

SUPPLEMENTARY MATERIAL

Supplementary Table 1. Patient characteristics in the Italy and UK datasets.

	Italy	UK
Sample size	120	125
Women, n (%)	97 (80.8)	99 (79.2)
Age, years, mean (SD)	52.95 (14.83)	55.90 (13.16)
Disease duration, years, mean (SD)	15.49 (9.59)	13.97 (9.38)
Basic education, n (%)	58 (48.3)	105 (86.1)

SD standard deviation.

Supplementary Table 2. Item fit statistics, individual items, Italian (I- ENAT).

	Item	Fit Residuals	Degrees of freedom	Chi Square	Probability*
Managing pain	1	2.139	109.97	1.984	0.159
	2	1.807	109.03	6.304	0.012
	3	0.940	108.09	3.056	0.080
	4	1.642	107.16	0.171	0.680
	5	1.445	109.97	0.682	0.409
	6	2.684	107.16	5.401	0.020
Movement	7	-0.332	109.03	0.175	0.676
	8	0.036	109.03	0.630	0.427
	9	-0.334	108.09	0.177	0.674
	10	1.290	109.97	1.880	0.170
	11	-0.423	109.97	2.324	0.127
Feelings	12	-0.568	109.03	1.418	0.234
	13	1.325	109.97	0.163	0.686
	14	0.677	109.03	1.382	0.240
	15	1.168	109.03	0.022	0.883
Arthritis process	16	3.143	109.97	8.008	0.005
	17	1.595	107.16	0.304	0.581
	18	2.196	106.22	6.629	0.010
	19	-0.808	108.09	0.644	0.422
	20	-1.110	108.09	2.137	0.144
	21	-1.617	109.97	5.172	0.023
	22	2.191	108.09	1.589	0.207
Treatments from health professionals	23	-0.807	109.97	0.411	0.522
	24	0.066	109.97	0.423	0.515
	25	2.549	109.97	6.232	0.013
	26	-2.439	109.97	7.108	0.008
	27	-1.066	109.97	2.604	0.107
	28	-0.443	109.03	0.120	0.729
	29	-0.074	109.97	0.110	0.740
	30	0.692	109.03	0.010	0.920
Self-help measures	31	-0.363	109.97	0.419	0.517
	32	-1.557	109.03	6.869	0.009
	33	-0.704	109.03	6.448	0.011
	34	-0.102	109.97	1.302	0.254
	35	-0.958	109.97	1.509	0.219
	36	-0.098	109.97	0.227	0.633
Support systems	37	0.109	109.97	0.014	0.907
	38	1.829	109.97	0.167	0.682
	39	0.155	109.97	0.116	0.733

*Fit to the model: Bonferroni adjusted Chi square $P > 0.002$.

Supplementary Table 3. Item fit statistics for the 7 domains, Italian ENAT (I-ENAT).

	Fit Residuals	Degrees of freedom	Chi Square	Probability
Managing pain	0.326	90.970	0.052	0.820
Movement	0.874	93.430	0.068	0.795
Feelings	1.269	95.070	0.043	0.835
Arthritis process	0.733	90.150	0.530	0.467
Treatments from health professionals	-0.428	95.070	0.841	0.359
Self-help measures	-0.657	93.430	1.173	0.279
Support systems	0.495	95.890	0.654	0.419
<i>Fit to the model</i>	<i>Within +/-2.500</i>			<i>>0.050</i>

Supplementary Table 4. Association of Rasch-transformed scores of the I-ENAT with continuous variables (Spearman's correlation).

