Long-term follow-up on health-related quality of life in major depressive disorder: A 2-year European cohort study

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SUPPLEMENTARY DATA

Appendix 1

Patient characteristics included in univariate analyses at baseline: country at baseline (France, Germany, Spain, Sweden, UK); age at baseline (18–34, 35–54, 55–65 years); sex at baseline (male/female); educational level at baseline (no degree or diploma/elementary school, high school, non-university degree, university degree); switch of antidepressant at baseline (yes/no); patients' first depressive episode (yes/no); time since beginning of this depressive episode (<1 week, 1–2 weeks, 2–4 weeks, 4–8 weeks, >8 weeks); at least one anxiety symptom/disorder at baseline (yes/no); at least one other concomitant mental disorder at baseline (yes/no); at least one other chronic medical condition at baseline (yes/no); chronic pain or fibromyalgia at baseline (yes/no); chronic fatigue at baseline (yes/no); sleep disorders at baseline (yes/no); suicide attempt before baseline (yes/no); hospitalization for depression over the past 12 weeks before baseline (yes/no); sick leave within the past 12 months before baseline (yes/no); CGI-S score at baseline (1–3, 4, 5–7); PHQ-9 total score at baseline (0–4, 5–9, 10–14, 15–19, 20–27); and PDQ-5 total score at baseline (0–1st quartile, 1st quartile—median, median—3rd quartile, 3rd quartile—20).

Patient characteristics included in univariate analyses at Month 2, Month 6/Month 12, and Month 18/Month 24: country at baseline (France, Germany, Spain, Sweden, UK); age at baseline (18–34, 35–54, 55–65 years); sex at baseline (male/female); educational level at baseline (no degree or diploma/elementary school, high school, non-university degree, university degree); at least one other concomitant mental disorder at baseline (yes/no); chronic pain or fibromyalgia at baseline (yes/no); suicide attempt before baseline or between

baseline and Month 2 (yes/no); hospitalization for depression between baseline and Month 2 (yes/no); sick leave within the past 12 months before baseline, at baseline, or between baseline and Month 2 (yes/no); treatment line at Month 2 (1, 2, ≥3); antidepressant treatment stopped between baseline and Month 2 (yes/no); CGI-S score at Month 2 (1–3, 4, 5–7); PHQ-9 total score at Month 2 (0–4, 5–9, 10–14, 15–19, 20–27); and PDQ-5 total score at Month 2 (0–1st quartile, 1st quartile–median, median–3rd quartile, 3rd quartile–20).

Table S1. Summary of patient characteristics at baseline

Patient characteristic	Analyzable population (N=1159)
Sociodemographics	
Country (n)	
France Spain UK Sweden Germany	339 270 341 45 164
Age, mean ± SD (years)	44.3±12.0
Female (%)	73.2
Marital status (%) Single Married/couple Divorced/separated Widowed	21.6 58.5 16.7 3.2
Education (%) No degree or diploma Elementary school High school Non-university degree University degree	4.5 24.4 36.9 14.0 20.2
Work status (%) Paid employment or self-employed Unemployed	66.8 17.8
Characteristics of current depressive episode	
Treating physician (% of patient group) General practitioner Psychiatrist	83.6 16.4
Duration of episode (%) ^a <1 week 1–2 weeks 2–4 weeks 4–8 weeks >8 weeks	1.6 5.9 21.3 19.8 51.4
Treatment ^b Initiating antidepressant therapy (%) Switching antidepressant therapy (%)	78.7 21.3
Significant symptoms of anxiety (%)c	62.6
Anxiety disorders (%) ^d	45.5

Patient characteristic	Analyzable population (N=1159)
Questionnaire scores, mean ± SD	
SF-12 ^e	
PCS	45.2±12.1
MCS	26.5±9.2
EQ-5D utility score ^f	0.5±0.3
PHQ-9 ⁹	17.6±5.3
CGI-S ^h	4.2±1.0
PDQ-5 ⁱ	11.4±4.6
Other current illnesses	
Mental-health disorders other than depression (%)	
Alcohol abuse or dependence	2.7
Other abuse disorders	1.3
Somatoform disorders	7.9
Eating disorders (anorexia, bulimia)	8.1
Other	0.6
Functional syndromes (%)	
Chronic pain	16.7
Chronic fatigue	16.1
Fibromyalgia	6.8
Premenstrual syndrome	3.5
Sleep disorders	28.2
Other	2.8
Previous depressive episodes	
History of depression (%)	
Previous episode ^j	56.6
Episode within previous 12 months if previous episode ^k	25.5
Antidepressant treatment if previous episode ¹	80.9
Previous hospitalization for depressionk	8.9
Remission of previous episode ^k	83.2
Previous suicide attempt ^k	13.1

