

Title: The effect of a cognitive-behavioral base physical therapy (CBPT) program for pain and disability after spine surgery: a randomized controlled clinical trial

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Summary Abstract:

The spine surgery rate in the United States is the highest in the world and up to 40% of patients report residual pain and disability. Studies suggest that cognitive-behavioral factors, such as fear of movement and subsequent avoidance behavior, may explain some of the variability in outcomes after spine surgery. Rehabilitation has traditionally focused on exercise programs to reduce physical complaints, but the literature recommends broadening the scope of physical therapy to include cognitive-behavioral components in order to address patients' fear of physical activity. Thus, the main goal of this study is to examine the feasibility and effectiveness of a cognitive-behavioral based physical therapy (CBPT) intervention in patients treated by lumbar spine surgery for degenerative conditions. Specific aims are to: 1) demonstrate the feasibility of training physical therapists in cognitive-behavioral techniques; 2) determine physical therapist and patient satisfaction with cognitive-behavioral education and exercises; and 3) examine the effectiveness of a CBPT intervention in improving post-surgical outcomes. A two group (control-standard physical therapy treatment vs. CBPT intervention) randomized controlled clinical trial design will be conducted at two outpatient physical rehabilitation centers. The study will screen for high fear-avoidance beliefs and recruit 70 subjects treated by lumbar spine surgery. Primary outcome measures will be pain (Brief Pain Inventory), disability (Oswestry Disability Index) and quality of life (SF-12). All participants will be treated by therapists 2 times a week for 5 weeks and follow-ups will occur at 3 and 6 months after discharge from therapy. CBPT, focusing on decreasing fear-avoidance and improving self-efficacy, has the potential to improve outcomes after lumbar spine surgery. Results will lead to a promising and innovative rehabilitation strategy for patients at-risk for poor surgical outcomes. In addition, the proposed project provides important pilot data necessary prior to a large multicenter, randomized controlled clinical trial.