

Validation of a New Outcome Measure for Sacroiliac Joint Pain – The Denver SI Joint Questionnaire (DSIJQ)

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Purpose/Hypothesis: The Oswestry Disability Index (ODI) has not been validated in sacroiliac joint (SIJ) pain.^{1,2} The purpose of this study was to develop and validate a SIJ disability questionnaire.

Subjects: Patients with diagnosed SIJ pain were prospectively recruited from the UCHealth Spine Clinic. Twenty-four subjects completed the study.

Materials/Methods: A 10-item questionnaire (DSIJQ) was developed by spine surgeons and clinical researchers. Subjects completed the DSIJQ and ODI at baseline, 2 weeks, and 3-6 months. The SF-36 was administered at baseline and 6 months. Subjects underwent physical capability testing at 2-weeks and 3-6 months, including lumbar inclinometry, single limb stance, 5-minute walk (5MW), active straight leg raise, timed up and go (TUG), sustained flexion and extension, progressive isoinertial lift test, and maximum static push/pull tests.³⁻⁹

Results: Test-retest reliability (ICC=0.87), internal consistency (Cronbach's alpha=0.842), and content validity were established. Convergent criterion validity with the ODI ($r=0.89$; $p < 0.001$) and divergent criterion validity with the SF-36 mental health component were demonstrated ($r=-0.33$; $p=0.12$). The DSIJQ correlated with the TUG ($r = 0.53$; $p= 0.008$) and 5MW ($r = -0.52$; $p=0.009$) and showed better responsiveness than the ODI (Standardized Response Mean, Effect Size: 1.14, 1.45 for DSIJQ and 0.75, 0.81 for ODI, respectively).

Conclusions: The DSIJQ demonstrated good repeatability and internal consistency. Criterion validity correlated with the ODI. DSIJQ scores correlated with the TUG and 5MW. The DSIJQ demonstrated better sensitivity to changes in SI disability over a 3-6 month time period than the ODI.

Clinical Relevance: The DSIJQ is appropriate to evaluate SIJ disability and detect changes in disability.

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