

# A New Cognitive Rehabilitation Intervention for Individuals with Chronic Cognitive Difficulties After mTBI: Results from the On-TRACC Pilot Study



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CHART AXIS LABEL

## BACKGROUND

- Over a million people in the United States sustain a mild traumatic brain injury (mTBI) every year.
- Many individuals report persistent post-concussive symptoms (PPCS), particularly cognitive difficulties, and associated functional impairment beyond the expected recovery trajectory.
- Our group developed a 5-session rehabilitation intervention for individuals with cognitive PPCS, Tools for Recovery and Clinical Care (On-TRACC), to address this need.

## On-TRACC Core Components

- Psychoeducation regarding medical/mental health conditions and cognition
- Core values identification and link to healthcare goals
- Cognitive rehabilitation and stress management skill building
- Self-management skills to help establish and follow-through on healthcare goals

## METHODS

Single-group open label pilot study

**Participants:** 28 individuals with mTBI and current cognitive PPCS

- Mean Age:** 43 years (range 25-80)
- Gender:** 64% male, 21% female, 7% transgender
- Race:** 54% White, 14% Multiracial, 7% Black, 4% Asian, 4% American Indian/Alaska Native, & 11% Other
- Mean Time since Injury:** 9 years
- Comorbid Symptoms:** 72% endorsed clinically significant PTSD symptoms (PCL-5), 62% for insomnia (ISI), and 77% for depression (PHQ-9).

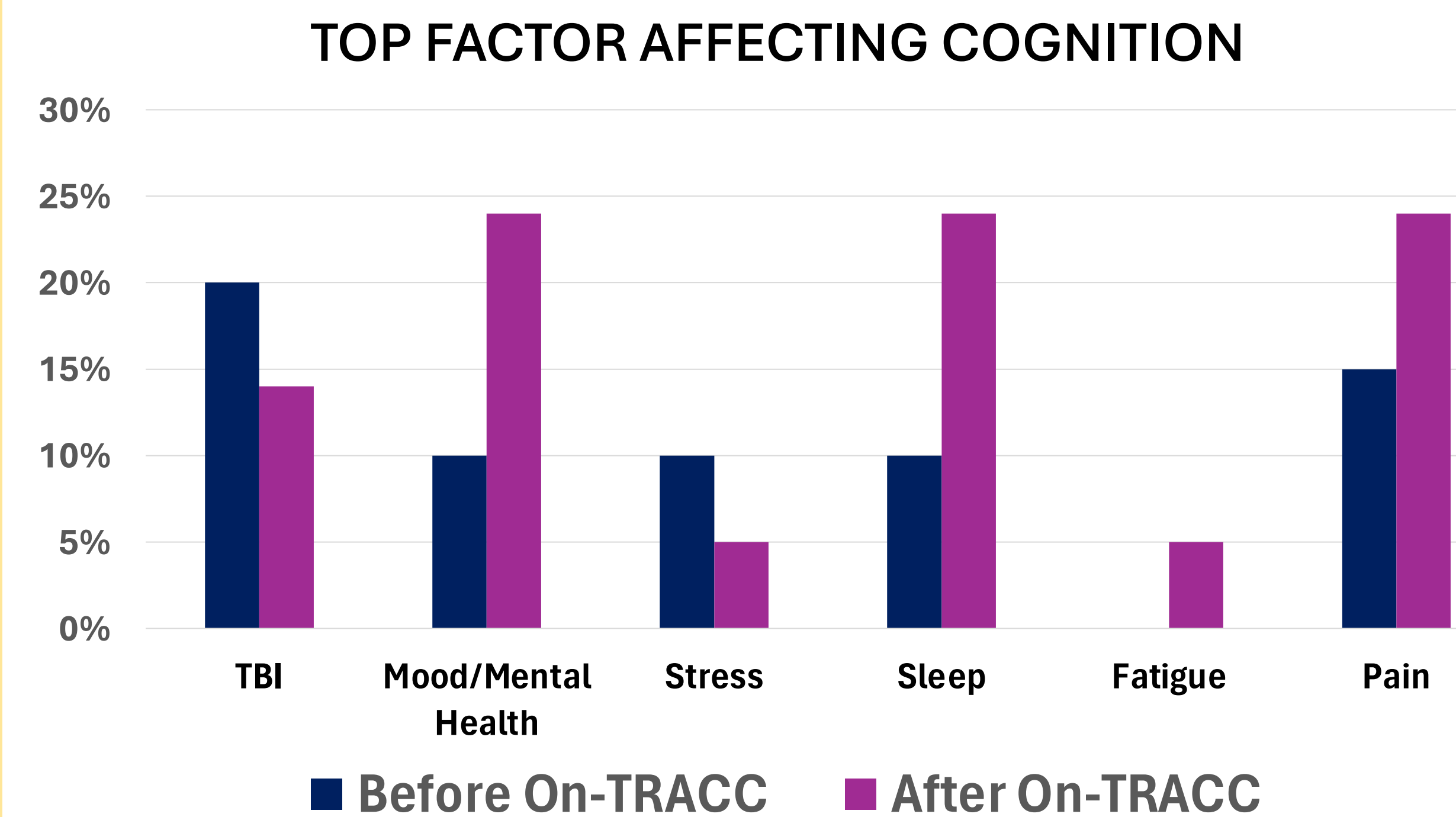
**Intervention:** 1:1 On-TRACC via video telehealth.

