

1. J Clin Rheumatol. 2012 Mar;18(2):76-82.

Efficacy of multidisciplinary treatment for patients with chronic low back pain: a prospective clinical study in 395 patients.

Moradi B, Hagmann S, Zahlten-Hinguranage A, Caldeira F, Putz C, Rosshirt N, Schönit E, Mesrian A, Schiltenwolf M, Neubauer E.

Source

University Clinic of Heidelberg, Department of Orthopaedics, Trauma Surgery and Paraplegiology, Schlierbacher Landstrasse 200a, Heidelberg, Germany. Babak.Moradi@med.uni-heidelberg.de

Abstract

BACKGROUND:

The effectiveness of multidisciplinary treatment programs varies throughout the literature, and it remains controversial how therapy outcome is affected by patients' individual parameters and which treatment settings work best.

OBJECTIVES:

We set out to examine the impact of patient variables on the effectiveness of a 3-week multidisciplinary treatment program in patients with chronic low back pain. By presenting effect sizes, we aimed to enable the comparison of our findings with other studies across disciplines.

METHODS:

Data on 395 patients were prospectively collected at study entry, at the end of the program (T1) and after 6 months' follow-up (T2). Relevant therapy outcomes were analyzed by presenting effect sizes with Cohen's d. Group comparisons were performed for sociodemographic and clinical features to determine the impact on therapy outcome.

RESULTS:

Medium effect sizes ($d = -0.6$ to -0.7) were shown for visual analog scale (VAS) after treatment and at T2, indicating clinically relevant pain relief. Significant changes in pain-related disability were observed immediately at T1 with a strong treatment effect ($d = 0.8$). Functional capacity was improved with low to medium effect sizes (0.4-0.5). Quality-of-life subscales (36-item Short Form Health Survey) improved significantly at T1 for physical function, vitality, and mental health ($d = 0.5-0.8$). Center for Epidemiological Studies - Depression Scale scores improved significantly with strong effect sizes of $d = 0.7$. Sociodemographic parameters displayed a significant impact on effect sizes for visual analog scale at T2, with females ($d = -0.9$), age group 30 to 39 years ($d = -1$), and patients with low physical job exposure

($d = -0.9$) benefiting most. An increase in number of pain locations (-0.7) and severity of accompanying pain (-0.7) in other body areas significantly impaired therapy outcome and effect sizes of VAS.

CONCLUSIONS:

Thus, multidisciplinary treatment ameliorates pain, functional restoration, and quality of life with medium to high effect sizes even for patients with a long history of chronic back pain. Effect sizes are higher than for monodisciplinary treatments and treatment effects remained stable at 6-month follow-up in a longitudinal uncontrolled study design. Thus, we believe that multidisciplinary treatment is vital for the treatment of patients with chronic low back pain. The impact of sociodemographic and pain-related parameters needs to be taken into account when including patients in an appropriate treatment program. We emphasize the presentation of effect sizes as a vital treatment evaluation to enable cross-sectional comparison of therapy outcomes.