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Supplementary Materials

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Cross-cultural adaptation and psychometric testing of the Dutch and German versions of the Evaluation of Daily Activity Questionnaire in people with rheumatoid arthritis.

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Supplementary Table S1: Evaluation of Daily Activity Questionnaire Part 2 content linked to the International Classification of Function Core Set for Rheumatoid Arthritis.

ICF Code:	ICF Category Title	Measured by Items within EDAQ Domains:
d170	Writing	10 Communication
d230	Carrying out daily routine	
d360	Using communication devices and techniques	10 Communication
d410	Changing basic body position	2 Bathroom and Personal Care 4 Bathing and Showering 5 Cooking 6 Moving Indoors 9 Moving and Transfers 11 Moving Outdoors and Shopping
d415	Maintaining a body position	6 Moving Indoors 9 Moving and Transfers
d430	Lifting and carrying objects	5 Cooking 6 Moving Indoors 11 Moving Outdoors and Shopping
d440	Fine hand use	1 Eating and Drinking 2 Bathroom and Personal Care 3 Dressing 4 Bathing and Showering 5 Cooking

		<p>6 Moving Indoors</p> <p>7 Cleaning the House</p> <p>8 Laundry and Clothes Care</p> <p>9 Moving and Transfers</p> <p>10 Communication</p> <p>11 Moving Outdoors and Shopping</p> <p>12 Gardening and Household Maintenance</p> <p>14 Leisure and Social Activities</p>
d445	Hand and arm use	<p>1 Eating and Drinking</p> <p>2 Bathroom and Personal Care</p> <p>3 Dressing</p> <p>4 Bathing and Showering</p> <p>5 Cooking</p> <p>6 Moving Indoors</p> <p>7 Cleaning the House</p> <p>8 Laundry and Clothes Care</p> <p>11 Moving Outdoors and Shopping</p> <p>12 Gardening and Household Maintenance</p>
d449	Carrying, moving and handling objects, other specified and unspecified	<p>5 Cooking</p> <p>6 Moving Indoors</p> <p>11 Moving Outdoors and Shopping</p>
d450	Walking	<p>6 Moving Indoors</p> <p>11 Moving Outdoors and Shopping</p>
d455	Moving around	6 Moving Indoors 11 Moving Outdoors and Shopping
d460	Moving around in different locations	6 Moving Indoors

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

		11 Moving Outdoors and Shopping
d465	Moving around using equipment	11 Moving Outdoors and Shopping
d470	Using transportation	11 Moving Outdoors and Shopping
d475	Driving	11 Moving Outdoors and Shopping
d510	Washing oneself	2 Bathroom and Personal Care 4 Bathing and Showering
d520	Caring for body parts	2 Bathroom and Personal Care 4 Bathing and Showering
d530	Toileting	2 Bathroom and Personal Care
d540	Dressing	3 Getting Dressed and Undressed
d550	Eating	1 Eating and Drinking
d560	Drinking	1 Eating and Drinking
d570	Looking after one`s health	Partly in 14 Leisure (item 5 Physical activities)
d620	Acquisition of goods and services	11 Moving Outdoors and Shopping
d630	Preparing meals	5 Cooking
d640	Doing housework	7 Cleaning the House 8 Laundry and Clothes Care
d660	Assisting others	13 Caring
d760	Family relationships	
d770	Intimate relationships	
d850	Remunerative employment	
d859	Work and employment, other specified and unspecified	

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

d910	Community life	14 Leisure and Social Activities
d920	Recreation and leisure	14 Leisure and Social Activities

Supplementary Table S2: Evaluation of Daily Activity Questionnaire Part 2 domain item test-retest reliability: linear weighted kappa coefficients.

