

## Supplement

Table S1. Analyses of covariance – Corrections of results for possible confounding variables.

	NHM (n=218)	HM (n=255)	NHF (n=278)	HF (n=245)	F	p-value
Number of long COVID-19 symptoms, mean $\pm$ SD	3.02 $\pm$ 2.91	3.03 $\pm$ 2.66	4.98 $\pm$ 3.59	4.6 $\pm$ 3.48	9.115	<b>&lt;0.001</b>
Number of medications during long COVID-19, mean $\pm$ SD	1.53 $\pm$ 2.14	1.75 $\pm$ 2.35	1.71 $\pm$ 2.01	2.29 $\pm$ 2.73	2.414	0.065
Number of psychotropic medications during long COVID-19, mean $\pm$ SD	0.05 $\pm$ 0.231	0.07 $\pm$ 0.331	0.18 $\pm$ 0.579	0.18 $\pm$ 0.513	2.798	<b>0.039</b>
BPRS, mean $\pm$ SD	25.90 $\pm$ 3.73	26.15 $\pm$ 3.45	27.78 $\pm$ 4.41	27.32 $\pm$ 4.54	4.164	<b>0.006</b>
HAM-D, mean $\pm$ SD	4.78 $\pm$ 3.71	5.13 $\pm$ 4.02	6.66 $\pm$ 4.57	6.95 $\pm$ 4.43	3.730	<b>0.011</b>
HAM-A, mean $\pm$ SD	5.50 $\pm$ 5.09	5.77 $\pm$ 4.84	8.16 $\pm$ 5.96	8.15 $\pm$ 5.81	5.208	<b>0.001</b>
KMDRS, mean $\pm$ SD	4.41 $\pm$ 2.20	4.94 $\pm$ 2.16	5.27 $\pm$ 3.24	4.87 $\pm$ 2.63	2.985	<b>0.030</b>
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.						

Table S2: Linear regressions between age and variables related to long COVID-19

Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	-0.013	0.015	-0.038	0.392	-0.043 0.017
Number of medications during long COVID-19	0.066	0.012	0.240	<b>0.000</b>	0.042 0.089
Number of psychotropic medications during long COVID-19	0.067 0.003	0.002	0.067	0.138	0.000 0.007
BPRS	0.000	0.020	-0.002	0.971	-0.039 0.038
HAM-A	-0.044	0.030	-0.075	0.138	-0.103 0.014
HAM-D	-0.018	0.025	-0.038	0.473	-0.066 0.031
KMDRS	-0.009	0.012	-0.033	0.455	-0.031 0.014
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S3. Linear regressions between gender and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	1.565	0.276	0.246	<b>0.000</b>	1.021 2.108
Number of medications during long COVID-19	0.536	0.229	0.105	0.200	0.086 0.985
Number of psychotropic medications during long COVID-19	0.113	0.038	0.131	<b>0.003</b>	0.037 0.188
BPRS	1.174	0.360	0.145	<b>0.001</b>	0.466 1.882
HAM-A	2.370	0.541	0.215	<b>0.000</b>	1.306 3.433
HAM-D	1.825	0.447	0.211	<b>0.000</b>	0.946 2.704
KMDRS	-0.068	0.215	-0.014	0.753	-0.490 0.355
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S4. Linear regressions between education years and variables related to long COVID-19					
Depndent Variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	0.110	0.320	0.160	0.728	-0.520 0.740
Number of medications during long COVID-19	-0.032	0.026	-0.056	0.220	-0.082 0.019
Number of psychotropic medications during long COVID-19	0.001	0.004	0.006	0.888	-0.008 0.009
BPRS	-0.095	0.041	-0.105	<b>0.020</b>	-0.175 -0.015
HAM-A	-0.057	0.062	-0.046	0.358	-0.179 0.065
HAM-D	-0.035	0.051	-0.036	0.494	-0.136 0.066
KMDRS	-0.045	0.024	-0.083	0.063	-0.092 0.002
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

