

BIOPSYCHOSOCIAL ANALYSES OF ACUTE AND CHRONIC PAIN, ESPECIALLY IN THE SPINE THE EFFECT OF DISTRESS ON PAIN INTENSITY AND DISABILITY

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The overall purpose was to assess factors that influence the experience of pain and disability due to acute low back pain (LBP) and chronic musculoskeletal pain (CMP). A further purpose was to outline the conceptual framework behind pain—with emphasis on the spine—and its management in primary healthcare.

Methods: In Studies **I-III**, cross-sectional design, 174 patients on long-term sick leave due to CMP were referred by the Social Insurance Office for orthopaedic assessment and evaluation of their ability to work. Additional psychiatric evaluation was required for 83/174 patients. Study **I** investigated the association between excessive illness behaviour—measured by Waddell signs (WS)—and clinical findings, pain intensity, depressed mood, disability, and duration of sick leave. In Study **II**, the occurrence of somatic and mental health comorbidity was studied, and the assessment of ability to work was compared between patients who only underwent an orthopaedic evaluation and patients who underwent both orthopaedic and psychiatric evaluations. In Study **III** (71/83), scores for mood in the Beck Depression Inventory (BDI) were compared with diagnosis of depression made by a psychiatrist. Study **IV**, a cross-cultural validation study of 288 patients with CMP and 161 controls, tested different psychometric characteristics of the Swedish version of the DAPOS (Depression, Anxiety, and Positive Outlook Scale) through confirmatory factor analysis. Study **V**, a randomised clinical trial involving 109 patients with acute-onset LBP, was performed to evaluate compliance with the treatment advice “Stay active” or “Adjust activity”, and to assess the influence of distress on pain-related disability and physical activity during a 7-day follow-up.

Results: Study **I**: 27% of patients exhibited WS. Such patients exhibited distress and greater pain and longer sick leave than WS-negative patients. **II**: Neck pain was the main cause of disability, and patients with neck pain often suffered pain in more than two sites, and greater pain. 84% of all patients were able to return to work to different degrees. However, unrecognised psychiatric disorders (vs. somatic) were the main cause of inability to work in 69% of patients who underwent team evaluation. **III**: There was good agreement between the BDI scores and diagnosis of depression made by a psychiatrist. **IV**: The Swedish version of the DAPOS demonstrated good validity, and the three DAPOS constructs were equivalent with respect to sex. **V**: Pain-related disability decreased in all patients by the end of the follow-up. Patients with depressed mood who had been advised to “Adjust pain” exhibited worse pain-related disability over time. A tendency toward compliance with treatment advice was confirmed and patients advised to “Stay active” were more physically active (greater step count), with the exception of those with fear of movement.

Conclusions: Distress is associated with increased pain intensity and disability/inability to work in acute LBP and CMP. Undiagnosed psychiatric disorders are common in patients on sick leave due to CMP. The early identification of distress, and giving the advice to “Stay active” early during care, may prevent pain-related disability in patients with acute severe LBP.

Key words: chronic musculoskeletal pain, pain intensity, disability, acute low back pain, psychological distress, fear of movement, ability to work, mental health comorbidity, patient compliance

ISBN: 91-628-8276-1

E-version: <http://hdl.handle.net/2077/24652>

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Akademisk avhandling

Som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien vid Göteborgs universitet kommer att offentligen försvaras i Förmaket, Sahlgrenska universitetssjukhuset, Göteborg, onsdagen den 08 juni, 2011, kl 9.00

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Avhandlingen baseras på följande delarbeten:

- I. Illness behaviour in patients on long-term sick leave due to chronic musculoskeletal pain. Olaya-Contreras P and Styf J. Acta Orthop. 2009 Jun;80(3):380-5.
- II. Biopsychosocial function analyses change the assessment of ability to work in patients on long-term sick leave due to chronic musculoskeletal pain - The importance of undiagnosed mental health comorbidity. Olaya-Contreras P and Styf J. (submitted)
- III. Comparison between the Beck Depression Inventory and psychiatric evaluation of distress in patients on long-term sick leave due to chronic musculoskeletal pain. Olaya-Contreras P, Persson T, and Styf J. J Multidiscip Healthc. 2010 Sep 1;3:161-7.
- IV. Cross-validation of the Depression, Anxiety, and Positive Outlook Scale (DAPOS) for clinical use. Olaya-Contreras P, Styf J, Lundberg M, and Jansson B. In press: Clin J Pain. 2011 May;27(4):330-7.
- V. Compliance and the effect on disability of two treatment advices in patients with acute severe low back pain: a randomised controlled trial. Olaya-Contreras P, Styf J, Kaigle Holm A, Olsson M, Hansson T. (submitted)

Göteborg 2011



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