Domain 1: Eating and Drinking	Dutch n = 252	German n=163
1. Lift a glass	0.75	0.47
2. Lift a cup	0.68	0.46
3. Use a knife and fork	0.60	0.65
4. Slice food (e.g. bread, cheese)	0.58	0.64
5. Get the milk out of the fridge	0.44	0.67
6. Open a milk carton/ plastic bottle and pour out	0.54	0.64
7. Open a bottle top (e.g. lager)	0.46	0.57
8. Open a screw top jar or bottle	0.61	0.61
9. Open a tin or ring pull can	0.63	0.62
10. Open a packet/pouch	0.49	0.62

<u>Domain 2: In the Bathroom and Personal Care</u>	Dutch n = 252	German n=163
1. Get on and off the toilet	0.60	0.62
2. Wipe yourself with toilet paper/ clean self below	0.61	0.62
3. Use tampons /suppositories	0.36	0.57
4. Flush the toilet	0.38	0.52
5. Arrange your clothes after going to toilet	0.52	0.66
6. Wash your hands	0.28	0.45
7. Brush and comb your hair	0.59	0.70
8. Brush your teeth	0.70	0.63
9. Use a tube of toothpaste	0.40	0.60
10. Open a medicine bottle/ blister pack	0.57	0.63
11. Do your make-up or shave	0.65	0.47
12. Put on jewellery/watch	0.47	0.70

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

<u>Domain 3: Dressing</u>	Dutch n = 252	German n=163
1. Put on / take off a coat	0.24	0.68
2. Pull clothes over your head	0.59	0.63
3. Put on front-opening clothes	0.63	0.62
4. Do up/undo buttons	0.64	0.69
5. Pull clothes over your feet	0.51	0.68
6. Do up /undo zips	0.51	0.58
7. Put on tights/socks	0.64	0.68
8. Take shoes/ boots on and off	0.55	0.61
9. Tie shoelaces	0.59	0.77
10. Put on/take off gloves	0.49	0.62
11. Fasten clothes at the back	0.58	0.67

Domain 4. Bathing and Showering	Dutch n = 252	German n=163
1. Get in and out of the bath	0.49	0.65
2. Shower whilst standing	0.67	0.60
3. Use shower controls /bath temperature mixers	0.46	0.47
4. Turn taps (<i>any in the home</i>)	0.48	0.61
5. Wash your back and neck	0.65	0.71
6. Dry your back and neck	0.63	0.66
7. Wash and dry your feet	0.60	0.64
8. Wash your hair	0.73	0.72
9. Style/ blow-dry your hair	0.58	0.71
10. Cut/file your fingernails	0.61	0.70
11. Take care of feet	0.60	0.65

Domain 5. Cooking	Dutch n = 252	German n=163
1. Stand while working in the kitchen	0.60	0.74
2. Set table/ carry plates, cups etc.	0.54	0.60
3. Peel and chop vegetables	0.66	0.73
4. Carry a full pan to/ from cooker	0.67	0.75
5. Drain water from a saucepan (e.g. vegetables, pasta)	0.58	0.74
6. Remove heavy items (e.g. bag of sugar) from top cupboards	0.54	0.62
7. Baking (e.g. cakes, bread, pastry)	0.51	0.61
8. Take things in/out of oven	0.45	0.66
9. Wash up	0.62	0.66
10. Put crockery/pans etc. into kitchen cupboards	0.56	0.50
11. Use a kettle (e.g. fill, pour)	0.53	0.67
12. Turn cooker knobs	0.51	0.68
13. Open fridge door	0.68	0.73
14. Prepare and cook snack and/or meal	0.61	0.82

<u>Domain 6: Moving around Indoors</u>	Dutch n = 252	German n=163
1. Walk indoors (e.g. get to toilet/ bathroom; round kitchen)	0.71	0.63
2. Open the front or back door	0.47	0.45
3. Lock and unlock doors	0.54	0.57
4. Get to the front door in time to answer	0.67	0.58
5. Get to the phone in time to answer	0.50	0.61
6. Stand for longer periods	0.65	0.68
7. Get up and down steps/ stairs	0.55	0.74
8. Bend to floor/pick up items	0.61	0.72
9. Reach up	0.64	0.67
10. Kneel	0.74	0.79
11. Carry heavy items around the house	0.62	0.67
12. Manage heating (e.g. controls, woodburner, multifuel stove, open fire)	0.40	0.55

