

Table 2. Comparisons of sociodemographic characteristics and comorbidity between groups

Variable		All (N = 120)	ACG (n = 63)	TG (n = 57)	$\chi^2/t/Z$	<i>p</i>
Sex					0.01	0.923
	Male	29 (24.2)	15 (23.8)	14 (24.6)		
	Female	91 (75.8)	48 (76.2)	43 (75.4)		
Age (year)		39.5±14.9	39.8±16.3	39.1±13.2	2.81	0.700
Body mass index (kg/m²)		23.3±3.8	22.9±3.9	23.8±3.6	-0.14	0.150
Duration of diagnosed COVID (week)	Mean ±SD	34.0±22.7	32.9±21.7	35.3±24.0	0.36	0.717 [†]
	Range	4-106	4-82	5-106		
	Median (IQR)	30 (17.0–48.0)	24.0 (17.0–46.0)	35.5 (16.5–48.0)		
Comorbidity						
	Hypertension	10 (8.3)	5 (7.9)	5 (8.8)	0.03	0.869
	Type 2 diabetes	4 (3.3)	3 (4.8)	1 (1.8)	0.84	0.359
	Cardiovascular disease	8 (6.7)	4 (6.4)	4 (7.0)	0.02	0.883

Note. Data are presented as n (%) or mean ± SD; ACG, active control group; TG, telerehabilitation group; IQR, interquartile range; *p* values were from either independent *t*-test or chi-square test; [†]Mann–Whitney U test.

Table 3. Comparisons of outcome indicators between groups and differences between pre- and post-intervention

Variable	ACG (n = 63)			TG (n = 57)			TG vs. ACG		
	Baseline	12 weeks	<i>p</i> ^a	Baseline	12 weeks	<i>p</i> ^a	Baseline		
							<i>t</i> / <i>x</i> ²	95% CI	<i>p</i> ^b
<i>Cardiorespiratory fitness</i>									
VO _{2peak} (ml/kg/min)	26.3±6.3	26.4±7.1	0.350	24.2±4.6	26.4±5.7	<.001	2.07	0.09, 4.12	0.041
AT (mL/kg/min)	14.0±3.7	14.0±3.7	0.398	12.5±3.1	14.3±3.9	<.001	2.51	0.33, 2.82	0.013
O ₂ Pulse (mL/beat)	10.1±2.3	10.2±2.6	0.837	10.0±2.2	10.6±2.5	0.005	0.16	-0.76, 0.89	0.872
HR recovery-1 min (beat)	20.4±8.4	21.0±8.5	0.238	20.0±8.5	21.5±7.9	0.219	0.21	-2.73, 3.39	0.831
HR recovery-2 min (beat)	33.7±13.0	33.8±10.7	0.915	30.2±9.7	34.1±9.1	<.001	1.65	-0.70, 7.67	0.101
<i>Gait parameters</i>									
Speed (m/s)	1.2±0.14	1.3±0.13	0.821	1.23±0.12	1.3±0.1	<.001	0.312	-0.04, 0.06	0.756
Cadence (spm)	116.9±12.7	118.7±20.6	0.568	115.8±11.6	124.4±13.0	<.001	0.478	-3.39, 5.54	0.634
<i>Body composition</i>									
Body fat (%)	31.5±7.0	31.6±6.9	0.777	33.7±6.3	32.9±6.0	0.035	-1.75	-4.58, 0.29	0.083
Lean mass weight (kg)	22.0±3.6	21.7±3.6	0.178	22.7±4.6	23.8±4.5	<.001	-0.98	-2.22, 0.75	0.327
<i>Sleep quality</i>	9.4±3.2	8.9±3.3	0.018	10.9±3.5	9.8±3.8	0.006	-2.42	-2.70, -0.27	0.017
<i>Quality of life</i>									
Physical	13.6±2.2	13.3±2.4	0.662	12.6±2.3	13.4±2.2	0.049	2.37	0.16, 1.76	0.020
Psychological	12.3±2.6	12.9±2.6	0.025	11.9±2.4	12.7±2.3	0.025	0.80	-0.55, 1.29	0.426
Social	13.8±2.3	14.0±2.4	0.392	13.2±2.2	14.1±2.2	0.007	1.31	-0.18, 1.48	0.192
Environmental	14.2±2.0	14.5±2.0	0.232	13.6±2.1	14.2±1.8	0.038	1.56	-0.16, 1.32	0.123
Long COVID symptoms									
Shortness of breath	35 (55.6)	25 (39.7)	0.108	38 (66.7)	24 (42.1)	0.014	1.55	-	0.213
Chest pain	25 (39.7)	13 (20.6)	0.032	25 (43.9)	10 (17.5)	0.004	0.22	-	0.643
Cough	39 (61.9)	26 (41.3)	0.032	41 (71.9)	23 (40.4)	0.001	1.35	-	0.245

