

Supplemental Tables:

Supplemental Table1: Comparison of baseline characteristics between the two groups

Characteristics	Control group (n=30)	MDSS Group (n=30)	t/ χ^2	P
Male/Female (cases)	22/8	21/9	0.082	0.774 ^B
Age (years)	60.10±8.71	58.47±11.20	1.402	0.166 ^A
Disease duration (days)	60.50±41.66	70.30±45.12	-0.874	0.386 ^A
Length of hospitalization (days)	24.17±2.20	23.80±1.99	0.677	0.501 ^A
Hemorrhage/infarction (cases)	2/28	3/27	-	1.00 ^B
Right/Left hemiplegia (cases)	13/17	15/15	0.268	0.605 ^B
Have/No Hypertension (cases)	21/9	21/9	0.000	1.000 ^B
Have/No Diabetes (cases)	9/21	10/20	0.077	0.781 ^B

Note: ^A employed a two-independent-sample *t*-test; ^B used the chi-square (χ^2) test.

Supplemental Table 2: MAS scores of the two groups before and after the intervention

Muscle group	Before the intervention				After the intervention			
	Control group	MDSS group	Between-group comparison		Control group	MDSS group	Between-group comparison	
			Z	P			Z	P
Flexor pollicis longus	3.00 (3.00,3.00)	3.00 (3.00,3.00)	-0.88 1	0.379	3.00 (3.00,3.00)	1.00 (1.00,2.00) [#]	-5.9 74	<0.001
Flexor digitorum superficialis (III)	3.00 (3.00,3.00)	3.00 (3.00,3.00)	-0.51 4	0.607	3.00 (3.00,3.00)*	1.00 (1.00,3.00) [#]	-3.5 92	<0.001
Flexor digitorum superficialis (V)_	3.00 (3.00,3.00)	3.00 (2.00,3.00)	-0.70 1	0.483	3.00 (1.75,3.00)	1.00 (1.00,1.00) [#]	-4.7 54	<0.001

Note: The data are presented as M (P25, P75). Pre- and post-intervention comparisons within each group were conducted using the Wilcoxon matched-pairs signed-rank test (*P < 0.05 and [#]P < 0.001). Between-group comparisons were performed using the Mann-Whitney U test.

Supplemental Table 3: MMT scores of the two groups before and after the intervention

Muscle group	Before the intervention				After the intervention			
	Control group	MDSS group	Between-group comparison		Control group	MDSS group	Between-group comparison	
			Z	P			Z	P
Flexor pollicis	6.00 (3.00,6.00)	6.00 (3.75,6.25)	-1.646	0.100	6.00 (4.00,6.00)	6.50 (6.00,7.00) [#]	-2.406	0.016
Flexor digitorum (III)	5.00 (3.00,6.00)	5.00 (3.00,6.00)	-0.476	0.634	6.00 (3.00,6.00)	6.00 (3.00,6.00)	-0.961	0.336
Flexor digitorum (V)	3.00 (2.75,3.00)	3.00 (3.00,3.00)	-0.629	0.529	3.00 (3.00,3.25)*	3.00 (3.00,4.50)*	-0.863	0.388
Extensor pollicis	1.00 (1.00,3.00)	1.00 (1.00,2.00)	-0.393	0.695	1.00 (1.00,3.00)	3.00 (1.00,3.00) [#]	-3.071	0.002
Extensor digitorum (III)	1.00 (0.00,1.00)	1.00 (0.75,1.00)	-0.815	0.415	1.00 (1.00,1.00)	1.00 (1.00,3.00) [#]	-3.405	0.001
Extensor digitorum (V)	1.00 (0.00,1.00)	1.00 (0.00,1.00)	-0.588	0.557	1.00 (0.00,1.00)	1.00 (1.00,3.00) [#]	-3.505	0.000

Note: The data are presented as M (P25, P75). Pre- and post-intervention comparisons within each group were conducted using the Wilcoxon matched-pairs signed-rank test (*P < 0.05 and [#]P < 0.01). Between-group comparisons were performed using the Mann-Whitney U test.

Supplemental Table 4: FMA and MBI scores of the two groups before and after the intervention

Scale	Before the intervention				After the intervention			
	Control group	MDSS group	Between-group comparison		Control group	MDSS group	Between-group comparison	
			t	P			t	P
FMA-UE score	35.33±7.36	37.10±7.98	-0.891	0.377	39.63±8.13*	45.07±6.14*	-2.922	0.005
MBI score	59.33±6.53	60.17±6.36	-0.501	0.619	65.50±5.31*	69.83±5.94*	-2.978	0.004

Note: Between-group comparisons were conducted using the independent samples t-test. Within-group comparisons before and after the intervention were performed using the paired-samples t-test (*P < 0.001).

