injury, does not come up.

Although this story is fictional, there are many [examples like it](#) in the real world. Mild traumatic [brain injury](#), or concussion, is a more common condition than many people realise—causing dizziness, confusion, headache, nausea and sometimes loss of consciousness. There is strong evidence that in an average class of 30 children, [at least five will experience a brain injury](#) before the age of 15. The symptoms of mild injury typically resolve in a few days or weeks. But in about [10 percent of these cases](#), mild injuries are estimated to lead to long-term deficits—causing problems with memory, concentration, behaviour, mood and personality.

Researchers base their estimates of the prevalence of [brain](#) injury on a strong association between concussion and persistent negative outcomes. For example, one study showed that children injured during their pre-[school years](#) were [significantly more likely](#) to have evidence of antisocial behaviour and/or psychiatric disorders during their teen years. These problems persisted into adulthood, with evidence of increased drug and alcohol abuse at the age of 25.

As brain injury is a hidden disability—you often can't tell that there has been an injury—we don't know a huge amount about. In fact, the symptoms many children experience after brain injury may be attributed to something else. For example, a child who has trouble concentrating and turning in schoolwork on time may seem to have attention problems and be mislabelled as having Attention Deficit Hyperactivity Disorder (ADHD).

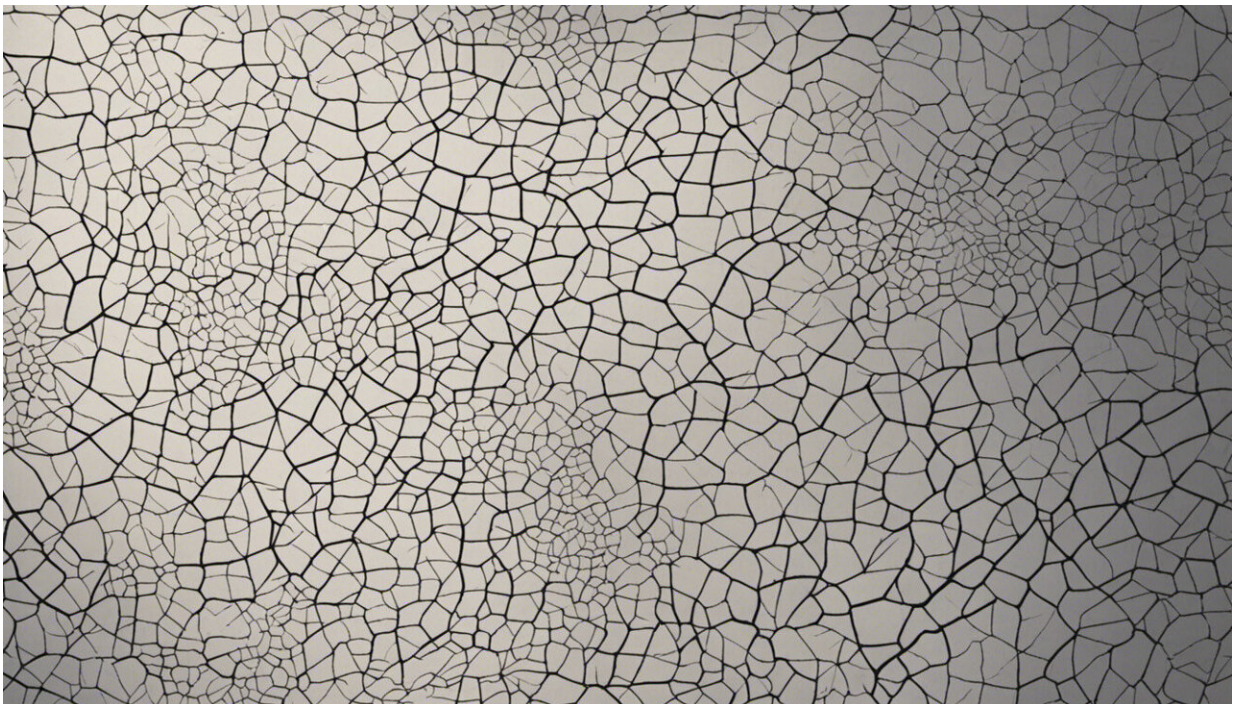
Research has shown that misdiagnosis of brain injury [is a real problem](#). Without accurate diagnosis, brain injury can be mistaken for another



disability, leading to inappropriate provision of support and services. A child with brain injury will likely have complex deficits which require frequent monitoring and adaptive service provision as the child's brain matures.

Also, many children do relatively well following injury, until [school](#) demands and expectations for independence increase, at which point they may suddenly struggle. At this point, parents and teachers may have forgotten about the childhood injury or simply fail to make the connection between the injury and the learning and behaviour challenges of their older child. In other words, effect does not always immediately follow cause when it comes to brain injury.

The lack of recognition of brain injury means that the public, families, healthcare providers, educators and members of the criminal justice system [hold many misconceptions](#) about what brain injury is and is not. Although the majority of children with injuries go on to live happy and fulfilling lives, brain injury can make some lives harder.



Credit: AI-generated image ([disclaimer](#))

## Ways forward

We need to be aware that support and greater consideration are necessary to help these children reach their full potential. However, those in the best position to help—educators—receive no training in how to support a child with brain injury. This lack of training means that teachers may be ill prepared to understand and meet the learning needs of these children. Currently, many children with brain [injury](#) are not well served in school and become dissatisfied with schooling, have poor educational attainment, and [may leave school unprepared](#) for adult life.

We know that [children](#) who stay in school have better occupations and earn more than those who leave school early. Children who leave school early may also get into trouble with the law. Interestingly, research shows [high rates of self-reported brain injury](#) among young offenders (87 percent) and the general prison population (65 percent).

But it is definitely possible to access appropriate supports and services. Let's go back to Jamie. If the symptoms don't improve, Jamie could go to the football coach who could ask for more information, including whether Jamie had received a knock to the head. Jamie could then reveal that while there had been no blow to the head, the symptoms had started after a collision with a goal post a few months earlier and hadn't realised that a concussion could happen without being knocked out. After a follow-up visit with the doctor, it could then be determined that Jamie had indeed sustained a concussion.

In this case, the doctor should recommend sitting out the spring football season and getting accommodations at school so Jamie doesn't fall behind. This information should be passed on to Jamie's school counsellor, who should share [information about concussion](#) with school staff, including some web-based resources on how to support students with concussion at school. Jamie should also be allowed to take rest breaks at school in the nurse's office as needed, turn in assignments late, and take tests in a quiet room. After taking a six-month break, Jamie could then start making a gradual return to soccer.

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Provided by The Conversation

Citation: Hidden epidemic? Childhood concussion may lead to long term cognitive and behavioural problems (2019, June 6) retrieved 6 May 2024 from <https://medicalxpress.com/news/2019-06-hidden-epidemic-childhood-concussion-term.html>

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