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Psychometric testing of the evaluation of daily activity questionnaire in osteoarthritis in the United Kingdom

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Objective: The Evaluation of Daily Activity Questionnaire (EDAQ) is a patient reported measure of activity limitations developed in Sweden. We previously revised and tested this in rheumatic arthritic in the UK. It includes 14 domains (Eating; Personal Care; Dressing; Bathing; Cooking; Moving Indoors; House Cleaning; Laundry; Transfers; Moving Outdoors; Communication; Household Maintenance; Caring; Leisure), each split in two sections: A scores activity performance without aids, alternate methods or help; and B performance with aids or alternate methods. Items are scored 0-3 (no difficulty to unable). Domains can be used separately. Validity and reliability of the EDAQ in osteoarthritis (OA) were evaluated.

Materials-Methods: Participants from 18 rheumatology clinics completed postal questionnaires including demographic questions, EDAQ (UK), Health Assessment Questionnaire (HAQ) and SF36v2; repeating the EDAQ three weeks later. Spearman's correlations (rs) were used to evaluate construct validity of domains with other measures and test-retest reliability of domain scores. Cronbach's alpha was used to evaluate internal consistency.

Results: 184 participated: 143 women; mean age = 64.51 years (SD 10.62); mean OA duration = 10.43 years (SD 10.24). Most domains correlated moderately ($p < 0.001$) with HAQ: rs = 0.50-0.83; SF36v2 Physical Function: rs = -0.45 to -0.87; SF36v2 Bodily Pain: rs = 0.40-0.65; SF36v2 Vitality: rs = -0.3 to -0.58. The Eating and Communication domains had only weak, but significant ($p < 0.01$), correlations with these, as few had difficulties with these. The Caring correlations were insignificant as activities were inapplicable for 53-83% of the participants. Internal consistency was high in all domains (Cronbach's alpha = 0.82-0.95). Test-retest reliability of scores was good for 11 domains (rs = 0.72-0.89), moderate for two (rs = 0.61-0.69) and insignificant for Caring (rs = 0.10).

Conclusion: The UK version of the EDAQ is a valid and reliable measure of daily activity in people with OA (apart from the Caring domain which needs testing in a larger sample). The EDAQ can be used in OA in clinical practice and research.

Keywords: Patient -reported outcome measures, daily activities, osteoarthritis, occupational therapy