



AOTA Evidence Briefs

Older Adults

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

OA#3

A leisure rehabilitation program may encourage stroke patients to participate in leisure activities.

Drummond, A. E. R., & Walker, M. F. (1995). A randomized controlled trial of leisure rehabilitation after stroke. *Clinical Rehabilitation, 9*, 283–290.

Level: IA1b

Randomized control trial, 20 or more participants per condition, high internal validity, moderate external validity

Why research this topic?

Research shows people's participation in leisure activities decreases following a stroke. Yet, participation in leisure activities is seldom addressed in rehabilitation, and little is known about the effectiveness of interventions to increase leisure participation after a stroke.

What did the researchers do?

Drummond and Walker (1995), of City Hospital (Nottingham, United Kingdom), hypothesized that a program encouraging leisure activities would help stroke patients resume such pursuits, and they designed a study to test their hypothesis. Sixty-five people participated: 37 men and 28 women. Their average age was 65.98 years. They all were patients consecutively admitted to the stroke unit in City Hospital between October 1990 and July 1992 who spoke English, had no severe comprehension problems, had no history of dementia, did not need to be transferred for further medical treatment, had an address in the Nottingham District Health Authority, and were not nursing or rest home residents.

The researchers randomly assigned the participants to a group that received the experimental treatment (leisure rehabilitation group), a group that received conventional occupational therapy treatment (conventional group), or a group that received no treatment (control group). Despite the random assignment, the participants in the leisure rehabilitation group turned out to be **significantly** (see *Glossary*) younger than the participants in the other two groups.

Occupational therapists delivered all the services in the participants' homes. The duration of treatment was 6 months. For the first 3 months, occupational therapists provided services once a week; for the last 3 months, once every 2 weeks. All the visits lasted 30 minutes.

For the leisure rehabilitation group, the interventions consisted of treatment, such as practice of transfers needed for preferred leisure pursuits; positioning; provision of equipment; adaptations of methods; advice on obtaining financial assistance and transportation; liaison with specialist organizations; and provision of assistance, such as referral to voluntary agencies that could provide physical assistance.

For the conventional group, the interventions focused on occupational therapy activities, such as practice of transfers and dressing, and perceptual treatments (e.g., requiring the client to move the arm unaffected by the stroke into space on the affected side to accomplish an activity, or using a red anchor line to the left of a project to bring the patient's attention into space on the affected side). If the participant was independent in activities of daily living (ADL), the occupational therapist used the visit as a check-up and inquired about problems and progress. Participants received no help or advice encouraging involvement in leisure pursuits.

The outcome areas of interest were *number of leisure activities and amount of time spent engaging in leisure activities* (as measured by the Nottingham Leisure Questionnaire); *motor performance* (as measured by the gross function section of the Rivermead Motor Function Scale); and *functional performance* (as measured by the self-care section of the Rivermead ADL Scale). Assessments of the first area were made before the study began, 3 months after it started, and 6 months after it started. Assessments of the second and third areas were made before the study began and when the participants entered the study (on discharge from the stroke unit to the home environment).

What did the researchers find?

The leisure rehabilitation group showed significantly higher leisure scores than the conventional group or the control group at both 3 and 6 months after entrance into the study (which, as noted, occurred on discharge from the hospital). Adjusting for the age imbalance between this group and the other groups, the researchers still found the increase to be significant.

What do the findings mean?

For therapists and other providers, the findings suggest that a post-discharge leisure rehabilitation program may enhance stroke patients' participation in leisure activities. By contrast, post-discharge occupational therapy that does not address leisure activities, may have little effect in enhancing leisure participation.

What are the study's limitations?

One potential limitation that could provide an alternative explanation for the outcome was the younger age of the leisure rehabilitation group compared with the conventional group or the control group. This imbalance occurred accidentally during randomization, but the researchers controlled for it in their analysis of the data.

A limitation not controlled for was that the same therapist delivered the intervention to the leisure rehabilitation group and the conventional group. If the therapist knew the study's hypothesis, he or she might have unconsciously influenced the findings. The assessor, however, was not aware of the group assignments and thus could not have influenced the findings.

Glossary

significance (or significant)—A statistical term, this refers to the probability that the results obtained in the study are not due to chance, but to some other factor (such as the treatment of interest). A significant result is one that is likely to be generalizable to populations outside the study.

Significance should not be confused with clinical effect. A study can be statistically significant without having a very large clinical effect on the sample. For example, a study that examines the effect of a treatment on a client's ability to walk may report that the participants in the treatment group were able to walk significantly longer distances than the control. However, if you read the study you may find that the treatment group was able to walk, on average, 6 feet, while the control group was able to walk, on average, 5 feet. While the outcome may be statistically significant, a clinician may not believe that a 1-foot increase will make his or her client functional.

■ 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).

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