

Supplementary Table 2. Additional results of the comparison of changes in neurocognitive function and clinical symptoms between verum and sham treatment groups

	Verum group (N=11)	Sham group (N=12)	Analyses (p)	Effect size (partial η^2)	Verum group with fMRI analysis (N=9)	Sham group with fMRI analysis (N=10)	Analyses (p)	Effect size (partial η^2)
STAI_state								
Baseline	60.5±10.0	61.7±8.8	MT: p<0.001*	0.37	61.7±10.7	63.2±8.8	MT: p=0.001*	0.37
End of treatment	45.6±13.0	56.8±11.4	MG: p=0.059	0.16	46.9±14.2	57.3±12.5	MG: p=0.106	0.15
Follow-up	46.4±13.6	59.6±13.2	Int: p=0.024*	0.18	46.3±15.2	60.5±14.4	Int: p=0.063	0.16
STAI_trait								
Baseline	67.1±7.8	64.4±10.3	MT: p<0.001*	0.56	67.0±8.5	65.7±10.0	MT: p<0.001*	0.53
End of treatment	50.2±11.7	58.3±9.6	MG: p=0.268	0.06	50.9±13.0	58.9±10.5	MG: p=0.270	0.07
Follow-up	51.6±10.9	58.7±9.2	Int: p=0.014*	0.22	52.1±12.1	60.0±9.3	Int: p=0.065	0.17
K-POMS_tension								
Baseline	17.9±7.1	16.8±7.9	MT: p<0.001*	0.43	17.6±7.7	18.0±8.2	MT: p<0.001*	0.44
End of treatment	9.8±3.4	14.7±6.9	MG: p=0.188	0.08	9.7±3.5	16.2±6.4	MG: p=0.145	0.12
Follow-up	8.7±5.9	14.5±6.7	Int: p=0.007*	0.21	9.3±5.0	14.8±7.4	Int: p=0.040*	0.18
K-POMS_depression								
Baseline	42.4±14.3	37.4±13.5	MT: p<0.001*	0.44	41.6±14.7	39.2±14.2	MT: p=0.001*	0.41
End of treatment	19.4±13.7	33.5±17.4	MG: p=0.184	0.08	19.8±15.1	36.3±17.6	MG: p=0.133	0.13
Follow-up	20.2±13.6	33.2±15.9	Int: p=0.004*	0.28	20.7±14.5	35.9±16.0	Int: p=0.010*	0.28
K-POMS_anger								
Baseline	18.6±10.4	20.7±12.7	MT: p=0.005*	0.23	19.3±11.4	21.9±13.5	MT: p=0.008*	0.25
End of treatment	7.9±7.0	21.7±11.5	MG: p=0.055	0.16	8.8±7.4	22.0±12.7	MG: p=0.121	0.14
Follow-up	11.1±8.4	20.1±11.8	Int: p=0.001*	0.28	12.2±8.5	20.3±13.0	Int: p=0.012*	0.23
K-POMS_vigor								
Baseline	1.9±2.4	3.8±4.2	MT: p=0.002*	0.32	2.3±2.5	3.9±4.6	MT: p=0.005*	0.33
End of treatment	8.2±6.4	5.6±4.1	MG: p=0.358	0.04	8.9±6.7	5.5±4.5	MG: p=0.232	0.08
Follow-up	9.0±8.7	4.4±3.9	Int: p=0.021*	0.20	10.6±8.9	4.4±4.3	Int: p=0.023*	0.24
K-POMS_fatigue								
Baseline	21.9±4.8	18.9±5.9	MT: p<0.001*	0.63	21.0±4.9	19.9±6.0	MT: p<0.001*	0.49
End of treatment	12.0±5.0	15.2±8.6	MG: p=0.633	0.01	11.3±5.4	16.5±8.9	MG: p=0.263	0.07
Follow-up	13.5±5.9	16.8±7.9	Int: p=0.008*	0.27	12.9±5.0	18.2±8.0	Int: p=0.022*	0.22
K-POMS_confusion								
Baseline	16.6±4.2	15.2±4.3	MT: p<0.001*	0.47	16.6±4.5	15.5±4.6	MT: p<0.001*	0.42
End of treatment	9.9±3.0	13.0±5.5	MG: p=0.374	0.04	10.0±3.1	13.6±5.9	MG: p=0.298	0.06
Follow-up	10.3±4.0	13.5±6.7	Int: p=0.012*	0.21	10.7±3.3	14.6±6.8	Int: p=0.023*	0.22
CANTAB_RVPA								
Baseline	0.92±0.03	0.89±0.05	MT: p=0.001*	0.33	0.93±0.03	0.89±0.06	MT: p=0.003*	0.34
End of treatment	0.94±0.04	0.92±0.05	MG: p=0.121	0.11	0.95±0.04	0.92±0.05	MG: p=0.109	0.14
Follow-up	0.95±0.04	0.94±0.05	Int: p=0.489	0.03	0.96±0.03	0.94±0.05	Int: p=0.448	0.04
CANTAB_OTSPSFC								
Baseline	0.73±1.12	0.09±0.74	MT: p=0.374	0.05	0.86±0.99	-0.03±0.75	MT: p=0.133	0.11
End of treatment	0.26±0.94	0.16±1.01	MG: p=0.299	0.05	0.22±1.00	0.02±0.80	MG: p=0.110	0.14
Follow-up	0.71±1.25	0.43±1.07	Int: p=0.550	0.03	0.97±1.19	0.32±1.14	Int: p=0.398	0.05
CANTAB_SWMS								
Baseline	0.18±1.44	-0.44±1.05	MT: p=0.020*	0.17	0.47±1.43	-0.65±0.93	MT: p=0.048*	0.16
End of treatment	0.63±1.49	0.16±1.42	MG: p=0.196	0.08	0.91±1.49	-0.02±1.38	MG: p=0.054	0.20
Follow-up	0.54±1.20	-0.34±1.06	Int: p=0.512	0.03	0.77±1.20	-0.45±1.11	Int: p=0.778	0.01

Values are presented as mean±standard deviation. *p<0.05. fMRI, functional magnetic resonance imaging; MT, main effect of time (session sequence); MG, main effect of group; Int, group-by-session sequence interaction effect; STAI, State-Trait Anxiety Inventory; K-POMS, Korean edition of the Profile of Mood States; CANTAB, Cambridge Neuropsychological Test Automated Battery; RVP, Rapid Visual Information Processing subtest in CANTAB; RVPA (Z-score), RVP A Prime, a measure of how good the subject is at detecting target sequences; OTS, One Touch Stockings of Cambridge subtest in CANTAB; OTSPSFC (Z-score), OTS Problems Solved on First Choice, the total number of assessed trials where the subject chose the correct answer on their first attempt; SWM, spatial working memory; SWMS (Z-score), SWM Strategy, the number of times a subject begins a new search pattern from the same box they started with previously