

**Appendix B, Supplementary Tables**

Table S1

*Trim and Fill Analyses*

Measure	Studies Trimmed	Adjusted <i>d</i>	95% Confidence Interval		Q
			Lower Limit	Upper Limit	
<b>Inhibition:</b>					
Stroop Incongruent	6	0.58	0.41	0.75	70.40
Stroop Neutral (Comparison Condition)	5	0.49	0.34	0.64	31.37
Stroop Interference	3	0.30	0.14	0.47	57.42
Stroop accuracy	4	0.50	0.25	0.74	30.32
Hayling	0	0.97	0.54	1.40	9.23
Inhibition Comp.	13	0.42	0.30	0.54	189.26
<b>Shifting:</b>					
WCST	6	0.35	0.19	0.50	81.81
TMT-B	8	0.43	0.27	0.58	168.00
TMT-A (Comparison Condition)	9	0.35	0.20	0.50	158.07
ID/ED Shift	4	0.35	0.19	0.52	30.88
Shifting Comp.	14	0.36	0.27	0.45	218.84
<b>Updating:</b>					
n-Back	0	0.63	0.11	1.15	27.02
Updating Comp.	0	0.57	0.20	0.94	35.22
<b>Verbal Working Memory:</b>					
Forward Digit Span	0	0.39	0.25	0.53	47.55
Backward Digit Span	0	0.55	0.39	0.71	49.30
Maintenance Comp.	10	0.23	0.10	0.37	101.85
Manipulation Comp.	0	0.52	0.38	0.66	55.86
Verbal WM Comp.	0	0.45	0.34	0.56	65.60
<b>Visuospatial Working Memory:</b>					
DMTS	3	0.23	0.05	0.42	17.67
Self-Ordered Pointing	1	0.33	0.11	0.55	20.20
Forward Spatial Span	0	0.36	0.17	0.55	33.40
Backward Spatial Span	1	0.63	0.26	1.00	37.73
Visuospatial WM Comp.	7	0.29	0.13	0.46	73.81
<b>Planning:</b>					
Planning Comp.	5	0.26	0.10	0.42	39.04
<b>Verbal Fluency:</b>					
Semantic VF	6	0.53	0.34	0.72	110.44
Phonemic VF	9	0.33	0.21	0.46	121.90
VF Comp.	10	0.42	0.30	0.54	159.82
<b>Comparison Measures:</b>					
Psychomotor Speed Comp.	5	0.20	0.03	0.38	97.38
Digit-Symbol Substitution	0	0.55	0.34	0.75	88.76

Vocabulary	6	0.08	-0.03	0.18	64.68
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*Note.* Comp. = composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A;

ID/ED = Intradimensional/Extradimensional; WM = working memory; DMTS = delayed-match-to-sample; VF= verbal fluency.

Table S2

*Descriptive Statistics for Demographic Factors*

Analysis	Severity (SD)	Age (SD)	% Medicated (SD)	Education matching %			IQ matching %		
				M	UM	NR	M	UM	NR
Inhibition Comp.	1.8 (1.2) <sup>1</sup>	45.2 (16.2)	53.9 (41.4) <sup>4</sup>	77.6	16.3	6.1	36.7	12.2	51.0
Stroop Incongruent	2.0 (1.2)	43.4 (8.5)	48.8.0 (42.9) <sup>1</sup>	73.7	21.1	5.3	63.2	21.1	15.8
Stroop Neutral	2.2 (1.0)	45.1 (9.0)	51.1 (44.4) <sup>1</sup>	64.3	21.4	14.3	50.0	21.4	28.6
Stroop Interference	1.8 (1.1) <sup>1</sup>	45.2 (16.5)	54.6 (46.5) <sup>2</sup>	75.0	20.0	5.0	40.0	10.0	50.0
Stroop Accuracy	2.2 (1.1)	49.4 (18.6)	63.0 (38.7) <sup>1</sup>	80.0	10.0	10.0	10.0	10.0	80.0
Hayling	1.6 (1.5)	54.6 (18.4)	68.8 (41.3)	60.0	20.0	20.0	40.0	0.0	60.0
Shifting Comp.	2.1 (1.2) <sup>7</sup>	45.3 (16.4)	52.8 (44.1) <sup>9</sup>	82.6	8.7	8.7	50.7	7.2	42.0
WCST	2.2 (1.0) <sup>2</sup>	46.4 (16.1)	53.9 (45.5) <sup>1</sup>	88.0	12.0	0.0	48.0	12.0	40.0
TMT-B	2.2 (1.1) <sup>2</sup>	45.9 (17.4)	40.6 (41.1) <sup>7</sup>	80.0	11.4	8.6	48.6	5.7	45.7
TMT-A	2.0 (1.2) <sup>2</sup>	46.9 (14.7)	44.6 (42.7) <sup>9</sup>	84.4	6.2	9.4	50.0	12.5	37.5
ID/ED Shift	2.7 (0.9) <sup>2</sup>	41.7 (15.3)	57.9 (47.2) <sup>2</sup>	92.3	7.7	13.3	66.7	0.0	33.3
n-Back	2.9 (0.2)	43.1 (12.6)	59.4 (39.3)	85.7	14.3	0.0	42.9	0.0	57.1
Updating Comp.	2.6 (0.9)	48.5 (15.7)	63.4 (37.4)	90.0	10.0	0.0	30.0	0.0	70.0
Verbal WM Comp.	2.0 (1.2) <sup>3</sup>	47.3 (16.6)	59.0 (43.4) <sup>5</sup>	89.7	7.7	2.5	53.8	15.4	30.8
Forward Digit Span	2.1 (1.2) <sup>1</sup>	45.2 (15.5)	50.35 (42.7) <sup>1</sup>	92.6	7.4	0.0	59.3	18.5	22.2
Backward Digit Span	2.5 (1.0) <sup>2</sup>	42.8 (13.4)	76.0 (34.0) <sup>1</sup>	91.3	4.3	4.3	56.5	17.4	26.1
Maintenance Comp.	2.0 (1.2) <sup>1</sup>	46.3 (16.7)	55.3 (44.3) <sup>1</sup>	90.3	6.5	3.2	58.1	16.1	25.8
Manipulation Comp.	2.3 (1.0) <sup>3</sup>	45.4 (14.9)	69.9 (38.2) <sup>4</sup>	92.9	3.6	3.6	50.0	14.3	35.7
Visuospatial WM Comp.	2.2 (1.2) <sup>2</sup>	43.5 (16.5)	55.6 (43.4) <sup>4</sup>	73.9	8.7	17.4	69.6	0.0	30.4
DMTS	2.5 (1.0) <sup>1</sup>	39.9 (15.3)	30.3 (42.9) <sup>3</sup>	63.6	9.1	27.3	81.8	0.0	18.2
Self-Ordered Pointing	2.5 (0.9) <sup>1</sup>	41.8 (16.9)	44.2 (47.9) <sup>2</sup>	75.0	0.0	25.0	83.3	0.0	16.7
Forward Spatial Span	2.2 (1.2) <sup>2</sup>	43.4 (17.8)	49.9 (44.6) <sup>2</sup>	72.2	5.6	22.2	72.2	0.0	27.8
Backward Spatial Span	1.6 (1.3) <sup>1</sup>	40.3 (13.3)	68.3 (36.3)	88.9	0.0	11.1	66.7	0.0	33.3
Planning Comp.	2.9 (0.3) <sup>1</sup>	42.8 (15.3)	67.4 (42.2) <sup>5</sup>	76.5	5.9	17.6	58.8	0.0	41.2
VF Comp.	2.1 (1.1) <sup>3</sup>	51.2 (16.3)	56.7 (44.2) <sup>10</sup>	84.8	10.9	4.3	45.7	8.7	45.7
Semantic VF	2.3 (1.0)	50.0 (15.9)	73.7 (35.7) <sup>7</sup>	87.5	8.3	4.2	45.8	8.3	45.8
Phonemic VF	2.2 (1.1) <sup>3</sup>	50.9 (16.3)	57.1 (45.8) <sup>6</sup>	83.8	10.8	5.4	48.6	10.8	40.5
Psychomotor Speed Comp.	2.1 (1.1) <sup>2</sup>	41.9 (17.4)	49.7 (45.4) <sup>3</sup>	73.9	13.0	13.0	47.8	0.0	52.2
Digit-Symbol Substitution	2.3 (1.0) <sup>3</sup>	50.5 (17.6)	41.7 (40.6) <sup>4</sup>	87.0	8.7	4.3	43.5	17.4	39.1
Vocabulary	1.8 (1.4) <sup>3</sup>	43.9 (14.6)	61.6 (41.4) <sup>4</sup>	86.1	5.6	8.3	-	-	-

