

Table S1. Demographical, clinical and neuropsychological data of elderly groups.

	Male Elderly Participants				Female Elderly Participants				Cut-off
	Total (n=15)	HP (n=8)	LP (n=7)	p-value	Total (n=15)	HP (n=8)	LP (n=7)	p-value	
Age (years)	68.3(5.0)	69.3(4.5)	67.3(5.4)	0.80	67.5(7.1)	65.4(5.1)	70.0(3.8)	0.75	
Education (years)	10.4(4.6)	13.6(4.5)	6.7(2.5)	0.06	11.6(4.3)	13.1(3.8)	9.9(4.5)	0.15	
Interpersonal Reactivity Index (IRI), total score	88.5(7.6)	92.0(7.5)	84.6(8.2)	0.23	90.0(8.5)	89.1(7.2)	91.0(8.9)	0.70	
Reading the Mind in the Eyes Test (RME)	21.1(4.8)	24.5(2.3)	17.1(3.1)	0.0001	23.1(3.1)	25.4(2.3)	20.4(4.7)	0.0001	
Mood and Anxiety Assessment									
Geriatric Depression Scale (GDS)	2.4(2.2)	2.0(2.0)	2.9(2.1)	0.35	4.8(4.6)	4.9(5.1)	4.7(1.8)	0.95	<11
State-Trait Anxiety Inventory (STAI)-State	30.4(7.0)	28.3(2.9)	32.9(9.9)	0.33	31.9(6.7)	32.4(7.5)	31.3(6.4)	0.77	
State-Trait Anxiety Inventory (STAI)-Trait	33.9(6.9)	32.8(4.3)	35.3(9.0)	0.35	36.2(8.8)	38.5(9.1)	33.6(6.4)	0.31	
Subjective Memory Complaints									
Everyday Memory Questionnaire (EMQ)	46.1(15.7)	42.6(11.5)	50.0(18.7)	0.53	45.5(15.2)	44.9(20.0)	46.3(10.7)	0.87	
Cognitive Reserve									
Cognitive Reserve Index (CRI – q), total score	111.3(15.9)	121.3(12.8)	100.0(14.6)	0.05	116.4(15.6)	117.6(17.2)	115.0(16.2)	0.77	
Cognitive Assessment Screening for dementia									
MMSE	28.9(0.8)	29.5(0.5)	28.3(0.7)	0.003	28.9(0.9)	29.4(0.7)	28.4(1.3)	0.05	≥24
Non-Verbal Reasoning									
Raven's colored progressive matrices	30.8(3.3)	33.0(2.0)	28.3(3.5)	0.03	29.7(4.7)	30.9(4.0)	28.3(3.5)	0.32	>17.5
Memory									
Digit Span (forward)	5.6(1.1)	5.8(0.5)	5.4(1.5)	0.73	6.0(1.4)	6.9(1.1)	5.0(0.8)	0.004	>4.25
Digit Span (backward)	4.6(1.1)	5.0(0.9)	4.1(1.2)	0.10	4.7(1.0)	5.3(0.7)	4.0(1.1)	0.01	>2.64
Story Recall	12.5(3.4)	13.2(4.0)	11.8(3.3)	0.39	14.0(3.8)	15.8(4.2)	12.0(3.7)	0.06	>7.5
RAVLT (Immediate recall)	44.0(8.6)	46.9(8.5)	40.7(8.5)	0.27	47.6(7.5)	50.9(7.2)	43.9(9.6)	0.08	>28.52
RAVLT (Delayed recall)	8.5(2.3)	9.3(3.1)	7.7(1.9)	0.39	10.2(2.8)	11.3(2.5)	9.0(2.2)	0.14	>4.68
Rey-Osterrieth Complex Figure, recall	17.8(5.6)	20.1(6.6)	15.2(4.7)	0.19	16.6(5.9)	19.1(6.2)	13.8(5.8)	0.09	>9.46
Language									
Token Test	33.7(1.5)	34.6(1.1)	32.6(1.6)	0.04	34.0(1.5)	34.3(1.3)	33.7(1.6)	0.54	>26.25
Verbal Fluency, phonemic	36.0(9.1)	40.9(7.1)	30.4(7.3)	0.003	39.1(13.7)	45.0(15.6)	32.4(9.7)	0.09	>16
Verbal Fluency, semantic	49.1(8.8)	54.3(8.2)	43.1(7.9)	0.06	48.9(11.6)	56.9(9.3)	39.7(7.5)	0.001	>24
Naming Objects (B.A.D.A)	28.9(0.8)	29.4(0.5)	28.3(0.7)	0.009	27.9(2.2)	28.6(1.1)	27.1(1.0)	0.22	
Naming Actions (B.A.D.A)	26.5(1.0)	26.8(0.8)	26.1(1.0)	0.35	25.5(2.6)	26.5(0.9)	24.3(1.5)	0.11	
Wechsler Adult Intelligence Scale – Vocabulary	38.6(13.2)	47.1(6.7)	28.9(15.5)	0.05	44.0(7.5)	47.0(4.8)	40.6(12.8)	0.11	
Praxis									
Rey-Osterrieth Complex Figure (ROCF), copy	31.6(2.8)	32.0(3.2)	31.1(2.7)	0.63	30.9(4.2)	32.8(1.9)	28.8(2.3)	0.08	>28.87
Attentional and Executive Functions									
Trial Making Test-A (seconds)	35.9(6.9)	33.3(5.2)	38.9(8.0)	0.09	41.5(14.7)	38.8(15.1)	44.7(7.7)	0.47	<94
Trial Making Test-B (seconds)	137.2(65.0)	107.1(29.0)	171.6(86.9)	0.17	118.8(59.6)	84.6(13.5)	157.9(76.7)	0.02	<283