Supplemental Table 5: Comparison of HbO concentrations in each ROI before and after the intervention within the Control group

ROI	RS				TS			
	Before the intervention (RS1)	After the intervention (RS2)	Comparison between RS2 and RS1		Before the intervention (TSa)	After the intervention (TSb)	Comparison between TSb and TSa	
			t	p			t	p
RPFC	0.011±0.024	0.016±0.033	0.685	0.499	0.027±0.025	0.039±0.056	1.046	0.304
LPFC	0.009±0.027	0.017±0.039	1.038	0.308	0.034±0.041	0.044±0.073	0.531	0.600
RPMC	0.010±0.021	0.012±0.040	0.289	0.775	0.035±0.027	0.037±0.071	0.190	0.850
LPMC	0.012±0.023	0.012±0.034	-0.060	0.952	0.028±0.026	0.038±0.085	0.585	0.563
RM1	0.013±0.023	0.014±0.048	0.081	0.936	0.037±0.03	0.051±0.082	0.854	0.400
LM1	0.014±0.034	0.015±0.045	0.042	0.967	0.034±0.032	0.046±0.096	0.639	0.528
RS1	0.012±0.021	0.014±0.038	0.247	0.806	0.038±0.033	0.046±0.069	0.586	0.562
LS1	0.014±0.027	0.012±0.041	-0.176	0.862	0.033±0.032	0.046±0.093	0.739	0.466
RSMG	0.018±0.025	0.022±0.044	0.532	0.599	0.037±0.031	0.044±0.075	0.417	0.680
LSMG	0.011±0.028	0.013±0.046	0.148	0.883	0.035±0.031	0.045±0.076	0.633	0.532
ROL	0.004±0.041	0.022±0.076	1.079	0.290	0.027±0.055	0.071±0.120	1.623	0.115
LOL	0.023±0.048	0.025±0.094	0.068	0.946	0.052±0.053	0.039±0.094	-0.567	0.575

Note: TSa and TSb represent the differences between TS and RS before and after the intervention, respectively. Within-group comparisons before and after the intervention were conducted using a paired-samples *t*-test.

Supplemental Table 6: Comparison of HbO concentrations in each ROI before and after the intervention within the MDSS group

ROI	RS				TS			
	Before the intervention (RS1)	After the intervention (RS2)	Comparison between RS2 and RS1		Before the intervention (TSa)	After the intervention (TSb)	Comparison between TSb and TSa	
			t	p			t	p
RPFC	0.001±0.017	0.014±0.026	2.143	0.041	0.013±0.025	0.055±0.049	4.602	0.000
LPFC	-0.001±0.018	0.013±0.027	2.324	0.027	0.013±0.028	0.057±0.048	4.934	0.000
RPMC	0.005±0.016	0.010±0.027	0.924	0.363	0.015±0.032	0.042±0.043	2.682	0.012
LPMC	0.002±0.017	0.013±0.020	2.455	0.020	0.019±0.031	0.053±0.037	4.372	0.000
RM1	0.000±0.017	0.007±0.023	1.218	0.233	0.016±0.034	0.047±0.060	2.496	0.018
LM1	0.004±0.019	0.009±0.025	1.025	0.314	0.022±0.041	0.066±0.060	3.936	0.000
RS1	-0.001±0.017	0.008±0.026	1.556	0.130	0.016±0.031	0.052±0.057	3.222	0.003
LS1	0.002±0.017	0.011±0.021	1.940	0.062	0.021±0.033	0.057±0.053	3.443	0.002
RSMG	0.003±0.020	0.010±0.028	1.172	0.251	0.018±0.030	0.052±0.046	3.569	0.001
LSMG	0.004±0.014	0.006±0.021	0.530	0.600	0.018±0.031	0.049±0.050	2.874	0.008

ROL	-0.001±0.022	0.002±0.027	0.535	0.597	0.012±0.039	0.049±0.059	2.765	0.010
LOL	0.005±0.029	-0.004±0.027	-1.403	0.171	0.017±0.045	0.045±0.052	2.274	0.031

Note: TSa and TSb represent the differences between TS and RS before and after the intervention, respectively. Within-group comparisons before and after the intervention were conducted using a paired-samples *t*-test.

Supplemental Table 7: Comparison of the differences in HbO concentration before and after the intervention in each ROI between the Control and MDSS groups

ROI	RS				TS			
	Control group	MDSS group	Comparison		Control group	MDSS group	Comparison	
			between RS2 and				between TS2 and	
			RS1				TS1	
RS1	RS2	t	p	TS1	TS2	t	p	
RPFC	0.005±0.037	0.013±0.032	0.885	0.380	0.012±0.065	0.042±0.050	1.957	0.055
LPFC	0.008±0.043	0.014±0.033	0.590	0.557	0.010±0.098	0.044±0.049	1.722	0.090
RPMC	0.002±0.043	0.005±0.032	0.311	0.757	0.003±0.075	0.026±0.054	1.410	0.164
LPMC	-0.001±0.041	0.011±0.025	1.322	0.191	0.010±0.089	0.034±0.043	1.359	0.179
RM1	0.001±0.054	0.007±0.030	0.514	0.609	0.014±0.087	0.031±0.068	0.865	0.391
LM1	0.001±0.056	0.005±0.029	0.432	0.668	0.012±0.100	0.044±0.061	1.511	0.136
RS1	0.002±0.042	0.008±0.030	0.700	0.487	0.009±0.082	0.036±0.062	1.459	0.150
LS1	-0.001±0.039	0.009±0.025	1.175	0.246	0.012±0.092	0.037±0.058	1.212	0.230
RSMG	0.005±0.047	0.007±0.035	0.277	0.783	0.006±0.085	0.034±0.053	1.519	0.134
LSMG	0.001±0.045	0.002±0.020	0.078	0.938	0.010±0.084	0.031±0.060	1.150	0.255
ROL	0.018±0.090	0.003±0.031	-0.842	0.406	0.044±0.150	0.037±0.073	-0.247	0.806
LOL	0.001±0.112	-0.009±0.036	0.497	0.622	-0.013±0.122	0.028±0.067	1.588	0.119

