Reliability and validity of the visual analogue scale for disability in patients with chronic musculoskeletal pain

[Brief research reports]

Boonstra, Anne M. a; Schiphorst Preuper, Henrica R. b, d; Reneman, Michiel F. b, d; Posthumus, Jitze B. a; Stewart, Roy E. c

a Revalidatie Friesland Center for Rehabilitation, Beetsterzwaag
b Center for Rehabilitation
c Northern Center for Health Care Research, University Medical Center Groningen
d University of Groningen, Groningen, The Netherlands

Correspondence to Dr Anne M. Boonstra, PhD, MD, Revalidatie Friesland, Center for Rehabilitation, PO Box 2, 9244 ZN Beetsterzwaag, The Netherlands

Tel: +31 512 389329; fax: +31 512 389244;
e-mail: a.m.boonstra@revalidatie-friesland.nl

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Abstract

To determine the reliability and concurrent validity of a visual analogue scale (VAS) for disability as a single-item instrument measuring disability in chronic pain patients was the objective of the study. For the reliability study a test-retest design and for the validity study a cross-sectional design was used. A general rehabilitation centre and a university rehabilitation centre was the setting for the study. The study population consisted of patients over 18 years of age, suffering from chronic musculoskeletal pain; 52 patients in the reliability study, 344 patients in the validity study. Main outcome measures were as follows. Reliability study: Spearman's correlation coefficients (ρ values) of the test and retest data of the VAS for disability; validity study: ρ values of the VAS disability scores with the scores on four domains of the Short-Form Health Survey (SF-36) and VAS pain scores, and with Roland-Morris Disability Questionnaire scores in chronic low back pain patients. Results were as follows: in the reliability study ρ values varied from 0.60 to 0.77; and in the validity study ρ values of VAS disability scores with SF-36 domain scores varied from 0.16 to 0.51, with Roland-Morris Disability Questionnaire scores from 0.38 to 0.43 and with VAS pain scores from 0.76 to 0.84. The conclusion of the study was that the reliability of the VAS for disability is moderate to good. Because of a weak correlation with other disability instruments and a strong correlation with the VAS for pain, however, its validity is questionable.