Stroop test – interference effect on time (seconds)	24.5(11.9)	19.6(2.8)	30.1(14.6)	0.03	23.9(8.2)	20.1(4.2)	28.2(13.1)	0.06	<36.92
Stroop test – interference effect on errors	0.6(1.0)	0.4(0.5)	0.9(1.3)	0.22	0.8(1.0)	0.5(0.8)	1.1(1.0)	0.26	<4.24
Wisconsin Card Sorting Test (WSCT) – Global score	66.5(35.6)	56.8(31.0)	77.6(34.7)	0.06	58.5(42.6)	46.1(38.6)	72.6(34.5)	0.26	<90.6
Wisconsin Card Sorting Test (WSCT) – Perseverative responses	21.4(18.9)	15.0(8.4)	28.7(18.6)	0.10	22.2(17.0)	18.8(17.7)	26.1(16.8)	0.44	<42.7
Wisconsin Card Sorting Test (WSCT) – Non Perseverative errors	20.9(12.1)	20.8(11.5)	21.1(13.7)	0.28	17.1(13.2)	11.8(9.6)	23.1(11.8)	0.11	<30.0
Wisconsin Card Sorting Test (WSCT) – Failure to maintain the set	1.5(1.2)	1.3(1.0)	1.9(1.2)	0.11	1.0(1.1)	1.1(1.1)	0.9(1.1)	0.66	<4.0
Flanker Task – Effect of Incongruency on RTs (milliseconds)	+174.4(71.8)	+195.9(81.4)	+149.7(56.0)	0.06	+134.1(98.7)	+80.8(94.5)	+195.0(70.6)	0.02	
Flanker Task – Effect of Congruency on RTs (milliseconds)	+2.2(51.9)	-15.0(39.4)	+21.8(65.8)	0.30	+0.5(45.5)	-29.7(43.7)	+35.0(55.9)	0.002	

Raw scores are reported (SD between parentheses). **HP: high-performing participants to the Reading the Mind in the Eyes Test; LP: low-performing participants to the Reading the Mind in the Eyes Test**; MMSE: Mini Mental State Examination, RAVLT: Rey Auditory Verbal Learning Test, B.A.D.A (Batteria per l'Analisi dei Deficit Afasici), RTs: Reaction Times. *p-value related to the t-tests comparing high- and low-performing subgroups into each experimental elderly group. Values in bold indicate significant difference (Bonferroni corrected for the number of comparisons: $p < 0.006$ for clinical scales, $p < 0.008$ for memory and language and $p < 0.005$ for attentional and executive functions evaluations). Cut-off scores according to Italian normative data are reported.