

What is the role of ‘nonorganic-somatic-components’ in Functional Capacity Evaluations in patients with chronic non-specific low back pain undergoing fitness for work evaluation?

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Background: Low back pain (LBP) continues to be a major health problem causing personal suffering and enormous socioeconomic costs. Most of the patients suffer from nonspecific LBP (NSLBP), defined as not attributable to a recognisable known specific pathology. Functional Capacity Evaluation (FCE) is increasingly used for physical fitness-for-work evaluation in patients with chronic NSLBP, but results seem to be influenced by physical as well as psychosocial factors. The influence of ‘nonorganic-somatic-components’ together with physical and other psychosocial factors on FCE performance has not yet been investigated.

Objective: To assess the association of ‘nonorganic-somatic-components’ together with physical and other psychosocial factors on FCE in patients with chronic NSLBP undergoing fitness-for-work evaluation.

Methods: Analytical cross-sectional study including 126 patients with chronic NSLBP referred for physical fitness-for-work evaluation was performed. FCE tests were lifting from floor to waist; forward bend standing; grip strength; and six minute walking. ‘Nonorganic-somatic-components’ were assessed with the eight ‘nonorganic-somatic-signs’ as defined by Waddell, and were adjusted for age, gender, days off work, salary in the previous occupation, pain intensity, fear avoidance belief, and perceived functional ability in multivariate regression analyses.

Results: Between 42%-58% of the variation in the FCE tests was explained in the final multivariate regression models. ‘Nonorganic-somatic-components’ were consistent independent predictors for all tests. Their influence was most important on forward bend standing and walking distance, and less on grip strength and lifting performance. The physical factors of age and/or gender were strongly associated with grip strength and lifting, less with walking distance and not at all with forward bend standing. The influence of at least one other psychosocial factor was observed in all FCE tests, having the highest proportion in the six minute walking test.

Conclusions: ‘Nonorganic-somatic-components’ seem to be consistent independent predictors in FCE testing and should be considered for interpretation of test results.