Chronic Pain Rehabilitation

Manu Mathews, MD*, Sara Davin, PhD

KEYWORDS

• Chronic pain • Interdisciplinary pain rehabilitation • Multidisciplinary • Rehabilitation

KEY POINTS

- Pain is a multidimensional experience that has an impact on a person's ability to function.
- Functional restoration is the cornerstone of a good chronic pain management strategy.
- Interdisciplinary treatment has been well established in the literature as the most effective approach, with improvements in pain, mood, and function.
- Opioid discontinuation undertaken as a part of an interdisciplinary treatment approach often leads to improvement in pain mood and function.

INTRODUCTION

Pain is a multidimensional experience that often expresses itself as reduced quality of life and functional ability. The biopsychosocial model of the assessment and management is increasingly considered to be the best model. Interdisciplinary pain rehabilitation programs have been shown to be very effective in improving pain mood and function in patients with chronic pain.[1] A meta-analysis of 65 studies of multidisciplinary pain rehabilitation showed significant improvement in function.[2] Another study of 27 randomized controlled trials (RCTs) demonstrated greater effectiveness of this approach compared with no treatment, standard treatments, or nonmultidisciplinary treatment.[3]

This improvement has been shown to persist for up to 13 years.[4]

Although these programs are more resource intensive initially, interdisciplinary pain rehabilitation programs (IPRPs) have been shown to be effective in reducing the use of pharmacologic treatment, surgeries, implantable pain devices, and physical therapy. Among all pain-related treatments, this is the only approach that has consistently been shown to be associated with return to work, reduction in hospitalizations over a 10-year period, and meaningful, sustained improvement in pain and function.

This article will discuss the approach and principles of chronic pain rehabilitation in an inter- or multidisciplinary environment. It will also highlight the common practices across some of the chronic pain rehabilitation programs in the United States.

COMPONENTS OF IPRPs

There is no consensus about what constitutes IPRPs. The terms interdisciplinary and multidisciplinary may be used interchangeably. Generally, these programs consists of providers from multiple backgrounds, including pain medicine, other medical backgrounds, psychologists, physical therapists, occupational therapists, addiction counselors, vocational rehabilitation specialists, and others, working together on a common treatment plan for every patient. This coordination and common treatment goal setting differentiate these programs from routine fragmented or unimodality care. The duration of programming can vary. Although patients in some programs are in rehabilitation 8 to 9 hours a day for 3 to 4 weeks, in others, patients attend 3 to 4 hours, a few days a week, for a few months. Often, patients are treated in groups.

Pain Medicine and Rehabilitation, Cleveland Clinic, 10524 Euclid Avenue, Cleveland, OH 44195, USA
* Corresponding author.
E-mail address: Mathews.manu@gmail.com

Neurosurg Clin N Am 25 (2014) 799–802
http://dx.doi.org/10.1016/j.nec.2014.07.004
1042-3680/14/$ – see front matter

The primary approach is addressing the factors that lead to disability and suffering. Pain behaviors are discouraged, and wellness behaviors are encouraged. Patients are usually in a stage of acceptance of their pain. The treatment is based on the physical and psychological needs of the individual patient. The flavor of the program can vary depending on the expertise of the providers. Although some providers may be pharmacologically biased, others may lean more toward psychological or physical therapy techniques. Nevertheless, the presence of all of these approaches in a coordinated fashion is common to all such programs.

PSYCHOLOGICAL FACTORS THAT AFFECT PAIN

Pain Catastrophizing

Multiple studies have shown that catastrophization leads to a heightened pain experience and is associated with poorer treatment outcomes. Catapstophizing is considered to be attribution of magnified negative meaning to the experience of pain. For example: "my nerves are being pulled," or "my back was broken" may be used to describe sciatica or back pain, respectively. Catastrophization can be contagious. Catastrophization by family members has been associated with the same in adults and children.[5]

Mood and Affect States

Like depression, anxiety and anger have been shown to impact the pain experience and treatment outcomes.[6] Thirty percent to 60% of patients with chronic pain have comorbid depression or anxiety.[7]

Acceptance is an important part of chronic pain rehabilitation. Patients entering these programs do better when they accept their pain and are looking to work on managing their lives better, reducing its effect on their function and moving away from a sick role to take on more appropriate role with their families, work, and friends.[8] Patients who are looking for more tests and surgeries to cure their pain may not be appropriate candidates for treatment in this environment.

Interestingly, the only imaging correlate with poor outcome was moderate-to-severe Modic changes of the vertebral end plate, which were weakly associated with an adverse outcome.[9]

PSYCHOLOGICAL MANAGEMENT

Principles of Chronic Pain Rehabilitation

Behavior modification

Behavioral modification and cognitive restructuring are concepts at the core of pain rehabilitation. These principles are applicable to the patient and their families. The basis of behavior modification is operant conditioning. Behavior rewarded is behavior repeated (Skinner), and unrewarded behaviors tend to get extinguished. By converse analogy, most behaviors can be explained by looking for the incentives driving them. Pain-related behaviors like somatic conversation, wearing dark glasses, reclining, avoiding social contacts, and moaning can be replaced with wellness behaviors by changing the incentives.

Behavior modification in chronic pain rehabilitation occurs in the context of patients' interactions with their treating team, including psychotherapists, nurses, physicians, and physical and occupational therapists.

Education

Education is the cornerstone of treating chronic pain. Helping the patient to differentiate between hurt and harm and addressing fear avoidance is an important first step of the treatment process. Patients often carry the acute pain construct with them while living with chronic pain and believe that they need to protect their body to avoid further damage. The experience of increased pain with movement leads to splinting of the body or part of it in the hope of recovery and the desire to limit perceived damage. This may often also be encouraged by health care providers who may be fearful of having patients push through their chronic pain in fear of structural damage. The failure to re-educate and rescind postoperative instructions may lead to the patient continuing with significant restrictions for many years, leading to deconditioning and deterioration (patient continuing to follow a 5 lb carrying restriction 5 years following spine surgery despite a solid fusion).

The treating team can play a critical role in identifying the misinformation and re-educating the patient and his or her family. Education can lead to a perception of increased control of disease, resolution of depression, and promotion of health-promoting activities like exercise and relaxation.

Education includes not only the patient, but also his or her family. There is ample evidence that patients do better when families are engaged in the rehabilitation process.[10,11] Families may respond to the patient's pain and disability in a few different ways. Some respond by enabling them: protecting them, taking over their responsibilities, lowering expectations in terms of work, chores, financial role fulfillment, and intimacy. Others may become angry and reject the patient, questioning the credibility of the patient's experience. Interestingly,