

Supplemental materials

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Table S1 Detailed settings for the Number Ordering Test

Item	Number of trials	Number of numbers	Number of negative numbers	Range of numbers
1	3	3	0	1–20
2	3	4	0	1–20
3	4	4	1	–20–20
4	4	4	2	0–50
5*	4	5	0	0–50
6*	4	5	2	–50–50
7 [†]	5	5	3	–50–50
8*	5	6	2	–70–70
9*	5	6	3	–70–70
10 [†]	5	6	4	–70–70
11 [†]	5	7	4	–100–100
12 [†]	15	7	5	–100–100

*At least two tens digits are the same. [†]At least two negative tens digits are the same.

Table S2 Other results of the Integrated Cognitive Assessment in COVID-19 survivors with different socio-demographic characteristics and COVID-19-related factors

	RT-animal (ms)		RT-non-animal (ms)		RT-Q1 (ms)		RT-Q3 (ms)		Accuracy-animal (%)		Accuracy-non-animal (%)	
	Mean±SD	P-value*	Mean±SD	P-value*	Mean±SD	P-value*	Mean±SD	P-value*	Mean±SD	P-value*	Median (IQR)	P-value†
Socio-demographics												
Gender		0.004		0.011		0.026		<0.001		<0.001		<0.001
Male	947.90±132.43		967.44±143.24		871.39±117.43		1089.29±184.10		89.86±8.74		94.00 (90.00, 96.00)	
Female	956.75±130.57		976.02±142.01		877.55±116.60		1106.20±184.48		88.59±8.99		94.00 (90.00, 96.00)	
Ethnicity (Han)		0.829		0.651		0.846		0.548		0.331		0.710
Han	954.19±131.33		973.43±142.77		875.89±117.13		1101.15±184.66		88.97±8.91		94.00 (90.00, 96.00)	
Minority	955.35±128.86		976.05±137.64		874.97±113.40		1105.66±182.83		88.62±9.32		94.00 (90.00, 96.00)	
Regions		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
North China	956.44±131.12		972.87±141.94		877.68±118.22		1098.70±181.49		88.77±9.09		94.00 (90.00, 96.00)	
Northeast China	974.24±144.19‡		993.64±154.94‡		890.95±125.97‡		1128.31±200.76‡		88.25±9.58‡		94.00 (88.00, 96.00)	
East China	944.16±129.79		961.97±141.08		866.15±114.26		1088.34±186.35		89.36±8.76		94.00 (90.00, 96.00)	
Central China	969.24±133.14‡		992.75±146.15‡		891.07±119.96‡		1126.21±188.20‡		88.28±9.14‡		94.00 (90.00, 96.00)	
South China	943.98±126.23		962.89±135.97		867.56±112.72		1087.41±176.63		89.61±8.40		94.00 (90.00, 98.00)	
Southwest China	957.45±132.41		978.09±143.05		878.68±116.71		1108.06±188.78		88.97±9.17		94.00 (90.00, 96.00)	
Northwest China	974.87±133.49‡		999.34±148.25‡		892.50±120.39‡		1133.45±185.45‡		87.32±9.55‡		92.00 (88.00, 96.00)	
COVID-19-related factors												
Underlying diseases		<0.001		<0.001		<0.001		<0.001		<0.001		<0.001
Yes	998.01±141.90		1020.85±151.70		913.53±122.97		1163.64±204.69		86.35±10.49		92.00 (88.00, 96.00)	
No	948.40±128.51		967.27±139.90		870.75±115.08		1093.12±180.02		89.30±8.65		94.00 (90.00, 96.00)	
Loss of smell or taste		0.225		0.114		0.586		0.032		0.018		0.160
Yes	956.38±132.32		976.59±143.21		876.67±116.94		1106.71±186.52		88.67±8.98		94.00 (90.00, 96.00)	
No	952.93±130.38		971.71±141.85		875.29±116.80		1098.12±183.17		89.13±8.91		94.00 (90.00, 96.00)	

Table S3 Other results of the Number Ordering Test in COVID-19 survivors with different socio-demographic characteristics and COVID-19-related factors

