Reviewer ID: Mohit Singh, Vanessa Noonan, Matthew Querée, Bryce Jay, Gita Manhas

Type of Outcome Measure: Spinal Cord Assessment Tools for Spastic Reflexes (SCATS)

<table>
<thead>
<tr>
<th>Author ID</th>
<th>Study Design</th>
<th>Setting</th>
<th>Population (sample size, age) and Group</th>
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<tbody>
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<td>Benz et al. 2005</td>
<td>Validation study through correlational analyses</td>
<td>Research Lab and outpatient medical clinic</td>
<td>Ages 16-65. For kinematic and electromyographic analysis, 11 subjects. For comparison with Ashworth Scale and Penn Span Frequency Scale (PSFS), 17 subjects were recruited. Report of spastic clinical behaviors.</td>
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<tr>
<td>Akpinar et al. 2016</td>
<td>Observational Reliability Study</td>
<td>Inpatient rehabilitation unit at an education and research hospital, Turkey</td>
<td>47 subjects with SCI with ASIA Scale grade A – D, had spasticity, and at least 6 months post injury between ages of 18 – 88 years old For comparison with the Modified Ashworth Scale (MAS) and Penn Spasm Frequency Scale (PSFS)</td>
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1. RELIABILITY

Akpinar et al. 2016

Test-Retest kappa coefficients of the SCATS demonstrated a HIGH agreement (coefficient +/- SD range = 0.614 +/- 0.8 – 1.000 +/- 0.8).

Interrater kappa coefficients of the SCATS demonstrated a HIGH agreement (coefficient = 0.669 +/- 1.000, P<0.01).

2. VALIDITY

Author ID | Validity
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Benz et al. 2005 | Clonus, flexor spasm and extensor spasm responses measured by using the SCATS correlated significantly with kinematic and electromyography (P<.01). Correlations ranged from 0.69-0.94.

Significant Spearman rank correlations between SCATS extensor spasms and the Ashworth scores for hip and knee flexors and for ankle plantar flexors (Spearman’s rank correlations = 0.98, 0.88, 0.61).

Only SCATS clonus scores correlated significantly with spasm frequency measures (rho=.59, P<.05).

Akpinar et al. 2016 | SCATS clonus scores significantly correlated with the Modified Ashworth Scale (MAS) scores of the hip extensor muscles, knee flexor muscles, and plantar flexor muscles (P<0.01)

SCATS flexor spasm scores only significantly correlated with the MAS score of the ankle plantar flexor muscles (P<0.05)

No significant correlation between the SCATS extensor spasm scores and any of the MAS scores

No significant correlation between the SCATS scores and the PSFS ratings

3. RESPONSIVENESS – no data available

4. FLOOR/CEILING EFFECT – no data available

5. INTERPRETABILITY – no data available