*Note.* M = matched; UM = unmatched; NR = not reported; Comp. = composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A; ID/ED = Intradimensional/Extradimensional; WM = working memory; DMTS = delayed-match-to-sample; VF = verbal fluency.

<sup>1</sup>Information not reported by 1 study. <sup>2</sup>Information not reported by 2 studies. <sup>3</sup>Information not reported by 3 studies. <sup>4</sup>Information not reported by 4 studies. <sup>5</sup>Information not reported by 5 studies. <sup>6</sup>Information not reported by 6 studies. <sup>7</sup>Information not reported by 7 studies. <sup>8</sup>Information not reported by 8 studies. <sup>9</sup>Information not reported by 9 studies.

Table S3

*Moderator Simple Regression Analyses*

DV	IV	Beta	95% Confidence Interval		B	SE	p	K	N <sub>ps</sub>	Q <sub>bet</sub> (df)	Q <sub>witht</sub> (df)
			Lower Limit	Upper Limit							
<b>Inhibition:</b>											
Stroop Interference	Severity	0.02	-0.47	0.51	0.006	0.072	.9	19	1324	0.01 (1)	16.21 (17)
	Age	0.16	-0.32	0.63	0.003	0.005	.5	20	1482	0.40 (1)	16.34 (18)
	Medication	0.30	-0.17	0.76	0.002	0.002	.2	18	1365	1.56 (1)	15.59 (16)
Inhibition Comp.	Severity	0.17	-0.13	0.46	0.052	0.046	.3	47	3102	1.25 (1)	43.45 (45)
	Age	0.12	-0.19	0.42	0.003	0.003	.4	48	3260	0.61 (1)	42.97 (46)
	Medication	0.26	-0.03	0.55	0.003	0.001	.079#	44	3020	3.09 (1)	42.06 (42)
<b>Shifting:</b>											
WCST	Severity	0.33	-0.06	0.71	0.127	0.076	.095#	23	1822	2.79 (1)	23.45 (21)
	Age	-0.05	-0.43	0.33	-0.001	0.005	.8	25	1943	0.06 (1)	26.08 (18)
	Medication	0.06	-0.33	0.44	0.000	0.002	.8	25	1943	0.08 (1)	25.96 (23)
TMT-B	Severity	0.20	-0.14	0.53	0.079	0.068	.2	33	2499	1.34 (1)	33.16 (31)
	Age	0.44	0.15	0.74	0.011	0.004	.003*	35	2787	8.54 (1)	34.92 (33)
	Medication	0.26	-0.11	0.62	0.003	0.002	.2	28	2026	1.93 (1)	27.11 (26)
TMT-A (Comparison Condition)	Severity	-0.05	-0.42	0.33	-0.015	0.062	.8	30	2468	0.06 (1)	27.28 (28)
	Age	0.08	-0.28	0.45	0.002	0.005	.6	32	2756	0.19 (1)	28.77 (30)
	Medication	0.27	-0.14	0.68	0.003	0.002	.2	23	1798	1.70 (1)	21.72 (21)
Shifting Comp.	Severity	0.24	0.01	0.48	0.078	0.039	.044*	63	4600	4.06 (1)	64.51 (61)
	Age	0.27	0.04	0.49	0.006	0.003	.021*	69	5116	5.29 (1)	69.35 (67)
	Medication	0.14	-0.10	0.39	0.001	0.001	.3	60	4170	1.29 (1)	61.13 (58)
<b>Verbal Working Memory:</b>											
Forward Digit Span	Severity	-0.02	-0.42	0.38	-0.006	0.064	.9	26	1737	0.01 (1)	24.01 (24)
	Age	-0.11	-0.50	0.28	-0.003	0.005	.6	27	1782	0.31 (1)	24.82 (25)
	Medication	0.48	0.10	0.86	0.004	0.002	.012*	23	1526	6.25 (1)	20.66 (21)
Backward Digit Span	Severity	0.42	0.05	0.80	0.175	0.080	.028*	21	1530	4.81 (1)	21.88 (19)
	Age	-0.02	-0.42	0.39	-0.001	0.006	.9	23	1662	0.01 (1)	23.3 (21)
	Medication	0.30	-0.13	0.72	0.003	0.003	.2	19	1254	1.85 (1)	19.01 (17)
Maintenance Comp.	Severity	-0.02	-0.39	0.35	-0.006	0.056	.9	30	2010	0.01 (1)	28.16 (28)
	Age	-0.05	-0.41	0.32	-0.001	0.004	.8	31	2055	0.06 (1)	29.05 (29)
	Medication	0.48	0.14	0.83	0.004	0.001	.006*	27	1799	7.51 (1)	24.71 (25)
Manipulation Comp.	Severity	0.47	0.13	0.82	0.171	0.063	.007*	24	1811	7.30 (1)	25.22 (22)
	Age	-0.18	-0.54	0.18	-0.004	0.005	.3	27	2051	0.94 (1)	28.14 (25)
	Medication	0.32	-0.06	0.71	0.003	0.002	.1	23	1643	2.67 (1)	22.93 (21)
Verbal WM Comp.	Severity	0.21	-0.11	0.52	0.060	0.047	.2	36	2840	5.88 (2)	33.66 (33)
	Task	0.29	-0.03	0.61	0.136	0.077	.076#				

