

## ORGANIZATION NEWS

### Highlights From the Rehabilitation Measures Database

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## Measurement Characteristics of the Perceived Stress Scale in Individuals With Spinal Cord Injury

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The original Perceived Stress Scale (PSS) is a 14-item self-report measure designed to assess the extent to which individuals judge their life circumstances as stressful.<sup>1</sup> PSS items are not bound to a specific life event or clinical condition; therefore, assessment of stress is broad, allowing for use in diverse populations and across different contexts.<sup>2</sup> Respondents are asked to contemplate the past month and then indicate how often they have felt that their lives are unpredictable or uncontrollable using a 5-point Likert-type scale, with a response set ranging from 0 (never) to 4 (very often). Although the PSS-14 has demonstrated adequate psychometric properties, 2 short-form versions have also been developed: a 10-item version,<sup>2,3</sup> derived from the 14-item scale using factor analysis techniques, and a 4-item version for use in brief interview situations.<sup>1,4</sup> Exploratory and confirmatory factor analyses support a 2-factor structure, with the first encompassing positive, coping-related questions and the second involving negatively worded, stress-related questions.<sup>5</sup> The PSS has shown to be a reliable and valid measure of perceived psychosocial stress,<sup>6</sup> demonstrates adequate to excellent criterion and construct validity with similar measures of life experience and stress,<sup>1</sup> and has been used in a diverse range of clinical and nonclinical populations.<sup>2-10</sup> In addition, versions of the PSS have been translated and validated in more than 25 languages.<sup>11</sup>

This Rehabilitation Measures Database summary provides a review of the psychometric properties of the PSS in people with spinal cord injury, including reliability, validity, standard error of measurement, minimum detectable change, and interpretation of the results.

A full review of the PSS and reviews of more than 300 other instruments can be found at [www.rehabmeasures.org](http://www.rehabmeasures.org). Please address correspondence to [rehabmeasures@ric.org](mailto:rehabmeasures@ric.org).

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This instrument summary is designed to facilitate the selection of outcome measures by trained clinicians. The information contained in this summary represents a sample of the peer-reviewed research available at the time of this summary's publication. The information contained in this summary does not constitute an endorsement of this instrument for clinical practice. The views expressed are those of the summary authors and do not represent those of authors' employers, instrument owner(s), the *Archives of Physical Medicine and Rehabilitation*, the Rehabilitation Measures Database, or the United States Department of Education. The information contained in this summary has not been reviewed externally.

