Neuropsychological Screening and Intervention: A Pilot Project Aimed at Identifying and Treating Traumatic Brain Injuries in the Offender Population

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Introduction

Traumatic brain injuries can lead to cognitive, behavioral, and emotional difficulties. Previous research suggests that traumatic brain injuries are relatively elevated in offender populations.

- The rate of traumatic brain injuries within the general population is 12% (Frost, Farmer, Prinsen, & Rolige, 2012).
- The rate increases to 60% (previous years) within the prison/jail population (Williams, Mowke, Trzaska, Bills, & Condon, 2010).
- Inmates found to have a lifetime history of TBI with on-going impairments as indicated by screening tests with intact effort will be enrolled in a peer support and self-advocacy curriculum. This program is being developed and includes:
  - educational overview of TBI
  - understanding of how cognitive and affective function is impacted by TBI
  - overview of strategies the inmate can use to be successful both within the jail and probation settings.

The purpose of this program was to identify the risk and develop programs to promote positive outcomes among inmates who have sustained TBI. The inmates were identified and consented to participate.

Method

Participants:

- Participants were recruited on a voluntary basis from the Denver County Jail. Neuropsychological screening evaluations were conducted on a group of inmates (N=36).
- Structured Clinical Interviews [SCID] were used to screen for gross cognitive deficits and history of traumatic brain injury.
- Efforts testing results were consistent with previous studies of injury severity but reflect an at-time high for prevalence.
- 34 of 36 (94%) of the inmates had a history of TBI.
- 29 of those 35 TBI survivors (83%) displayed "tri
- Inmates found to have a lifetime history of TBI with on-going impairments as indicated by screening tests with intact effort will be enrolled in a peer support and self-advocacy curriculum.

Results:

- Inmates were identified and consented to participate.
- Assessment sessions (2 hours) were conducted (875,015 to 878,015/2018).
- - Semi-Structured Clinical Interviews
- Neuropsychological Screening Test (NBT) (Wines & Stern, 2003) via NIMH Core Battery (Neta LifeSciences).
- OSU-TRI ID (Cortigny & Regen, 2007).
- Gift Test (e.g., TOMRA, VIP, NAM A, Rey 15 Item Test).
- Feedback meetings (1 hour) 05/08/2013 to 08/14/2013.
- Inmates received a single-page summary of results.
- Jail staff received a 2-page report and copy of summary.

Measures:

- The OSU-TRI ID and neuropsychological screening tests were adequate screens for gross cognitive deficits and history of traumatic brain injury.
- Efforts testing results were consistent with previous studies of injury severity but reflect an at-time high for prevalence.
- 34 of 36 (94%) of the inmates had a history of TBI.
- 29 of those 35 TBI survivors (83%) displayed gross cognitive impairments on screening tests.

There was a substantial overlap between TBI history, substance abuse, and mental illness.

- 34 of 36 (94%) had substance abuse histories.
- 35 of 36 (97%) had psychiatric histories (e.g., diagnosis with major mental illness).
- 35 of 36 (97%) of TBI survivors had at least one co-morbid condition.
- 28 of those 35 TBI survivors (83%) displayed "abnormal" or history of TBI, mental illness, and substance abuse problems.

- 83% of this sample positive screens for a combination of mental illness, substance abuse, criminal history, and traumatic brain injury.

Efforts testing results were consistent with population base rates.

- 34 of 36 (94%) had a history of TBI.

Conclusion:

- The rate of TBI in this county jail population is very high, and is higher than other studies with offenders. In 94% of those injuries, there appear to be neuropsychological consequences on screening evaluation. Pre existing and co-existing issues (e.g., substance abuse, mental illness) may also contribute to deficits in functioning. Programming intended to the needs of this population will be developed and rectification remains tracked on the one year to establish program efficacy.

Screening Study Findings:

- "Will the information you learned through the assessment be useful in your life upon community re-entry?"

- "I would like more testing if possible! Thank you!"
- "I do believe that it was very helpful for me because I could see things a lot differently."
- "Very useful tool."
- "Even though this patient has been released, the feedback was interesting/helpful in rounding out my understanding of this patient."
- "Nice to have an additional component in understanding this patient. Thanks!"

Intervention

Peer Support and Self-Advocacy Curriculum:

- Inmates found to have a lifetime history of TBI with on-going impairments as indicated by screening tests with intact effort will be enrolled in a peer support and self-advocacy curriculum.
- This curriculum will be developed in the coming year with state grant funding.
- Dr. McMillan and DU graduate students will take the lead on the development of this curriculum.

References