	Age	-0.12	-0.42	0.18	-0.002	0.003	.4	39	2840	5.56 (2)	36.78 (36)
	Task	0.34	0.04	0.65	0.154	0.069	.025*				
	Medication	0.46	0.13	0.78	0.003	0.001	.006*	33	2840	13.04 (2)	29.93 (30)
	Task	0.18	-0.15	0.50	0.073	0.069	.3				
<b>Visuospatial Working Memory:</b>											
Visuospatial WM Comp.	Severity	0.29	-0.13	0.71	0.088	0.064	.2	21	1382	1.87 (1)	20.25 (19)
	Age	0.09	-0.32	0.51	0.002	0.005	.7	23	1455	0.20 (1)	21.87 (21)
	Medication	0.48	0.06	0.91	0.004	0.002	.026*	19	1121	4.94 (1)	16.34 (17)
<b>Verbal Fluency:</b>											
Semantic VF	Severity	0.62	0.30	0.94	0.288	0.076	<.001*	24	1643	14.33 (1)	22.77 (22)
	Age	-0.29	-0.66	0.09	-0.008	0.006	.1	24	1643	2.23 (1)	25.22 (22)
	Medication	0.07	-0.42	0.56	0.001	0.004	.8	17	1096	0.08 (1)	16.08 (15)
Phonemic VF	Severity	0.50	0.20	0.80	0.155	0.047	.001*	34	2555	10.83 (1)	32.01 (23)
	Age	0.08	-0.25	0.41	0.002	0.004	.6	37	2850	0.22 (1)	35.34 (35)
	Medication	0.01	-0.35	0.37	0.000	0.002	.9	31	2131	0.00 (1)	29.79 (29)
VF Comp.	Severity	0.48	0.22	0.74	0.162	0.044	<.001*	43	3466	16.42 (2)	40.85 (40)
	Task	0.26	0.00	0.52	0.121	0.053	.053#				
	Age	-0.04	-0.33	0.24	-0.001	0.003	.8	46	3466	2.30 (2)	45.02 (43)
	Task	0.22	-0.07	0.50	0.108	0.073	.1				
	Medication	0.01	-0.32	0.35	0.000	0.002	.9	36	3466	2.05 (2)	35.04 (33)
	Task	0.23	-0.10	0.57	0.140	0.103	.2				
<b>Comparison Measures:</b>											
Psychomotor Speed Comp.	Severity	0.31	-0.11	0.72	0.130	0.089	.1	21	1557	2.11 (1)	20.58 (19)
	Age	0.27	-0.14	0.68	0.007	0.005	.2	23	1742	1.66 (1)	21.34 (21)
	Medication	0.19	-0.26	0.63	0.002	0.002	.4	20	1529	0.69 (1)	18.78 (18)
Digit-Symbol Substitution	Severity	0.44	0.07	0.81	0.248	0.106	.019*	22	1857	5.46 (1)	22.99 (20)
	Age	0.37	-0.01	0.74	0.012	0.006	.059#	23	1944	3.57 (1)	23.28 (21)
	Medication	0.40	-0.01	0.81	0.006	0.003	.058#	19	1601	3.59 (1)	19.30 (17)
Vocabulary	Severity	0.45	0.13	0.76	0.102	0.037	.005*	33	2057	7.75 (1)	31.02 (31)
	Age	0.40	0.09	0.71	0.009	0.004	.013*	36	2175	6.23 (1)	33.32 (34)
	Medication	-0.14	-0.50	0.22	-0.001	0.001	.4	32	1986	0.58 (1)	28.79 (30)

Note. Comp. = composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A;

ID/ED = Intradimensional/Extradimensional; WM = working memory; DMTS = delayed-match-to-sample; VF = verbal fluency.

\* Significant ( $p < .05$ ). # Marginal ( $p < .10$ ).

Table S4

*Categorical Age Moderator ANOVA Analyses (Older vs. Younger Adults)*

DV	Group	Weighted Mean Effect Size ( <i>d</i> )	95% Confidence Interval		SE	<i>K</i>	<i>N<sub>ps</sub></i>	<i>Q<sub>w</sub></i> ( <i>df</i> )	Between Groups Homogeneity Test	
			Lower Limit	Upper Limit					<i>Q<sub>B</sub></i> ( <i>df</i> )	<i>p<sub>B</sub></i>
<b>Inhibition:</b>										
Stroop interference	Older (60+)	0.37	0.04	0.70	0.17	5	1482	16.52 (18)	0.01 (1)	.9
	Younger	0.39	0.21	0.58	0.10	15				
Inhibition Comp.	Older (60+)	0.51	0.27	0.75	0.12	11	3260	44.09 (46)	0.44 (1)	.5
	Younger	0.60	0.47	0.73	0.07	37				
<b>Shifting:</b>										
WCST	Older (60+)	0.40	0.13	0.67	0.14	7	1943	25.89 (23)	0.37 (1)	.5
	Younger	0.50	0.32	0.68	0.09	18				
TMT-B	Older (60+)	0.85	0.58	1.13	0.14	8	2787	36.27 (33)	4.74 (1)	.029*
	Younger	0.50	0.35	0.65	0.08	27				
TMT-A (Comparison Condition)	Older (60+)	0.54	0.22	0.86	0.16	6	2756	28.39 (30)	0.03 (1)	.9
	Younger	0.51	0.36	0.67	0.08	26				
Shifting Comp.	Older (60+)	0.55	0.38	0.72	0.09	16	5116	70.32 (67)	1.13 (1)	.3
	Younger	0.44	0.35	0.54	0.05	53				
<b>Verbal Working Memory:</b>										
Forward Digit Span	Older (60+)	0.22	-0.06	0.49	0.14	6	1782	24.86 (25)	2.14 (1)	.144
	Younger	0.45	0.29	0.60	0.08	21				
Maintenance Comp.	Older (60+)	0.27	0.05	0.49	0.11	8	2055	29.16 (29)	1.67 (1)	.2
	Younger	0.44	0.30	0.58	0.07	23				
Manipulation Comp.	Older (60+)	0.32	0.06	0.59	0.13	6	2051	27.83 (25)	2.83 (1)	.093#
	Younger	0.59	0.43	0.74	0.08	21				
Verbal WM. Comp.	Older (60+)	0.30	0.12	0.48	0.09	11	2840	36.77 (37)	3.78 (1)	.052#
	Younger	0.52	0.39	0.64	0.06	28				
<b>Visuospatial Working Memory:</b>										
Visuospatial WM Comp.	Older (60+)	0.46	0.15	0.76	.016	5	1455	21.82 (21)	0.00 (1)	.9
	Younger	0.45	0.28	0.62	0.09	18				
<b>Verbal Fluency:</b>										
Semantic VF	Older (60+)	0.53	0.21	0.85	0.16	7	1643	25.09 (22)	1.53 (1)	.2
	Younger	0.77	0.56	0.98	0.11	17				
Phonemic VF	Older (60+)	0.48	0.29	0.66	0.09	14	2850	35.48 (35)	0.07 (1)	.8
	Younger	0.45	0.29	0.60	0.08	23				
VF Comp.	Older (60+)	0.50	0.32	0.69	0.09	16	3466	45.15 (44)	0.40 (1)	.5
	Younger	0.58	0.44	0.72	0.07	30				
<b>Comparison Measures:</b>										
Digit-Symbol Substitution	Older (60+)	0.81	0.44	1.18	0.19	8	1944	23.59 (21)	1.71 (1)	.2
	Younger	0.50	0.22	0.77	0.14	15				
Psychomotor Speed Comp.	Older (60+)	0.40	0.02	0.77	0.19	5	1743	21.94 (21)	0.17 (1)	.7
	Younger	0.31	0.10	0.51	0.10	18				