		Total I-ENAT	Managing pain	Movement	Feelings	Arthritis process	Treatments from health professionals	Self-help measures	Support systems systems
Age	Correlation	-0.011	-0.059	0.04	0.078	0.025	0.069	-0.038	-0.001
	Coefficient								
Disease duration	p value		0.666	0.401	0.796	0.456	0.68	0.988	0.911
	Correlation	-0.127	-0.071	-0.003	-0.024	-0.138	-0.028	-0.111	-0.095
School leaving age, years	Coefficient								
	p value	0.194	0.455	0.978	0.797	0.145	0.766	0.231	0.304
C-reactive protein	Correlation	-0.148	-0.015	-0.14	-0.056	-0.083	-0.158	-0.095	-0.205*
	Coefficient								
Erythrocyte sedimentation rate	p value	0.129	0.871	0.133	0.547	0.382	0.085	0.304	0.025
	Correlation	0.065	0.141	0.04	-0.123	0.093	0.079	-0.07	0.003
Swollen joint count	Coefficient								
	p value	0.743	0.449	0.826	0.496	0.617	0.661	0.7	0.985
Tender joint count	Correlation	0.242*	0.220*	0.143	0.262*	0.06	0.266*	0.109	0.212*
	Coefficient								
Patient - VAS, mm	p value	0.017	0.024	0.141	0.006	0.549	0.005	0.265	0.027
	Correlation	0.017	0.116	0.103	0.054	-0.106	0.001	-0.073	0.124
28-joint disease activity score (CRP)	Coefficient								
	p value	0.868	0.233	0.285	0.569	0.278	0.992	0.446	0.193
28-joint disease activity score (ESR)	Correlation	-0.122	-0.079	-0.02	-0.125	-0.208*	-0.091	-0.188	-0.006
	Coefficient								
HAQ	p value	0.231	0.42	0.838	0.19	0.033	0.342	0.051	0.952
	Correlation	0.326*	0.205*	0.301*	0.201*	0.222*	0.209*	0.235*	0.300*
Health	Coefficient								
	p value	0.001	0.029	0.001	0.028	0.018	0.022	0.01	0.001
Severity	Correlation	0.07	0.126	0.141	0.016	-0.073	0.067	-0.026	0.136
	Coefficient								
Health	p value	0.494	0.197	0.144	0.868	0.456	0.488	0.789	0.151
	Correlation	0.136	0.196	0.157	0.083	-0.095	0.118	0.043	0.188
Health	Coefficient								
	p value	0.193	0.05	0.115	0.404	0.354	0.232	0.67	0.056
Health	Correlation	0.286*	0.096	0.400*	0.287*	0.228*	0.204*	0.164	0.246*
	Coefficient								
Health	p value	0.003	0.312	<0.001	0.002	0.015	0.026	0.076	0.007
	Correlation	0.157	0.058	0.250*	0.131	0.207*	0.091	0.098	0.054
Health	Coefficient								
	p value	0.107	0.545	0.007	0.159	0.028	0.325	0.294	0.562
Health	Correlation	0.212*	0.088	0.298*	0.250*	0.18	0.206*	0.131	0.221*
	Coefficient								
Health	p value	0.028	0.35	0.001	0.006	0.056	0.025	0.159	0.015
	Coefficient								

*significant associations (p value <0.05).

IQR interquartile range. CRP C-reactive protein. ESR erythrocyte sedimentation rate. VAS Visual Analogic Score. HAQ Health assessment questionnaire.

