

The 27th Annual Williamsburg Traumatic Brain Injury Rehabilitation Conference

*Medical, Cognitive, and Neurobehavioral
Problems After Injury:
Effective Practice for Improved Outcomes*

Presented By

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POSTER 4

**Computerized Cognitive Training on People with Mild to
Moderate Cognitive Deficit**

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Computerized cognitive training on people with mild to moderate cognitive deficit.

Background: Recent data on brain plasticity gave foundation to use cognitive rehabilitation intervention in early stages of dementia.

Objective: To investigate possibility for cognitive training by using computerized program, which measures brain processing speed while performing various tasks.

Method: The participants were 10 medically ill patients with MMSE scores 15 and above.

The ages ranged from 62 to 79 years old, education levels ranged from 4 to 16 years. The patients were taking different antidepressants, anticholinesterase inhibitors and vitamins.

Initial assessment included 2&7 Ruff Selective Attention Test, Ruff Figural Fluency Test (RFFT) and Cognometer, software, which employs Neuro-Cognitive Chronometric Assessment Technology (NCAT). This chronometrical test was developed by Cognitive Diagnostic Inc. We registered Reaction time and Performance on subtests for attention and for running (encoding) memory (separately on letters, words, shapes, pictures, objects and numbers). The same program was used for the training. There were held about thirty 30 minutes session twice a week.

Results: After the training, positive changes were found on 2 and 7 Selective attention test (8 patients) and Ruff Right Frontal fluency test (9 patients). Data on Cognometer test

showed decrease reaction time on attention and memory subtests and increase performance only on attention subtest (5 patients).

Conclusion: Cognometer is software, which is suitable not only as a cognitive screening instrument, but also as a training tool for people with mild to moderate cognitive decline.

In these patients the training encoding memory increased brain speed and has positive impact on other cognitive domains such as attention and executive function. The results of these cognitive training suggest that it should be part of early intervention in demented people.