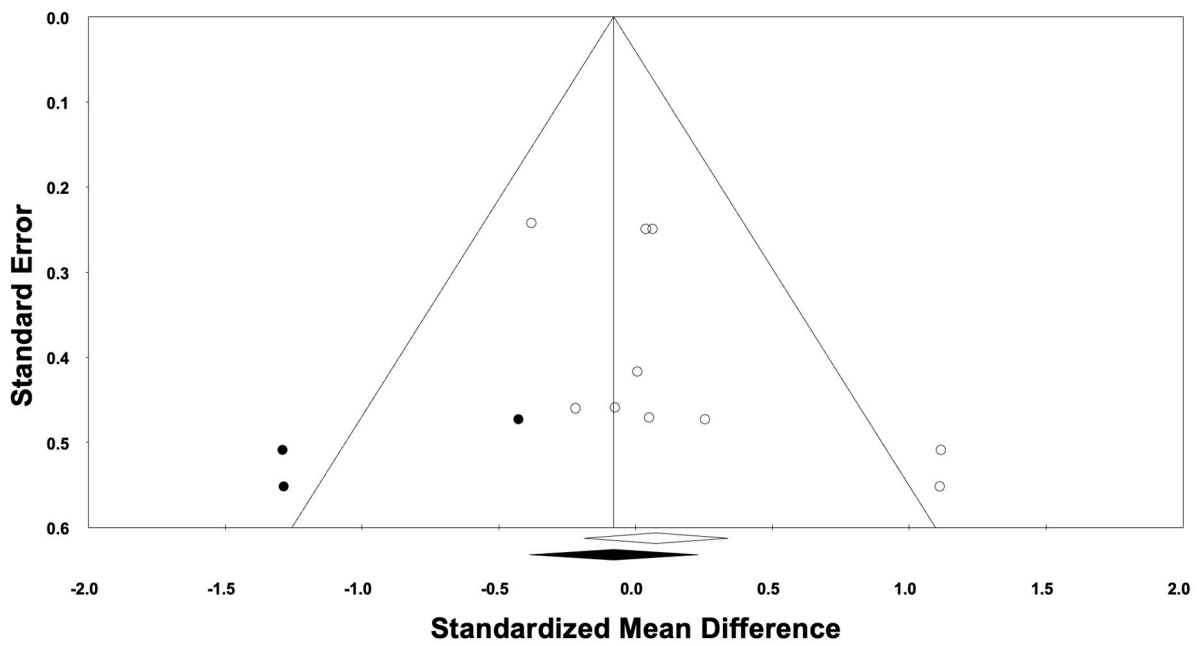
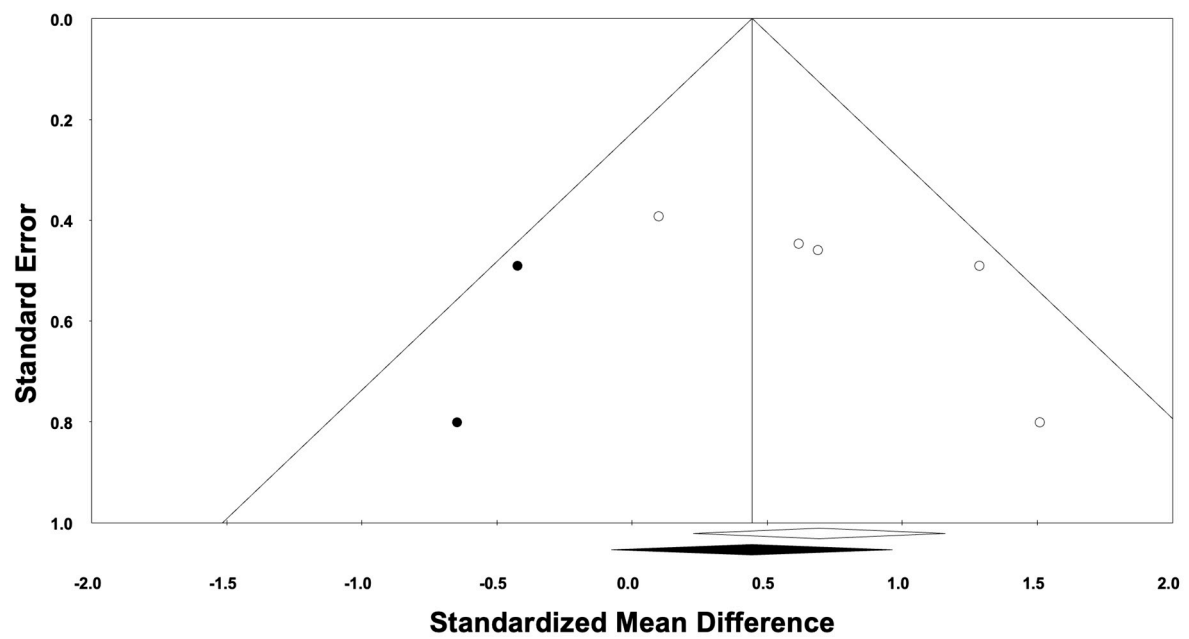


