

# CHRONIFICATION RISK AND BODILY FUNCTIONAL MEASURES IN LOW BACK PAIN

**Thomas Kienbacher<sup>1</sup>, Gerold Ebenbichler<sup>2</sup>, Patrick Mair<sup>3</sup>,  
Elisabeth Fehrmann<sup>4</sup>, Julian Dietl<sup>1</sup>**

<sup>1</sup> Karl Landsteiner Institut für ambulante Reha Forschung, Austria

<sup>2</sup> Univ Klinik für PMR, Austria

<sup>3</sup> Harvard University, United States

<sup>4</sup> Karl Landsteiner Universität, Austria

e-mail: [kienbacher@rehabzentrum.at](mailto:kienbacher@rehabzentrum.at)

## Background and Aims

The STarT back screening tool (SBST) validly categorizes the risk of pain chronification which is relevant for prognosis and treatment of back pain according to the biopsychosocial model. This cross-sectional study sought to investigate if low, medium, and high risk SBST chronification groups differ in bodily functional and psychosocial measures and if interactions with patients' age and gender exist. 595 chronic low back pain patients (68 % females, mean age  $53 \pm 6.7$  years) recruited from an outpatient rehabilitation center completed the SBST and well-established reliable function categories, rated visual analogue pain scale, and performed maximum bodily functional measurement testings. Multivariate analyses of variance were calculated for statistical analyses.

## Results

Significant between SBST group effects were observed for pain, disability (Roland Morris disability questionnaire, Pain Disability Index), the 5-level European Quality of Life Questionnaire, the Hospital Anxiety and Depression Scale ( $p < 0,001$ ) but not for the Avoidance-Endurance behaviour. Differences in maximum trunk extension and flexion strength, hand grip strength, and trunk range of motion outcome measures interacted with age and gender but the impact of gender vanished in the high risk SBST group.

## Conclusion

Pain chronification risk has significant impact not only on psychosocial but on bodily functional measures as well. However, high chronification risk seems to dominate otherwise existing gender associated trunk muscle strength differences in chronic back pain patients. Future randomized controlled trials should focus on the need for individually tailored treatment programs to optimize back pain therapy outcome.

**Keywords:** chronification risk, bodily measurements, impact