<u>Domain 7: Cleaning the House</u>	Dutch n = 252	German n=163
1. Make the bed	0.71	0.63
2. Dust and wipe surfaces	0.72	0.61
3. Sweep up/ mop floor	0.59	0.63
4. Wring out a cloth	0.64	0.64
5. Vacuum clean	0.77	0.74
6. Open a window	0.59	0.74
7. Clean windows	0.64	0.72
8. Clean the bath and/or shower	0.68	0.77
9. Heavy housework (e.g. move furniture, take down curtains)	0.67	0.71

<u>Domain 8: Laundry and Clothes Care</u>	Dutch	German
	n = 252	n=163
1. Do the hand washing	0.50	0.58
2. Use a washing machine (e.g. load and unload)	0.73	0.58
3. Hang out washing	0.73	0.68
4. Plug in and pull out an electric plug (any in home)	0.48	0.63
5. Put up an ironing board	0.60	0.64
6. Iron	0.59	0.67
7. Do small repairs e.g. hemming, buttons	0.70	0.67
8. Use scissors (any in home)	0.51	0.62
9. Pick up pins/needles	0.60	0.73

<u>Domain 9: Moving and Transfers</u>	Dutch n = 252	German n=163
1. Get into and out of bed	0.66	0.51
2. Turn over and sit up in bed	0.65	0.50
3. Stand up from a chair without armrests	0.62	0.64
4. Pull up bedclothes/duvet	0.60	0.70
5. Getting a comfortable sleeping position	0.62	0.53
6. Sit for longer periods (e.g. in a car, train)	0.58	0.61

<u>Domain 10: Communication</u>	Dutch	German
	n = 252	n=163
1. Use a phone / mobile/ smartphone (<i>call/ text/ any functions</i>)	0.61	0.53
2. Hold a book	0.61	0.67
3. Write	0.59	0.74
4. Handle money/ cards; use cash machine/ pay by card	0.68	0.66
5. Use a computer and mouse/ laptop/ tablet (e.g. iPad)	0.59	0.56
6. Use remote controls (e.g. TV)	0.58	0.55

<u>Domain 11:</u>	Dutch	German
<u>Moving Outdoors and Shopping</u>	n = 252	n=163
1. Walk on level ground	0.60	0.41
2. Go for a long walk (e.g. a mile)	0.70	0.68
3. Go up stairs without a handrail	0.68	0.71
4. Travel by public transport	0.70	0.59
5. Get in and out of a car and open car door	0.66	0.57
6. Drive a car (e.g. hold steering wheel, turn car key, change gear)	0.50	0.56
7. Fill the car with petrol	0.52	0.67
8. Open a heavy (e.g. shop) door	0.64	0.74
9. Walk around the shops	0.53	0.78
10. Carry shopping	0.57	0.74
11. Do the weekly shopping	0.61	0.65
12. Hold a walking stick	0.41	0.53
13. Use a mobility scooter	0.33	0.53

<u>Domain 12:</u>	Dutch	German
<u>Gardening and Household Maintenance</u>	n = 252	n=163
1. Change a light bulb	0.53	0.63
2. Light gardening (e.g. weed, prune, plant)	0.49	0.68
3. Heavy gardening (e.g. dig, mow)	0.52	0.73
4. Climb ladders	0.41	0.75
5. Clean the car (inside and out)	0.45	0.80
6. Do household repairs	0.46	0.78
7. Car maintenance (eg oil, water)	0.46	0.78

