

Data supplement

Table DS1 Study characteristics for individual studies			
Study	Sample	Tasks	Effect size
Bornstein <i>et al</i> , 1990 ¹¹	55 schizophrenia, 18 schizoaffective disorder out-patient	Phonetic fluency	−0.26
		TMT-A	0.13
		TMT-B	0.46
		Delayed memory	0.43
		WCST perseverative errors	0.67
		Semantic fluency	−0.11
		Visual memory – delayed	−0.01
Morice <i>et al</i> , 1990 ¹²	60 schizophrenia, 20 bipolar disorder near discharge	WAIS-R IQ	1.07
		Digit symbol	0.44
		Digit span	0.37
		WCST categories achieved	0.10
		WCST perseverative errors	−0.01
Beatty <i>et al</i> , 1993 ¹³	13 schizophrenia, 13 schizoaffective disorder out-patient	Phonetic fluency	−0.44
		WCST categories achieved	0.00
		WCST perseverative errors	0.04
		Digit span forwards	0.66
		Digit span backwards	0.14
		Semantic fluency	0.52
Metz <i>et al</i> , 1994 ³⁸	28 schizophrenia, 5 schizoaffective disorder symptomatic	WCST categories achieved	0.43
		WCST perseverative errors	0.58
Jeste <i>et al</i> , 1996 ¹⁴	160 schizophrenia, 30 major depression out-patients	TMT-A	0.06
		TMT-B	0.01
		Digit symbol	−0.21
		Digit Span	−0.22
		CVLT learning	0.18
		Story learning	−0.20
		Figure learning	0.08
		Story recall	−0.38
		Figure recall	−0.40
Miller <i>et al</i> , 1996 ¹⁵	26 schizophrenia, 26 schizoaffective disorder symptomatic	WAIS-R IQ	−0.25
		List learning	−0.09
		BVRT	−0.55
Manschrek <i>et al</i> , 1997 ¹⁶	19 schizophrenia, 19 schizoaffective disorder symptomatic	Miller–Selfridge recall	0.22
Gruzelier <i>et al</i> , 1998 ¹⁰	36 schizophrenia, 21 affective psychosis symptomatic	Semantic fluency	−0.34
		Phonetic fluency	−0.37
		Digit span	−0.31
Evans <i>et al</i> , 1999 ¹⁷	115 schizophrenia, 24 schizoaffective disorder	Memory	0.36
		Digit span	−0.18
Mojtabai <i>et al</i> , 2000 ¹⁸	102 schizophrenia 121 affective psychosis (72 bipolar disorder, 49 major depression) first episode, out-patients	TMT-A	0.55
		TMT-B	0.73
		Digit symbol	0.99
		Visual reproduction	
		–Immediate	0.54
		–Delayed	0.66
		WMS-R pair associates	
		–Immediate	0.65
		–Delayed	0.45
Phonetic fluency	0.62		
Rossi <i>et al</i> , 2000 ¹⁹	66 schizophrenia, 40 bipolar disorder euthymic	WCST categories achieved	0.25
		WCST perseverative errors	0.18
Taiminen <i>et al</i> , 2000 ⁴⁰	17 first-episode schizophrenia, 23 major depression symptomatic	WCST categories achieved	0.60
		WCST perseverative errors	0.63
Verdoux & Liraud 2000 ²⁰	20 schizophrenia, 33 bipolar disorder symptomatic	WCST categories achieved	0.09
		BEM immediate	0.42
		BEM delayed	0.05
		Story learning	0.74
		Story delayed	0.69
		Figure immediate	−0.22
		Figure delayed	−0.08
Gilvarry <i>et al</i> , 2001a ²¹	45 schizophrenia, 10 schizoaffective disorder symptomatic	Phonetic fluency	0.75