Vocabulary	Older (60+)	0.39	0.13	0.64	0.13	6	2175	32.94 (34)	4.22 (1)	.040*
	Younger	0.10	-0.01	0.20	0.06	30				

*Note.* Comp. = composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A; WM

= working memory; VF = verbal fluency.

\* Significant ( $p < .05$ ). # Marginal ( $p < .10$ ).



Table S5

*Mean Effect Size Analyses for IQ and Education Matched Samples Only*

Measure	N	k	Weighted Mean Effect Size (d)	95% Confidence Interval		SE	Z	p	Homogeneity Test				
				Lower Limit	Upper Limit				v	Q	df	p	I <sup>2</sup>
<b>Inhibition:</b>													
Stroop Incongruent	644	10	0.88	0.71	1.05	0.08	10.33	<.001	0.00	5.03	9	.8	0.00
Stroop Neutral (Comparison Condition)	333	5	0.68	0.46	0.91	0.12	5.85	<.001	0.00	1.00	4	.9	0.00
Stroop Interference	553	7	0.47	0.19	0.75	0.14	3.26	.001	0.08	14.67	6	.023	59.13
Inhibition Comp.	1047	15	0.62	0.43	0.79	0.09	6.74	<.001	0.09	26.10	14	<.001	46.36
<b>Shifting:</b>													
WCST	862	11	0.43	0.26	0.61	0.09	4.80	<.001	0.03	14.55	10	.2	31.27
TMT-B	929	12	0.35 <sup>^</sup>	0.13	0.58	0.11	3.11	.002	0.09	26.41	11	.006	58.35
TMT-A (Comparison Condition)	941	12	0.37 <sup>^</sup>	0.13	0.61	0.12	3.01	.003	0.11	30.72	11	.001	64.19
ID/ED Shift	475	8	0.41	0.18	0.64	0.12	3.45	.001	0.03	10.16	7	.2	11.42
Shifting Comp.	1888	28	0.40	0.28	0.52	0.06	6.53	<.001	0.04	40.96	27	.042	34.08
<b>Verbal Working Memory:</b>													
Forward Digit Span	1046	15	0.42	0.22	0.61	0.10	4.15	<.001	0.08	30.29	14	.007	53.78
Backward Digit Span	900	12	0.46	0.24	0.67	0.11	4.10	<.001	0.08	25.25	11	.008	56.44
Maintenance Comp.	1121	16	0.40	0.22	0.59	0.09	4.34	<.001	0.07	30.41	15	.011	50.67
Manipulation Comp.	949	13	0.43	0.22	0.64	0.11	3.99	<.001	0.08	28.19	12	.005	57.43
Verbal WM Comp.	1375	19	0.40	0.25	0.56	0.08	5.15	<.001	0.05	32.35	18	.020	44.36
<b>Visuospatial Working Memory:</b>													
DMTS	325	6	0.40	0.16	0.64	0.12	3.21	.001	0.01	5.86	5	.3	14.68
Self-Ordered Pointing	396	6	0.33	-0.02	0.68	0.18	1.84	.065	0.12	13.59	5	.019	63.21
Forward Spatial Span	537	9	0.21	-0.02	0.43	0.11	1.80	.071	0.04	12.28	8	.1	34.85
Backward Spatial Span	360	5	0.75	0.23	1.27	0.27	2.82	.005	0.27	19.84	4	.001	79.84
Visuospatial WM Comp.	795	12	0.47	0.24	0.69	0.12	4.05	.0001	0.08	24.76	11	.010	55.57
<b>Planning:</b>													
Planning Comp.	527	8	0.29	0.01	0.57	0.14	2.01	.045	0.10	17.06	7	.017	58.97
<b>Verbal Fluency:</b>													
Semantic VF	456	8	0.75	0.54	0.97	0.11	6.91	<.001	0.01	8.14	7	.3	14.00
Phonemic VF	1167	17	0.44	0.31	0.57	0.07	6.67	<.001	0.01	17.62	16	.3	9.19
VF Comp.	1226	18	0.51	0.39	0.63	0.06	8.09	<.001	0.00	17.85	17	.4	4.76
<b>Comparison Measures:</b>													
Psychomotor Speed Comp.	646	9	0.30	-0.08	0.68	0.19	1.53	.125	0.27	41.43	8	<.001	80.69
Digit-Symbol Substitution	703	9	0.30 <sup>^</sup>	0.07	0.52	0.11	2.60	.009	0.05	14.73	8	.065	45.69

Note. Comp. = composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A;

ID/ED = Intradimensional/Extradimensional. <sup>^</sup> Significant reduction in effect size compared to analysis with all samples included.

