

Psychometric Testing of a German version of the Evaluation of Daily Activity Questionnaire in Rheumatoid Arthritis.

A. Hammond¹, K. Niedermann², S. Tyson³, A Tennant⁴

¹ Centre for Health Sciences Research, University of Salford, UK; ² Gesundheit, ZHAW, Winterthur, Switzerland;

³ Nursing, Midwifery and Social Work, University of Manchester, Manchester, UK; ⁴ ICF Network, Swiss Paraplegic Institute, Notwil, Switzerland



INTRODUCTION

- EDAQ is a Patient Reported Outcome (PRO) of activity abilities.
- English EDAQ valid, reliable and comprehensive; includes commonest daily activity difficulties of people with musculoskeletal conditions [1,2]
- 138 activities in 14 sub-scales (Table 2); activities scored 0-3 (no difficulty to unable to do).
- No similar measure available in German. Before use, PROs must be tested in target languages and conditions to ensure reliability and validity.

AIM: Linguistically validate and test a German version of the EDAQ (EDAQ-D) in Rheumatoid Arthritis (RA).

METHOD

Forward/ backward translate English to German
Cognitive debriefing interviews; Expert Panel review

Recruitment from 3 Swiss Rheumatology Clinics;
3 Patient Organisations (German, Austrian, Swiss)

Test 1 Questionnaire completed at home (n=163)
EDAQ; SF36v2, HAQ20, RAQOL, Perceived health, Pain and Fatigue

4 weeks: Test 2 completed at home (n=107)
EDAQ; health better/same/worse since Test 1?

Reliability and Validity Testing

Table 1: Participant information (n=163)

Demographic information	Mean (SD) ; median (IQR) or %
Age (years)	52.84 (SD 14.94)
Gender (M:F)	18:145
RA duration (years)	15.73 (SD 12.12)
Employed (n:%)	85 (45%)
Pain (0-10)	4 (IQR 2-6)
Fatigue (0-10)	5 (IQR 5-7)
HAQ20 (0-60)	7 (IQR 2-14)
Medication (%): DMARDs only / Biologics	34%/ 49%

RESULTS

Interviews (n=6): minor wording changes identified; no new activities recommended.

Internal consistency (Cronbach's alpha): high in all sub-scales ($\alpha = 0.84 - 0.96$).

Test-retest reliability: excellent for all sub-scales ($r(s) = 0.80 - 0.93$; $p < 0.01$).

Validity: All EDAQ sub-scales correlated significantly ($p < 0.001$) with SF36v2 Physical Function, SF36v2 Vitality, Health Assessment Questionnaire (HAQ20), RA Quality of Life (RAQOL), perceived health, pain and fatigue rating scales.

Caring sub-scale: non-significant correlations with Vitality/ fatigue, as scale not applicable to many.

Available online [3,4].

Contact: a.hammond@salford.ac.uk; nika@zhaw.ch

CONCLUSIONS

- EDAQ-D [4] has good internal consistency, test-retest reliability and validity.
- EDAQ-D can be used in practice, audit and research as a self-report questionnaire.
- In future, EDAQ-D's acceptability in clinical practice should be tested.

Table 2: Median (IQR) sub-scale scores; internal consistency, test-retest reliability and validity (n=163)

EDAQ sub-scales (score range)	Median (IQR)	Internal consistency α	Test-retest r(s)	Validity						
				SF36v2: PF r(s)	Vitality r(s)	HAQ20 r(s)	RAQOL r(s)	Health r(s)	Pain r(s)	Fatigue r(s)
1 Eating 0-30	6 (3-10.5)	0.91	0.87	-0.70	-0.34	0.77	0.55	0.52	0.48	0.26
2 Personal Care 0-36	3 (0-6)	0.90	0.89	-0.70	-0.34	0.81	0.57	0.50	0.52	0.35
3 Dressing 0-33	4 (1-9)	0.95	0.88	-0.73	-0.27	0.79	0.55	0.53	0.57	0.28
4 Bathing 0-33	4 (1-9)	0.92	0.89	-0.79	-0.33	0.83	0.58	0.55	0.56	0.38
5 Cooking 0-42	7 (1.5 - 13)	0.96	0.87	-0.81	-0.40	0.87	0.68	0.59	0.58	0.38
6 Move Indoors 0-36	7 (3-11)	0.89	0.91	-0.84	-0.36	0.83	0.65	0.64	0.60	0.37
7 Cleaning 0-27	7 (2-13)	0.95	0.92	-0.87	-0.30	0.87	0.63	0.56	0.54	0.32
8 Laundry 0-27	4 (1-9)	0.94	0.87	-0.86	-0.31	0.86	0.57	0.52	0.48	0.32
9 Transfers 0-18	3 (1-6)	0.84	0.81	-0.76	-0.42	0.77	0.68	0.64	0.64	0.42
10 Communication 0-18	2 (0-4)	0.87	0.86	-0.61	-0.38	0.73	0.55	0.52	0.46	0.33
11 Move Outdoors 0-39	7 (2-13)	0.92	0.93	-0.87	-0.41	0.89	0.71	0.65	0.66	0.42
12 Garden/House 0-21	5 (1-10)	0.93	0.96	-0.79	-0.33	0.76	0.63	0.57	0.53	0.33
13 Caring 0-27	0 (0 - 5)	0.96	0.77	-0.40	-0.10	0.42	0.25	0.27	0.37	0.14
14 Hobbies 0-27	4 (3-8)	0.89	0.83	-0.77	-0.68	0.76	0.68	0.60	0.55	0.41

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[1] Hammond et al Rheumatology 2015;54:1605-1615; [2] Hammond et al Disabil Rehabil 2017 DOI: 10.1080/09638288.2017.1323027 [3] Hammond, Niedermann et al EDAQ User Manual v3. 2018: <http://usir.salford.ac.uk/30752/> [4] Hammond, Niedermann et al EDAQ:D. Fragebogen zur Bewertung von täglichen Aktivitäten <http://usir/salford.ac.uk/46276> 2018.