Note: RS1 and RS2 represent the differences in HbO concentration between post-intervention and pre-intervention during the resting state in the Control group and the MDSS group, respectively. TS1 and TS2 represent the differences in HbO concentration between post-intervention and pre-intervention during the task state in the Control group and the MDSS group, respectively. Between-group comparisons were conducted using the independent-samples *t* test.

Supplemental Table 8: Comparison of the FCs before and after the intervention in the Control group

ROI- ROI	RS				TS			
	Before the intervention (RS1)	After the intervention (RS2)	Comparison between RS2 and RS1		Before the intervention (TS1)	After the intervention (TS2)	Comparison between TS2 and TS1	
			t	p			t	p
RPFC~LPFC	0.508±0.208	0.416±0.187	-1.793	0.078	0.461±0.227	0.465±0.246	0.060	0.953
RPFC~ROL	0.308±0.336	0.289±0.270	-0.237	0.814	0.351±0.332	0.349±0.316	-0.037	0.970
RPFC~LOL	0.295±0.301	0.303±0.256	0.114	0.910	0.373±0.266	0.317±0.310	-0.934	0.358
LPFC~ROL	0.310±0.314	0.305±0.252	-0.065	0.949	0.320±0.290	0.364±0.336	0.564	0.577
LPFC~LOL	0.343±0.313	0.338±0.283	-0.053	0.958	0.344±0.223	0.374±0.314	0.442	0.662
RPMC~LPMC	0.678±0.287	0.644±0.378	-0.394	0.695	0.696±0.394	0.705±0.352	0.091	0.928
RPMC~RPFC	0.420±0.236	0.419±0.262	-0.009	0.993	0.455±0.282	0.437±0.235	-0.257	0.799
RPMC~LPFC	0.434±0.207	0.402±0.246	-0.555	0.581	0.404±0.227	0.413±0.255	0.125	0.902
RPMC~ROL	0.378±0.366	0.472±0.366	0.991	0.326	0.458±0.417	0.536±0.396	0.695	0.492
RPMC~LOL	0.400±0.286	0.515±0.361	1.357	0.180	0.524±0.323	0.478±0.321	-0.602	0.552
LPMC~RPFC	0.416±0.229	0.406±0.296	-0.148	0.883	0.432±0.264	0.416±0.269	-0.208	0.837
LPMC~LPFC	0.495±0.226	0.442±0.281	-0.813	0.420	0.436±0.247	0.495±0.280	0.797	0.432
LPMC~ROL	0.368±0.448	0.390±0.33	0.218	0.828	0.480±0.416	0.482±0.376	0.019	0.985
LPMC~LOL	0.423±0.363	0.479±0.338	0.618	0.539	0.561±0.372	0.493±0.350	-0.695	0.493
RM1~LM1	0.949±0.379	0.861±0.449	-0.821	0.415	0.938±0.484	0.925±0.372	-0.098	0.923
RM1~RS1	1.039±0.425	0.980±0.437	-0.533	0.596	1.027±0.471	1.024±0.483	-0.023	0.982
RM1~LS1	0.828±0.355	0.741±0.432	-0.854	0.396	0.834±0.409	0.825±0.383	-0.071	0.944
RM1~RPMC	0.838±0.413	0.854±0.405	0.151	0.880	0.859±0.458	0.909±0.436	0.374	0.711
RM1~LPMC	0.720±0.275	0.644±0.413	-0.838	0.406	0.704±0.420	0.712±0.354	0.062	0.951
RM1~RPFC	0.463±0.237	0.403±0.293	-0.878	0.384	0.406±0.293	0.416±0.235	0.141	0.889
RM1~LPFC	0.477±0.212	0.424±0.264	-0.858	0.394	0.388±0.236	0.428±0.268	0.580	0.566
RM1~ROL	0.365±0.395	0.539±0.366	1.773	0.081	0.513±0.456	0.503±0.456	-0.079	0.938
RM1~LOL	0.396±0.377	0.515±0.350	1.262	0.212	0.519±0.353	0.528±0.419	0.086	0.932
LM1~RS1	0.882±0.377	0.781±0.479	-0.903	0.370	0.868±0.363	0.861±0.446	-0.064	0.949
LM1~LS1	0.968±0.338	0.895±0.483	-0.677	0.501	1.042±0.447	1.061±0.458	0.144	0.887
LM1~RPMC	0.778±0.370	0.770±0.453	-0.073	0.942	0.797±0.354	0.787±0.373	-0.097	0.924
LM1~LPMC	0.806±0.271	0.748±0.485	-0.576	0.567	0.890±0.452	0.880±0.421	-0.088	0.930
LM1~RPFC	0.453±0.250	0.435±0.311	-0.238	0.813	0.447±0.303	0.384±0.270	-0.830	0.413
LM1~LPFC	0.503±0.219	0.461±0.288	-0.628	0.532	0.443±0.244	0.482±0.272	0.596	0.556
LM1~ROL	0.429±0.378	0.484±0.397	0.553	0.582	0.492±0.434	0.509±0.447	0.141	0.889
LM1~LOL	0.458±0.360	0.543±0.396	0.870	0.388	0.547±0.371	0.588±0.394	0.424	0.675
RS1~LS1	0.861±0.359	0.751±0.462	-1.031	0.307	0.815±0.361	0.797±0.439	-0.148	0.884
RS1~RPMC	0.758±0.419	0.745±0.420	-0.123	0.903	0.827±0.426	0.751±0.454	-0.619	0.540
RS1~LPMC	0.681±0.294	0.597±0.406	-0.916	0.363	0.673±0.369	0.666±0.397	-0.059	0.954
RS1~RPFC	0.495±0.222	0.400±0.285	-1.437	0.156	0.413±0.282	0.403±0.265	-0.131	0.897

