

# Study suggests link between brain injury and use of mental health and substance-use services

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Individuals who use mental health or substance use services may be more likely to have experienced a traumatic brain injury (TBI) when

compared to the general population, according to a new scoping review led by Lawrence S. Bloomberg Faculty of Nursing Ph.D. student Julia Davies.

Most studies included in the review, published in the *Journal of Head Trauma Rehabilitation*, indicated that at least a quarter of [mental health](#) and addictions service users had experienced a TBI, with nearly half the studies identifying TBI rates of more than 50%.

That is significant, Davies says, because of the implications it has for guidelines around screening for TBI history and the need to raise awareness of the implications for a [brain injury](#) among mental health-care providers. As an acute care mental health nurse, Davies has observed that brain injury history is not something that is consistently addressed or considered in mental health services.

"Right now, we don't know enough about the needs of individuals with TBI who seek out [mental health services](#)," Davies says. "We need a better understanding not only of how they are screened for a brain injury, but also how their injury and symptoms might impact their needs as they progress through the mental health system."

Davies and other members of the research team found that TBI was associated with more severe substance use and mental health symptoms. There was also a consistent association between TBI and risk or history of aggression towards others—another important factor for health-care providers to consider when screening for TBI history that may promote more thorough and supportive care planning.

"Part of what we were looking for in our review was how different studies measured brain injury—and we did find some inconsistencies. Some studies included only impacts to the head with a loss of consciousness. But you can have brain injury or a concussion without

losing consciousness," Davies says.

Brain injuries can also go under-reported among more vulnerable populations particularly if prior medical documentation is relied upon for brain injury history. This is why Davies feels that use of a standardized measurement tool would be most beneficial—so that providers are accurately assessing those with the greatest risk of TBI related mental health concerns.

While the study examined brain injury history among all age groups, Davies and the team found there was little research focused on TBI history and mental health use among [young adults](#) and adolescents even though this age group is at the highest risk of both mental health challenges and concussion or head injuries.

"Given the need for [early intervention](#) for young people in mental health, it seems important to understand and explore their history of TBI when they access mental health care, which is why it is a key component of my doctoral research," Davies says.

Davies' interest in the area stems from her earlier [clinical practice](#) on a trauma unit, where she worked closely as registered nurse with adults and [young people](#) who either had a physically traumatic event or accident related to mental health or substance use and would subsequently experience cognitive or personality changes after the injury.

"I wanted to know what happens down the road for them," Davies says. "Where do they end up after we have discharged them because they are physically well? How are we supporting them?"

Though there is research suggesting a strong link between brain injury and depression or cognitive challenges, Davies believes there is a gap

that needs to be addressed.

"For young adults in particular, they sit at a crossroads of vulnerability to mental health and brain injury," she says. "There is more work to be done to address their needs within mental health settings and this study is one step forward for future research."

**More information:** Julia Davies et al, Traumatic Brain Injury History Among Individuals Using Mental Health and Addictions Services: A Scoping Review, *Journal of Head Trauma Rehabilitation* (2022). [DOI: 10.1097/HTR.0000000000000780](https://doi.org/10.1097/HTR.0000000000000780)

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