Domain 13: Caring	Dutch n = 252	German n=163
1. Feed a child, prepare bottles	0.59	0.49
2. Bathe a child/ change nappy	0.43	0.64
3. Dress a child	0.34	0.72
4. Do a child's hair	0.33	0.55
5. Use children's equipment (e.g. highchair, push chair, car seat)	0.43	0.64
6. Put a child in/ out of highchair, push chair, high seat	0.60	0.67
7. Lift and carry a child	0.55	0.61
8. Play with children	0.40	0.56
9. Care for others (e.g. elderly relatives)	0.20	0.47

Domain 14. Leisure, Hobbies and Social Activities	Dutch n = 252	German n=163
1. Crafts (e.g. knitting, crochet, sewing, embroidery, model making)	0.62	0.68
2. Do-It-Yourself (e.g. using tools, painting and decorating)	0.56	0.58
3. Visit friends/ socializing (e.g. pub, cinema, theatre)	0.63	0.62
4. Attend community / religious groups or classes	0.55	0.59
5. Physical activities (e.g. dance, active sports, swimming, bicycling)	0.45	0.65
6. Quiet recreation (e.g. painting, cards)	0.65	0.63
7. Performing arts (e.g. music, choir, dramatics)	0.36	0.62
8. Pet care (e.g. feed, groom)	0.45	0.70
9. Take dog for a walk (e.g. hold leash)	0.25	0.67

Supplementary Table S3.		Rasch	
Transformation: Evaluation of Daily Activity Questionnaire Self-Care Component for Dutch, German and English versions for Rheumatoid Arthritis.			
Raw Score (bold)	Rasch Transformed Score		
0	0.0	18	73.3
1	20.0	19	74.2
2	32.3	20	75.2
3	40.0	21	76.0
4	45.5	22	76.9
5	49.8	23	77.6
6	53.2	24	78.4
7	56.1	25	79.1
8	58.6	26	79.9
9	60.8	27	80.5
10	62.7	28	81.2
11	64.5	29	81.8
12	66.0	30	82.5
13	67.5	31	83.0
14	68.8	32	83.6
15	70.0	33	84.2
16	71.2	34	84.8
17	72.3	35	85.3
		36	85.9
		37	86.4
		38	86.9
		39	87.4
		40	87.8
		41	88.3
		42	88.8
		43	89.3
		44	89.7
		45	90.2
		46	90.6
		47	91.0
		48	91.5
		49	91.9
		50	92.3
		51	92.7
		52	93.1
		53	93.5
		54	93.9
		55	94.3
		56	94.7
		57	95.1
		58	95.5
		59	95.8
		60	96.2
		61	96.6
		62	96.9
		63	97.3
		64	97.6
		65	98.0
		66	98.3
		67	98.7
		68	99.0
		69	99.4
		70	99.7
		71	100.0

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

72	100.4	99	108.7	126	116.2
73	100.7	100	109.0	127	116.5
74	101.1	101	109.3	128	116.8
75	101.4	102	109.6	129	117.1
76	101.7	103	109.9	130	117.4
77	102.0	104	110.2	131	117.6
78	102.3	105	110.4	132	117.9
79	102.7	106	110.7	133	118.2
80	103.0	107	111.0	134	118.4
81	103.3	108	111.3	135	118.7
82	103.6	109	111.6	136	119.0
83	103.9	110	111.8	137	119.3
84	104.2	111	112.1	138	119.5
85	104.6	112	112.4	139	119.8
86	104.9	113	112.7	140	120.1
87	105.2	114	113.0	141	120.4
88	105.4	115	113.2	142	120.6
89	105.8	116	113.5	143	120.9
90	106.1	117	113.8	144	121.2
91	106.4	118	114.1	145	121.5
92	106.7	119	114.3	146	121.7
93	107.0	120	114.6	147	122.0
94	107.2	121	114.9	148	122.3
95	107.5	122	115.2	149	122.6
96	107.8	123	115.4	150	122.9
97	108.1	124	115.7	151	123.1
98	108.4	125	116.0	152	123.4