RS1~LPFC	0.482±0.190	0.396±0.277	-1.394	0.169	0.384±0.233	0.415±0.273	0.435	0.667
RS1~ROL	0.432±0.403	0.525±0.370	0.932	0.355	0.593±0.426	0.584±0.464	-0.067	0.947
RS1~LOL	0.414±0.370	0.556±0.389	1.446	0.154	0.596±0.356	0.549±0.443	-0.454	0.653
LS1~RPMC	0.708±0.319	0.636±0.445	-0.721	0.474	0.699±0.370	0.688±0.367	-0.100	0.921
LS1~LPMC	0.728±0.319	0.674±0.436	-0.553	0.583	0.774±0.404	0.755±0.407	-0.171	0.865
LS1~RPFC	0.457±0.234	0.415±0.315	-0.591	0.557	0.434±0.290	0.404±0.275	-0.407	0.687
LS1~LPFC	0.538±0.210	0.439±0.294	-1.487	0.142	0.432±0.251	0.502±0.268	1.007	0.322
LS1~ROL	0.449±0.373	0.430±0.387	-0.194	0.847	0.496±0.446	0.497±0.464	0.007	0.994
LS1~LOL	0.465±0.347	0.568±0.420	1.028	0.308	0.568±0.343	0.571±0.433	0.033	0.974
RSMG~LSMG	0.708±0.365	0.677±0.442	-0.296	0.768	0.731±0.352	0.733±0.430	0.020	0.984
RSMG~RM1	0.885±0.386	0.815±0.447	-0.644	0.522	0.868±0.488	0.861±0.372	-0.052	0.959
RSMG~LM1	0.803±0.355	0.726±0.425	-0.758	0.452	0.785±0.427	0.781±0.384	-0.032	0.975
RSMG~RS1	1.006±0.376	0.879±0.449	-1.181	0.242	0.947±0.470	0.938±0.400	-0.065	0.948
RSMG~LS1	0.823±0.303	0.689±0.447	-1.357	0.181	0.779±0.384	0.787±0.394	0.074	0.941
RSMG~RPMC	0.687±0.384	0.671±0.419	-0.150	0.881	0.713±0.398	0.660±0.400	-0.462	0.648
RSMG~LPMC	0.674±0.294	0.568±0.389	-1.196	0.237	0.648±0.376	0.635±0.344	-0.113	0.911
RSMG~RPFC	0.521±0.264	0.419±0.277	-1.465	0.148	0.420±0.282	0.401±0.272	-0.269	0.790
RSMG~LPFC	0.470±0.208	0.404±0.242	-1.134	0.262	0.375±0.241	0.419±0.288	0.605	0.550
RSMG~ROL	0.457±0.467	0.500±0.350	0.408	0.685	0.562±0.494	0.591±0.550	0.194	0.848
RSMG~LOL	0.478±0.434	0.557±0.416	0.718	0.476	0.576±0.421	0.577±0.531	0.016	0.987
LSMG~RM1	0.641±0.358	0.625±0.438	-0.151	0.880	0.704±0.401	0.693±0.323	-0.107	0.916
LSMG~LM1	0.676±0.323	0.757±0.434	0.818	0.417	0.859±0.402	0.868±0.450	0.070	0.945
LSMG~RS1	0.651±0.374	0.651±0.448	0.006	0.995	0.754±0.341	0.675±0.396	-0.742	0.464
LSMG~LS1	0.763±0.330	0.735±0.473	-0.262	0.794	0.856±0.406	0.925±0.416	0.651	0.520
LSMG~RPMC	0.569±0.337	0.585±0.430	0.162	0.872	0.643±0.304	0.604±0.363	-0.400	0.692
LSMG~LPMC	0.570±0.328	0.581±0.451	0.109	0.913	0.689±0.364	0.648±0.419	-0.380	0.707
LSMG~RPFC	0.391±0.193	0.390±0.291	-0.017	0.986	0.412±0.240	0.384±0.267	-0.421	0.677
LSMG~LPFC	0.486±0.198	0.405±0.292	-1.253	0.215	0.414±0.246	0.482±0.287	0.865	0.394
LSMG~ROL	0.416±0.385	0.426±0.373	0.107	0.915	0.481±0.444	0.518±0.486	0.266	0.792
LSMG~LOL	0.472±0.341	0.579±0.400	1.115	0.270	0.574±0.304	0.582±0.470	0.074	0.941
ROL~LOL	0.532±0.484	0.594±0.503	0.488	0.627	0.637±0.547	0.677±0.508	0.278	0.783

Note: Paired-samples *t*-test was used to compare FCs before and after the intervention within the Control group.