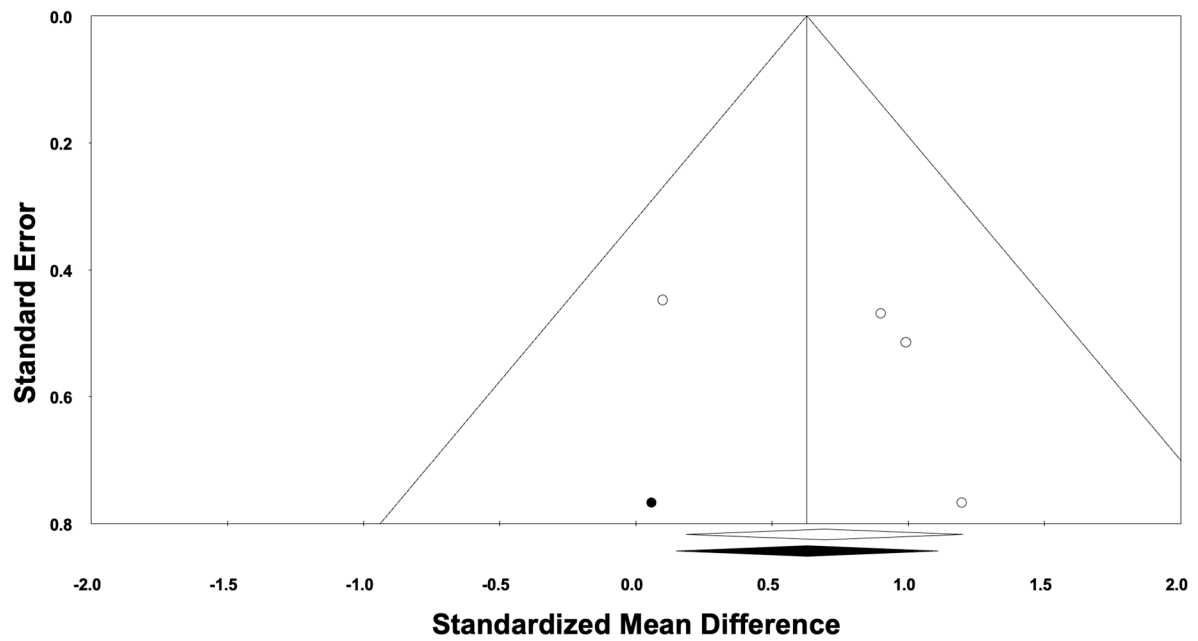
**Figure S1. Funnel plots including 20 comparisons about short-term effects of combined robotic-training and tDCS protocols on upper limb for publication bias assessments.** White circles and white diamond display the original comparisons and overall effects size, whereas four black circles and black diamond indicate denote imputed comparisons and revised effect size.



**Figure S2. Funnel plots including 10 comparisons about long-term effects of combined robotic-training and tDCS protocols on upper limb for publication bias assessments.** White circles and white diamond display the original comparisons and overall effects size, whereas three black circles and black diamond indicate denote imputed comparisons and revised effect size.



**Figure S3. Funnel plots including five comparisons about short-term effects of combined robotic-training and tDCS protocols on lower limb for publication bias assessments.** White circles and white diamond display the original comparisons and overall effects size, whereas two black circles and black diamond indicate denote imputed comparisons and revised effect size.



**Figure S4. Funnel plots including four comparisons about long-term effects of combined robotic-training and tDCS protocols on lower limb for publication bias assessments.** White circles and white diamond display the original comparisons and overall effects size, whereas one black circle and black diamond indicate denote imputed comparisons and revised effect size.

