Data supplement to Roux et al. Associations between residual depressive symptoms, cognition, and functioning in patients with euthymic bipolar disorder: results from the FACE-BD cohort**.** Br J Psychiatry doi: 10.1192/bjp.bp.117.201335

Table DS1 Results of the parallel analysis

Component	Adjusted Eigenvalue	Unadjusted Eigenvalue
1	**5.91**	**6.49**
2	**1.84**	**2.33**
3	**1.33**	**1.73**
4	**1.14**	**1.48**
5	**1.02**	**1.3**
6	0.85	1.07
7	0.68	0.86
8	0.72	0.85
9	0.66	0.74
10	0.6	0.64
11	0.61	0.6
12	0.61	0.56
13	0.6	0.51
14	0.63	0.5
15	0.58	0.41
16	0.61	0.4
17	0.59	0.34
18	0.62	0.33
19	0.61	0.28
20	0.61	0.25
21	0.62	0.21
22	0.58	0.12

Table DS2 Component statistics

	Verbal memory	Speed	Working memory	Executive functions	Attention
Sum of squared loadings	3.35	3.2	2.78	2.26	1.74
Proportion of explained variance	0.15	0.15	0.13	0.1	0.08
Cumulative proportion of explained variance	0.15	0.3	0.42	0.53	0.61

Table DS3 Pearson correlations among the 241 participants for the cognitive and non-cognitive variables

	MADRS		**Cognitive component scores**										**FAST**		**Education**		**Age**	
			"Verbal memory"		**"Speed of processing and verbal knowledge"**		**"Working memory and problem solving"**		**"Verbal fluency and inhibition"**		**"Visual sustained attention »**							
	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p	r	p
"Verbal memory"	-0.02	0.743																
"Speed of processing and verbal knowledge"	-0.01	0.917	0.31	<0.001														
"Working memory and problem solving"	-0.05	0.482	0.36	<0.001	0.34	<0.001												
"Verbal fluency and inhibition"	-0.1	0.129	0.14	0.032	0.28	<0.001	0.2	0.002										
"Visual sustained attention »	0.12	0.076	0.05	0.412	-0.05	0.375	0.06	0.453	-0.01	0.937								
FAST	0.43	<0.001	-0.22	<0.001	-0.1	0.101	-0.03	0.623	-0.24	<0.001	0	0.987						
Education	0.07	0.244	0.23	<0.001	0.28	<0.001	0.16	0.013	-0.01	0.902	0.26	<0.001	-0.09	0.161				
Age	-0.05	0.488	-0.28	<0.001	-0.26	<0.001	-0.3	<0.001	-0.03	0.645	0.26	<0.001	-0.12	0.078	-0.04	0.566		
Sex (male:1)	-0.07	0.272	-0.18	0.003	-0.07	0.283	0.26	<0.001	-0.09	0.134	-0.06	0.355	0.04	0.529	-0.05	0.454	-0.06	0.336

* P values were computed from standard errors estimated using bootstrap with 2000 iterations.
MADRS: Montgomery Åsberg Depression Rating Scale
FAST: Functioning Assessment Short Test

Table DS4 Patterns of missingness for the variables included in the model

MADRS	Cognitive components scores					FAST	Age	Sex	Education
	"Verbal memory"	"Speed of processing and verbal knowledge"	"Working memory and problem solving"	"Verbal fluency and inhibition"	"Visual sustained attention »				
present	present	present	present	present	present	present	present	present	present
present	present	present	present	present	present	missing	present	present	present
missing	present	present	present	present	present	missing	present	present	present
missing	present	present	present	present	present	present	present	present	present

MADRS: Montgomery Åsberg Depression Rating Scale
FAST: Functioning Assessment Short Test

Table DS5 Covariance coverage matrix for the variables included in the model

	MADRS	**Cognitive component scores**					**FAST**	**Age**	**Sex**	**Education**
		"Verbal memory"	**"Speed of processing and verbal knowledge"**	**"Working memory and problem solving"**	**"Verbal fluency and inhibition"**	**"Visual sustained attention"**				
MADRS	0.97									
"Verbal memory"	0.97	1								
"Speed of processing and verbal knowledge"	0.97	1	1							
"Working memory and problem solving	0.97	1	1	1						
"Verbal fluency and inhibition"	0.97	1	1	1	1					
"Visual sustained attention"	0.97	1	1	1	1	1				
FAST	0.94	0.95	0.95	0.95	0.95	0.95	0.95			
Age	0.97	1	1	1	1	1	0.95	1		
Sex	0.97	1	1	1	1	1	0.95	1	1	
Education	0.97	1	1	1	1	1	0.95	1	1	1

