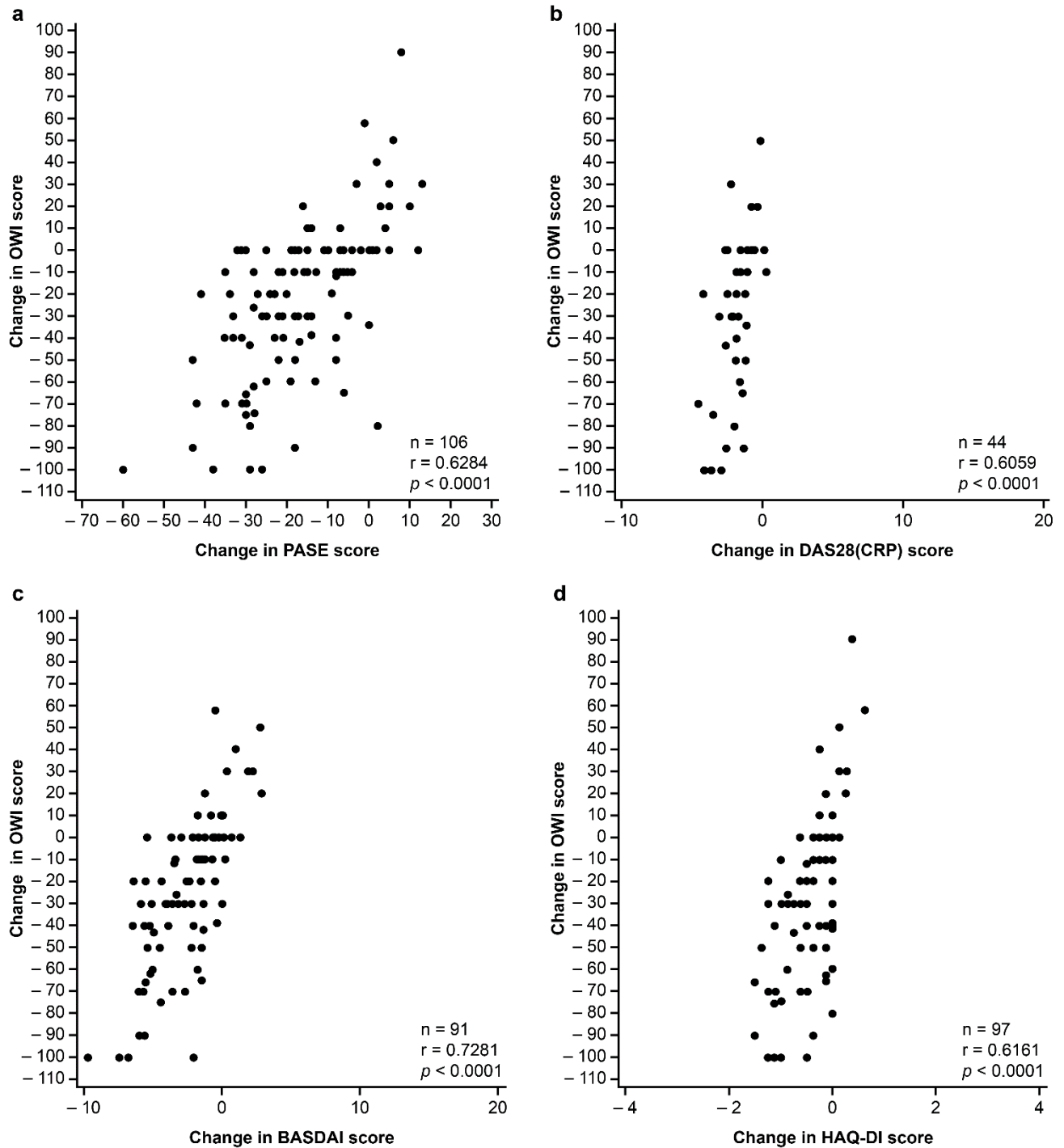


Supplementary Material

Fig. S1 Correlation between change in OWI and effectiveness scores at last evaluation: **a** OWI and PASE; **b** OWI and DAS28(CRP); **c** OWI and BASDAI; **d** OWI and HAQ-DI.



