

EDITORIALS



Biopsychosocial care for chronic back pain

Supporting evidence looks promising but far from complete

Richard A Deyo *professor*

Departments of Family Medicine, Internal Medicine, and Public Health and Preventive Medicine, and the Oregon Institute for Occupational Health Sciences, Oregon Health and Science University, 3181 SW Sam Jackson Park Road, Portland, OR 97239, USA

Chronic back pain is a leading cause of disability that has a major impact on patients, doctors, healthcare systems, and workplaces.¹ Despite growing use in some countries of spinal imaging, opioid analgesics, spinal injections, and spinal fusion surgery, disability from back pain has increased.²

Chronic low back pain is increasingly recognized as often being more than simply an anatomical or physiological problem related to intervertebral discs, facet joints, sacroiliac joints, paravertebral muscles, or other spinal structures.³ Accordingly, multidisciplinary rehabilitation programs have evolved to tackle multiple facets of the condition, but their optimal design, effectiveness, and costs have remained uncertain. Uncertainties have in turn spurred an expanding clinical trial literature on these programs, and the linked paper by Kamper and colleagues (doi:10.1136/bmj.h444) provides a new systematic review of the evidence on their effectiveness.⁴

Multidisciplinary rehabilitation programs acknowledge that although deranged anatomy or physiology contributes to back pain, psychological factors such as anxiety, depression, and a tendency to catastrophize may amplify or prolong pain.⁵ Similarly, social factors such as demands of work, the work environment, or legal action related to back pain affect the nature of pain and responses to therapy.⁶ These insights have led to wide acceptance of a biopsychosocial model of low back pain,³ increasing the popularity of multidisciplinary programs.

Unlike drug trials, in which we are confident about the content and dose of a drug and its comparison treatment, the content and dose of multidisciplinary rehabilitation programs vary widely. Although based on biopsychosocial models, these programs have not evolved from a standardized template. Instead, they incorporate individualized features based on the strengths, interests, and theories of local champions. Even defining multidisciplinary rehabilitation can be a challenge. Here, Kamper and colleagues offer a reasonable definition: some sort of physical component (most often exercise with supervision by a physical therapist) combined with a psychological component (most often cognitive-behavioral therapy), a work related intervention, or both. Most of the programs used small group sessions for much of the intervention. Some programs are very intensive; 15 of the 41 trials in this

systematic review involved programs with greater than 100 hours and daily patient contact.

This systematic review provides more robust support for the efficacy of multidisciplinary biopsychosocial rehabilitation than do previous reviews. The authors included more randomized trials with better long term (at least one year) follow-up. Combining exercise intervention with cognitive-behavioral therapy (or similar counseling) seems to be more effective than exercise alone. Multidisciplinary rehabilitation may even have benefits comparable to surgery for back pain caused by degenerative disc disease. This is reinforced by a recent 11 year follow-up of surgical trials.⁷ Another important finding was a lack of evidence that more intensive multidisciplinary programs had greater benefit than less intensive ones.

Despite benefits, some caveats are in order. Advantages of the multidisciplinary programs over comparison treatments were, on average, relatively small. The pooled benefit over comparison treatments from meta-analysis of pain scores was just a half point on a 0-10 pain scale, and the pooled effect on functional status was about 1.5 points on the 24 point Roland-Morris Disability Questionnaire. These average effects are smaller than estimates of the minimal clinically important differences.⁸ Most studies did not report the proportion of patients who improved more than such minimal thresholds.

The effect on return to work was inconclusive. Multidisciplinary rehabilitation was more effective than purely physical comparison treatments but not more effective than “usual care,” consisting of drugs, referrals, or other interventions recommended by the patient’s primary physician. The modest benefits over comparison treatments in some trials may have resulted from “control” groups that offered important benefits. Other caveats are that a single study by Monticone et al,⁹ with dramatic benefits, influenced the average effect and that the effects of treatment seemed to wane over time. That is, effects were smaller after one year than in earlier assessments. The durability of participants’ return to work was unclear. Unlike drug trials, blinding patients to their treatment assignments was largely impossible, and more time and attention from healthcare professionals alone may have been beneficial for some intervention groups.

These programs are labor intensive, and their availability, time demands, and costs are important barriers. Thus, many important uncertainties about multidisciplinary rehabilitation remain. We do not yet know, for example, how well the reported benefits generalize beyond highly motivated participants in clinical trials; how to identify people who need the full multidisciplinary rehabilitation, rather than something simpler; how to motivate patients to seek intensive exercise and overcome the stigma sometimes associated with psychological counseling; whether “booster” treatments could help to maintain the benefits for longer; which disciplines are essential to rehabilitation programs; and whether the high cost of these programs is partly offset by reduced use of other expensive health services.

Finally, can less intensive interventions work as well as the more intensive ones? Kamper and colleagues’ systematic review suggests that this may be possible. Perhaps cognitive-behavioral therapy could be delivered effectively and more efficiently by telephone or online.^{10 11}

Future research to investigate all these uncertainties would benefit from greater standardization, along with better reporting of the detail of interventions and their comparison treatments. Future researchers should also strive for greater consistency in describing the patients who enter these programs. New research standards for back pain may help in this regard.¹² Clear and reliable answers to these questions could make a theoretically attractive strategy more practical, affordable, and available, as well as even more effective.

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