# Research Summary – LISAT-9 (Life Satisfaction Questionnaire) and LISAT-11 – Quality of Life

| **Author YearResearch Design****Setting (country)** | **Demographics and Injury Characteristics of Sample** | **Validity** | **Reliability** | **Responsiveness Interpretability** |
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| [Mangold et al.](https://pubmed.ncbi.nlm.nih.gov/38172426/) 2024Psychometric study to translate and explore the data completeness, targeting, reliability and aspects of validity of the Swedish version of s-MSESCommunity rehabilitation program | **N = 92 program participants**58M, 24WMedian (IQR) age 47.0 (27.5) yearsMedian (IQR) time since injury 1 (2) yearsCause of injury: Traumatic (n = 75), non-traumatic (n = 17)Level of injury: Tetraplegia (n = 48), paraplegia (n = 44)Completeness of injury: Complete (n = 37), incomplete (n = 54)**N = 42 peer mentors**37M, 11WMedian (IQR) age 38.0 (18.2.5) yearsMedian (IQR) time since injury 10 (9.25) yearsCause of injury: Traumatic (n = 37), non-traumatic (n = 5)Level of injury: Tetraplegia (n = 10), paraplegia (n = 32)Completeness of injury: Complete (n = 21), incomplete (n = 20) | The s-MSES scores were positively correlated with the LiSat11 (total score rs = 0.72, p < 0.001).  |  |  |
| [Geyh et al.](https://pubmed.ncbi.nlm.nih.gov/20815864/)2010Cross-sectional multi-centre study examining the LISAT-9Out-patients with SCI from study centers in Australia, Brazil, Canada, Israel, South Africa, and the US | N=243Mean age= 41.4 ± 13.6% male = 79.4% female = 20.6Mean time since onset = 139.6±138.8 monthsSCI% paraplegia = 45.7% tetraplegia = 54.3Completeness of injury% complete (A) = 47.7% incomplete (B-D) = 43.6% unspecified = 8.6 |  | **Internal Consistency:**Person reliability index overall = 0.86 | **Interpretability:**See table 1. |
| Table 1. LiSat-9 raw scores (N, mean (SD)) for 6 countries and overall:

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| **Item:** | **Overall:** | **Australia:** | **Brazil:** | **Canada:** | **Israel:** | **Republic of South Africa:** | **USA:** |
| Sum score | 243, 31.6 (9.4) | 40, 40 (17.2) | 34, 31.4 (9.8) | 34, 34.8 (9.9) | 71, 31.5 (9.5) | 30, 27.1 (7.8) | 34, 34.1 (10.3) |
| Life as a whole | 243, 3.9 (1.3) | 40, 4.0 (0.9) | 34, 3.6 (1.3) | 34, 4.2 (1.3) | 71, 3.9 (1.4) | 30, 3.4 (1.2) | 34, 4.4 (1.2) |
| Self-care | 243, 3.5 (1.7) | 40, 2.6 (1.4) | 34, 3.5 (1.7) | 34, 4.2 (1.6) | 71, 3.5 (1.6) | 30, 3.1 (1.6) | 34, 4.0 (1.8) |
| Vocational situation | 240, 3.4 (1.6) | 40, 3.0 (1.3) | 34, 3.3 (1.5) | 33, 4.1 (1.5) | 70, 3.1 (1.9) | 30, 3.2 (1.2) | 33, 3.8 (1.8) |
| Financial situation | 243, 3.3 (1.5) | 40, 2.8 (1.1) | 34, 2.9 (1.5) | 34, 3.9 (1.2) | 71, 3.9 (1.6) | 30, 2.5 (1.2) | 34, 3.4 (1.8) |
| Leisure situation | 243, 3.4 (1.5) | 40, 3.9 (0.9) | 34, 2.9 (1.3) | 34, 3.8 (1.4) | 71, 3.1 (1.8) | 30, 3.5 (1.3) | 34, 3.6 (1.5) |
| Sexual life | 237, 2.5 (1.5) | 38, 2.5 (1.4) | 33, 2.5 (1.5) | 32, 3.0 (1.7) | 71, 2.2 (1.6) | 30, 2.2 (1.3) | 33, 3.0 (1.6) |
| Partner relations | 139, 4.5 (1.6) | 18, 4.7 (1.7) | 25, 4.8 (1.2) | 18, 4.5 (1.7) | 51, 4.0 (1.8) | 8, 4.3 (1.4) | 19, 5.1 (1.1) |
| Family life | 242, 4.6 (1.3) | 40, 5.0 (0.8) | 34, 4.7 (1.1) | 33, 4.8 (1.3) | 71, 4.4 (1.5) | 30, 3.7 (1.3) | 34, 4.8 (1.1) |
| Contact with friends | 240, 4.6 (1.2) | 38, 4.8 (0.9) | 34, 4.4 (1.2) | 34, 4.7 (1.2) | 71, 4.6 (1.4) | 30, 4.4 (1.1) | 33, 4.6 (1.1) |

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| [Post et al.](https://pubmed.ncbi.nlm.nih.gov/22484088/)2012Cross-sectional study analyzing LISAT-9 5 years after discharge from inpatient rehab8 rehab centres with specialized SCI units | 145 SCI participants (104 men, 41 women)mean age: 45.4±13.727 incomplete paraplegia65 complete paraplegia16 incomplete tetraplegia37 complete tetraplegia116 traumatic SCI, 29 non-traumatic | Spearman’s nonparametric correlations:Correlations between the LISAT-9 and instruments with different constructs:Functional Independence Measure – Motor subscale (FIM-Motor): 0.29 (P<.01)Level of injury: 0.24 (P<.01)Completeness of injury: 0.10Cause of injury: 0.12Age: -.14Sex: -.04 Education: .00Correlations between the LISAT-9 and instruments measuring similar constructs:LISAT-9 vs. Satisfaction with Life Scale (SWLS): 0.60LISAT-9 vs. MHI-5 (mental health subscale of SF-36): 0.52 (P<.01)LISAT-9 vs. SIP-SOC (social dimension of SIP-68): -0.45 (P<.01) | **Internal Consistency:**Cronbach’s alpha for the whole scale = 0.75Corrected item-to-total correlations for the 9 questions ranged from 0.21 to 0.64 |  |
| [Van Koppenhagen et al.](https://pubmed.ncbi.nlm.nih.gov/18675395/) 2008Cohort Study. Data was collected retrospectively at the start of active rehabilitation and one year after discharge from inpatient rehabilitation.Eight rehabilitation centers in The Netherlands | N = 147 with SCI Age = 18-65Wheel-chair dependent at least for long distances |  |  | **Responsiveness:**See table 1. |
| Table 1.

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| **LiSat-9 domain** | **Effect size of differences from before (retrospectively) to after SCI** |
| 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) |

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