

# Research Matters

## Early Elementary School Outcome in Children With a History of Traumatic Brain Injury Before Age 6 Years

### WHY IS IT IMPORTANT TO LOOK AT EARLY CHILDHOOD OUTCOMES FOR CHILDREN WHO HAVE EXPERIENCED A TRAUMATIC BRAIN INJURY (TBI) BEFORE AGE 6?

- Children who experience TBI at a younger age are more likely to have poorer outcomes than children who sustain injuries when they are older.

### ABOUT THIS STUDY

Authors Haarbauer-Krupa, Zing, Wise, Gillam, Trapani, Weissman, and DePompei (2019) explore the differences in early childhood outcomes between a group of children who experienced a TBI before age 6 and a group of children who had orthopedic injuries. Based on their findings, the authors recommend specific actions that could be useful when young children who have experienced TBI enter school.

### KEY FINDINGS

- Intellectual functioning, language, and reading scores were within the average range for all participants
- Significant group differences were found in
  - Intellectual function: verbal and overall composite
  - Language: receptive vocabulary, pragmatic language, story retell, word fluency
  - Reading: comprehension
  - Behavior: executive function, adaptive behavior
  - More children from the TBI group scored in the clinical range in all of the above areas
- No significant group differences were found in
  - Reading: word identification, word attack
- Children in the TBI group were reported to have more health-related symptoms (headaches, sleep difficulties, and seizures).

### CONCLUSIONS

Children who experience TBI before starting school may have prolonged symptoms that go unnoticed in a school setting. In this study, children in the TBI group had more behavioral difficulties and health symptoms than children in the comparison group. Both groups scored within the average range for cognitive, language, and reading scores, but group differences were found in performance. More sensitive measures and continual monitoring of children with TBI may be needed to promote school progress.

## REFERENCE

Haarbauer-Krupa, J., King, T. Z., Wise, J., Gillam, S., Trapani, J., Weissman, B., & DePompei, R. (2019). Early elementary school outcome in children with a history of traumatic brain injury before age 6 years. *The Journal of head trauma rehabilitation, 34*(2), 111-121. 10.1097/HTR.0000000000000414