^aPhysicians' response. ^bN=1157; switching/initiating status unknown for two patients. ^cThe percentage refers to patients "probably" or "definitely" presenting clinically significant symptoms of anxiety according to physician; total N=1158. ^dThe percentage refers to patients "probably" or "definitely" meeting DSM-IV criteria for one or more of the anxiety disorders according to physician; N=1120. ^eN=912. ^fUK study population only; N=276. ^gN=940. ^hN=1155. ⁱN=770. ⁱN=1157. ^kN=655. ⁱN=654.

Abbreviations: CGI-S, Clinical Global Impression—Severity of illness scale; DSM-IV, Diagnostic and Statistical Manual of Mental Disorders (4th Edition); EQ-5D, EuroQol Five Dimensions questionnaire; MCS, mental component summary; PCS, physical component summary; PDQ-5, 5-item Perceived Deficit Questionnaire; PHQ-9, 9-item Patient Health Questionnaire; SD, standard deviation; SF-12, 12-item Short-Form Health Survey.

Table S2. Results of the univariate analyses of patient characteristics associated with SF-12 MCS and PCS scores at baseline, Month 2, and Month 6/Month 12. Data shown are coefficients (± standard error). Coefficients show the change in the respective score between the specified levels for each characteristic. Factors with *P*<0.2 in the univariate ANOVA were retained in the multivariate ANCOVA (shown in Table 1). A long dash indicates that an association with the characteristic listed was not assessed for this time point; a short dash (–) indicates the reference category.

	Base	Baseline ^a		Month 2 ^a		Month 6/Month 12 ^a	
Patient characteristic	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score	
Baseline sociodemographic	s						
Country	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	P=0.030	<i>P</i> <0.001	
France	-2.76±0.95	1.13±1.25	0.44±1.13	2.11±1.23	1.35±1.11	3.32±1.09	
Spain	0.87±0.99	-1.67±1.30	2.72±1.21	-0.82±1.32	1.64±1.17	−0.47±1.15	
UK	-6.10±0.96	7.85±1.25	-2.54±1.12	6.84±1.21	−0.57±1.13	6.66±1.11	
Sweden	-2.48±1.62	3.99±2.11	-3.02±1.97	3.71±2.14	-3.19±2.06	2.95±2.02	
Germany	-	-	-	-	-	-	
Age (years)	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> =0.016	<i>P</i> <0.001	
18–34	−5.11±0.87	7.36±1.14	-3.57±1.04	6.70±1.13	-2.94±1.06	7.07±1.04	
35–54	-1.50±0.73	4.77±0.96	-0.78±0.86	3.83±0.94	−0.71±0.85	4.48±0.84	
55–65	-	-	-	-	-	-	
Sex; male vs female	<i>P</i> =0.639	<i>P</i> =0.002	<i>P</i> =0.832	<i>P</i> =0.336	<i>P</i> =0.490	<i>P</i> =0.298	
	-0.32±0.69	2.72±0.90	−0.17±0.81	0.87±0.90	0.57±0.82	0.86±0.83	
Educational level	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> =0.471	<i>P</i> <0.001	
Elementary school	3.43±0.86	-8.60±1.10	1.62±1.01	−8.27±1.08	0.44±1.01	-7.68±0.98	
High school	0.34±0.82	-2.09±1.04	-1.41±0.96	−2.01±1.03	−0.57±0.97	-2.32±0.94	
Non-university degree	1.49±1.05	-0.41±1.34	2.53±1.23	-0.82±1.32	1.07±1.23	-0.16±1.19	
University degree	-	_	_	_	_	_	