Speed (m/s)	0.05	<.001	0.03	0.191	0.07	0.04	0.11	<.001	0.005
Cadence (spm)	6.01	<.001	1.40	0.615	4.96	1.05	8.86	<.001	0.005
Body composition									
Body fat (%)	-0.35	0.164	1.69	0.149	-0.92	-1.91	0.06	0.103	0.161
Lean mass weight (kg)	0.43	0.017	1.40	0.055	1.32	0.64	2.00	<.001	0.005
Sleep quality	-0.78	<.001	1.19	0.040	-0.58	-1.53	0.38	0.034^a	0.085 ^a
Quality of life									
Physical	0.21	0.256	-0.47	0.118	0.97	0.08	1.85	0.033^a	0.085 ^a
Psychological	0.67	<.001	-0.29	0.427	0.17	-0.67	1.01	0.698	0.698
Social	0.48	0.020	-0.26	0.561	0.77	-0.01	1.55	0.049	0.111
Environmental	0.42	0.016	-0.45	0.162	0.26	-0.36	0.88	0.413	0.469
Long COVID symptoms									
Shortness of breath	0.44	<0.001	1.31	0.400	0.58	0.28	1.20	0.140	0.206
Chest pain	3.18	<0.001	1.07	0.850	0.66	0.40	1.09	0.100	0.161
Cough	0.35	<0.001	1.20	0.520	1.63	0.98	2.70	0.060	0.115
Dizziness	0.46	<0.001	1.46	0.250	0.65	0.29	1.45	0.290	0.381
Headache	0.45	<0.001	1.16	0.660	0.51	0.23	1.15	0.100	0.161
Fatigue	0.12	<0.001	1.12	0.720	0.20	0.08	0.50	< 0.001	0.005
Sleep disturbance	0.50	<0.001	0.97	0.930	0.49	0.24	1.03	0.060	0.115
Palpitation	0.61	0.001	1.30	0.460	0.78	0.36	1.70	0.530	0.552
Brain fog	0.56	<0.001	1.20	0.540	0.68	0.33	1.41	0.300	0.381
Depression/anxiety	0.65	0.020	0.95	0.890	0.65	0.27	1.53	0.320	0.381
Olfactory dysfunction	0.63	0.020	0.98	0.960	0.65	0.27	1.53	0.320	0.381

Note. GEE, generalized estimating equations; ACG, active control group; TG, telerehabilitation group; β , Regression coefficient; *OR*, Odds ratio; CI, confidence interval; HR, heart rate; VO_{2peak} , peak oxygen consumption; AT, anaerobic threshold; O_2 pulse, oxygen pulse; *p* values were derived from linear or logistic models using generalized estimating equations, with a Group $\times$ Time interaction term characterizing the intervention effect of interest. ^aAnalyses were adjusted for baseline values as covariates for outcomes that showed significant between-group differences at baseline; ^b To address the multiple tests in the primary regression analyses, the Benjamini–

Hochberg procedure was employed as a means of controlling the false discovery rate (FDR) (Benjamini and Hochberg, 1995) to calculate adjusted p values.