



AOTA Evidence Briefs

Chronic Pain

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

CPAIN #8

A comprehensive program of functional restoration may be effective in returning patients with low-back pain to work and reducing their need for pain medications, additional hospitalizations, and additional surgeries.

Tollison, C. D. (1991). Comprehensive treatment approach for lower back workers' compensation injuries. *Journal of Occupational Rehabilitation, 1*, 281–287.

Level IIA3b

Nonrandomized controlled trial, 2 groups, 20 or more participants per condition, low internal validity, moderate external validity.

Why research this topic?

At the time of this study, low-back injuries related to work were a growing problem in the United States. “Workers’ compensation low-back injuries” seem to resist medical interventions. The research literature has documented a general disappointment in treatment success with this group compared with outcomes for groups incurring back injuries but not compensated.

What did the researcher do?

Tollison (1991), affiliated with the Greenville (South Carolina) Hospital System and the Medical College of Georgia (Augusta), designed a study to test the effectiveness of a comprehensive occupational rehabilitation program. The objectives of the program were to achieve a level of physical activity that can reduce health care utilization and to allow a return to productivity and employment. The participants were drawn from patients with work-related injuries referred to the Pain Therapy Center of Greenville over a 5-month period. Of these 71 patients, 54 actually participated in the experimental group. An additional 21 served as the comparison group. The latter were patients whose insurance company denied them reimbursement for evaluation or treatment. Overall, there were 42 men and 33 women. Their average age was 42 years, and their average duration of pain or disability was 11.6 months.

The experimental group received outpatient treatment 4 hours a day, 5 days a week, from a treatment team consisting of anesthesiologists, psychologists, physical therapists, athletic trainers, and nurses. The treatment emphasized independence in day-to-day activities. Each participant’s treatment was individualized to address goals determined by the participant and staff. However, the standard treatment included 3 hours daily of exercises for strength and flexibility, work simulation, aquatics therapy, and instruction in body mechanics; 1 hour daily of behavioral management and vocational counseling, typically delivered in a group setting; and 1 hour weekly of family therapy. The participants averaged 18.4 outpatient visits.

The comparison group received no treatment.

The outcome areas of interest were *return to full-time employment*, *consumption of pain medications*, *additional hospitalizations*, and *additional surgeries*. Assessments were made before treatment began and 12 months after treatment ended (12 months after referral for the comparison group). Eleven participants could not be located at the 12-month point, so follow-up data were available for only 44 participants in the experimental group and for 20 in the comparison group.

What did the researcher find?

At the 12-month follow-up, **significantly** (see *Glossary*) more members of the experimental group than members of the comparison group were working full-time and had reduced their consumption of prescription pain medications. Further, significantly fewer had required additional hospitalizations and additional surgeries.

What do the findings mean?

For therapists and other providers, the findings suggest that a comprehensive program of functional restoration aimed at patients with low-back pain who are eligible for workers' compensation is effective in returning them to work, reducing their dependence on pain medications, and decreasing their need for additional hospitalizations and surgeries.

What are the study's limitations?

- Specific details about the outcomes measurements used for the study were not reported.
- Certain aspects of the interventions methods were not clear from the study, especially the difference between the standard treatment and occupational rehabilitation program and the selective use of the pharmacotherapy and nerve blocks.

GLOSSARY

significance (or significant)—A statistical term that refers to the probability that the results obtained in the study are not due to chance but to some other factor (e.g., the treatment of interest). A significant result 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, after reading the study one may find that the treatment group was able to walk, on average, 6 feet, whereas the control group was able to walk, on average, 5 feet. Although the outcome may be statistically significant, a clinician may not feel 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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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.

