

Supplementary information

**Association between post-COVID-19 sleep disturbance and neurocognitive function:
a comparative study based on propensity score matching**

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Table S1

Table S1 Comparison of neurocognitive function in non-PCSD individuals in different subgroups

Neurocognitive function	PCSD* (n=4456)	ICA-RT (ms)		ICA-accuracy (%)		NOT total score		NOT trial accuracy (%)	
		Median (IQR)	<i>P</i> value	Median (IQR)	<i>P</i> value	Median (IQR)	<i>P</i> value	Median (IQR)	<i>P</i> value
COVID-19 related symptoms									
Asymptomatic infection			0.009		0.006		0.094		0.485
No	4209 (94.46)	938.41 (861.09, 1027.07)		93 (89, 95)		53.76 (45.88, 62.04)		89 (83, 94)	
Yes	247 (5.54)	953.04 (886.49, 1049.50)		92 (87, 95)		52.08 (43.37, 62.04)		90 (82, 95)	
Upper respiratory infection			0.003		0.011		0.114		0.094
No	425 (9.54)	952.53 (881.88, 1059.25)		92 (87, 95)		53.00 (44.37, 62.04)		90 (83, 95)	
Yes	4031 (90.46)	938.25 (860.50, 1025.97)		93 (89, 95)		53.76 (45.92, 62.04)		89 (83, 94)	
Loss of smell or taste			0.619		0.875		0.007		0.141
No	2928 (65.71)	938.62 (864.44, 1029.05)		93 (89, 95)		54.56 (45.92, 62.30)		89 (83, 94)	
Yes	1528 (34.29)	940.04 (860.87, 1027.92)		93 (89, 95)		53.00 (45.57, 61.10)		89 (82, 94)	
Underlying diseases			<0.001		<0.001		<0.001		0.410
No	4014 (90.08)	934.75 (859.80, 1021.58)		93 (89, 95)		54.56 (46.11, 62.30)		89 (83, 94)	
Yes	442 (9.92)	992.04 (896.15, 1097.42)		91 (86, 94)		50.63 (41.58, 58.00)		90 (83, 94)	
Severe pneumonia			0.002		0.231		0.051		0.502
No	4423 (99.26)	938.67 (862.18, 1028.05)		93 (89, 95)		53.68 (45.57, 62.04)		89 (83, 94)	
Yes	33 (0.74)	1015.70 (920.44, 1093.43)		91 (88, 94)		48.98 (42.63, 57.85)		88 (80, 95)	
Post-COVID-19 cognitive complaints									
Inflexible thinking after recovery			0.319		0.307		0.068		0.001
No	1998 (44.84)	943.00 (861.13, 1033.57)		93 (89, 95)		54.56 (46.02, 62.30)		89 (83, 94)	
Yes	2458 (55.16)	936.77 (863.97, 1027.10)		93 (89, 95)		53.06 (45.57, 61.41)		89 (82, 94)	
Slowed processing speed after recovery			0.097		0.206		0.186		0.001
No	2224 (49.91)	942.92 (863.20, 1034.82)		93 (89, 95)		53.95 (45.92, 62.05)		89 (83, 94)	
Yes	2232 (50.09)	936.49 (862.19, 1025.86)		92 (89, 95)		53.68 (45.57, 62.04)		89 (82, 94)	

* Data are expressed as frequency (percentage). *P* value in bold indicate statistical significance. PCSD: post-coronavirus disease 2019 (COVID-19) sleep disturbance; ICA: Integrated Cognitive Assessment; NOT: Number Ordering Test; RT: reaction time; IQR: interquartile range.