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NORTHERN NEW JERSEY
TRAUMATIC BRAIN INJURY SYSTEM
at Kessler Foundation

Real-Life Science

A Randomized Controlled Trial to Treat Learning Impairment in Traumatic Brain Injury

Nancy D. Chiaravalloti, Ph.D., Joshua Sandry, Ph.D., Nancy B. Moore, MA, & John DeLuca, Ph.D. (Journal of Neurorehabilitation & Neural Repair, 2016)

This study evaluated a memory intervention designed to help individuals with brain injury improve their ability to learn and remember information. The study compared two groups.

- Individuals who received the memory treatment (Treatment Group)
- Individuals that did not receive the treatment (Control/Comparison Group)

Both groups included individuals with a history of traumatic brain injury and the groups were similar in age, gender, intelligence, learning ability before treatment, time since injury, and symptoms of depression and anxiety. Both the Treatment Group and the Control Group completed an evaluation before the intervention, called a baseline assessment. This consisted of

- Neuropsychological tests: paper and pencil tests to assess thinking, learning, attention, etc.
- Questionnaires that ask about depression, anxiety, and everyday life

The Treatment Group received a memory intervention, the Kessler Foundation-modified Story Memory Technique (KF-mSMT), which included 10 sessions of treatment, twice a week for five weeks. Those in the Treatment Group met individually with a trainer and were taught to use techniques to help with learning new information. Two techniques were taught:

- Imagery: using images created in one's mind to increase recall of words
- Context: creating an easy to visualize story to help remember a list of words.

 Individuals in the Treatment Group were also taught to apply these strategies to real-world tasks in their life that required memory such as remembering a shopping list, a to-do list or directions.

Individuals who were in the Control Group met individually with a trainer, twice a week for five weeks (10 sessions), but they did not learn the 2 techniques (imagery and context).

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One week after the 10 sessions were completed, individuals in both the Treatment Group and the Control Group completed a follow-up evaluation which consisted of the same measures they completed during the baseline evaluation and the groups were compared. Results showed that the Treatment Group were better able to recall a story and to remember the location of hidden objects (everyday memory) as compared to the Control Group. The family of patients in the Treatment Group also reported less impulsive and/or inappropriate behavior at home after treatment.

Overall, the results of the study show that the KF-mSMT treatment improves memory in individuals with a history of TBI.

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