	Baseline ^a		Month 2 ^a		Month 6/Month 12 ^a	
Patient characteristic	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score
Clinical characteristics						
CGI-S score ^b	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001
1–3	3.30±0.88	4.75±1.15	5.84±1.16	6.39±1.28	7.30±1.11	6.02±1.16
4	1.19±0.66	5.07±0.86	1.74±1.21	3.94±1.33	2.46±1.16	3.19±1.21
5–7	_	_	_	_	_	_
PHQ-9 score ^b	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001
0–4	22.05±2.88	6.10±4.22	21.54±1.29	15.12±1.62	16.06±1.52	13.52±1.59
5–9	12.74±1.10	8.80±1.61	12.30±0.99	11.57±1.24	11.87±1.16	10.73±1.22
10–14	8.48±0.76	4.30±1.11	7.57±0.97	8.64±1.21	7.79±1.14	7.69±1.19
15–19	4.38±0.64	2.82±0.94	2.93±1.02	5.10±1.28	3.05±1.22	5.58±1.28
20–27	_	_	_	_	_	_
PDQ-5 score ^b	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001	<i>P</i> <0.001
0–7	11.49±0.89	5.23±1.31	13.84±0.94	7.25±1.19	11.62±1.09	6.10±1.20
8–11	7.12±0.84	3.57±1.23	7.64±0.94	6.45±1.19	6.83±1.06	5.16±1.16
12–14	4.36±0.84	1.14±1.24	5.11±0.95	3.75±1.19	4.91±1.08	3.63±1.19
15–20	_	_	_	_	_	_
Patient's first depressive	<i>P</i> =0.990	<i>P</i> =0.203	_	_	_	_
episode; yes vs no	-0.01±0.61	1.02±0.80				
Time since the start of this	<i>P</i> =0.073	<i>P</i> =0.075	_	_	_	_
depressive episode						
<1 week	3.98±2.40	5.41±3.16				
1–2 weeks	2.37±1.29	-1.92±1.70				
2–4 weeks	1.61±0.79	1.18±1.03				
4–8 weeks	1.01±0.80	-1.34±1.06				
>8 weeks	_	_				
Suicide attempt ^c ; yes vs no	<i>P</i> =0.003	<i>P</i> =0.045	<i>P</i> =0.003	<i>P</i> =0.291	<i>P</i> <0.001	<i>P</i> =0.062
	-3.60±1.22	-3.24±1.61	-4.05±1.35	-1.59±1.50	-5.38±1.32	-2.53±1.35
At least one anxiety	<i>P</i> =0.077	<i>P</i> <0.001	_	_	_	_
symptom/disorder at baseline;	1.13±0.63	-3.73±0.83				

	Baseline ^a		Month 2 ^a		Month 6/Month 12 ^a	
Patient characteristic	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score	SF-12 MCS score	SF-12 PCS score
yes vs no						
At least one other concomitant mental disorder at baseline; yes vs no	<i>P</i> =0.051 1.64±0.84	<i>P</i> <0.001 -4.84±1.09	<i>P</i> =0.473 0.71±0.99	<i>P</i> <0.001 −3.73±1.09	<i>P</i> =0.139 -1.41±0.95	<i>P</i> <0.001 -3.63±0.96
At least one other chronic medical condition at baseline; yes vs no	<i>P</i> =0.118 1.08±0.69	<i>P</i> <0.001 -5.60±0.89	_	_	_	_
Chronic pain or fibromyalgia at baseline; yes vs no	<i>P</i> <0.001 4.32±0.75	<i>P</i> <0.001 -10.29±0.95	<i>P</i> =0.174 1.21±0.89	<i>P</i> <0.001 -9.11±0.93	<i>P</i> =0.030 -1.90±0.87	<i>P</i> <0.001 -9.05±0.83
Chronic fatigue at baseline; yes vs no	<i>P</i> =0.004 2.41±0.85	<i>P</i> <0.001 -5.46±1.10	_	_	_	_
Sleep disorders at baseline; yes vs no	<i>P</i> =0.672 0.29±0.68	<i>P</i> =0.004 -2.58±0.89	_	_	_	_
Hospitalization for depression ^d ; yes vs no	<i>P</i> =0.399 1.57±1.86	<i>P</i> =0.006 -6.74±2.44	<i>P</i> =0.480 -1.77±2.50	<i>P</i> =0.012 -6.84±2.73	<i>P</i> =0.558 -1.43±2.45	<i>P</i> =0.119 -3.92±2.51
Sick leavee; yes vs no	<i>P</i> =0.267 -0.73±0.66	<i>P</i> =0.007 -2.34±0.86	<i>P</i> =0.010 -1.87±0.72	<i>P</i> =0.067 -1.47±0.80	<i>P</i> =0.301 -0.75±0.72	<i>P</i> =0.259 -0.83±0.73
Treatment characteristics						
Switch of antidepressant at baseline; yes vs no	<i>P</i> =0.598 0.39±0.75	<i>P</i> <0.001 -5.77±0.97	_	_	_	_
Treatment line at Month 2 1 2 ≥3	_	_	P=0.002 0.82±1.76 -2.14±1.86	<i>P</i> <0.001 6.16±1.93 1.57±2.03 –	P<0.001 3.92±1.63 -0.26±1.73	<i>P</i> <0.001 6.17±1.65 1.57±1.75
Antidepressant treatment stopped between baseline and Month 2; yes vs no	_	_	<i>P</i> =0.518 0.97±1.49	<i>P</i> =0.162 2.29±1.63	<i>P</i> =0.796 0.37±1.43	<i>P</i> =0.034 3.07±1.44