**Table S5. Linear regressions between occupation and variables related to long COVID-19**

Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	-0.101	0.349	-0.013	0.773	-0.786 0.585
Number of medications during long COVID-19	-0.957	0.278	-0.154	<b>0.001</b>	-10.503 -0.412
Number of psychotropic medications during long COVID-19	-0.118	0.030	-0.172	<b>0.000</b>	-0.178 -0.059
BPRS	-10.730	0.439	-0.174	<b>0.000</b>	-20.592 -0.868
HAM-A	-10.034	0.676	-0.077	0.127	-20.362 0.295
HAM-D	-10.549	0.553	-0.146	<b>0.005</b>	-20.637 -0.461
KMDRS	-0.129	0.263	-0.022	0.625	-0.645 0.388

**Legend:** significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.

**Table S6. Linear regressions between psychiatric history prior to COVID-19 and variables related to long COVID-19**

Dependent Variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	0.328	0.484	0.030	0.498	-0.623 10.278
Number of medications during long COVID-19	-0.087	0.390	-0.010	0.824	-0.852 0.679
Number of psychotropic medications during long COVID-19	0.095	0.066	0.065	0.148	-0.034 0.224
BPRS	10.524	0.614	0.111	<b>0.013</b>	0.317 20.731
HAM-A	50.125	0.904	0.275	<b>0.000</b>	30.347 60.903
HAM-D	20.781	0.762	0.189	<b>0.000</b>	10.282 40.280
KMDRS	0.351	0.365	0.043	0.366	-0.365 10.067