Table S6

*Mean Effect Size Analyses for Medication-Free Samples Only*

Measure	N	k	Weighted Mean Effect Size ( <i>d</i> )	95% Confidence Interval		SE	Z	<i>p</i>	Homogeneity Test				
				Lower Limit	Upper Limit				<i>v</i>	Q	df	<i>p</i>	I <sup>2</sup>
<b>Inhibition:</b>													
Stroop Incongruent	505	7	0.69	0.36	1.02	0.17	4.06	<.001	0.14	17.35	6	.008	65.42
Stroop Neutral (Comparison Condition)	423	5	0.56	0.29	0.84	0.14	4.05	.0001	0.04	6.77	4	.1	40.92
Stroop Interference	397	6	0.42	0.05	0.80	0.19	2.23	.026	0.14	14.89	5	.011	66.42
Inhibition Comp.	870	13	0.54	0.30	0.78	0.12	4.42	<.001	0.11	32.55	12	.001	63.13
<b>Shifting:</b>													
WCST	805	8	0.45	0.19	0.72	0.14	3.35	.001	0.09	20.60	7	.004	66.02
TMT-B	706	10	0.57	0.32	0.83	0.13	4.38	<.001	0.10	21.44	9	.011	58.02
TMT-A (Comparison Condition)	631	8	0.43	0.10	0.77	0.17	2.52	.012	0.17	26.08	7	.001	73.16
Shifting Comp. <sup>a</sup>	1410	18	0.42	0.27	0.57	0.08	5.46	<.001	0.04	29.43	17	.031	42.24
<b>Verbal Working Memory:</b>													
Forward Digit Span	529	7	0.23	0.01	0.45	0.11	2.03	.042	0.02	7.81	6	.3	23.18
Maintenance Comp.	663	8	0.23	0.05	0.41	0.09	2.48	.013	0.01	8.22	7	.3	14.84
Verbal WM Comp.	712	9	0.22	0.06	0.38	0.08	2.66	.008	0.00	8.53	8	.4	6.21
<b>Visuospatial Working Memory:</b>													
Visuospatial WM Comp.	286	5	0.27	-0.04	0.57	0.16	1.70	.090	0.05	6.44	4	.2	37.89
<b>Verbal Fluency:</b>													
Phonemic VF	694	9	0.49	0.31	0.67	0.09	5.41	<.001	0.01	9.44	8	.3	15.25
VF Comp.	762	10	0.49	0.32	0.65	0.09	5.71	<.001	0.01	10.58	9	.3	14.92
<b>Comparison Measures:</b>													
Psychomotor Speed Comp.	577	7	0.18	-0.26	0.61	0.22	0.80	.4	0.27	36.21	6	<.001	77.11
Digit-Symbol Substitution	651	7	0.34	0.06	0.63	0.15	2.35	.019	0.09	15.69	6	.016	61.76
Vocabulary	417	7	0.17	-0.02	0.37	0.10	1.73	.084	0.00	1.63	6	.9	0.00

Note. Comp.= composite score; WCST= Wisconsin Card Sorting Test; TMT-B = Trail Making Test part B; TMT-A = Trail Making Test part A; ID/ED

= Intradimensional/Extradimensional; WM = working memory. DMTS = delayed-match-to-sample. VF = verbal fluency.

<sup>a</sup> One outlier (*d* = 2.96) excluded. With this outlier included weighted mean effect size *d* = 0.53.

## Supplementary Figures

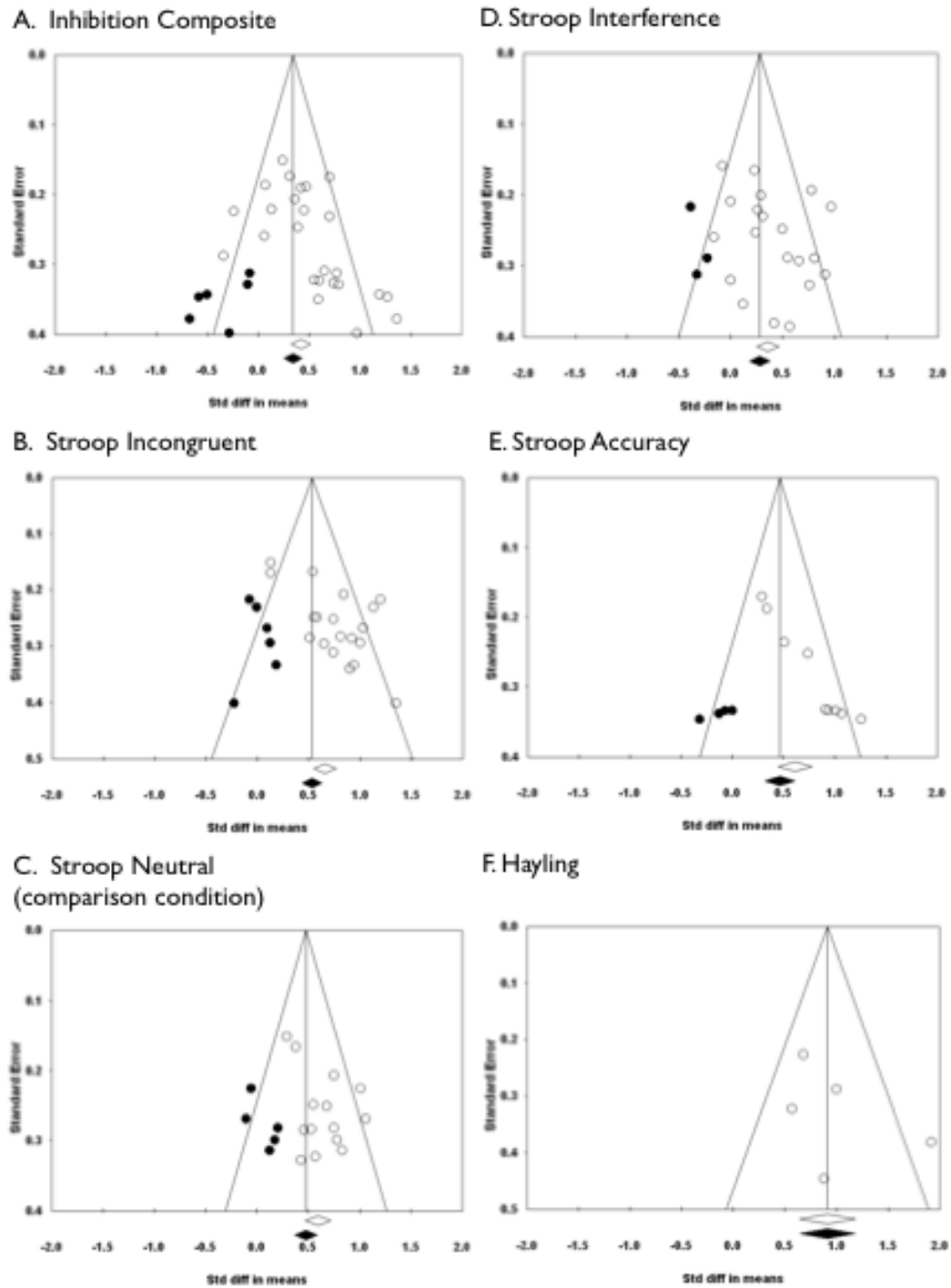


Figure S1. Funnel plots for effect sizes in inhibition measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

