



Youth with Brain Injury in Virginia's Juvenile Justice System

Project Overview

Objectives:

To study the prevalence of brain injury among youth admitted to Virginia's juvenile justice detention system. To create a standardized assessment / screening instrument for brain injury that could be incorporated into the routine evaluation of youth entering the juvenile justice system.

Process:

Researchers from Virginia Commonwealth University in conjunction with the Virginia Department of Juvenile Justice administered a series of tests that measured memory, attention, concentration, visual perception, and visual construction. They also collected information on lifetime incidence of traumatic brain injury and associated symptoms via interviews with the juveniles and thorough review of medical charts.

Results:

Researchers found that 53% of youth admitted to the juvenile justice system reported a history of sustaining at least one traumatic brain injury.

Project Details

Demographics:

Eight hundred sixty-seven participants were screened upon admittance to the juvenile justice system from July 2010 to March 2012. Following is information on age, in years, at time of evaluation:

Age at Admission	Percentage
13	1%
14	6%
15	15%
16	30%
17	37%
18	11%
19	1%
20	0.1%

Average age at admission of participants: 16 years

Gender: Male, 92.6%; Female, 7.4%

Race/Ethnicity: Asian/Pacific Islander, 0.5%; African American, 69%; Caucasian, 27%; Hispanic, 4.8%; Other, 2.2%; Unknown, 1.4%.

Screening Process:

Project researchers examined medical records to identify the presence of other neurological conditions including the four listed below:

Medical Record Review	Positive Responses
Hypoxia (oxygen insufficiency)	16%
Prenatal Drug Exposure	13%
Birth Trauma	12%
History of Seizure Disorder	3%

Among the 867 participants, 455 (53%) reported a history of hitting or hurting their head. Using the VCU Brain Injury Screening Tool, these 455 individuals were asked about any medical care received or symptoms related to the injury. Following is information derived from administration of the screening tool:

Question	Answered "Yes"
Went to ER?	83%
Felt dazed/confused?	70%
Had headaches?	68%
Saw a doctor?	59%
Had dizziness?	43%
Noticed additional/new problems?	38%
Lost consciousness?	29%
Had memory problems?	27%
More easily frustrated/mad?	25%
Had trouble concentrating?	21%
Overnight hospital stay?	20%
Had vision changes?	18%
Were depressed?	13%
Had problems with reading, writing, or math?	10%
Had grade changes?	9%
Had problems with schoolwork?	8%
Had relationship changes?	6%
Other changes in feeling/thinking?	3%

Participants' neuropsychological functioning (e.g., attention, memory, verbal learning) was evaluated using a series of tests: Symbol Digit Modalities Test; Trail Making Test A (Intermediate, Adult Versions); Trail Making Test B (Intermediate, Adult Versions); Rey Complex Figure Test (Copy and Recall); and Rey Auditory Learning Test.

Other Project Highlights:

- VCU established a project Advisory Board comprised of representatives from the Virginia Department for Aging and Rehabilitative Services (DARS), Department of Juvenile Justice (DJJ), VCU's TBI Model System, the Brain Injury Association of Virginia (BIAV), the Department of Education (DOE), and the Department of Corrections Education (DCE).
- BIAV and VCU collaborated on a series of videos to educate DJJ front-line staff about brain injury. The videos can be found on BIAV's YouTube site at <http://www.youtube.com/user/biavirginia>.
- DARS and BIAV sponsored the *Virginia Collaborative Policy Summit on Juvenile Justice* in Richmond, Virginia to highlight VCU's research project results and exchange information with other states addressing the issue. Attendees included Health Resources and Services Administration (HRSA) staff, researchers, state agency personnel, and advocacy professionals from five states: Virginia, Utah, Minnesota, Texas, and Nebraska. A "Proceedings Manual" of the *Policy Summit* is posted on the BIAV (www.biav.net) and DARS (www.vadars.org) websites, or call BIAV at 804/355-5748.

Supported in part by HRSA Grant #H21MC06763-04-00 from the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB) and state contract #09-251 administered by the Virginia Department for Aging and Rehabilitative Services. The contents are the sole responsibility of the authors and do not necessarily represent the official views of HHS or DARS. This is in the public domain. Please duplicate and distribute widely.

Information in this fact sheet was obtained from grant #10-168 awarded to VCU by the Commonwealth Neurotrauma Initiative (CNI) Trust Fund (www.vacni.org). Content adapted from the "Best Practices for Incarcerated Youth with Brain Injury Project Final Report" by Dr. Jeffrey Kreuzer and Stephanie Lichiello, Virginia Commonwealth University

