

Traumatic brain injury linked to criminal activity

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“We think it’s likely that some individuals who enter the criminal justice system still suffer from the effects of a recent TBI and might benefit from specific treatment for that,” Dr Schofield says. Credit: Love Makes A Way

Experiencing a traumatic brain injury (TBI) may increase the likelihood of an individual criminally offending by 60 per cent, according to latest research.

The study, involving UWA and interstate universities, examined the records of around 30,000 Western Australians born between 1980 and 1985, including about 8,000 with hospital record evidence of a past TBI.

In order to properly evaluate the evidence, it was important they gathered information about other 'confounding' factors, according to Hunter New England Local Health District clinical director of Neuropsychiatry Service Dr Peter Schofield.

"Substance misuse, some psychiatric conditions, and social disadvantage increase the risk both of having a TBI and of committing offences," he says.

"Taking into account these and other factors allowed us to tease out the specific, separate role TBI might have in terms of increasing the risk of offending."

The study's control group consisted of siblings of the individual with a TBI, including some twins who had not experienced a TBI.

"The main results suggest that experiencing a TBI increases the likelihood that an individual may subsequently offend," Dr Schofield says.

"About 10 per cent of those without a TBI and 18 per cent of those with a TBI subsequently offended up to age 30 years.

This represented about a 60 per cent increase in risk related to TBI after accounting for other factors that independently increased the risk of first offending, such as having a drug and alcohol treatment record, a mental illness diagnosis, being indigenous, and evidence of social disadvantage.

Efforts to reduce levels of [substance abuse](#) and of accidents and assaults

in the context of substance abuse, as well as appropriate use of helmets in high velocity sports and when riding bicycles should have benefits in reducing the occurrence of TBI, Dr Schofield says.

"It seems likely that improved treatment of psychiatric illness might also reduce rates of TBI," he says.

"We think it's likely that some individuals who enter the criminal justice system still suffer from the effects of a recent TBI and might benefit from specific treatment for that.

"Additionally, other offenders may have longer term side effects of a head injury with consequences for their behaviour and for coping with the stresses that imprisonment imposes."

Future studies will investigate how other factors might affect the risks of offending associated with TBI.

More information: Peter W. Schofield et al. Does Traumatic Brain Injury Lead to Criminality? A Whole-Population Retrospective Cohort Study Using Linked Data, *PLOS ONE* (2015). [DOI: 10.1371/journal.pone.0132558](https://doi.org/10.1371/journal.pone.0132558)

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