



AOTA Evidence Briefs

Chronic Pain

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

CPAIN #6

A psychoeducational program may, in the short term, improve the mood and attitudes of patients with chronic low-back pain.

Strong, J. (1998). Incorporating cognitive-behavioral therapy with occupational therapy: A comparative study with patients with low back pain. *Journal of Occupational Rehabilitation*, 8, 61–71.

Level IB1a

Randomized controlled trial, 2 groups, fewer than 20 participants per condition, high internal validity, high external validity.

Why research this topic?

A patient's attitudes about pain affect his or her behavior. Attitudes that are dysfunctional may prevent a patient from functioning independently. Attitude change therefore may be a goal of therapy, but how best to change attitudes is not yet clear.

What did the researchers do?

Strong (1998), of the University of Queensland (Brisbane, Australia), designed a study to test the effectiveness of a psychoeducational program (a program that uses education to influence attitudes) in modifying the dysfunctional attitudes of patients with chronic low-back pain. Strong recruited participants from a pool of 46 patients with chronic low-back pain consecutively admitted to the pain clinic of a metropolitan hospital. Four patients declined to participate, and 12 agreed to participate but either did not start the study or did not complete it. The final sample was 30 (gender not reported). Their average age was 44.5, and they had experienced back pain for an average of 8.4 years. At follow-up the sample was reduced to 18.

The researcher randomly assigned the patients to a treatment group or a control group. Both groups received the existing hospital treatment, which consisted of anesthesia, psychiatry, occupational therapy, physiotherapy, and other consultations as needed.

The treatment group also participated in the psychoeducational program, which took place over four 2-hour sessions. It involved patients first viewing a 40-minute video on pain and then receiving 7 hours and 20 minutes of individual therapy.

The video highlighted differences between chronic and acute pain and discussed the impact of chronic pain on the individual's life. Information was given on how pain is experienced by an individual, the anatomy of the back and spine, the way the spinal cord has a gating mechanism for pain transmission and perception, and the influence of descending influences on pain perception. The importance of behaviors, cognitions, and emotions on pain was discussed. Management strategies to deal with pain were then described and illustrated. Topics covered include[d] goal setting, skill acquisition (relaxation and pacing), cognitive and behavioral rehearsal, and generalization and maintenance of skills (p. 64).

Instead of the psychoeducational program, the control group participated in an 8-hour nonspecific program conducted by a research assistant in individual sessions. It also included a health education video.

The outcome areas of interest were variables: *illness behavior*, *depressed and negative cognitions*, and *use of acute pain strategies*. The researcher identified these variables by looking for correlations among the following lesser variables: pain intensity, pain disability, emotional link, control over pain, desire for solicitude, medical cure, diverting coping strategies, positive coping strategies, helpless coping strategies, reinterpreting coping strategies, depression, affective inhibition, denial, and irritability. (These variables were measured by the Integrated Psychosocial Assessment Model, which consists of the Box Scale, the Pain Disability Index, the Coping Strategy Questionnaire, the Survey of Pain Attitudes Revised, the Beck Depression Inventory, and the Illness Behavior Questionnaire.)

Assessments were made before treatment, immediately following treatment, and 3 months following treatment.

What did the researchers find?

On the measures of depressed and negative cognitions, the treatment group improved **significantly** (see *Glossary*) from before treatment to immediately after. It also improved significantly more than the control group did during this interval. At follow-up, however, **no significant** (see *Glossary*) differences were evident between the groups.

What do the findings mean?

For therapists and other providers, the findings suggest that, in the short term, a psychoeducational program involving a video presentation and individual therapy improves the mood and attitudes of patients with chronic low-back pain and thereby reduces disability. More research is needed, with a larger sample size.

What are the study's limitations?

The study was well controlled. The high rating (1) that it received on internal validity indicates that the outcomes were due to the interventions and not to some other factor.

- The specifics of the occupational therapy interventions were not clearly reported in the article.
- Small sample size resulting into nonsignificant differences between groups at the follow-up also prevented generalization of the intervention effectiveness.
- Integrated Psychosocial Assessment Mode (IPAM) is a combination of many standardized unidimensional assessments. However, the psychometric properties of IPAM as an multidimensional profile instrument were not reported in this study.

GLOSSARY

nonsignificant (or no significance)—A statistical term that refers to study findings that are likely to be due to chance differences between the groups rather than to other factors (e.g., the treatment of interest). A nonsignificant result is not generalizable outside the study. Like significance, a nonsignificant result does not indicate the clinical effect. Often studies will show nonsignificant results, yet the treatment group's mean will be better than the control group's. This is usually referred to as a *trend in the right direction*. Because significance is closely determined by sample size, nonsignificant results would often become significant if the sample size were increased.

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.



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