

## ORGANIZATION NEWS

### Highlights From the Rehabilitation Measures Database

This content is provided as a service by the American Congress of Rehabilitation Medicine and is not peer reviewed by the Archives.

# Measurement Characteristics and Clinical Utility of the Life Satisfaction Questionnaire 9 in a Spinal Cord Injury Population

Allison Peipert, BS, Rachel Bond, BA, Edeth Engel, BS, Linda Ehrlich-Jones, PhD

There are several assessments that evaluate life satisfaction for those with spinal cord injury (SCI), and the Life Satisfaction Questionnaire 9 (LiSat-9) has merit due to the combination of efficiency and psychometric evidence.<sup>1</sup> Advancements in medicine and care yield an increased lifespan for those with SCI; therefore, life satisfaction is becoming increasingly important to evaluate.<sup>2</sup> The LiSat-9 assesses 9 aspects of life satisfaction including life as a whole, self-care management, leisure situations, vocation, financial situation, sexual life, partner relation, family life, and contact with friends and acquaintances.<sup>1</sup> The items on the LiSat-9 are answered using a 6-point Likert scale, which ranges from 1 (very dissatisfied) to 6 (very satisfied).<sup>1</sup> The total Life Satisfaction score is obtained by finding the mean of the item scores. Lower scores indicate dissatisfaction and higher scores indicate satisfaction. The LiSat-9 takes 10-30 minutes to complete, requires no formal training, and is free to use. The LiSat-9 has demonstrated adequate to excellent internal consistency,<sup>3,4</sup> excellent reliability,<sup>5</sup> adequate to excellent concurrent validity,<sup>4</sup> and adequate to excellent convergent validity<sup>2</sup> across several studies. The LiSat-9 also demonstrates responsiveness, varying from small to large effect size, 1 year after discharge from inpatient rehabilitation.<sup>6</sup> In addition, there is an 11-item version available that includes domains of somatic and psychological health.

This abbreviated summary provides a review of the psychometric properties of LiSat-9 in people with SCI. A full review of the LiSat-9 and reviews of more than 400 other instruments for patients with various health conditions can be found at [www.sralab.org/Rehabilitation-Measures](http://www.sralab.org/Rehabilitation-Measures).

Please address correspondence to [rehabmeasures@sralab.org](mailto:rehabmeasures@sralab.org).

This instrument summary is designed to facilitate the selection of outcome measures by 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 U.S. Department of Health and Human Services. The information contained in this summary has not been reviewed externally.

The Rehabilitation Measures Database and Instrument Summary Tear Sheets were initially funded by the National Institute on Disability, Independent Living, and Rehabilitation Research, U.S. Department of Health and Human Services, through the Rehabilitation Research and Training Center on Improving Measurement of Medical Rehabilitation Outcomes (H133B090024).

#### BIBLIOGRAPHY

1. Post M. Measuring the subjective appraisal of participation with life satisfaction measures: bridging the gap between participation and quality of life measurement. *Top Spinal Cord Inj Rehabil* 2010;15:1-15.
2. Budh CN, Österåker A-L. Life satisfaction in individuals with a spinal cord injury and pain. *Clin Rehabil* 2007;21:89-96.
3. Post MW, de Witte LP, van Asbeck FW, et al. Predictors of health status and life satisfaction in spinal cord injury. *Arch Phys Med Rehabil* 1998;79:395-401.
4. Post MW, van Leeuwen CM, et al. Validity of the Life Satisfaction questions, the Life Satisfaction Questionnaire, and the Satisfaction With Life Scale in persons with spinal cord injury. *Arch Phys Med Rehabil* 2012;93:1832-7.
5. Geyh S, Fellinghauer BA, Kirchberger I, et al. Cross-cultural validity of four quality of life scales in persons with spinal cord injury. *Health Qual Life Outcomes* 2010;8:94.
6. van Koppenhagen CF, Post MW, van der Woude LH, et al. Changes and determinants of life satisfaction after spinal cord injury: a cohort study in the Netherlands. *Arch Phys Med Rehabil* 2008;89:1733-40.