MADRS: Montgomery Åsberg Depression Rating Scale
FAST: Functioning Assessment Short Test

Table DS6. Estimated standardised path and residual correlation coefficients in the path analysis model

Variables	**Estimated standardised path coefficients**	**Standard Error**	**z**	**p**
MADRS => “Verbal memory”	-0.06	0.06	-1.1	0.263
MADRS => “Speed of processing and verbal knowledge”	-0.04	0.06	-0.8	0.436
MADRS => “Working memory and problem solving”	-0.06	0.06	-0.9	0.36
MADRS => ”Verbal fluency and inhibition”	-0.11	0.07	-1.6	0.107
MADRS => “Visual sustained attention”	0.11	0.06	1.7	0.09
“Verbal memory” => FAST	-0.25	0.07	-3.5	**<0.001**
“Speed of processing and verbal knowledge” => FAST	-0.01	0.07	-0.2	0.833
“Working memory and problem solving” => FAST	0.08	0.07	1.2	0.229
“Verbal fluency and inhibition” => FAST	-0.19	0.05	-3.7	**<0.001**
“Visual sustained attention” => FAST	0.02	0.06	0.3	0.752
MADRS => FAST	0.41	0.05	8.2	**<0.001**
Covariates	**Estimated standardised path coefficients**			
Age => “Verbal memory”	-0.29	0.06	-5.1	**<0.001**
Sex => “Verbal memory”	-0.2	0.06	-3.4	**0.001**
Education => “Verbal memory”	0.21	0.06	3.6	**<0.001**
Age => “Speed of processing and verbal knowledge”	-0.26	0.06	-4.5	**<0.001**
Sex => “Speed of processing and verbal knowledge”	-0.07	0.06	-1.3	0.207
Education => “Speed of processing and verbal knowledge”	0.27	0.05	5	**<0.001**
Age => “Working memory and problem solving”	-0.28	0.05	-5.1	**<0.001**
Sex => “Working memory and problem solving”	0.25	0.06	4.5	**<0.001**
Education => “Working memory and problem solving”	0.17	0.06	2.7	**0.006**
Age => “Verbal fluency and inhibition”	-0.04	0.06	-0.7	0.505
Sex => “Verbal fluency and inhibition”	-0.1	0.06	-1.7	0.088
Education => “Verbal fluency and inhibition”	-0.01	0.07	-0.1	0.912
Age => “Visual sustained attention”	0.28	0.05	5.1	**<0.001**
Sex => “Visual sustained attention”	-0.02	0.06	-0.4	0.713
Education => “Visual sustained attention”	0.26	0.06	4.5	**<0.001**
Age => FAST	-0.15	0.07	-2.3	**0.023**
Sex => FAST	-0.03	0.06	-0.5	0.652
Education => FAST	-0.08	0.05	-1.5	0.126
Cognitive components	**Residual correlation coefficients**			
“Verbal memory” <=> “Speed of processing and verbal knowledge”	0.19	0.06	3	**0.003**
“Verbal memory” <=> “Working memory and problem solving”	0.34	0.06	5.8	**<0.001**
“Verbal memory” <=> “Verbal fluency and inhibition”	0.12	0.06	1.8	**0.067**
“Speed of processing and verbal knowledge” <=> “Working memory and problem solving”	0.28	0.05	5.4	**<0.001**
“Speed of processing and verbal knowledge <=> “Verbal fluency and inhibition”	0.29	0.06	4.5	**<0.001**
“Working memory and problem solving <> “Verbal fluency and inhibition”	0.23	0.06	3.8	**<0.001**

Standard errors are estimated using model-based bootstrapping with 2000 iterations.

Online Supplemental DS1

The references for the range, internal consistency and intraclass correlation coefficient of FAST are the following:

1. Aydemir O, Uykur B. [Reliability and validity study of the Turkish version of functioning assessment short test in bipolar disorder]. Turk Psikiyatri Derg. 2012; 23(3): 193-200.
2. Barbato A, Bossini L, Calugi S, D'Avanzo B, Fagiolini A, Koukouna D, et al. Validation of the Italian version of the Functioning Assessment Short Test (FAST) for bipolar disorder. Epidemiol Psychiatr Sci. 2013; 22(2): 187-94.
3. Cacilhas AA, Magalhaes PV, Cereser KM, Walz JC, Weyne F, Rosa AR, et al. Validity of a short functioning test (FAST) in Brazilian outpatients with bipolar disorder. Value Health. 2009; 12(4): 624-7.
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6. Suominen K, Salminen E, Lahteenmaki S, Tupala T, Isometsa E. Validity and reliability of the Finnish version of the Functioning Assessment Short Test (FAST) in bipolar disorder. Int J Bipolar Disord. 2015; 3: 10.