BASDAI Bath Ankylosing Spondylitis Disease Activity Index, *CRP* C-reactive protein, *DAS28* Disease Activity Score in 28 joints, *HAQ-DI* Health Assessment Questionnaire-Disability Index, *OWI* overall work impairment, *PASE* Psoriatic Arthritis Screening and Evaluation

Table S1 Factors affecting OWI score (effectiveness population)

Baseline factor ^{a, b}	<i>n</i> ^c	Baseline	Last evaluation	Change in score	<i>p</i> value ^d
Age (years)					0.2966 ^e
≥15 to <65	99	40.54 ± 33.22	17.41 ± 26.03	- 23.13 ± 36.24	
≥65	7	35.71 ± 28.78	27.14 ± 17.99	- 8.57 ± 19.52	
Sex					0.1614 ^f
Male	77	41.16 ± 32.86	16.02 ± 24.05	- 25.14 ± 35.02	
Female	29	37.73 ± 33.25	23.45 ± 29.19	- 14.28 ± 36.20	
Weight (kg)					0.1821 ^e
<50	5	51.66 ± 33.24	20.00 ± 18.71	- 31.66 ± 29.53	
≥50 to <60	11	28.72 ± 23.67	18.18 ± 27.50	- 10.54 ± 23.85	
≥60 to <70	26	45.96 ± 32.13	15.38 ± 22.84	- 30.58 ± 27.87	
≥70 to <80	22	45.45 ± 38.39	21.26 ± 29.44	- 24.19 ± 42.63	
≥80 to <90	14	35.88 ± 25.62	24.69 ± 31.67	- 11.19 ± 28.51	
≥90	7	55.71 ± 40.08	11.43 ± 22.68	- 44.29 ± 40.43	
Unknown	21	28.68 ± 31.62	15.24 ± 23.58	- 13.44 ± 41.64	
BMI (kg/m ²)					0.2976 ^e
<25	41	40.79 ± 31.05	18.43 ± 26.99	- 22.36 ± 26.88	
≥25 to <30	30	40.97 ± 32.74	18.93 ± 24.78	- 22.04 ± 37.38	
≥30	8	61.25 ± 40.27	20.00 ± 28.78	- 41.25 ± 39.50	
Unknown	27	32.30 ± 32.22	15.93 ± 24.85	- 16.38 ± 43.07	
BSA of rash (%)					0.8943 ^e
<10	37	39.51 ± 32.87	22.43 ± 29.94	- 17.07 ± 36.07	
≥10 to <20	14	39.64 ± 33.19	14.29 ± 24.09	- 25.36 ± 28.99	
≥20 to <30	9	40.36 ± 31.31	22.86 ± 22.56	- 17.50 ± 27.61	
≥30	12	35.00 ± 32.61	16.48 ± 24.48	- 18.52 ± 39.80	
Unknown	34	43.05 ± 34.76	14.12 ± 22.58	- 28.94 ± 38.17	
Duration of skin symptoms (years)					0.1805 ^e
<2	7	54.21 ± 33.66	54.29 ± 37.35	0.07 ± 30.72	
≥2 to <5	14	46.19 ± 34.25	32.39 ± 32.86	- 13.80 ± 55.13	
≥5 to <10	16	41.12 ± 24.03	10.00 ± 13.17	- 31.12 ± 19.65	
≥10	54	37.77 ± 32.30	15.37 ± 21.69	- 22.40 ± 29.52	
Unknown	15	36.00 ± 42.05	6.00 ± 15.49	- 30.00 ± 45.20	
Duration of joint symptoms (years)					0.2537 ^e
<2	40	44.23 ± 32.24	27.84 ± 32.55	- 16.39 ± 37.06	
≥2 to <5	24	40.64 ± 33.23	7.50 ± 11.13	- 33.14 ± 33.69	
≥5 to <10	15	21.95 ± 26.48	6.67 ± 9.00	- 15.29 ± 26.10	
≥10	15	51.33 ± 29.97	30.67 ± 25.76	- 20.67 ± 34.53	
Unknown	12	35.00 ± 39.43	5.00 ± 11.68	- 30.00 ± 43.48	
Comorbidities					0.3313 ^f
Absent	60	38.12 ± 32.20	13.00 ± 19.25	- 25.12 ± 32.05	
Present	46	42.97 ± 33.82	24.64 ± 31.13	- 18.33 ± 39.60	
Past medical history					0.0455 ^f
Absent	85	43.13 ± 33.51	17.13 ± 24.92	- 26.00 ± 34.07	

