



AOTA Evidence Briefs

Stroke

**A product of the American Occupational Therapy Association's Evidence-Based Literature Review Project*

S #11

Cognitive training may be more effective than regular rehabilitation in improving stroke clients' verbal function, memory, and logical thinking

Soderback, I. (1988). The effectiveness of training intellectual functions in adults with acquired brain damage: An evaluation of occupational therapy methods. *Scandinavian Journal of Rehabilitation Medicine*, 20, 47–56.

Level IC2b

Randomized controlled trial, less than 20 participants per condition or group, moderate internal validity, moderate external validity

Why research this topic?

The few studies of the immediate effects of training in activities of daily living, motor relearning, and cognitive training (training in intellectual function) for stroke patients have shown this training to be **significant** (see *Glossary*). However, not much is known about the long-term effects, including whether clients maintain the level of function that they achieve and whether they can generalize the strategies they learn.

What did the researchers do?

Söderback (1988), of Danderyd Hospital in Stockholm, Sweden, evaluated the long-term effects of cognitive training for people who had experienced a stroke. The participants were selected between March 1983 and March 1986 from patients in four neurological emergency clinics in Sweden. Criteria for inclusion were that they had to be 17 to 65 years old, have some housework experience, have acute acquired brain damage (a cerebrovascular accident), and need rehabilitation. The resulting sample consisted of 67 people, 35 men and 32 women, whose average age was 47 years. They were randomly assigned to one of four groups: (1) intellectual functional training (IFT) plus a regular rehabilitation program (R) (IFT&R group); (2) intellectual housework training (IHT) plus R (IHT&R group); (3) IFT plus IHT plus R (IFT&IHT&R group); and (4) R only (R group).

The outcome areas of interest were *various components of cognition* (defined by Merriam-Webster's Collegiate Dictionary as the act or process of knowing; for example, verbal understanding, verbal fluency, ability to process and organize visual input, ability to relate items in space, attention, problem solving, and ability to work with numbers.) The measures were an intellectual function assessment and an intellectual housework assessment (both intended for use with the corresponding training program) and 15 *psychometric tests* (tests that measure cognitive functions, such as memory).

Occupational therapists conducted the interventions in a rehabilitation clinic. On average, participants received 40 hours of treatment over 14 weeks. The regular rehabilitation program, R, in which all four groups engaged, involved training in a variety of activities, such as macramé, sewing, games, woodworking, pottery, painting, gardening, model

■ Terminology used in this document is based on two systems of classification current at the time the evidence-based literature reviews were completed: *Uniform Terminology for Occupational Therapy Practice—Third Edition* (AOTA, 1994) and *International Classification of Functioning, Disability and Health (ICIDH-2)* (World Health Organization [WHO], 1999). More recently, the *Uniform Terminology* document was replaced by *Occupational Therapy Practice Framework: Domain and Process* (AOTA, 2002), and modifications to *ICIDH-2* were finalized in the *International Classification of Functioning, Disability and Health* (WHO, 2001).

This work is based on the evidence-based literature review completed by Hui-ing Ma, ScD, OTR, and Catherine A. Trombly, ScD, OTR/L, FAOTA.

For more information about the Evidence-Based Literature Review Project, contact the Practice Department at the American Occupational Therapy Association, 301-652-6611, x 2040.



Copyright 2003 American Occupational Therapy Association, Inc. All rights reserved.
This material may be reproduced and distributed without prior written consent.