Supplemental Table 9: Comparison of the FCs before and after the intervention within the MDSS group

ROI- ROI	RS				TS			
	Before the intervention (RS1)	After the intervention (RS2)	Comparison between RS2 and RS1		Before the intervention (TS1)	After the intervention (TS2)	Comparison between TS2 and TS1	
			RS1				and TS1	
			t	p			t	p
RPFC~LPFC	0.424±0.246	0.622±0.232	3.290	0.003	0.388±0.206	0.511±0.145	2.422	0.022

RPFC~ROL	0.189±0.235	0.433±0.339	3.264	0.003	0.225±0.249	0.388±0.227	2.676	0.012
RPFC~LOL	0.198±0.267	0.431±0.320	3.138	0.004	0.225±0.258	0.376±0.230	2.208	0.035
LPFC~ROL	0.191±0.190	0.411±0.286	3.392	0.002	0.226±0.196	0.366±0.210	2.778	0.010
LPFC~LOL	0.238±0.254	0.488±0.295	3.479	0.002	0.246±0.228	0.420±0.207	3.162	0.004
RPMC~LPMC	0.614±0.288	0.892±0.324	3.312	0.002	0.530±0.201	0.673±0.164	2.694	0.012
RPMC~RPFC	0.352±0.245	0.559±0.254	3.157	0.004	0.371±0.229	0.481±0.177	1.949	0.061
RPMC~LPFC	0.324±0.235	0.518±0.252	2.948	0.006	0.350±0.219	0.445±0.185	1.783	0.085
RPMC~ROL	0.324±0.261	0.603±0.322	3.663	0.001	0.323±0.254	0.537±0.221	4.145	0.000
RPMC~LOL	0.352±0.322	0.620±0.282	3.293	0.003	0.323±0.286	0.532±0.202	3.043	0.005
LPMC~RPFC	0.350±0.283	0.523±0.250	2.523	0.017	0.342±0.222	0.465±0.169	2.130	0.042
LPMC~LPFC	0.396±0.263	0.579±0.250	2.714	0.011	0.372±0.200	0.492±0.154	2.417	0.022
LPMC~ROL	0.275±0.316	0.552±0.393	2.964	0.006	0.262±0.251	0.497±0.252	3.796	0.001
LPMC~LOL	0.423±0.369	0.691±0.250	3.493	0.002	0.321±0.270	0.583±0.163	4.500	0.000
RM1~LM1	0.791±0.430	0.981±0.405	1.699	0.100	0.634±0.225	0.710±0.197	1.269	0.215
RM1~RS1	0.951±0.504	1.146±0.367	1.639	0.112	0.695±0.249	0.771±0.142	1.386	0.176
RM1~LS1	0.663±0.391	0.825±0.296	1.773	0.087	0.580±0.231	0.642±0.165	1.113	0.275
RM1~RPMC	0.838±0.415	1.110±0.385	2.606	0.014	0.650±0.239	0.754±0.147	1.928	0.064
RM1~LPMC	0.664±0.351	0.830±0.323	1.876	0.071	0.551±0.218	0.647±0.182	1.581	0.125
RM1~RPFC	0.339±0.278	0.500±0.303	2.101	0.044	0.366±0.235	0.431±0.208	1.061	0.297
RM1~LPFC	0.344±0.274	0.477±0.279	1.701	0.100	0.360±0.221	0.409±0.208	0.794	0.434
RM1~ROL	0.353±0.325	0.588±0.357	2.894	0.007	0.347±0.260	0.530±0.244	2.882	0.007
RM1~LOL	0.386±0.403	0.608±0.320	2.360	0.025	0.333±0.312	0.517±0.233	2.515	0.018
LM1~RS1	0.724±0.416	0.909±0.315	1.846	0.075	0.609±0.236	0.686±0.164	1.355	0.186
LM1~LS1	0.844±0.449	1.116±0.336	2.404	0.023	0.662±0.205	0.769±0.159	2.154	0.040
LM1~RPMC	0.642±0.353	0.916±0.377	2.871	0.008	0.566±0.229	0.677±0.192	1.847	0.075
LM1~LPMC	0.736±0.423	1.093±0.424	3.454	0.002	0.581±0.227	0.750±0.177	2.825	0.008
LM1~RPFC	0.338±0.294	0.511±0.270	2.410	0.023	0.361±0.244	0.448±0.183	1.501	0.144
LM1~LPFC	0.393±0.285	0.569±0.258	2.304	0.029	0.389±0.211	0.478±0.168	1.659	0.108
LM1~ROL	0.291±0.334	0.563±0.396	2.630	0.014	0.295±0.275	0.508±0.274	3.357	0.002
LM1~LOL	0.412±0.414	0.682±0.277	2.946	0.006	0.352±0.310	0.581±0.193	3.149	0.004
RS1~LS1	0.683±0.390	0.825±0.277	1.671	0.105	0.596±0.216	0.641±0.156	0.832	0.412
RS1~RPMC	0.692±0.412	0.972±0.365	2.618	0.014	0.583±0.278	0.700±0.188	1.772	0.087
RS1~LPMC	0.592±0.333	0.763±0.300	1.940	0.062	0.521±0.224	0.611±0.192	1.444	0.159
RS1~RPFC	0.328±0.273	0.525±0.317	2.507	0.018	0.361±0.247	0.443±0.211	1.267	0.215
RS1~LPFC	0.348±0.255	0.490±0.274	1.953	0.061	0.378±0.209	0.418±0.193	0.722	0.476
RS1~ROL	0.334±0.345	0.591±0.425	2.630	0.014	0.325±0.301	0.516±0.268	2.836	0.008
RS1~LOL	0.419±0.398	0.663±0.331	2.587	0.015	0.363±0.326	0.546±0.220	2.419	0.022
LS1~RPMC	0.546±0.316	0.794±0.271	3.204	0.003	0.514±0.234	0.626±0.167	1.964	0.059
LS1~LPMC	0.603±0.384	0.903±0.292	3.706	0.001	0.512±0.233	0.685±0.165	3.215	0.003
LS1~RPFC	0.320±0.282	0.478±0.221	2.428	0.022	0.346±0.248	0.430±0.163	1.438	0.161
LS1~LPFC	0.391±0.254	0.550±0.213	2.488	0.019	0.394±0.196	0.469±0.149	1.502	0.144
LS1~ROL	0.293±0.320	0.529±0.360	2.528	0.017	0.300±0.250	0.470±0.275	2.415	0.022
LS1~LOL	0.460±0.392	0.659±0.267	2.441	0.021	0.408±0.289	0.563±0.191	2.295	0.029
RSMG~LSMG	0.530±0.345	0.773±0.360	2.604	0.014	0.485±0.223	0.619±0.221	2.229	0.034