^aNumber of patients with an SF-12 assessment: Baseline, N=912; Month 2, N=807; Month 6, N=738; Month 12, N=702.

bBaseline CGI-S, PHQ-9 and PDQ-5 scores used in analysis of HRQoL outcomes at baseline; Month 2 CGI-S, PHQ-9 and PDQ-5 scores used in analysis of HRQoL outcomes at Month 2, Month 6/Month 12, and Month 18/ Month 24.

^cBefore baseline for HRQoL outcomes at baseline; before baseline or between baseline and Month 2 for HRQoL outcomes at Month 2, Month 6/ Month 12, and Month 18/ Month 24.

^dWithin 12 weeks before baseline for HRQoL outcomes at baseline; between baseline and Month 2 for HRQoL outcomes at Month 6/ Month 12, and Month 18/ Month 24.

^eWithin 12 months before baseline for HRQoL outcomes at baseline; within 12 months before baseline or at baseline or between baseline and Month 2 for HRQoL outcomes at Month 2 and Month 6/Month 12.

Abbreviations: CGI-S, Clinical Global Impression—Severity of illness scale; HRQoL, health-related quality of life; MCS, mental component summary; PCS, physical component summary; PDQ-5, 5-item Perceived Deficit Questionnaire; PHQ-9, 9-item Patient Health Questionnaire; SF-12, 12-item Short-Form Health Survey

Table S3. Results of the univariate analyses of patient characteristics associated with EQ-5D utility index at baseline, Month 2, Month 6/Month 12, and Month 18/Month 24 (UK population only). Data shown are coefficients (± standard error). Coefficients show the change in the respective score between the specified levels for each characteristic. Factors with *P*<0.2 in the univariate ANOVA were retained in the multivariate ANCOVA (shown in Table 2). A long dash indicates that an association with the characteristic listed was not assessed for this time point; a short dash (–) indicates the reference category.

	EQ-5D utility index ^a					
Patient characteristic	Baseline	Month 2	Month 6/ Month 12	Month 18/ Month 24		
Baseline sociodemographi	ics					
Age (years) 18–34 35–54 55–65	P=0.029 0.05±0.05 0.12±0.05	P=0.083 -0.07±0.05 0.02±0.04	P=0.079 0.05±0.05 0.10±0.05 -	P=0.464 0.05±0.06 0.06±0.05		
Sex; male vs female	<i>P</i> =0.183 -0.05±0.04	<i>P</i> =0.891 -0.00±0.04	<i>P</i> =0.334 -0.04±0.04	<i>P</i> =0.438 0.03±0.04		
Educational level Elementary school High school Non-university degree University degree	P=0.376 -0.01±0.07 0.01±0.04 0.00±0.06	P=0.499 -0.10±0.07 -0.04±0.04 -0.02±0.06	P=0.027 -0.17±0.07 -0.08±0.04 0.02±0.06	P=0.005 -0.26±0.07 -0.11±0.05 -0.07±0.07		
Clinical characteristics						
CGI-S score ^b 1–3 4 5–7	P<0.001 0.03±0.06 0.02±0.05	P<0.001 0.41±0.09 0.27±0.09	P=0.003 0.24±0.10 0.14±0.10	P=0.008 0.27±0.10 0.18±0.10		
PHQ-9 score ^b 0–4 5–9 10–14 15–19 20–27	P<0.001 NA 0.32±0.08 0.22±0.06 0.16±0.04	P<0.001 0.54±0.06 0.47±0.04 0.39±0.04 0.28±0.04	P<0.001 0.45±0.07 0.39±0.05 0.34±0.05 0.22±0.05	P<0.001 0.34±0.08 0.28±0.06 0.25±0.06 0.10±0.06		
PDQ-5 score ^b 0–7 8–11 12–14 15–20	P<0.001 0.29±0.06 0.21±0.04 0.21±0.04	P<0.001 0.24±0.05 0.28±0.04 0.16±0.04	P<0.001 0.17±0.06 0.20±0.05 0.12±0.04	P=0.005 0.13±0.06 0.19±0.05 0.08±0.05		
Patient's first depressive episode; yes vs no	<i>P</i> =0.470 0.03±0.04	_	_	_		
Time since the start of this depressive episode <1 week 1–2 weeks	P=0.505 0.20±0.17 -0.06±0.08	_	_	_		

