

[THU0300] THE ITALIAN VERSION OF THE HAND MOBILITY IN SCLERODERMA (HAMIS) TEST: EVIDENCE FOR VALIDITY AND RELIABILITY

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Background: In Systemic Sclerosis (SSc) patients, skin induration and joint and muscle involvement lead to reduction in range of motion, that is the major cause of rehabilitative problems. The frequent hand disability is mainly due to the typical flexion contractures of metacarpophalangeal joints, loss of extension of proximal interphalangeal joints, reduced motion of thumb and wrist and to arthralgias, arthritis, ulcers, calcinosis. HAMIS is a hand function test for SSc patients composed by 9 items assessing the movements included in an ordinary range of motion test (1).

Objectives: To validate the Italian version of HAMIS, by assessing its test-retest reliability, internal consistency, and external consistency in Italian SSc patients.

Methods: 40 SSc patients (7 dSSc, 33 ISSc; 5 men, 35 women; mean age and disease duration: 57.3±11.2, 9.0±3.8) were evaluated with Hand Mobility in Scleroderma (HAMIS) test, Durouoz index, fist closure, Health Assessment Questionnaire (HAQ), Short Form 36 (SF-36) summary physical (SPI) and mental index (SMI), and modified Rodnan skin score.

HAMIS consists of 9 items assessing: finger flexion and extension, abduction of the thumb, dorsal extension and volar flexion of the wrist, pronation and supination of the forearm, ability to make a thumb pincer grip and to make finger abduction. The different performance areas of HAMIS are composed of different-sized grips and different movements, all related to tools and movements that are part of daily occupations. Each exercise is graded on a 0–3 scale (with 0: normal function and 3: inability to perform the task) (1).

HAMIS was translated following a forward–backward translation procedure, with independent translations to Italian and counter-translation to English, according to international methodology (2).

Test-retest reliability was assessed, comparing the results of the first and second administration, by intra-class correlation coefficient (ICC), internal consistency by Cronbach's α and external consistency was evaluated by comparison with Durouoz index, fist closure (cm), HAQ.

Results: The statistical analysis of the total HAMIS score showed a good test-retest reliability (ICCs>0.75) and internal consistency (Cronbach's α >0.7). A good external consistency was confirmed by the significant correlation with Durouoz index (ρ : 0,6428; P <0.0001), fist closure (ρ : 0.69; P <0.0001), PSI (ρ : -0,3286; p = 0,0384), HAQ (ρ :0,3313; p : 0,0368). HAMIS did not correlate with MSI and Skin Score.

Skin Score (mean \pm SD)	11.5 \pm 6.8
Musculo-skeletal involvement (yes/no)	30/10
Hamis (mean \pm SD)	7,68 \pm 6,6
Durouoz (mean \pm SD)	24,03 \pm 21,84
Fist closure (cm) (mean \pm SD)	1,65 \pm 1,95
MSI (SF-36) (mean \pm SD)	40,91 \pm 8,1
PSI (SF-36) (mean \pm SD)	36,42 \pm 9,05
HAQ (mean \pm SD)	0,82 \pm 0,9

Conclusion: HAMIS is a hand function test developed to specifically assess SSc hand disability. Our results support its validity and reliability in Italian SSc patients. It also may be useful in assessing and following-up SSc patients with hand impairment involved in hand rehabilitation protocols

References: [ol][li]Sandqvist G, Eklund M. Arthritis Care Res. 2000;13:369-74.[/li][li]Lassere MN. Osteoarthritis Cartilage. 2006;14 Suppl A:A10-3.[/li][ol]**Disclosure of Interest:** None declared

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