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Table DS1 (continued)			
Study	Sample	Tasks	Effect size
Gilvarry <i>et al</i> , 2001a ²¹	45 schizophrenia, 20 bipolar disorder	Phonetic fluency	0.72
Gilvarry <i>et al</i> , 2001b ³⁷	270 schizophrenia, 345 schizoaffective disorder	TMT-A	0.02
		TMT-B	-0.16
Gilvarry <i>et al</i> , 2001b ³⁷	270 schizophrenia, 50 schizoaffective disorder	TMT-A	0.00
		TMT-B	0.24
Gooding & Tallent, 2002 ²²	34 schizophrenia, 23 bipolar disorder out-patients	IQ	0.33
		WCST categories achieved	0.36
		WCST perseverative errors	-0.19
		Spatial working memory	0.06
Seidman <i>et al</i> , 2002 ²³	87 schizophrenia, 15 bipolar disorder symptomatic	IQ	0.66
		WCST categories achieved	0.80
		WCST perseverative errors	0.67
		WMS logical immediate	0.69
		WMS logical delayed	0.50
		TMT-A	0.23
		TMT-B	0.52
		Digit symbol	1.44
		Digit span	0.43
		Arduini <i>et al</i> , 2003 ²⁴	42 schizophrenia, 22 bipolar disorder near discharge
WCST perseverative errors	0.28		
Savage <i>et al</i> , 2003 ³⁹	41 schizophrenia, 20 schizoaffective disorder	IQ	0.27
		Digit symbol	0.46
		TMT-A	0.67
		TMT-B	0.24
		Phonetic fluency	0.52
Fitzgerald <i>et al</i> , 2004 ²⁵	52 schizophrenia, 18 affective psychosis	WAIS IQ	0.43
		Working Memory Index	0.49
		Digit span forwards	-0.20
		List learning	0.63
		List delayed recall	0.28
		Logical memory I	0.87
		Logical memory II	0.62
		Figure delayed	0.03
		WCST categories achieved	0.24
		WCST perseverative errors	-0.10
		TMT-B	0.15
		TMT-A	0.00
		Phonetic fluency	0.47
		Semantic fluency	0.32
Wiegand <i>et al</i> , 2004 ²⁶	17 schizophrenia, 17 affective psychosis symptomatic	Digit span backwards	-0.09
		Digit span forwards	-0.12
Badcock <i>et al</i> , 2005 ²⁷	24 schizophrenia, 14 bipolar disorder symptomatic	Spatial working memory	0.55
Goldstein <i>et al</i> , 2005 ²⁸	63 schizophrenia, 20 schizoaffective disorder near discharge	TMT-B	0.56
		Digit symbol	0.35
		WCST perseverative errors	0.14
Stip <i>et al</i> , 2005 ²⁹	44 schizophrenia, 13 schizoaffective disorder euthymic	PAL learning	0.56
Ayres <i>et al</i> , 2006 ³⁶	98 schizophrenia 72 affective psychosis (41 bipolar disorder, 31 major depression) first episode	Phonetic fluency	0.16
		Digit span forwards	0.11
		Digit span backwards	0.11
Glahn <i>et al</i> , 2006 ³⁰	15 schizophrenia, 11 bipolar disorder	Digit span forwards	0.46
		Digit span backwards	-0.06
		Spatial working memory	-0.40
Glahn <i>et al</i> , 2006 ³⁰	15 schizophrenia, 15 schizoaffective disorder	Digit span forwards	0.21
		Digit span backwards	-0.08
		Spatial working memory	-0.50
Gruber <i>et al</i> , 2006 ³¹	14 schizophrenia, 14 schizoaffective disorder near discharge	Verbal working memory	1.24
		Spatial working memory	-0.47
Fiszdon <i>et al</i> , 2007 ³²	199 schizophrenia, 73 schizoaffective disorder out-patient	Logical memory I	0.31
		Logical memory II	0.36
		Figural memory	0.30
		WCST categories achieved	0.10
		List learning	0.13
		DSST	0.02
		Digit span	0.16
		IQ estimate	0.20

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Table DS1 (continued)			
Study	Sample	Tasks	Effect size
Selva <i>et al</i> , 2007 ³³	33 schizophrenia, 18 bipolar disorder symptomatic	Phonetic fluency	0.12
		Digit symbol	-0.71
		TMT-A	-0.44
		TMT-B	-0.42
		WCST categories achieved	0.04
		WCST perseverative errors	-0.11
		Semantic fluency	0.10
		Digit span	-0.42
		Babcock Story recall	0.26
Szoke <i>et al</i> , 2008 ³⁴	48 schizophrenia, 26 schizoaffective disorder	WCST perseverative errors	0.40
		TMT-B	0.00
Szoke <i>et al</i> , 2008 ³⁴	48 schizophrenia, 52 bipolar disorder	WCST perseverative errors	0.71
		TMT-B	0.44
Heinrichs <i>et al</i> , 2008 ³⁵	103 schizophrenia, 48 schizoaffective disorder symptomatic	Letter-number	0.53
		Digit symbol	0.63
		Phonetic fluency	0.46
		List learning total	0.65
TMT-A, Trail Making Test Part A; TMT-B Trail Making Test Part B; Wisconsin Card Sorting Test (WCST); WAIS-R, Wechsler Adult Intelligence Scale - Revised; BVRT, Benton Visual Retention Test; BEM, Battery of Memory Efficiency; PAL, Paired Associates Learning; DSST, Digit Symbol Substitution Test.			