	EQ-5D utility index ^a					
Patient characteristic	Baseline	Month 2	Month 6/ Month 12	Month 18/ Month 24		
2–4 weeks 4–8 weeks >8 weeks	0.02±0.06 0.05±0.05 —					
Suicide attempt ^c ; yes vs no	<i>P</i> <0.001 -0.19±0.06	<i>P</i> =0.002 -0.17±0.05	<i>P</i> <0.001 -0.24±0.05	<i>P</i> <0.001 -0.21±0.06		
At least one anxiety symptom/disorder at baseline; yes vs no	<i>P</i> <0.001 -0.12±0.03	_	_	_		
At least one other concomitant mental disorder at baseline; yes vs no	<i>P</i> =0.087 -0.15±0.09	<i>P</i> =0.093 -0.13±0.08	<i>P</i> =0.905 -0.01±0.11	<i>P</i> =0.384 0.09±0.10		
At least one other chronic medical condition at baseline; yes vs no	<i>P</i> =0.131 -0.07±0.04	_	_	_		
Chronic pain or fibromyalgia at baseline; yes vs no Chronic fatigue at	P=0.004 -0.17±0.06 P=0.465	<i>P</i> <0.001 -0.24±0.05	<i>P</i> <0.001 -0.20±0.05	<i>P</i> <0.001 -0.26±0.06		
baseline; yes vs no	-0.11±0.14	_	_	_		
Sleep disorders at baseline; yes vs no	<i>P</i> =0.156 0.12±0.08	_	_	_		
Hospitalization for depression ^d ; yes vs no	<i>P</i> =0.698 0.04±0.10	<i>P</i> =0.309 -0.20±0.19	<i>P</i> <0.001 -0.85±0.25	<i>P</i> <0.001 -0.85±0.25		
Sick leavee; yes vs no	<i>P</i> =0.014 -0.09±0.03	<i>P</i> =0.001 -0.11±0.03	<i>P</i> =0.059 -0.07±0.03	<i>P</i> =0.264 -0.04±0.04		
Treatment characteristics						
Switch of antidepressant at baseline; yes vs no	P=0.044 -0.09±0.05	_	_	_		
Treatment line at Month 2 1 2 ≥3	_	P<0.001 0.16±0.09 -0.04±0.10 -	P<0.001 -0.07±0.10 -0.24±0.10 -	P=0.003 -0.01±0.11 -0.18±0.11 -		
Antidepressant treatment stopped between baseline and Month 2; yes vs no	_	<i>P</i> =0.554 0.04±0.07	<i>P</i> =0.187 0.08±0.06	<i>P</i> =0.714 -0.03±0.07		

^aNumber of patients with an EQ-5D assessment: Baseline, N=276; Month 2, N=261; Month 6, N=216; Month 12, N=196; Month 18, N=161; Month 24, N=160

^bBaseline CGI-S, PHQ-9 and PDQ-5 scores used in analysis of HRQoL outcomes at baseline; Month 2 CGI-S, PHQ-9 and PDQ-5 scores used in analysis of HRQoL outcomes at Month 2, Month 6/ Month 12, and Month 18/ Month 24.

^cBefore baseline for HRQoL outcomes at baseline; before baseline or between baseline and Month 2 for HRQoL outcomes at Month 2, Month 6/Month 12, and Month 18/Month 24.

^dWithin 12 weeks before baseline for HRQoL outcomes at baseline; between baseline and Month 2 for HRQoL outcomes at Month 2, Month 6/ Month 12, and Month 18/ Month 24.

^eWithin 12 months before baseline for HRQoL outcomes at baseline; within 12 months before baseline or at baseline or between baseline and Month 2 for HRQoL outcomes at Month 2 and Month 6/Month 12.

Abbreviations: CGI-S, Clinical Global Impression—Severity of illness scale; EQ-5D, EuroQol Five Dimensions questionnaire; HRQoL, health-related quality of life; NA, not available; PDQ-5, 5-item Perceived Deficit Questionnaire; PHQ-9, 9-item Patient Health Questionnaire