**Legend:** significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.

Table S7. Linear regressions between psychotropic medications assumption prior to COVID-19 and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	0.511	0.600	0.038	0.395	-0.668 10.689
Number of medications during long COVID-19	-0.089	0.483	-0.008	0.854	-10.038 0.861
Number of psychotropic medications during long COVID-19	0.224	0.018	0.123	<b>0.006</b>	0.065 0.384
BPRS	20.065	0.761	0.121	<b>0.007</b>	0.570 30.560
HAM-A	40.989	10.139	0.216	<b>0.000</b>	20.749 70.229
HAM-D	20.968	0.950	0.163	<b>0.002</b>	10.100 40.837
KMDRS	0.838	0.451	0.083	0.064	-0.048 10.724
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S8. Linear regressions between substance abuse before COVID-19 and variables related to long COVID-19 .					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	-0.851	0.369	-0.103	<b>0.022</b>	-10.576 -0.126
Number of medications during long COVID-19	-10.037	0.295	-0.157	<b>0.000</b>	-10.617 -0.457
Number of psychotropic medications during long COVID-19	-0.095	0.050	-0.084	0.061	-0.193 0.004
BPRS	-0.791	0.473	-0.075	0.095	-10.720 0.137
HAM-A	0.032	0.721	0.002	0.965	-10.386 10.449
HAM-D	-0.368	0.595	-0.033	0.536	-10.537 0.801
KMDRS	0.058	0.280	0.009	0.836	-0.492 0.608
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S9. Linear regressions between distance from COVID-19 onset and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	0.005	0.001	0.158	<b>0.000</b>	0.002 0.008
Number of medications during long COVID-19	0.002	0.001	0.074	0.104	0.000 0.004
Number of psychotropic medications during long COVID-19	0.001	0.000	0.153	<b>0.001</b>	0.000 0.001
BPRS	0.001	0.002	0.015	0.739	-0.003 0.004
HAM-A	-0.008	0.003	-0.132	<b>0.008</b>	-0.013 -0.002
HAM-D	-0.004	0.002	-0.088	0.096	-0.009 0.001
KMDRS	0.000	0.001	-0.028	0.526	-0.003 0.001
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S10 Linear regressions between history of psychiatric symptoms during COVID-19 and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	20.249	0.704	0.142	<b>0.001</b>	0.867 30.631
Number of medications during long COVID-19	0.789	0.572	0.062	0.168	-0.335 10.912
Number of psychotropic medications during long COVID-19	0.320	0.096	0.148	<b>0.001</b>	0.132 0.508
BPRS	0.437	0.908	0.022	0.630	-10.346 20.220
HAM-A	0.011	10.381	0.000	0.994	-20.704 20.726
HAM-D	10.256	10.138	0.058	0.270	-0.981 30.493
KMDRS	-0.252	0.536	-0.021	0.638	-0.304 0.800
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S11. Linear regressions between number of symptoms during COVID-19 and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	0.390	0.031	0.496	<b>0.000</b>	0.330 0.450
Number of medications during long COVID-19	0.013	0.028	0.021	0.644	-0.043 0.069
Number of psychotropic medications during long COVID-19	0.005	0.003	0.073	0.103	-0.001 0.011
BPRS	0.136	0.045	0.136	<b>0.002</b>	0.049 0.224
HAM-A	0.288	0.067	0.212	<b>0.000</b>	0.157 0.420
HAM-D	0.228	0.055	0.213	<b>0.000</b>	0.199 0.336
KMDRS	0.068	0.026	0.115	<b>0.010</b>	0.017 0.120
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S12. Linear regressions between psychiatric medications during COVID-19 and variables related to long COVID-19					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of long COVID-19 symptoms	10.451	0.588	0.110	<b>0.014</b>	0.296 20.605
Number of medications during long COVID-19	20.078	0.467	0.198	<b>0.000</b>	10.160 20.996
Number of psychotropic medications during long COVID-19	10.028	0.066	0.573	<b>0.000</b>	0.898 10.157
BPRS	10.851	0.750	0.110	<b>0.014</b>	0.377 30.326
HAM-A	10.046	10.148	0.046	0.363	-10.211 30.303
HAM-D	20.86310	0.942	0.112	20.133	0.157 30.6
KMDRS	-0.078	0.446	-0.008	0.861	-0.954 0.798
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S13. Analysis of linear regressions between the duration of hospitalization and Long COVID outcomes in males.					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of drugs post-COVID	0.012	0.005	0.144	<b>0.023</b>	0.002 0.023
Number of psychotropic drugs post-COVID	0.002	0.001	0.147	<b>0.019</b>	0.000 0.003
KMDRS	0.004	0.005	0.046	0.466	-0.006 0.013
<b>Legend:</b> significant results are in bold. KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S14. Analysis of linear regressions between the duration of hospitalization and Long COVID outcomes in females.					
Dependent variable	B	SE	$\beta$	P	95% CI
Number of drugs post-COVID	0.033	0.005	0.394	<b>0.000</b>	0.023 0.043
Number of psychotropic drugs post-COVID	0.003	0.001	0.203	<b>0.001</b>	0.001 0.005
KMDRS	-0.014	0.005	-0.169	<b>0.008</b>	-0.024 -0.004
<b>Legend:</b> significant results are in bold. KMDRS, Koukopoulos Mixed Depression Rating Scale.					