Present	20	29.39 ± 28.05	20.89 ± 29.13	- 8.50 ± 37.82	
Unknown	1	10.00	40.00	30.00	
Smoking history					0.9120 ^f
Absent	42	38.45 ± 33.00	15.32 ± 22.94	- 23.13 ± 34.30	
Present	41	45.67 ± 33.11	21.71 ± 27.83	- 23.97 ± 34.52	
Unknown	23	33.75 ± 31.94	16.52 ± 26.56	- 17.23 ± 40.32	
Previous treatment					0.3265 ^f
Absent	4	27.50 ± 34.03	22.50 ± 28.72	- 5.00 ± 5.77	
Present	102	40.72 ± 32.87	17.88 ± 25.65	- 22.85 ± 36.02	
Previous biologic					0.1766 ^f
Absent	95	41.06 ± 32.66	17.30 ± 25.18	- 23.76 ± 34.85	
Present	11	32.98 ± 35.12	24.55 ± 29.79	- 8.44 ± 39.85	
Previous topical corticosteroid					0.1301 ^f
Absent	39	41.08 ± 33.42	12.05 ± 16.73	- 29.03 ± 33.33	
Present	67	39.73 ± 32.75	21.54 ± 29.16	- 18.18 ± 36.37	
Previous topical activated vitamin D ₃					0.4565 ^f
Absent	53	42.49 ± 34.22	17.74 ± 24.78	- 24.75 ± 37.58	
Present	53	37.96 ± 31.56	18.37 ± 26.69	- 19.59 ± 33.47	
Previous oral cyclosporin					0.3432 ^f
Absent	93	41.79 ± 33.00	18.39 ± 26.14	- 23.40 ± 35.00	
Present	13	29.04 ± 30.54	15.65 ± 22.44	- 13.38 ± 39.32	
Previous oral retinoid					0.9582 ^f
Absent	99	40.54 ± 32.77	18.42 ± 26.15	- 22.12 ± 35.60	
Present	7	35.71 ± 36.14	12.86 ± 17.04	- 22.86 ± 36.92	
Previous oral MTX					0.1914 ^f
Absent	63	38.33 ± 33.89	19.90 ± 28.79	- 18.44 ± 36.56	
Present	43	42.99 ± 31.43	15.35 ± 20.16	- 27.64 ± 33.57	
Previous oral DMARD (excluding MTX)					0.9483 ^f
Absent	96	40.16 ± 33.12	18.06 ± 25.80	- 22.10 ± 35.36	
Present	10	40.87 ± 31.68	18.00 ± 25.30	- 22.87 ± 38.91	
Previous oral corticosteroid					0.5630 ^f
Absent	88	39.48 ± 31.99	16.40 ± 23.28	- 23.08 ± 35.96	
Present	18	43.84 ± 37.54	26.11 ± 34.66	- 17.73 ± 33.81	
Previous oral NSAID					0.0142 ^f
Absent	59	31.08 ± 30.15	16.40 ± 25.01	- 14.67 ± 33.47	
Present	47	51.70 ± 32.77	20.12 ± 26.52	- 31.58 ± 36.10	
Concomitant drugs					0.9949 ^f
Absent	16	33.99 ± 34.17	11.88 ± 24.28	- 22.12 ± 38.54	
Present	90	41.33 ± 32.67	19.15 ± 25.84	- 22.18 ± 35.17	
Concomitant topical corticosteroid					0.9546 ^f
Absent	76	37.21 ± 32.02	14.91 ± 22.46	- 22.30 ± 33.96	
Present	30	47.86 ± 34.21	26.00 ± 31.36	- 21.86 ± 39.78	
Concomitant topical vitamin D ₃ derivatives					0.8660 ^f
Absent	79	39.09 ± 32.50	17.26 ± 25.39	- 21.83 ± 36.04	
Present	27	43.54 ± 34.22	20.37 ± 26.67	- 23.17 ± 34.54	
Concomitant oral retinoid					

