

# Research Matters:

## Do Cognitive Behavioral Therapy Techniques Reduce Symptom Duration in Children and Adolescents who have Sustained a Mild TBI?

### FREQUENCY OF MILD TRAUMATIC BRAIN INJURY (TBI):

- 2.5 million high school students in the past year have reported a concussion or a mild TBI.
- Symptoms are typically short lived. However, 10-15% of students who experience a mild TBI report continued symptoms and require intervention.

### SYMPTOMS OF A MILD TBI:

- Neurological symptoms: seizures, irritability, lethargy, vomiting, dizziness, fatigue, headache, vision and hearing difficulties, and consciousness loss
- Cognitive symptoms: difficulty concentrating, confusion, disorientation
- Emotional symptoms: increase in aggressive behaviors, attitude change toward family members or siblings, behavior changes, moodiness, personality and temperament changes

### WHAT IS COGNITIVE BEHAVIOR THERAPY (CBT)?

CBT is a type of psychotherapy with the aim of changing maladaptive behaviors which hinder full recovery. This is often due to negative perception of an injury or its impact. The purpose of CBT is to change one's perception of the concussion to facilitate recovery.

### PURPOSE OF THIS STUDY

The influence of CBT is more common in persistent rather than acute concussions. This study attempted to determine the impact of CBT on mild TBI symptoms in children and adolescents. In a ten-year search of research which included children and teens who experienced lingering symptoms of a mild TBI, only 3 studies reported the impact of using CBT to decrease symptoms.

## FINDINGS:

For participants that received CBT, the following results were found:

- Increased participants return to school
- Decreased symptoms
- Decreased depression
- Some impact on anxiety

## Study Recommendations

There is moderate evidence to support the use of CBT for children and adolescents experiencing persistent symptoms from a mild TBI. CBT decreased the symptoms of mild TBI. However, more research is necessary. Only 3 studies were identified and reviewed, two of which were pilot studies. Additionally, these studies included other interventions in addition to CBT with results that were not reported independently of one another. Thus, the combination of CBT with other impactful interventions results in the reduction of mild TBI symptoms.

## REFERENCE:

Elmer, C. K. & Valovich McLoed, T. C. (2021). Do cognitive behavior therapy techniques reduce symptom duration in children and adolescents who have sustained a mild TBI? *International Journal of Athletic Therapy and Training*. <https://doi.org/10.1123/ijatt.2020-0096>