

## LUMBAR PAIN

### VALIDITY OF THE NEW BACKACHE INDEX (BAI) IN PATIENTS WITH LOW BACK PAIN

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**INTRODUCTION:** The Backache-Index (BAI) is applied to patients with low back pain (LBP) in order to help doctors/surgeons perform physical examinations easily and it is carried out within a short space of time (< 2 min.) without using inclinometric instruments.

**PURPOSE/AIM:** To explore reliability, validity and responsiveness of the BAI in patients with LBP, which can fulfil the existing need for a reliable routine examination in the clinical environment.

**MATERIALS & METHODS:** In total, 75 patients with subacute LBP participated in a randomized controlled study (1). The BAI consisted of a scoring system that includes pain factors and stiffness estimation at the end of a series of five different lumbar movements of a patient standing in erect position.

**RESULTS:** The (blinded) inter-observer reliability between 2 observers for the BAI was perfect (ICC = 0.96). A BAI change of one unit is able to exclude a measurement error. A significantly good correlation ( $P < 0.001$ ) was found between BAI at baseline, and Oswestry Disability Index (ODI,  $R = 0.62$ ) and MPQ-PRIT, as the total degree of pain rating index ( $R = 0.57$ ). The effect size and discriminative ability were explored after two treatment sessions. The greatest level of distinction was found for MPQ-PRI-T and BAI (AUC  $\geq 0.93$ ), followed by ODI (AUC = 0.92). A less distinction was found for MPQ-NWC-T and Visual Analogue Scale (VAS, AUC  $\geq 0.82$ ).

**RELEVANCE:** the BAI is available in different languages: English, Spanish, French, Dutch, German, ITALIAN, Portuguese, Russian, Turkish, Hebrew, Chinese, Japanese and Thais. [www.roptrotherapy.info](http://www.roptrotherapy.info)

**CONCLUSIONS:** The Backache Index or BAI appears to be a reliable and valid assessment of overall restricted spinal movements in case of LBP and discriminates between successful and unsuccessful treatment outcome.

**DISCUSSION:** The inter-observer reliability after a few minutes for the BAI was sufficient. The validity of the BAI was found to be good with the ODI and moderate with the VAS. A Backache Index change of one unit is able to exclude a measurement error.

**KEYWORDS:** Low back pain; Outcome scales; Reliability; Validity; Impairment; Pain rating scales.

**IMPLICATIONS:** In a Spanish study (2) the test-retest after 3 days of the same group (n=46) revealed that the reliability for the 5 outcome scores was good (ICC=0.73). No significant difference was found between BAI1 ( $4.65 \pm 4.15$ ) and BAI2 ( $4.72 \pm 4.20$ ) and the absolute reliability was perfect with an ICC=0.97.

#### REFERENCE:

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