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

153	123.7	180	133.3	207	162.2
154	124.0	181	133.7	208	165.4
155	124.3	182	134.2	209	169.3
156	124.6	183	134.7	210	174.3
157	124.9	184	135.3	211	181.5
158	125.2	185	135.8	212	193.4
159	125.5	186	136.4	213	213.0
160	125.8	187	137.0		
161	126.1	188	137.7		
162	126.4	189	138.3		
163	126.7	190	139.0		
164	127.1	191	139.8		
165	127.4	192	140.6		
166	127.8	193	141.4		
167	128.1	194	142.3		
168	128.4	195	143.2		
169	128.8	196	144.2		
170	129.1	197	145.3		
171	129.5	198	146.4		
172	129.9	199	147.6		
173	130.3	200	148.9		
174	130.7	201	150.3		
175	131.0	202	151.8		
176	131.5	203	153.5		
177	131.9	204	155.3		
178	132.3	205	157.3		
179	132.8	206	159.6		

Supplementary Table S4. Rasch Transformation Evaluation of Daily Activity Questionnaire Mobility component for Dutch, German and English versions for Rheumatoid Arthritis.

Raw Score (bold)	Rasch Transformed Score	24	67.4	49	88.5	74	98.1	99	102.5
0	0.0	25	68.5	50	89.0	75	98.3	100	102.7
1	14.8	26	69.6	51	89.6	76	98.6	101	102.8
2	23.9	27	70.7	52	90.1	77	98.8	102	102.9
3	29.5	28	71.8	53	90.6	78	99.0	103	103.1
4	33.6	29	72.8	54	91.1	79	99.2	104	103.2
5	36.9	30	73.8	55	91.6	80	99.4	105	103.4
6	39.6	31	74.8	56	92.0	81	99.6	106	103.6
7	42.0	32	75.8	57	92.5	82	99.8	107	103.7
8	44.1	33	76.7	58	92.9	83	99.9	108	103.9
9	46.1	34	77.6	59	93.3	84	100.1	109	104.1
10	47.8	35	78.5	60	93.7	85	100.3	110	104.2
11	49.6	36	79.4	61	94.1	86	100.5	111	104.4
12	51.2	37	80.2	62	94.5	87	100.7	112	104.6
13	52.7	38	81.0	63	94.8	88	100.8	113	104.8
14	54.3	39	81.8	64	95.2	89	101.0	114	104.9
15	55.7	40	82.6	65	95.5	90	101.1	115	105.2
16	57.1	41	83.3	66	95.8	91	101.3	116	105.4
17	58.5	42	84.0	67	96.2	92	101.5	117	105.6
18	59.9	43	84.7	68	96.5	93	101.6	118	105.8
19	61.2	44	85.4	69	96.8	94	101.7	119	106.0
20	62.5	45	86.0	70	97.0	95	101.9	120	106.3

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

21	63.9	46	86.7	71	97.3	96	102.1	121	106.5
22	65.2	47	87.3	72	97.6	97	102.2	122	106.7
23	66.4	48	87.9	73	97.8	98	102.3	123	107.0
124	107.3								
125	107.6								
126	107.9								
127	108.3								
128	108.6								
129	109.0								
130	109.4								
131	109.8								
132	110.3								
133	110.8								
134	111.4								
135	112.0								
136	112.7								
137	113.4								
138	114.2								
139	115.1								
140	116.2								
141	117.5								
142	119.0								
143	121.0								
144	123.6								
145	127.5								
146	134.4								
147	147.0								

Supplementary Table S5: Evaluation of Daily Activity Questionnaire Part 2: discriminant validity by perceived health groups (Dutch n=239; German n=162): median (inter-quartile range) domain scores.