Table S15 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with variables related to long COVID-19 in linear regressions.					
Number of medications during long COVID-19	B	SE	t	P	95% CI
Age	0.053	0.011	4.617	<b>0.000</b>	0.030 0.075
Occupation	-0.523	0.267	-1.955	0.051	-1.048 0.003
Substance abuse prior to COVID-19	-0.571	0.277	-2.063	<b>0.040</b>	-1.114 -0.027
Number of psychotropic medications during COVID-19	1.617	0.434	3.727	<b>0.000</b>	0.764 2.470
Gender	-0.158	0.253	-0.626	0.532	-0.655 0.399
DH	-0.009	0.012	-0.806	0.421	-0.032 0.013
Gender*DH	0.020	0.007	2.0845	<b>0.005</b>	0.006 0.034
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S16 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: Number of psychotropic medications during long COVID-19	B	SE	t	P	95% CI
Psychotropic medications prior to COVID-19	0.199	0.064	3.113	<b>0.002</b>	0.073 0.325
Distance from COVID-19 onset	0.000	0.000	2.211	<b>0.027</b>	0.00003930 0.001
Psychotropic medications during COVID-19	0.963	0.064	15.170	<b>0.000</b>	0.839 1.088
Gender	0.028	0.036	0.790	0.430	-0.042 0.099
DH	-0.002	0.002	-1.345	0.179	-0.006 0.001
Gender*DH	0.003	0.001	2.589	<b>0.010</b>	0.001 0.005
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S17 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: KMDRS	B	SE	t	P	95% CI
Distance from COVID-19 onset	0.000	0.001	-0.454	0.650	-0.003 0.002
Psychotropic medications during COVID-19	-0.056	0.451	-0.123	0.902	-0.941 0.830
number of long COVID-19 symptoms	0.085	0.035	2.453	<b>0.015</b>	0.017 0.153
Gender	0.098	0.257	0.379	0.705	-0.408 0.603
DH	0.020	0.012	1.714	0.087	-0.003 0.044
Gender*DH	-0.017	0.007	-2.311	<b>0.021</b>	-0.031 -0.002
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S18 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: number of long COVID-19 symptoms	B	SE	t	P	95% CI
Distance from COVID-19 onset	0.005	0.001	3.383	<b>0.001</b>	0.002 0.008
Psychotropic medications during COVID-19	0.984	0.575	1.713	0.087	-0.145 2.133
Gender	1.605	0.323	4.962	<b>0.000</b>	0.969 2.240
DH	0.002	0.015	0.141	0.888	-0.028 0.032
Gender*DH	-0.007	0.009	-0.736	0.462	-0.025 0.011
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S19 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: HAM-D	B	SE	t	P	95% CI
Distance from COVID-19 onset	-0.003	0.002	-1.566	0.118	-0.008 0.001
Psychotropic medications prior to COVID-19	1.049	1.060	0.990	0.323	-1.035 3.134
Gender	1.599	0.529	3.024	<b>0.003</b>	0.599 2.638
DH	-0.002	0.024	-0.072	0.943	-0.049 0.046
Gender*DH	0.012	0.017	0.702	0.483	-0.021 0.044
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S20 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: HAM-A	B	SE	t	P	95% CI
Distance from COVID onset	-0.005	0.003	-2.036	<b>0.042</b>	-0.010 0.000
Psychotropic medications prior to COVID-19	1.201	1.296	0.927	0.355	-1.348 3.750
Gender	2.424	0.609	3.982	<b>0.000</b>	1.227 3.621
DH	0.020	0.027	0.766	0.444	-0.032 0.073
Gender*DH	-0.013	0.016	-0.819	0.413	-0.045 0.018
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					

Table S21 – Multivariate regression analyses – Results adjusted for variables showing a significant relationship with each Long COVID outcomes in the linear regressions.					
Dependent variable: BPRS	B	SE	t	P	95% CI
Psychotropic medications prior- COVID-19	1.305	0.958	1.362	0.174	-0.578 3.187
Psychotropic medications during COVID-19	1.205	0.743	1.621	0.106	-0.256 2.665
number of symptoms During COVID-19	0.126	0.046	2.753	<b>0.006</b>	0.036 0.215
Occupation	-1.220	0.461	-2.646	<b>0.008</b>	-2.125 -0.314
Education	-0.089	0.041	-2.197	<b>0.029</b>	-0.170 -0.009
Psychiatric history prior to COVID-19	0.606	0.778	0.780	0.436	-0.922 2.135
Gender	0.770	0.435	1.769	0.077	-0.085 1.626
DH	0.016	0.020	0.806	0.421	-0.023 0.055
Gender*DH	-0.007	0.012	-0.575	0.565	-0.030 0.017
<b>Legend:</b> significant results are in bold. BPRS, Brief-Psychiatric Rating Scale; HAM-A, Hamilton Anxiety Rating Scale; HAM-D, Hamilton Rating Scale for Depression; KMDRS, Koukopoulos Mixed Depression Rating Scale; DH, Duration of Hospitalization					