RSMG~RM1	0.759±0.452	0.960±0.333	1.970	0.058	0.612±0.262	0.710±0.156	1.683	0.103
RSMG~LM1	0.628±0.382	0.849±0.333	2.264	0.031	0.548±0.239	0.665±0.189	1.912	0.066
RSMG~RS1	0.879±0.451	1.063±0.377	1.708	0.098	0.674±0.221	0.729±0.169	1.053	0.301
RSMG~LS1	0.637±0.358	0.788±0.278	1.839	0.076	0.562±0.204	0.631±0.177	1.327	0.195
RSMG~RPMC	0.597±0.368	0.883±0.333	3.238	0.003	0.531±0.255	0.674±0.181	2.339	0.026
RSMG~LPMC	0.542±0.299	0.764±0.332	2.620	0.014	0.488±0.200	0.610±0.189	2.007	0.054
RSMG~RPFC	0.325±0.251	0.571±0.342	2.994	0.006	0.348±0.240	0.470±0.213	1.905	0.067
RSMG~LPFC	0.342±0.240	0.532±0.304	2.463	0.020	0.361±0.202	0.446±0.204	1.503	0.144
RSMG~ROL	0.320±0.313	0.612±0.491	2.763	0.010	0.345±0.262	0.516±0.306	2.626	0.014
RSMG~LOL	0.398±0.362	0.703±0.425	3.058	0.005	0.367±0.324	0.558±0.274	2.363	0.025
LSMG~RM1	0.511±0.362	0.714±0.288	2.284	0.030	0.466±0.258	0.594±0.192	2.151	0.040
LSMG~LM1	0.599±0.435	0.923±0.365	2.992	0.006	0.509±0.271	0.685±0.215	2.863	0.008
LSMG~RS1	0.557±0.348	0.726±0.281	2.026	0.052	0.508±0.235	0.601±0.180	1.634	0.113
LSMG~LS1	0.720±0.381	0.951±0.271	2.868	0.008	0.580±0.216	0.697±0.159	2.665	0.012
LSMG~RPMC	0.462±0.296	0.782±0.291	3.944	0.000	0.438±0.248	0.626±0.180	3.576	0.001
LSMG~LPMC	0.554±0.306	0.843±0.287	3.644	0.001	0.465±0.192	0.665±0.157	4.614	0.000
LSMG~RPFC	0.296±0.289	0.518±0.289	3.002	0.005	0.317±0.241	0.452±0.201	2.356	0.025
LSMG~LPFC	0.371±0.270	0.617±0.253	3.942	0.000	0.358±0.209	0.514±0.162	3.296	0.003
LSMG~ROL	0.244±0.336	0.574±0.357	3.344	0.002	0.263±0.299	0.501±0.273	3.471	0.002
LSMG~LOL	0.423±0.423	0.730±0.312	3.200	0.003	0.360±0.326	0.610±0.186	3.660	0.001
ROL~LOL	0.270±0.390	0.514±0.490	2.380	0.024	0.256±0.386	0.474±0.314	2.461	0.020

Note: Paired-samples *t*-test was used to compare FC values before and after the intervention within the MDSS group.