	<b>Measure Name:</b>	<b>Acronym:</b>	<b>Summary Authors:</b>	<b>Items:</b>
	<b>Life Satisfaction Questionnaire- 9</b>	LiSat-9; LSQ	Peipert, A., Bond, R., Engel, E., & Ehrlich-Jones, L.	9
<b>Purpose &amp; Administration Instructions:</b> The LiSat-9 assesses various aspects of life satisfaction: 1. Life as a whole 2. Self-care Management 3. Leisure Situations 4. Vocation 5. Financial Situation 6. Sexual Life 7. Partner Relation 8. Family Life 9. Friends and Acquaintances	<b>Populations Reviewed:</b>	<b>Training Required:</b>	<b>Admin Time:</b>	
	Spinal Cord Injury	None	10-30 minutes	
	<b>Scoring Interpretation:</b>	<b>Scoring Instructions:</b>		
	Typically group data are divided into groups of “dissatisfied” (scores 1-4) and “satisfied” (scores 5-6)	9 items are scored on a 6-point Likert scale • 1: very dissatisfied • 6: very satisfied A total Life Satisfaction score is computed as the mean of the item scores (range of 1-6)		
	<b>Score:</b>			
Sum Score: 9/54 (min/max) Total Average: 1/6 (min/max)				
<b>Internal Consistency:</b>	<b>Adequate</b> internal consistency (Cronbach’s alpha =0.74-0.75) <sup>3,4</sup>			
<b>Validity:</b>	<b>Reliability:</b>		<b>Floor / Ceiling Effects:</b>	
<i>Concurrent Validity</i> <sup>4</sup> <b>Adequate-Excellent</b> ( $r = 0.41-0.72$ ) <ul style="list-style-type: none"> <li>• <b>Adequate</b> concurrent validity with Life Satisfaction Questions (LS) and LiSat-9 total score (<math>r = 0.59</math>)</li> <li>• <b>Excellent</b> concurrent validity with LiSat-9 item 1 (overall satisfaction) and LS (<math>r = 0.72</math>)</li> <li>• <b>Excellent</b> concurrent validity with Satisfaction With Life Scale (SWLS) and LiSat-9 total score (<math>r = 0.60</math>)</li> <li>• <b>Excellent</b> concurrent validity with LiSat-9 item 1 and SWLS item 3 (overall satisfaction) (<math>r = 0.60</math>)</li> <li>• <b>Adequate</b> concurrent validity with LiSat-9 and Mental Health Inventory (MHI-5) (<math>r = 0.52</math>)</li> </ul>	Person reliability index (Rasch-based reliability) = 0.86 <sup>5</sup>		No floor or ceiling effects found (less than 15% of respondents achieved the highest or lowest possible score) <sup>4</sup>	
<i>Convergent Validity</i> <sup>2</sup> <ul style="list-style-type: none"> <li>• <b>Excellent</b> convergent validity with depression as measured by the Hospital Anxiety and Depression (HAD) Scale (<math>r = 0.64</math>)</li> <li>• <b>Adequate</b> convergent validity with anxiety as measured by HAD (<math>r = 0.50</math>)</li> <li>• <b>Adequate</b> convergent validity with pain unpleasantness as measured by HAD (<math>r = 0.33</math>)</li> </ul>	<b>Responsiveness:</b>		Differences between LiSat-9 scores after SCI and retrospective scores prior to SCI <sup>6</sup>	
<b>Professional Considerations</b>	<b>LiSat-9 domain</b>		<b>Effect size of differences from before to after SCI</b>	
	Life as a whole		0.8 (large)	
	Self care		1.2 (large)	
	Leisure situation		0.5 (moderate)	
	Vocational situation		0.9 (large)	
	Financial situation		0.3 (small)	
	Sex life		1.1 (large)	
	Partner relationship		0.4 (moderate)	
	Family life		0.3 (moderate)	
	Contact friends		0.1 (small)	
LiSat-9 total score		1.0 (large)		
<ul style="list-style-type: none"> <li>• LiSat-9 is recommended by SCI EDGE for chronic (&gt;6 months) SCI</li> <li>• In a Rasch analysis, the LiSat-9 yielded improved cross-cultural psychometrics when 2 items were deleted (partner relations and family life) and the response options were condensed from a 6 point to a 4 point scale, very dissatisfying, dissatisfying, satisfying, and very satisfying.<sup>6</sup></li> </ul>	<b>Cut-off Criteria:</b>			
		<i>r</i>	ICC	
	<b>Excellent</b>	≥ .6	≥ .75	
	<b>Adequate</b>	.31-.59	.40 -.74	
<b>Poor</b>	≤ .3	< .4		