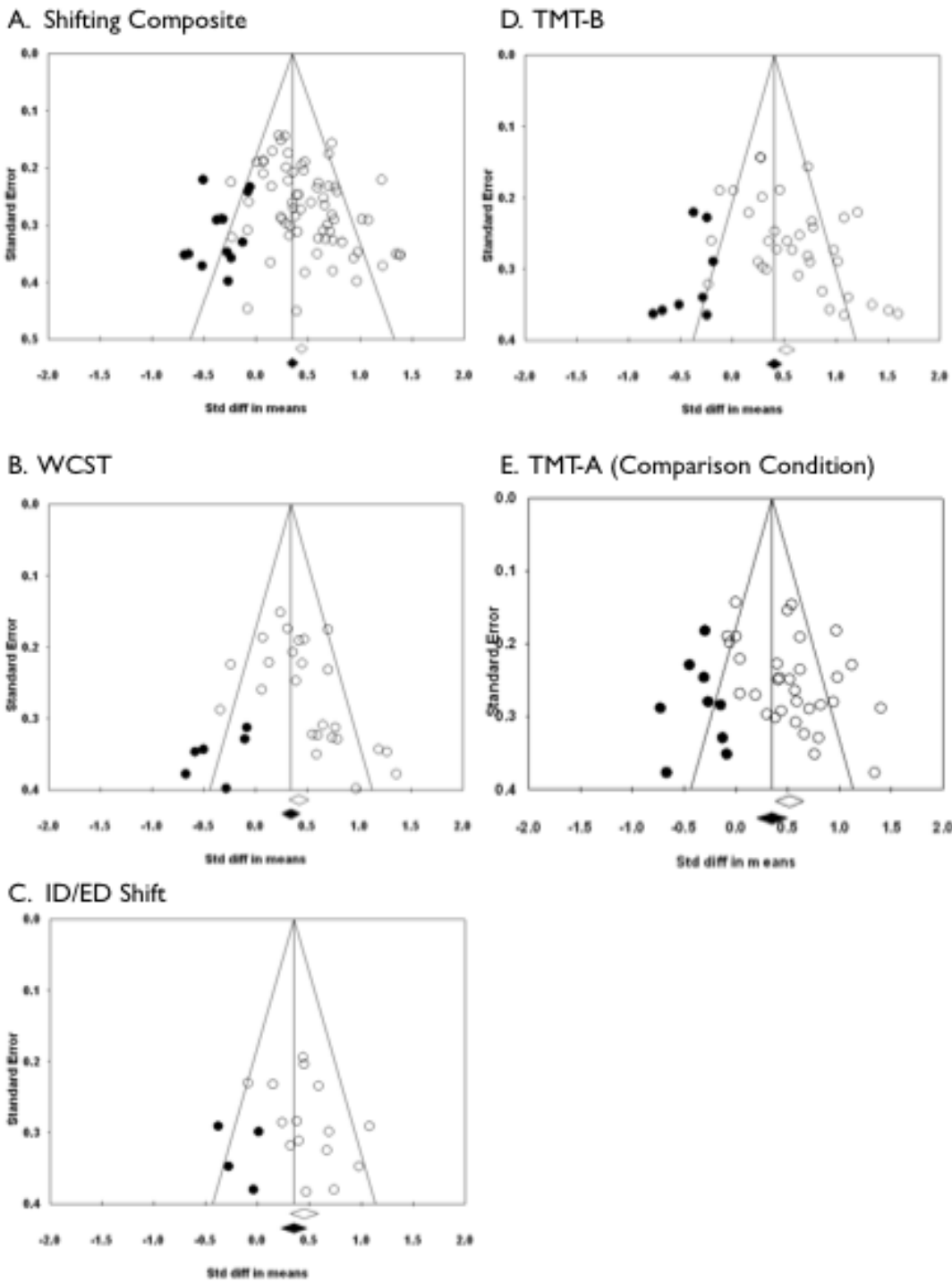
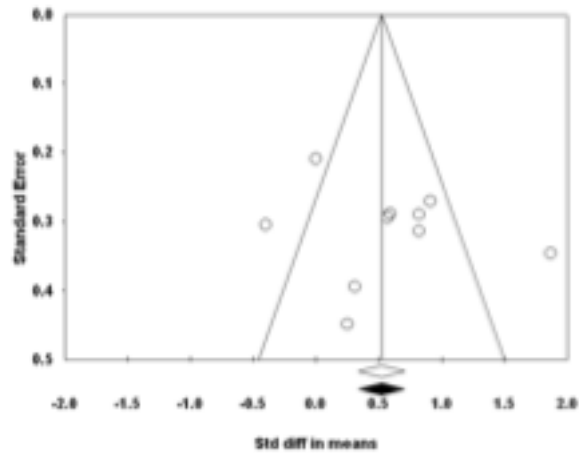


Figure S2. Funnel plots for effect sizes in shifting measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

## A. Updating Composite



## B. n-Back

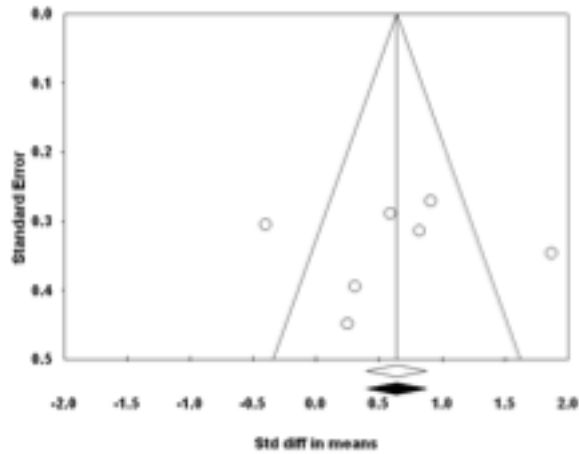


Figure S3. Funnel plots for effect sizes in updating measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