	RT-NOT (ms)		Completed trials		Correct trials		Trial accuracy (%)		Correct numbers		Number accuracy (%)	
	Median (IQR)	P-value [†]	Mean±SD	P-value [*]	Mean±SD	P-value [*]	Mean±SD	P-value [*]	Mean±SD	P-value [*]	Mean±SD	P-value [*]
Socio-demographics												
Gender (female)		<0.001		0.128		<0.001		<0.001		<0.001		<0.001
Male	3202.23 (2907.02, 3551.72)		16.92±2.49		14.89±2.33		88.37±9.76		60.44±10.58		96.66±3.10	
Female	3240.00 (2967.94, 3574.36)		16.84±2.37		14.67±2.28		87.50±9.89		59.55±10.32		96.39±3.18	
Ethnicity (Han)		0.123		0.102		<0.001		0.004		0.001		0.001
Han	3228.19 (2951.94, 3564.36)		16.87±2.40		14.75±2.29		87.83±9.82		59.90±10.37		96.49±3.14	
Minority	3272.91 (2969.86, 3602.63)		16.71±2.46		14.42±2.41		86.62±10.33		58.54±10.73		96.08±3.33	
Regions		<0.001		<0.001		<0.001		0.096		<0.001		0.023
North China	3254.43 (2979.96, 3588.47)		16.75±2.32 [‡]		14.65±2.29 [‡]		87.86±10.14		59.33±10.24 [‡]		96.47±3.27	
Northeast China	3270.33 (2986.41, 3632.43)		16.61±2.47 [‡]		14.48±2.31 [‡]		87.55±9.98		58.60±10.50 [‡]		96.37±3.19	
East China	3184.20 (2907.75, 3493.85)		17.12±2.42		15.04±2.29		88.27±9.78		61.21±10.39		96.65±3.10	
Central China	3286.07 (2997.09, 3595.50)		16.60±2.40 [‡]		14.51±2.16 [‡]		87.87±9.39		58.63±9.91 [‡]		96.52±2.94	
South China	3168.84 (2903.49, 3505.48)		17.17±2.38		14.99±2.26		87.68±9.58		61.17±10.30		96.48±3.03	
Southwest China	3248.09 (2965.62, 3616.11)		16.72±2.43 [‡]		14.52±2.41 [‡]		87.15±10.55		58.92±10.73 [‡]		96.23±3.45	
Northwest China	3358.29 (3076.82, 3765.89)		16.14±2.35 [‡]		14.03±2.20 [‡]		87.34±9.71		56.39±9.85 [‡]		96.30±3.13	
COVID-19-related factors												
Underlying diseases		<0.001		<0.001		<0.001		0.893		<0.001		0.204
Yes	3388.90 (3100.64, 3752.65)		16.11±2.40		14.05±2.31		87.70±10.72		56.47±10.35		96.34±3.51	
No	3210.29 (2937.13, 3541.65)		16.96±2.39		14.82±2.28		87.75±9.74		60.24±10.33		96.48±3.10	
Loss of smell or taste		<0.001		<0.001		<0.001		0.426		<0.001		0.238
Yes	3260.71 (2977.40, 3585.05)		16.74±2.40		14.60±2.28		87.64±9.93		59.15±10.33		96.41±3.20	

No	3214.96 (2939.78, 3555.55)	16.94±2.40	14.81±2.31	87.81±9.82	60.22±10.43	96.50±3.13
Severe pneumonia						
Yes	3487.14 (3039.47, 3832.88)	15.89±2.64	13.77±2.53	87.24±10.94	55.26±11.15	96.14±3.66
No	3228.61 (2951.97, 3563.77)	16.87±2.40	14.74±2.29	87.75±9.85	59.85±10.38	96.47±3.15
Inflexible thinking after recovery						
Yes	3238.74 (2963.69, 3574.75)	16.86±2.39	14.68±2.28	87.47±9.86	59.60±10.31	96.38±3.17
No	3214.92 (2937.45, 3550.78)	16.86±2.44	14.82±2.33	88.25±9.86	60.17±10.58	96.62±3.13
Slowed processing speed after recovery						
Yes	3238.85 (2960.65, 3570.13)	16.86±2.38	14.69±2.28	87.45±9.88	59.61±10.29	96.38±3.18
No	3217.38 (2944.22, 3565.19)	16.85±2.44	14.80±2.33	88.20±9.82	60.09±10.58	96.60±3.11
Insomnia after recovery						
Yes	3264.85 (2981.97, 3594.38)	16.72±2.39	14.56±2.29	87.44±9.99	58.99±10.35	96.36±3.21
No	3202.14 (2927.18, 3533.87)	17.00±2.41	14.90±2.29	88.03±9.73	60.56±10.39	96.56±3.10

P-values in bold indicate statistical significance. * Student's *t*-test or analysis of variance (ANOVA). †Mann-Whitney *U* test or Kruskal-Wallis *H* test. ‡Values with significant differences from the South China group in Student-Newman-Keuls post hoc multiple comparisons. COVID-19, coronavirus disease 2019; RT, reaction time; NOT, Number Ordering Test; IQR, interquartile range; SD, standard deviation.