Supplemental Table 10: Comparison of the differences in the FCs before and after the intervention between the Control and MDSS groups

ROI- ROI	RS				TS			
	Control group (RS1)	MDSS group (RS2)	Comparison		Control group (TS1)	MDSS group (TS2)	Comparison	
			between RS2				between TS2	
			and RS1				and TS1	
			t	p			t	p
RPFC~LPFC	-0.092±0.280	0.198±0.338	3.617	0.001	0.003±0.335	0.123±0.252	1.570	0.122
RPFC~ROL	-0.019±0.431	0.244±0.412	2.409	0.019	-0.003±0.458	0.163±0.337	1.600	0.116
RPFC~LOL	0.008±0.396	0.234±0.417	2.149	0.036	-0.056±0.408	0.151±0.346	2.119	0.039
LPFC~ROL	-0.005±0.403	0.220±0.344	2.327	0.024	0.045±0.444	0.140±0.287	0.991	0.327
LPFC~LOL	-0.004±0.422	0.249±0.390	2.416	0.019	0.031±0.385	0.174±0.308	1.595	0.116
RPMC~LPMC	-0.034±0.475	0.278±0.434	2.659	0.010	0.009±0.528	0.143±0.259	1.245	0.220
RPMC~RPFC	-0.001±0.352	0.207±0.353	2.283	0.026	-0.017±0.367	0.110±0.289	1.493	0.141
RPMC~LPFC	-0.033±0.321	0.194±0.345	2.639	0.011	0.008±0.341	0.096±0.287	1.071	0.289
RPMC~ROL	0.094±0.518	0.280±0.415	1.536	0.130	0.078±0.575	0.214±0.337	1.113	0.272
RPMC~LOL	0.114±0.461	0.267±0.428	1.333	0.188	-0.046±0.455	0.208±0.350	2.423	0.019
LPMC~RPFC	-0.010±0.374	0.172±0.378	1.880	0.065	-0.015±0.377	0.124±0.279	1.624	0.110