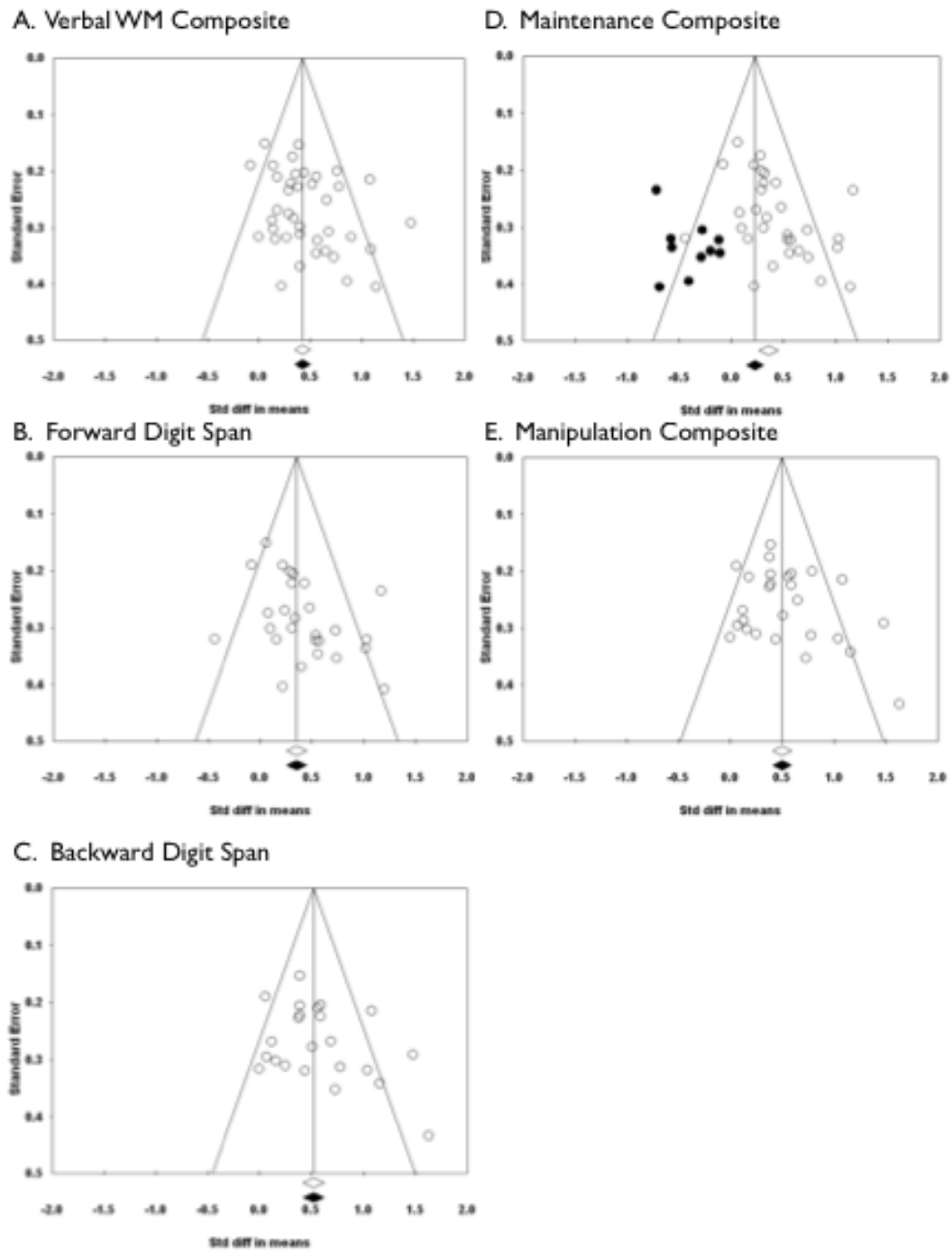


Figure S4. Funnel plots for effect sizes in verbal working memory measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

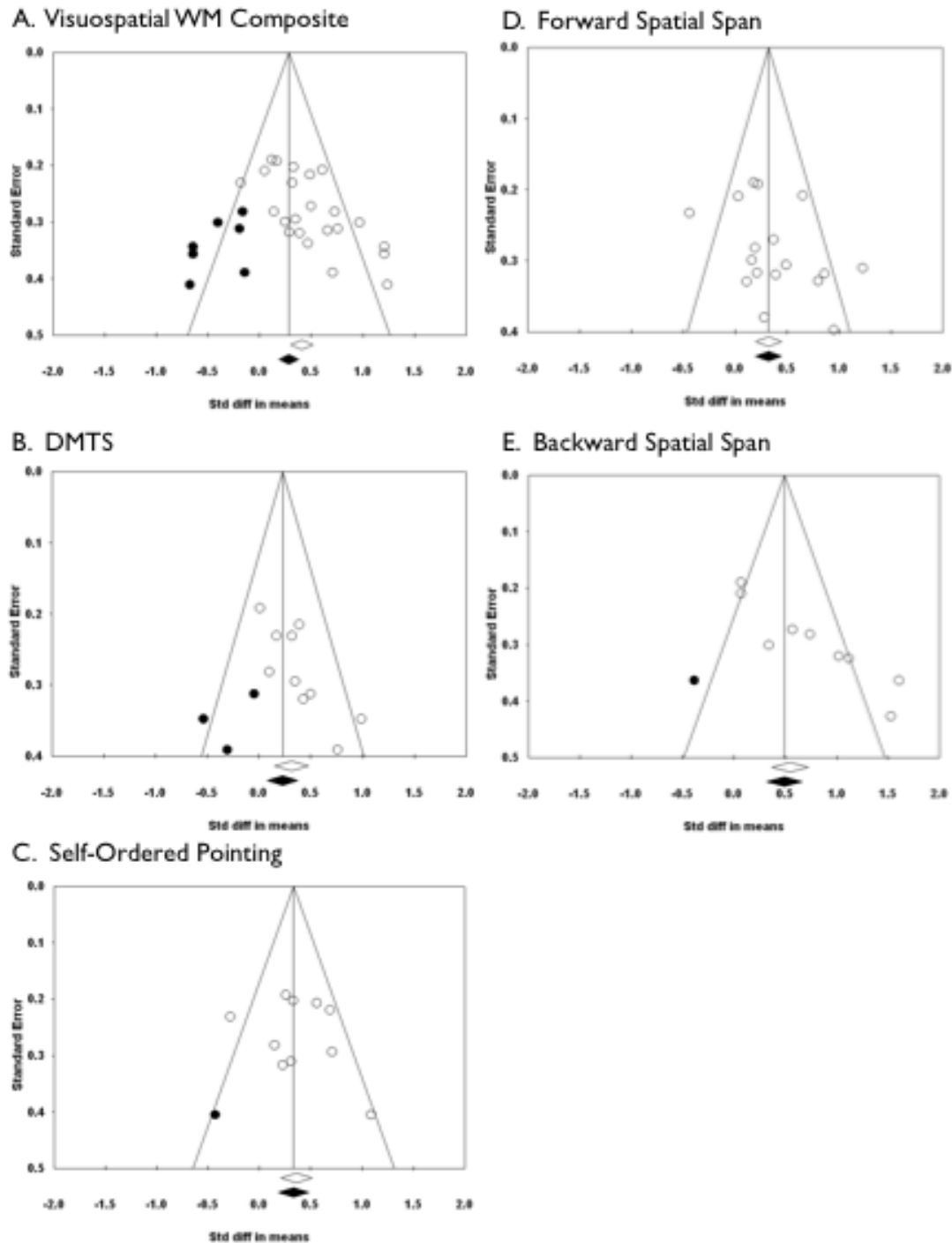


Figure S5. Funnel plots for effect sizes in visuospatial working memory measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

