

# Screening for traumatic brain injury in women prisoners

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**BBC Radio 4's Law In Action looked into how traumatic brain injury (TBI) and crime are linked and how women prisoners with a history of TBI are particularly affected<sup>1</sup>**

Causes of TBI in women prisoners are different from those in male prisoners and are often not reported<sup>2</sup>

Comparison between men and women who self-reported a TBI<sup>2</sup>



**Prof. Huw Williams – Exeter University**

“In prison populations, the general finding across countries is that between 50% to 80% have had a brain injury of some kind”<sup>1</sup>

Women prisoners need to be proactively screened with appropriately validated tools early in their prison sentence, in order to identify those who have a history of TBI so that the appropriate help, support and rehabilitation can be given.

## Utility of the Brain Injury Screening Index in identifying female prisoners with a traumatic brain injury and associated cognitive impairment<sup>3</sup>

### Objective

❖ To explore test-retest reliability and criterion validity of the BISI as a tool for screening for a history of TBI in female prisoners

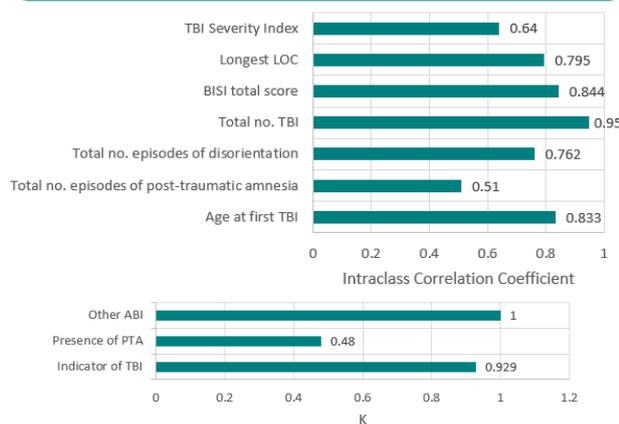
### Methods

➤ A cross-sectional study design was used to evaluate the psychometric properties of the BISI in a closed UK female prison. 56 females aged between 18 and 80 underwent clinical interview, the BISI, self-report measures of mood and a battery of measures of cognitive functioning. The BISI is an 11-item TBI screening questionnaire designed by the Disabilities Trust.

- ✓ 5/7 continuous variables showed adequate reliability, 2/3 binary variables reached statistical significance.
- ✓ The TBI Severity Index showed no correlation with the self-report measures and cognitive tests.
- ✓ BISI Total Score and TBI Indicator showed expected positive correlations but only the NFI Motor subscale was significant

### Results

### Test-Retest Reliability for Key Continuous and Binary Variables<sup>3</sup>



### Our interpretation:

- BISI needs further research and refinement with a larger population.
- Women prisoners appear to respond to the BISI differently to men, perhaps reflecting the differences in cause and response to a TBI. The screening tool will need to take this into account.
- Women prisoners with history of TBI are a vulnerable population. An effective screening tool for TBI could help inform funding for the training of prison staff, rehabilitation services and their engagement with the criminal justice system.

1. BBC Sounds. Traumatic brain injury and crime. London: BBC Sounds; 2021. Available from: <https://www.bbc.co.uk/sounds/play/m000wrkt>  
 2. Durand E et al., Traumatic brain injury among female offenders in a prison population: results of the FleuryTBI study. Brain and behaviour. 2016;e00535  
 3. O’Sullivan M et al., Utility of the Brain Injury Screening Index in identifying female prisoners with a traumatic brain injury and associated cognitive impairment. Journal of Correctional Health Care. 2019; 25 (4): 313-327