LPMC~LPFC	-0.054±0.361	0.182±0.362	2.525	0.014	0.059±0.374	0.120±0.252	0.740	0.463
LPMC~ROL	0.022±0.556	0.277±0.504	1.863	0.068	0.002±0.560	0.234±0.356	1.917	0.061
LPMC~LOL	0.056±0.496	0.268±0.445	1.745	0.086	-0.068±0.510	0.262±0.316	3.014	0.004
RM1~LM1	-0.088±0.587	0.189±0.590	1.824	0.073	-0.012±0.611	0.076±0.299	0.712	0.480
RM1~RS1	-0.059±0.610	0.196±0.623	1.601	0.115	-0.003±0.675	0.076±0.286	0.593	0.556
RM1~LS1	-0.087±0.559	0.161±0.490	1.830	0.073	-0.008±0.560	0.062±0.284	0.613	0.543
RM1~RPMC	0.016±0.579	0.272±0.566	1.734	0.088	0.050±0.632	0.104±0.281	0.425	0.676
RM1~LPMC	-0.076±0.496	0.166±0.477	1.927	0.059	0.007±0.549	0.096±0.284	0.784	0.437
RM1~RPFC	-0.060±0.376	0.161±0.411	2.173	0.034	0.010±0.376	0.065±0.314	0.609	0.545
RM1~LPFC	-0.053±0.339	0.133±0.391	1.965	0.054	0.040±0.357	0.048±0.303	0.101	0.920
RM1~ROL	0.174±0.539	0.235±0.483	0.462	0.646	-0.010±0.645	0.183±0.356	1.439	0.157
RM1~LOL	0.119±0.515	0.222±0.515	0.776	0.441	0.009±0.548	0.185±0.390	1.432	0.158
LM1~RS1	-0.100±0.609	0.185±0.522	1.951	0.056	-0.007±0.575	0.078±0.287	0.725	0.473
LM1~LS1	-0.073±0.590	0.271±0.561	2.316	0.024	0.019±0.640	0.107±0.260	0.698	0.490
LM1~RPMC	-0.008±0.585	0.274±0.516	1.980	0.053	-0.010±0.514	0.111±0.299	1.114	0.271
LM1~LPMC	-0.058±0.556	0.357±0.600	2.786	0.007	-0.010±0.618	0.169±0.288	1.436	0.158
LM1~RPFC	-0.017±0.399	0.173±0.400	1.845	0.070	-0.064±0.406	0.087±0.305	1.626	0.110
LM1~LPFC	-0.042±0.362	0.176±0.384	2.258	0.028	0.039±0.366	0.089±0.270	0.607	0.547
LM1~ROL	0.055±0.548	0.272±0.518	1.575	0.121	0.017±0.623	0.214±0.388	1.465	0.149
LM1~LOL	0.085±0.536	0.270±0.499	1.385	0.171	0.041±0.541	0.228±0.365	1.571	0.122
RS1~LS1	-0.110±0.585	0.142±0.478	1.830	0.073	-0.018±0.569	0.046±0.266	0.557	0.581
RS1~RPMC	-0.013±0.593	0.280±0.550	1.986	0.052	-0.076±0.623	0.117±0.336	1.494	0.142
RS1~LPMC	-0.084±0.501	0.171±0.448	2.073	0.043	-0.006±0.542	0.090±0.295	0.856	0.397
RS1~RPFC	-0.095±0.362	0.197±0.418	2.892	0.005	-0.010±0.387	0.081±0.325	0.986	0.328
RS1~LPFC	-0.086±0.336	0.143±0.374	2.486	0.016	0.031±0.359	0.041±0.284	0.115	0.909
RS1~ROL	0.093±0.547	0.256±0.548	1.155	0.253	-0.009±0.630	0.192±0.403	1.467	0.149
RS1~LOL	0.142±0.537	0.244±0.518	0.751	0.456	-0.047±0.568	0.183±0.394	1.822	0.074
LS1~RPMC	-0.072±0.548	0.248±0.417	2.551	0.014	-0.011±0.521	0.113±0.288	1.136	0.262
LS1~LPMC	-0.054±0.540	0.300±0.483	2.677	0.010	-0.019±0.573	0.173±0.286	1.645	0.107
LS1~RPFC	-0.042±0.393	0.159±0.358	2.071	0.043	-0.030±0.400	0.084±0.297	1.257	0.214
LS1~LPFC	-0.098±0.361	0.159±0.332	2.871	0.006	0.069±0.368	0.074±0.246	0.061	0.952
LS1~ROL	-0.019±0.537	0.236±0.482	1.937	0.058	0.001±0.644	0.170±0.372	1.244	0.220
LS1~LOL	0.102±0.545	0.199±0.474	0.736	0.465	0.004±0.552	0.154±0.347	1.266	0.212
RSMG~LSMG	-0.031±0.573	0.243±0.499	1.975	0.053	0.002±0.556	0.133±0.314	1.126	0.265
RSMG~RM1	-0.069±0.591	0.201±0.562	1.816	0.075	-0.007±0.613	0.098±0.305	0.838	0.407
RSMG~LM1	-0.077±0.554	0.221±0.506	2.170	0.034	-0.004±0.574	0.117±0.304	1.018	0.314
RSMG~RS1	-0.126±0.586	0.185±0.588	2.052	0.045	-0.009±0.618	0.055±0.278	0.514	0.610
RSMG~LS1	-0.134±0.540	0.150±0.453	2.207	0.031	0.009±0.550	0.068±0.270	0.533	0.597
RSMG~RPMC	-0.016±0.568	0.286±0.496	2.189	0.033	-0.052±0.564	0.142±0.312	1.653	0.105
RSMG~LPMC	-0.106±0.487	0.222±0.447	2.718	0.009	-0.013±0.509	0.121±0.275	1.268	0.211
RSMG~RPFC	-0.102±0.382	0.246±0.425	3.342	0.001	-0.019±0.391	0.122±0.321	1.525	0.133
RSMG~LPFC	-0.066±0.319	0.190±0.387	2.798	0.007	0.045±0.376	0.086±0.287	0.474	0.637
RSMG~ROL	0.043±0.583	0.292±0.582	1.649	0.104	0.028±0.740	0.171±0.403	0.928	0.358
RSMG~LOL	0.079±0.601	0.305±0.559	1.510	0.136	0.002±0.678	0.191±0.424	1.294	0.202

LSMG~RM1	-0.016±0.566	0.203±0.463	1.639	0.107	-0.011±0.515	0.127±0.321	1.253	0.216
LSMG~LM1	0.081±0.541	0.324±0.568	1.700	0.095	0.008±0.603	0.176±0.346	1.324	0.192
LSMG~RS1	0.001±0.583	0.170±0.447	1.258	0.214	-0.079±0.523	0.092±0.296	1.557	0.126
LSMG~LS1	-0.028±0.577	0.231±0.467	1.907	0.062	0.069±0.581	0.117±0.268	0.410	0.684
LSMG~RPMC	0.016±0.547	0.320±0.416	2.422	0.019	-0.039±0.474	0.189±0.306	2.215	0.031
LSMG~LPMC	0.011±0.558	0.289±0.420	2.181	0.034	-0.041±0.555	0.200±0.248	2.175	0.036
LSMG~RPFC	-0.001±0.349	0.222±0.408	2.278	0.027	-0.028±0.359	0.135±0.313	1.878	0.066
LSMG~LPFC	-0.081±0.353	0.245±0.370	3.492	0.001	0.068±0.378	0.156±0.264	1.043	0.302
LSMG~ROL	0.010±0.536	0.330±0.491	2.408	0.019	0.036±0.658	0.238±0.405	1.430	0.159
LSMG~LOL	0.107±0.526	0.308±0.525	1.478	0.145	0.008±0.560	0.250±0.375	1.968	0.055
ROL~LOL	0.062±0.698	0.244±0.626	1.063	0.292	0.041±0.747	0.218±0.497	1.084	0.283

Note: RS1 and RS2 represent the FC differences during the resting state before and after the intervention in the Control group and the MDSS group, respectively. TS1 and TS2 represent the FC differences during the task state before and after the intervention in the Control group and the MDSS group, respectively. All between-group comparisons were conducted using the independent-samples *t*-test.