Absent	104	40.80 ± 32.89	18.01 ± 25.73	- 22.79 ± 35.46	0.1972 ^f
Present	2	10.00 ± 0.00	20.00 ± 28.28	10.00 ± 28.28	
Concomitant oral MTX					0.1615 ^f
Absent	68	37.43 ± 33.33	18.88 ± 27.26	- 18.55 ± 37.44	
Present	38	45.23 ± 31.77	16.58 ± 22.69	- 28.65 ± 31.19	
Concomitant oral DMARD (excluding MTX)					0.2139 ^f
Absent	101	40.99 ± 33.23	17.86 ± 25.97	- 23.13 ± 35.82	
Present	5	24.84 ± 19.70	22.00 ± 19.24	- 2.84 ± 23.07	
Concomitant oral corticosteroid					0.1725 ^f
Absent	93	39.13 ± 32.08	15.20 ± 21.93	- 23.94 ± 37.15	
Present	13	48.02 ± 38.37	38.46 ± 39.34	- 9.55 ± 16.03	
Concomitant oral NSAID					0.2293 ^f
Absent	78	34.14 ± 31.23	14.46 ± 21.15	- 19.68 ± 35.04	
Present	28	57.18 ± 31.74	28.06 ± 33.73	- 29.12 ± 36.52	
PASE					0.0098 ^f
≥ 47	63	54.60 ± 29.66	25.13 ± 28.12	- 29.47 ± 36.78	
< 47	43	19.16 ± 25.18	7.67 ± 17.02	- 11.49 ± 30.95	
DAS28(CRP)					0.0026 ^e
> 5.1	10	75.92 ± 22.67	24.00 ± 30.98	- 51.92 ± 32.89	
> 3.2 to ≤ 5.1	32	50.49 ± 29.42	17.99 ± 20.41	- 32.50 ± 35.39	
> 2.6 to ≤ 3.2	8	15.00 ± 14.14	16.25 ± 27.74	1.25 ± 26.42	
≤ 2.6	11	15.45 ± 29.79	8.18 ± 12.50	- 7.27 ± 31.33	
Unknown/missing	45	35.53 ± 31.11	19.51 ± 29.75	- 16.02 ± 33.14	
HAQ-DI					0.0004 ^e
> 1.5	4	86.43 ± 9.44	27.50 ± 17.08	- 58.93 ± 25.35	
> 1.0 to ≤ 1.5	12	75.42 ± 21.47	28.33 ± 32.15	- 47.08 ± 35.06	
> 0.5 to ≤ 1.0	29	53.21 ± 31.09	23.45 ± 28.19	- 29.76 ± 36.93	
≤ 0.5	60	24.33 ± 24.87	13.06 ± 22.62	- 11.28 ± 31.07	
Unknown/missing	1	10.00	0.00	- 10.00	
BASDAI					< 0.0001 ^f
≥ 4	48	61.86 ± 28.05	25.70 ± 30.19	- 36.16 ± 37.70	
< 4	51	19.42 ± 21.76	10.78 ± 16.83	- 8.63 ± 22.73	
Unknown/missing	7	43.47 ± 36.50	18.57 ± 32.88	- 24.90 ± 59.13	
PASI					0.8605 ^e
< 10	57	46.02 ± 36.18	21.85 ± 29.81	- 24.17 ± 39.96	
≥ 10 to < 20	30	34.39 ± 25.33	14.59 ± 20.73	- 19.80 ± 30.55	
≥ 20	11	32.60 ± 34.40	8.18 ± 12.50	- 24.42 ± 34.16	
Unknown/missing	8	31.25 ± 27.48	17.50 ± 20.53	- 13.75 ± 21.34	
Enthesitis					0.4859 ^f
Absent	62	38.69 ± 32.28	14.61 ± 22.67	- 24.08 ± 30.93	
Present	39	40.75 ± 34.56	21.74 ± 28.43	- 19.01 ± 41.70	
Missing	5	55.14 ± 27.58	32.00 ± 34.21	- 23.14 ± 42.83	
Dactylitis					0.0748 ^f
Absent	42	35.60 ± 29.97	20.90 ± 27.46	- 14.70 ± 34.13	
Present	59	42.25 ± 35.02	14.84 ± 23.30	- 27.41 ± 35.56	
Missing	5	55.14 ± 27.58	32.00 ± 34.21	- 23.14 ± 42.83	

