Reliability, Validity, and Responsiveness of the Japanese Version of the Lower Extremity Functional Scale in Outpatients with Lower Extremity Musculoskeletal Dysfunction

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Purpose: The purpose of this study was to assess the reliability, validity, and responsiveness of the Japanese version of the Lower Extremity Functional Scale (LEFS-J).

Methods: A total of 112 outpatients with lower-extremity musculoskeletal dysfunction participated in the study. Psychometric testing include reliability by internal consistency (Cronbach α) and test-retest reliability (intraclass correlation coefficient), convergent validity by comparing the LEFS-J with the short-form health survey, version 36 (Pearson correlation) and responsiveness (unpaired t tests and minimal detectable change).

Results: The Cronbach α of the LEFS-J was 0.96 and intraclass correlation coefficient for test-retest reliability was 0.92. The correlation between the LEFS and the short-form health survey physical function subscale was excellent (r = 0.75). The analysis of responsiveness was calculated with an unpaired t test after 4 weeks of treatment demonstrating a statistically significant difference between the stable and improved patients (p = 0.02). The minimal detectable change was calculated 8.14.

Conclusion: The LEFS-J is a valid, reliable, and responsive tool that can be used assess Japanese outpatients with lower-extremity musculoskeletal dysfunction.