**Assessments:** Baseline and post-treatment.

## RESULTS

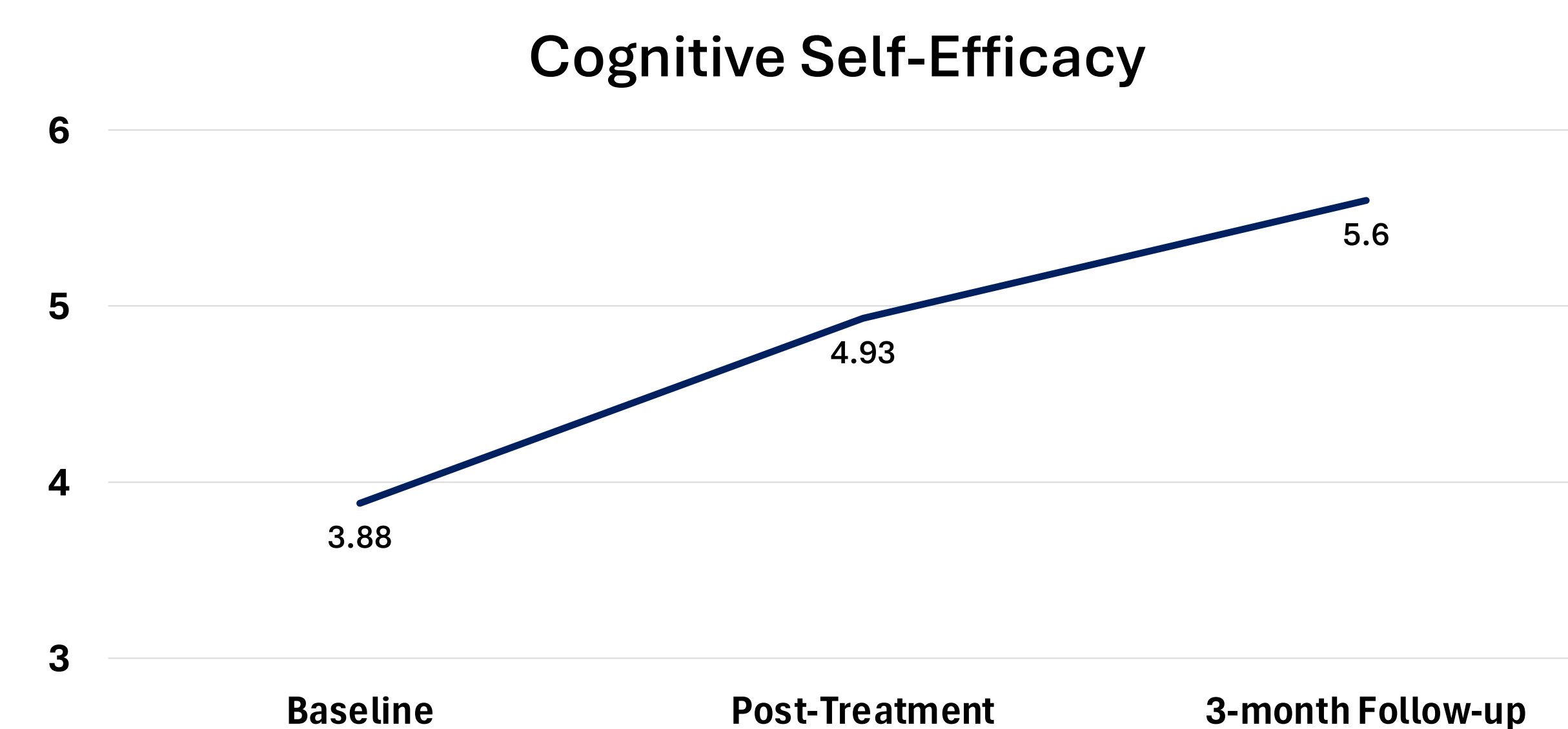
### Symptom Attribution

Most important factor contributing to cognitive difficulties shifted from TBI (baseline) to mental health, pain, and sleep (post-treatment).



### Self-Reported Cognition & Cognitive Self-Efficacy

Participants reported fewer cognitive difficulties (NSI Cognitive subscale  $p = .04$ ) and improved cognitive self-efficacy ( $p < .01$ ) post-treatment. This pattern continued at 3-months post-treatment ( $n=10$ ).



### Treatment Engagement

% who followed through on treatment goals in the 3 months following On-TRACC:

- 60% for mental health
- 60% for pain
- 50% for sleep

## CONCLUSIONS

On-TRACC led to changes in symptom attribution in individuals with chronic and functionally impairing symptoms.

This translated to engagement in treatment of comorbid conditions and continued improvement in cognitive self-efficacy beyond the intervention period.

## ACKNOWLEDGEMENTS

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Interested in learning more?  
[farkat@uw.edu](mailto:farkat@uw.edu)

### On-TRACC

Tools for Recovery  
and Clinical Care



#### Patient Workbook

This workbook was developed by Kathleen F. Pagulayan, PhD;  
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