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PSYCHOMETRIC TESTING OF THE DUTCH EVALUATION OF DAILY ACTIVITY QUESTIONNAIRE IN RHEUMATOID ARTHRITIS

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Background: The Evaluation of Daily Activity Questionnaire (EDAQ) is a patient reported measure of activity limitations in Rheumatoid Arthritis (RA) and other musculoskeletal conditions, for which there is a Swedish (1) and an updated English version (2-4). The English version was translated into Dutch, and linguistically validated, with phrasing changes made following cognitive debriefing interviews with six Dutch people with RA. The Dutch EDAQ includes 138 items in 14 'domains' (Eating/ Drinking; Personal Care; Dressing; Bathing; Cooking; Moving Indoors; House Cleaning; Laundry; Moving and Transfers; Moving Outdoors; Gardening/Household Maintenance; Caring; and Leisure/ Social Activities). Each domain is split into two sections: one (A) scores whether activities can be performed without aids, alternate methods or help; and another (B) which scores whether the activities can be performed with aids or alternate methods. All items are scored on a 0-3 scale (no difficulty to unable to do).

Objectives: To test the reliability and validity of the Dutch version of the EDAQ in people with RA in the Netherlands.

Methods: Participants from an out-patient Rheumatology clinic (Reinier de Graaf Hospital, Delft) completed postal questionnaires of demographic questions, the EDAQ, HAQ, SF36v2, RAQOL, a hand pain numeric

rating scale (NRS) and a current condition severity scale. Three weeks later, the EDAQ was mailed again. Test-retest reliability of domain scores was evaluated using nonparametric correlations. Internal consistency was tested using Cronbach's alpha. Validity of the 14 domains of the EDAQ against the other measures was assessed with non-parametric correlations.

Results: 252 people participated: 155 women and 93 men; age = 65.16 (SD 13.45) years; RA duration = 11.75 years (SD 9.93). 68 (27%) were employed; 20 had children <18y at home. Average pain score = 3 (IQR 1-6) and fatigue = 4 (IQR 2-7).

155 (62%) completed Test 2 and test-retest reliability of total domain scores was excellent for nine domains ($r_s = 0.81 - 0.88$) and moderate-substantial for five ($r_s = 0.56 - 0.78$). Internal consistency was high in all domains: Cronbach's alpha = 0.79-0.92 for Section A.

All domains of the EDAQ correlated significantly ($p < 0.001$) with: HAQ $r_s = 0.51 - 0.88$; SF36v2 (Physical Function) $r_s = -0.55$ to -0.87 ; SF36v2 Bodily Pain $r_s = 0.44 - 0.67$; SF36v2 (Vitality) $r_s = -0.35$ to -0.62 ; RAQOL $r_s = 0.50 - 0.83$; and hand pain $r_s = 0.46 - 0.64$. An exception was the 'Caring' domain as many did not have childcare responsibilities, and thus validity was lower compared to the above variables, although still significant ($p < 0.01$; $r_s = 0.16$ to 0.31).

Conclusions: The Dutch version of the EDAQ is a valid and reliable measure of daily activity in people with RA. It can be used in both clinical practice and research.

References: (1) Nordenskiöld et al (1998) Clin Rheumatol 17:6-16. (2) Hammond et al (2015) HQLQ 12:143; (3) Hammond et al (2015) Rheumatology 54:1605-1615. (4) Hammond et al (2015) Br J Occ Ther 78:144-157.

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