

problems were associated with greater financial exploitation vulnerability, and this relationship was not driven by worse cognition. These results suggest that even low amounts of drinking and alcohol-related problems may be associated with cognition and financial exploitation vulnerability in cognitively unimpaired older adults. This study also corroborates the use of the SMAST over the CAGE in older adult populations that may be more sensitive to cognitive changes.

**Categories:** Addiction/Dependence

**Keyword 1:** alcohol

**Keyword 2:** computerized neuropsychological testing

**Keyword 3:** social cognition

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## 2 Pilot Study of a Cognitive Enhancement Intervention for Substance Abuse Recovery

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**Objective:** This was a pilot study testing a cognitive enhancement program to improve rate of cognitive recovery in early substance abuse treatment. It is hypothesized that if patients were able to accelerate the rate of cognitive improvement, they may be able to better engage in substance abuse treatment and potentially have better long-term outcomes.

**Participants and Methods:** Participants were 47 adults newly admitted to a residential substance abuse treatment facility (74.5% male, 76.6% white, mean age=34.5 years, education=12+ years). All were post-detox. All were being treated for opioid abuse, with the majority in treatment for polysubstance abuse. Participants were randomly assigned to either the intervention group (BrainHQ research cognitive training program) or active control group (inert computer games) and completed 3-4 training sessions per week for a minimum of 3 weeks. NIH Toolbox cognition battery was administered at baseline and endpoint.

**Results:** Regardless of study group, most participants had a significant improvement in cognitive performance across most subtests and composite scores of the NIH Toolbox cognition battery. The RAVLT and Oral Symbol Digit subtests had the greatest change ( $p < .001$ ) for both groups, as well as a significant improvement ( $p = .002$ ) in Cognitive Function Composite Score for both groups. The only difference between the control and intervention group was on the Pattern Comparison subtest, with the intervention group scoring significantly higher at endpoint ( $p = .004$ ).

**Conclusions:** Although substance abuse is known to cause injury to the brain that may not be fully repaired by sobriety, cognitive recovery was significant in this group of patients during early inpatient treatment for opioid abuse. Although it has yielded significant effect in other patient populations, the BrainHQ program did not show a significant enhancement in cognitive recovery, compared to the active control group, in this pilot study of patients in treatment for opioid abuse. This study was limited by a small sample size and potential future variations should be considered, such as changes to intervention intensity and specific intervention exercises.

**Categories:** Addiction/Dependence

**Keyword 1:** addiction or dependence

**Keyword 2:** cognitive rehabilitation

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## 3 Neuropsychiatric Change and Childhood Adversity Levels in an Opioid Treatment Population

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**Objective:** Early life adversity is strongly correlated with a number of negative health outcomes, with some of the highest risks are related to later illicit drug use and substance use disorders (SUDs). Specifically, it has been found that an ACEs score of  $>4$  confers a 7-10-fold risk of substance abuse. Subsequent research has identified a number of neurobiological effects of childhood trauma, including structural and