comorbidity								
No	82.8 (54;98.2)	13.5 (9.5;15.4)	9.5 (6.2;11.8)	7.4 (5.5;10)	15.4 (10.6;20.8)	13.4 (5.7;17.7)	12.2 (4.9;16.3)	8.4 (5.3;10.4)
Yes	82.5 (58.7;102.5)	12.5 (9.5;15.4)	9 (6.2;11.8)	8.3 (5.9;10.3)	15.4 (12.4;20.8)	13.4 (10;17.7)	13.7 (4.3;18.1)	9.4 (5.3;10.4)
p value	0.575	0.522	0.949	0.343	0.688	0.727	0.666	0.65
Patient-reported Outcomes								
Willing to receive information								
No	52.2 (38.5;94.7)	9.5 (7.1;12)	6.2 (4;9.5)	5.9 (5;8.8)	8.1 (3.2;13.9)	6.2 (4.8;13.4)	7.1 (3.5;13.7)	6.2 (5;9.4)
Yes	85.6 (64;103.9)	13.5 (10.5;15.9)	10.1 (7.6;12.8)	8.3 (5.9;10.3)	17 (12.4;20.8)	13.4 (10;17.7)	13.7 (4.9;16.3)	8.4 (5.3;10.4)
p value	0.007	<0.001	0.012	0.115	<0.001	0.005	0.114	0.057
How much information								
1	43 (40.8;44)	8.6 (8.2;12)	6.2 (3.1;7.4)	6.6 (6.6;6.6)	4.1 (3.8;9)	4.4 (2.2;4.8)	3.8 (3.5;5.5)	4.6 (4.6;5.4)
2	43.4 (28.6;69)	8.6 (6.7;11.3)	7.2 (3.7;9.3)	4.7 (3.8;7)	6.5 (2.4;12.4)	5.9 (4.1;11.9)	3.5 (3.5;10.2)	5.8 (3;8.1)
3	70.1 (64.4;95)	11.5 (10.5;14.5)	9.5 (6.2;10.6)	7.4 (5.9;9.2)	17 (12.4;18.8)	14.8 (6.2;17.7)	7.1 (4.3;13.7)	8.4 (6.2;10.4)
4	88.4 (71.3;109.2)	14.5 (11;16.4)	10.6 (7;14.7)	9.2 (5.9;10.7)	17 (12.4;20.8)	13.4 (10;19.8)	13.7 (7.1;18.4)	9.4 (5.3;10.4)
p value	<0.001	0.001	0.015	0.013	<0.001	0.001	<0.001	0.009
Post-hoc tests	Categories 1 and 4. p=0.039; 2 and 4. p<0.001	Categories 2 and 4. p=0.001	Categories 2 and 4. p=0.031	Categories 2 and 4. p=0.008	Categories 2 and 3. p=0.007; 2 and 4. p<0.001	Categories 1 and 4. p=0.038; 2 and 4. p=0.014	Categories 2 and 4. p=0.001	Categories 2 and 4. p=0.018
Flare								
Yes	86.6 (70.5;103.3)	13.5 (10.3;15.7)	10.6 (6.8;14.7)	9.2 (5.9;10.3)	16.2 (12.4;21.6)	15.5 (10;19.3)	13.7 (7.1;16.3)	8.4 (5.8;10.4)
No	70.9 (49.6;96.8)	12.5 (9.5;15.4)	8.5 (5.7;10.6)	7.4 (5.3;10)	13.9 (9.3;18.8)	11.9 (5.5;16.2)	12.2 (4.3;16.3)	7.8 (4.6;10.4)
p value	0.075	0.423	0.115	0.325	0.207	0.023	0.408	0.162
Health								
1	66.1 (63.9;86.7)	9.5 (8.6;11.5)	4.2 (3.7;6.2)	5.3 (4.3;8.4)	13.9 (12.4;15.4)	9.7 (7.5;13)	13 (6.3;17.8)	6.3 (5.3;8.9)
2	68.7 (46.9;86.3)	11.5 (8.6;15.4)	7.6 (4.9;10.6)	6.6 (4.7;9.2)	12.4 (8.8;17)	10 (5.5;14.1)	7.1 (4.3;13.3)	5.3 (4.3;8.9)
3	95 (69.6;111.2)	13.5 (11.5;15.4)	10.1 (7.8;12.8)	8.3 (5.9;9.8)	17 (12.4;23.8)	16.2 (12.7;22.6)	14.4 (7.1;19.1)	9.4 (7.3;10.9)
4	85.7 (62;96.2)	13.5 (9.5;16.4)	10.6 (7.2;14.7)	9.2 (5.9;11.7)	13.9 (12.4;20.8)	13.4 (10;17.7)	13 (6.4;16.3)	8.4 (6.2;10.4)
p value	0.024	0.284	0.003	0.059	0.057	0.004	0.049	0.004
Post-hoc tests	Categories 2 and 3. p=0.024		Categories 1 and 3. p=0.037; 1 and 4 p=0.030			Categories 2 and 3. p=0.003	Categories 2 and 3. p=0.031	Categories 2 and 3. p=0.031
Severity								
1	66.1 (44.3;90.4)	12 (8.4;15.4)	6.2 (5.1;8.5)	7 (4.3;9)	13.9 (5.2;17)	11.9 (6;14.8)	12.2 (4.3;15.7)	8.3 (4.2;10.2)
2	72 (54;99.9)	13.5 (9.5;15.4)	8.5 (6.5;10.6)	8.3 (5.3;9.2)	12.4 (8.8;20.8)	13.4 (5.5;18.6)	13 (4.9;16.3)	8.4 (5.3;10.4)
3	85.2 (57.5;108.3)	13.5 (9.5;16.4)	9.5 (6.2;14.7)	7.4 (5.9;11.7)	17 (12.4;20.8)	13.4 (7.5;17.7)	13 (4.3;18.8)	8.4 (6.2;10.4)
4	88.9 (70.9;96.9)	13.5 (10.5;15.4)	10.6 (10.6;14.7)	9.2 (5.9;10.3)	17 (13.9;20.8)	16.2 (11.9;17.7)	13.7 (12.2;16.3)	6.2 (4.6;10.4)
p value	0.441	0.922	0.056	0.558	0.189	0.693	0.742	0.627