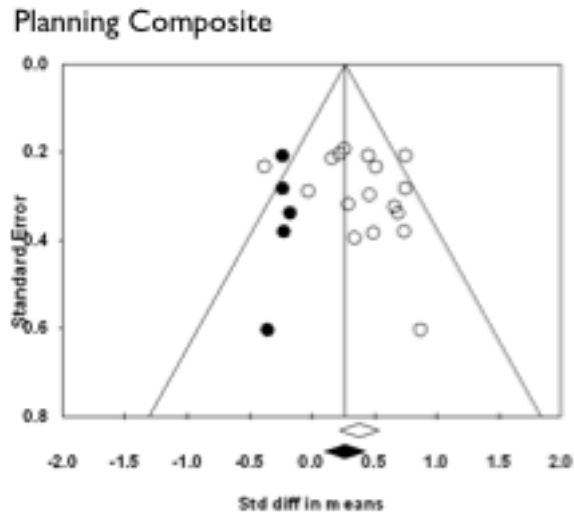


Figure S6. Funnel plot for effect sizes in the planning composite score analysis. The vertical line indicates the weighted mean effect size. The grey box indicates the data point excluded in the trimmed analyses (Table S3): the effect size is robust to trimming this points.



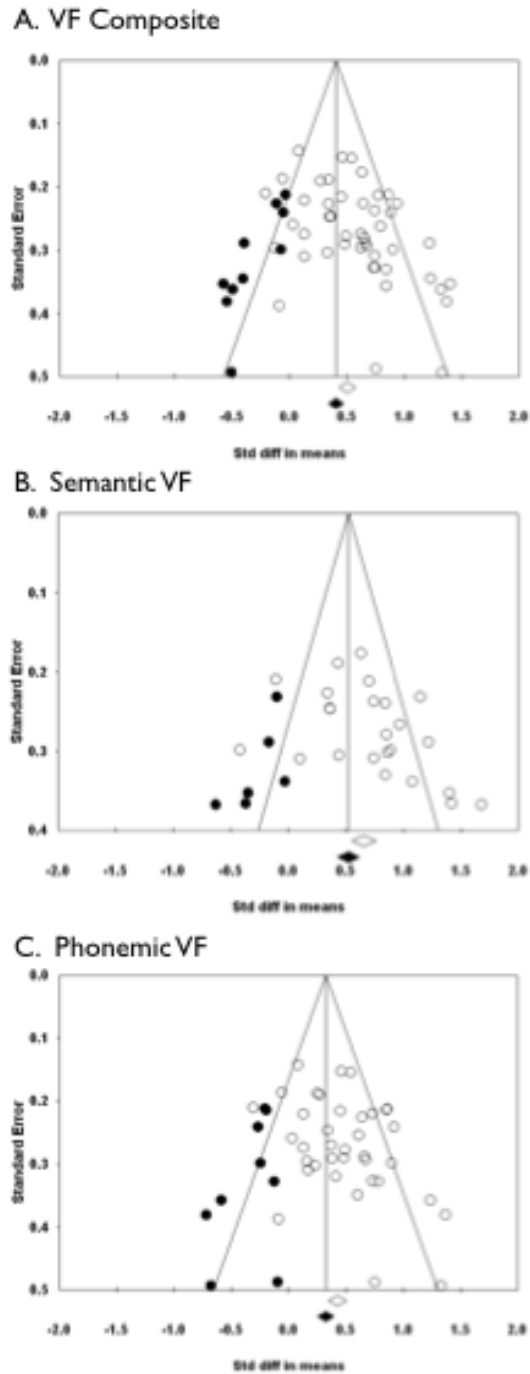
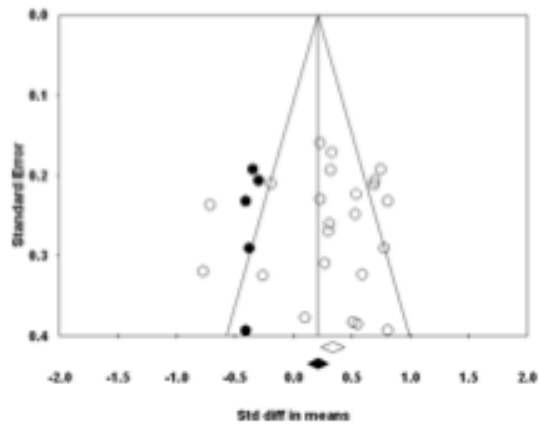
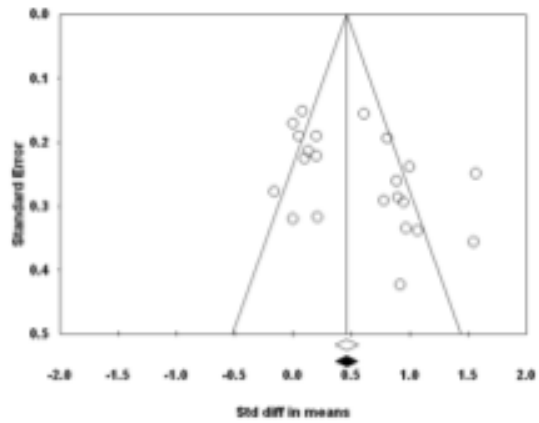


Figure S7. Funnel plots for effect sizes in verbal fluency measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.

## A. Psychomotor Speed Composite



## B. Digit-Symbol Substitution



## C. Vocabulary

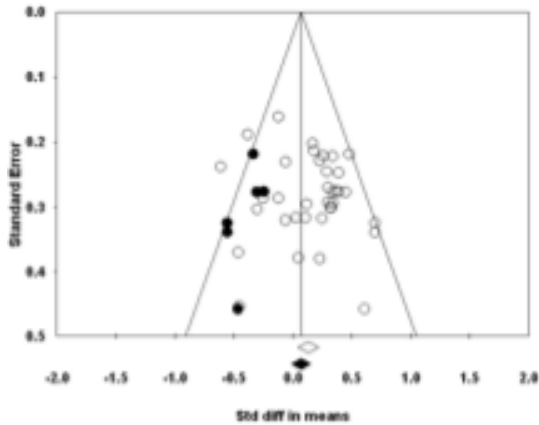


Figure S8. Funnel plots for effect sizes in non-EF comparison measure analyses. Vertical lines indicate the weighted mean effect size for each analysis. Clear circles indicate actual data points and black circles indicate imputed data points from the trim and fill analyses.