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	<b>Measure Name:</b> Perceived Stress Scale-14	<b>Acronym:</b> PSS-14	<b>Summary Author:</b> K. Nitsch, A. Miskovic & B. Rodichok
	<b>Population Reviewed:</b> Spinal Cord Injury	<b>Items:</b> 14, 10, & 4 item versions available	<b>Administration Time:</b> 5 Minutes
<b>Purpose &amp; Administration Instructions:</b>			
<ul style="list-style-type: none"> <li>The PSS-14 is a self-report instrument developed to assess the degree to which individuals appraise their lives as being stressful, unpredictable, and uncontrollable, specifically over the last month.</li> <li>The PSS-14 is a global measure of subjective stress that is not restricted to any one specific life event or clinical condition, making it ideal for use across diverse populations and settings.</li> <li>Items are scored on a 5-point, Likert-type scale, with a response set ranging from 0 (never) to 4 (very often).</li> <li>For the PSS-14, item numbers 4, 5, 6, 7, 9, 10, and 13 are reverse scored (i.e., 0=4, 1=3, etc.); a total sum score is calculated, ranging from 0–56. Higher scores indicate greater levels of perceived stress.</li> </ul>			
<b>Required Equipment:</b> Pen/Pencil & Administration Form	<b>Training:</b> Reading an Article/Manual	<b>Cost of Measure:</b> Free: Available at <a href="http://www.psy.cmu.edu/~scohen/">www.psy.cmu.edu/~scohen/</a>	
<b>Normative Data for Spinal Cord Injury:<sup>8</sup></b>			<b>Reliability:</b>
<b>Sample Name</b>	<b>Mean</b>	<b>Standard Deviation</b>	<b>Internal Consistency:</b>
Overall Sample	18.02	8.43	<ul style="list-style-type: none"> <li>Multiple Sclerosis: <b>Excellent</b> (<math>\alpha = 0.91</math>)<sup>7</sup></li> <li>College Students: <b>Excellent</b> (<math>\alpha = 0.84-0.85</math>)<sup>1</sup></li> <li>Smoking Cessation: <b>Excellent</b> (<math>\alpha = 0.86</math>)<sup>1</sup></li> <li>U.S. Sample: <b>Adequate</b> (<math>\alpha = 0.75</math>)<sup>2</sup></li> <li>Suicide Survivors: <b>Excellent</b> (<math>\alpha = 0.89</math>)<sup>9</sup></li> </ul>
<b>Age Groups</b>			<b>Test-Retest Reliability:</b>
<50	18.68	8.17	<ul style="list-style-type: none"> <li>College Students (2 days): <b>Excellent</b> (ICC= 0.85)<sup>1</sup></li> <li>Smoking-Cessation (6 weeks): <b>Adequate</b> (ICC= 0.55)<sup>1</sup></li> </ul>
50-59	18.76	8.99	<b>Split-Half Reliability:</b>
60-69	16.47	7.72	<ul style="list-style-type: none"> <li>Suicide Survivors: <b>Excellent</b> (Spearman Brown Coefficient= 0.86)<sup>9</sup></li> </ul>
>69	13.27	6.66	<b>Validity:</b>
<b>Duration of Injury</b>			<b>Convergent Validity</b>
<30 Years	18.30	8.54	<ul style="list-style-type: none"> <li>CES-D Score: <b>Excellent</b> (<math>r = 0.645</math>)<sup>8</sup></li> <li>IPWB Score: <b>Adequate</b> (<math>r = 0.461</math>)<sup>8</sup></li> <li>LSI-Z Score: <b>Poor</b> (<math>r = -0.275</math>)<sup>8</sup></li> <li>Quality of Life: <b>Adequate</b> (<math>r = -0.353</math>)<sup>8</sup></li> <li>IES Score: <b>Adequate</b> (<math>r = 0.51</math>)<sup>9</sup></li> <li>PTS-AS Score: <b>Excellent</b> (<math>r = 0.68</math>)<sup>9</sup></li> </ul>
30-39 Years	19.02	8.13	<b>Concurrent Validity</b>
>39 Years	12.31	6.84	<ul style="list-style-type: none"> <li>MOS-SF36 Mental Health: <b>Excellent</b> (<math>r = -0.65</math>)<sup>9</sup></li> <li>MOS-SF36 Physical Health: <b>Poor</b> (<math>r = -0.27</math>)<sup>9</sup></li> </ul>
<b>Gender</b>			<b>Floor/Ceiling Effects:</b>
Men	17.76	8.57	<ul style="list-style-type: none"> <li><b>Excellent:</b> (0.4% Floor; 0.0% Ceiling)<sup>7</sup></li> </ul>
Women	19.62	7.45	<b>Considerations</b>
<b>Impairment Group</b>			<ul style="list-style-type: none"> <li>Two additional versions of the PSS, a 10-item and 4-item instrument, are available.<sup>1,2</sup></li> <li>The PSS-14 (and other versions) have been translated and validated in multiple languages.<sup>11</sup></li> </ul>
Tetra ASIA ABC	18.16	9.23	
Para ASIA ABC	18.01	7.90	
All ASIA D	17.81	8.65	
<b>Abbreviations</b>			
<p>CES-D: Center for Epidemiologic Studies Depression Scale  IPWB: Index of Psychological Well-Being  LSI-Z: Life Satisfaction Index-Z  IES: The Impact of Event Scale  PTS-AS: Posttraumatic Stress-Arousal Scale  MOS-SF36: Medical Outcomes Study Short-Form 36  ICC: Interclass Correlation  <math>\alpha</math>: Cronbach's Alpha</p>			
<b>Cut-off Criteria:</b>			
	<b>r</b>	<b>ICC</b>	
<b>Excellent</b>	$\geq .6$	$\geq .75$	
<b>Adequate</b>	<b>.31-.59</b>	<b>.40-.74</b>	
<b>Poor</b>	$\leq .3$	$< .4$	