EDAQ Part 2 domain section A (score range)	Good/Very Good	Fair	Poor/Very Poor	Chi-square	df	P <
1: Eating and Drinking (0-33)						
Dutch	3 (0-5)	8 (4-11)	13 (6.5-17)	48.29	2	0.000
German	4 (0.5-7)	8 (5-12)	11.5 (8.5-16.5)	40.37	2	0.000
2: In the Bathroom and Personal Care (0-36)						
Dutch	0 (0-1)	2 (0-5)	7 (3.5-11)	46.85	2	0.000
German	1 (0-3)	4 (2-8)	7.5 (1.25-10.5)	36.75	2	0.000
3: Dressing (0-33)						
Dutch	0.5 (0-3)	5 (2-9)	14 (7-18)	58.18	2	0.000
German	2 (0-4)	6.5 (3-13)	8.5 (5-14)	40.08	2	0.000
4: Bathing and Showering (0-33)						
Dutch	1 (0-4)	5 (1-10)	11 (8-22)	52.84	2	0.000
German	2 (0-5)	6 (3-10.75)	11 (5.25-16.75)	42.25	2	0.000

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

5: Cooking (0-42)						
Dutch	1 (0-4)	5 (2-11)	12 (7.5-28.5)	51.20	2	0.000
German	2 (0-7)	10 (6-15)	14 (8.25-24.75)	49.08	2	0.000
6: Moving Indoors (0-36)						
Dutch	3 (0-7)	8.5 (5-13.75)	15 (10.5-22)	52.54	2	0.000
German	3 (1-7)	9 (7-14)	13 (9.25-18)	60.78	2	0.000
7: Cleaning the House (0-27)						
Dutch	2 (0-6.25)	8 (3.25-14.5)	18 (6.5-25)	46.31	2	0.000
German	3 (0-8)	9 (6-14)	14.5 (10.25-18)	46.17	2	0.000
8: Laundry and Clothes Care (0-27)						
Dutch	0 (0-2)	4 (0-7.5)	7 (2-19)	38.77	2	0.000
German	2 (0-6)	7 (3-12.5)	11.5 (5.25-18.5)	37.51	2	0.000
9: Moving and Transfers (0-18)						
Dutch	1 (0-3)	3 (2-6)	10 (6-11.75)	64.74	2	0.000
German	1 (0-3)	5 (3.25-7)	7.5 (4-9)	62.37	2	0.000

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

10: Communication (0-18)						
Dutch	0 (0-1)	2 (1-3.75)	3 (2-6)	42.23	2	0.000
German	0 (0-2)	3 (1-5)	6 (2.25-7)	38.18	2	0.000
11: Moving Outdoors and Shopping (0-39)						
Dutch	3 (1-7)	9.5 (5 – 13.25)	20 (11.75-26)	60.17	2	0.000
German	2.5 (0-7)	10.5 (6-15.5)	14.5 (11-21.5)	61.24	2	0.000
12: Gardening and Household Maintenance (0-21)						
Dutch	0 (1-4)	3 (0.75-7)	5 (1-9)	12.27	2	0.002
German	2 (0-5)	7.5 (5-12)	13 (6.25-18)	44.19	2	0.000
13: Caring (0-27)						
Dutch	0 (0-0)	0 (0-1)	0 (0-1.5)	2.61	2	0.27
German	0 (0-2)	0.5 (0-7.75)	3 (0-12.25)	9.79	2	0.007
14: Leisure, Hobbies and Social Activities (0-27)						
Dutch	1 (0-2)	3 (1-5.5)	7 (3.25-12.5)	57.70	2	0.000
German	1 (0-3)	5.5 (3-9)	8.5 (7-13.5)	52.16	2	0.000

Supplementary Materials: Dutch and German EDAQ: adaptation and testing

Note: sample sizes Dutch: good/very good n =144; fair n = 79; poor/very poor n=16. German: very good/good n = 82; fair n = 60; poor/very poor n=20.