Spondylitis						0.2628 ^f
Absent	70	39.84 ± 34.36	15.08 ± 24.72	- 24.76 ± 36.29		
Present	31	38.69 ± 30.30	22.51 ± 25.78	- 16.18 ± 32.95		
Missing	5	55.14 ± 27.58	32.00 ± 34.21	- 23.14 ± 42.83		
Nail psoriasis						0.8157 ^f
Absent	44	40.44 ± 32.98	18.54 ± 26.83	- 21.90 ± 35.40		
Present	54	41.38 ± 33.78	17.74 ± 25.72	- 23.64 ± 37.52		
Missing	8	31.25 ± 27.48	17.50 ± 20.53	- 13.75 ± 21.34		

BASDAI Bath Ankylosing Spondylitis Disease Activity Index, *BMI* body mass index,

BSA body surface area, *CRP* C-reactive protein, *DAS28* Disease Activity Score in 28

joints, *DMARD* disease-modifying antirheumatic drug, *HAQ-DI* Health Assessment

Questionnaire-Disability Index, *MTX* methotrexate, *NSAID* nonsteroidal anti-

inflammatory drug, *OWI* overall work impairment, *PASE* Psoriatic Arthritis Screening

and Evaluation, *PASI* Psoriasis Area and Severity Index, *SD* standard deviation

^aAll values are mean ± SD.

^bPatients with values missing before treatment initiation (between 28 days prior to and the first administration day of adalimumab) were classified as “unknown/missing.”

^cPatients with missing values were excluded from these analyses.

^dThe significant test was performed on the score before administration and the amount of change at final evaluation.

^e*p* values were assessed using a one-way analysis of variance.

^f*p* values were assessed using the *t* test.

Table S2 Median [range]) effectiveness scores at baseline and 24 weeks

Effectiveness scores	<i>n</i>	Baseline	<i>n</i>	24 weeks
WPAI				
OWI, %	106	35 (0–100)	79	10 (0–100)
Absenteeism, %	106	0 (0–100)	79	0 (0–100)
Presenteeism, %	106	30 (0–100)	82	10 (0–100)
AI, %	104	35 (0–100)	83	10 (0–80)
Skin symptoms, PASI	98	5.5 (0–39.6)	81	0.6 (0–13.5)
Joint symptoms				
TJC	99	5 (0–55)	78	0 (0–14)
SJC	99	3 (0–36)	78	0 (0–8)
DAS28(ESR)	48	4.4 (0.3–7.5)	24	1.7 (0–3.7)
DAS28(CRP)	61	3.5 (1.3–7.4)	29	1.9 (1.0–3.1)
BASDAI	99	3.92 (0.29–9.79)	68	0.97 (0–7.08)
PASE	106	48 (17–75)	83	28 (15–59)
Patient-reported outcomes				
HAQ-DI	105	0.5 (0–2.1)	67	0 (0–1)
PGA	105	62 (1–100)	81	10 (0–85)
VAS	105	59 (1–100)	81	8 (0–84)
PhGA VAS	99	42 (0–100)	76	6 (0–90)

AI activity impairment, *BASDAI* Bath Ankylosing Spondylitis Disease Activity Index, *CRP* C-reactive protein, *DAS28* Disease Activity Score in 28 joints, *ESR* erythrocyte sedimentation rate, *HAQ-DI* Health Assessment Questionnaire-Disability Index, *OWI* overall work impairment,

PASE Psoriatic Arthritis Screening and Evaluation, *PASI* Psoriasis Area and Severity Index,
PGA patient global assessment, *PhGA* physician global assessment, *SJC* swollen joint count,
TJC tender joint count, *VAS* visual analog scale, *WPAI* Work Productivity and Activity
Impairment