**Table S1. Intervention protocols for control**

Study	Robotic-Training	Joints	Support Type	Session	Sham Current
<b><i>Upper Limb Rehabilitation</i></b>					
Ang 2015 [51]	MI-BCI/MIT-Manus	Uni: shoulder/elbow	End-effector	10	30 sec
Chew 2020 [52]	MI-BCI/MIT-Manus	Uni: shoulder/elbow	End-effector	10	20 sec
De Laet 2022 [54]	REApplan robot	Uni: wrist/hand	End-effector	1	8 sec
Dehem 2018 [55]	REApplan robot	Uni: shoulder/elbow	End-effector	1	40 sec
Edwards 2019 [56]	MIT-Manus	Uni: whole arm	End-effector	36	30 sec
Giacobbe 2013 [58]	InMotion3 wrist robot	Uni: wrist/hand	End-effector	1	30 sec
Hesse 2011 [59]	Bi-Manu Track	Bi: wrist/hand	End-effector	30	No sham
Hong 2017 [60]	MI-BCI/MIT-Manus	Uni: shoulder/elbow	End-effector	10	No sham
Hu 2021 [66]	MI-BCI/MIT-Manus	Uni: shoulder/elbow	End-effector	10	No sham
Kasashima 2015 [45]	MI-BCI/Motor-driven orthosis	Uni: finger	End-effector	30	No sham
Mazzoleni 2015 [62]	InMotion3 wrist robot	Uni: wrist/hand	End-effector	16	5 sec
Mazzoleni 2019 [63]	InMotion3 wrist robot	Uni: wrist/hand	End-effector	30	No sham
Maxfield-Panker 2011 [61]	ReoGo robotic device	Uni: shoulder/elbow	End-effector	22	No sham
Straudi 2016 [65]	ReoGo robotic device	Uni: shoulder/elbow	End-effector	10	30 sec
Triccas 2015 [46]	Armeo® Spring arm robot	Uni: whole arm	Exoskeleton	18	10 sec
<b><i>Lower Limb Rehabilitation</i></b>					
Danzl 2013 [53]	Lokomat	Bi: whole leg	Exoskeleton	12	75 sec
Geroïn 2011 [57]	Gait Trainer GT1	Bi: whole leg	End-effector	10	No sham
Leon 2017 [47]	Gait Trainer or Lokomat	Bi: whole leg	End-effector or Exoskeleton	20	No sham
Picelli 2015 [37]	G-EO System Evolution	Bi: whole leg	End-effector	10	2 min
Seo 2017 [64]	Walkbot S-WALKBOT	Bi: whole leg	Exoskeleton	10	1 min

*Abbreviations.* MI-BCI: Motor Imagery Brain-Computer Interface.

**Table S2. Specific data format and meta-analytic calculation data**

Study	Data Format	SMD	SE	Variance	95%CI-LL	95%CI-UL	Z-value	p-value
<b><i>Upper Limb Rehabilitation: Short-Term Effect</i></b>								
Ang 2015 [51]	Independent groups (Sample size, p)	-0.556	0.468	0.219	-1.473	0.362	-1.187	0.235
Chew 2020 [52]	Independent groups (means, SD's)	-0.542	0.468	0.219	-1.459	0.375	-1.158	0.247
De Laet 2022 [54]	Paired groups (N, p-value)	0.106	0.244	0.059	-0.372	0.583	0.434	0.664
Dehem 2018 [55]	Paired groups (N, p-value)	0.568	0.241	0.058	0.096	1.040	2.357	0.018
Edwards 2019 [56]	Independent groups (means, p)	-0.169	0.229	0.052	-0.617	0.278	-0.741	0.458
Giacobbe 2013 [58]	Paired groups (N, p-value)	0.629	0.316	0.100	0.010	1.248	1.991	0.047
Giacobbe 2013 [58]	Paired groups (N, p-value)	-0.793	0.331	0.110	-1.442	-0.144	-2.396	0.017
Giacobbe 2013 [58]	Paired groups (N, p-value)	0.135	0.290	0.084	-0.434	0.703	0.464	0.642
Hesse 2011 [59]	Independent groups (means, SD's)	-0.007	0.250	0.063	-0.497	0.483	-0.027	0.978
Hesse 2011 [59]	Independent groups (means, SD's)	-0.023	0.250	0.063	-0.513	0.467	-0.093	0.926
Hong 2017 [60]	Independent groups (means, SD's)	0.004	0.471	0.222	-0.920	0.928	0.009	0.993
Hu 2021 [66]	Independent groups (means, SD's)	-0.040	0.474	0.225	-0.970	0.890	-0.085	0.932
Kasashima 2015 [45]	Independent groups (means, SD's)	0.454	0.489	0.239	-0.506	1.413	0.927	0.354
Mazzoleni 2015 [62]	Independent groups (means, SD's)	-0.985	0.611	0.374	-2.184	0.213	-1.612	0.107
Mazzoleni 2019 [63]	Independent groups (Sample size, p)	0.354	0.346	0.120	-0.325	1.032	1.021	0.307
Maxfield-Panker 2011 [61]	Independent groups (means, SD's)	0.245	0.473	0.224	-0.683	1.172	0.517	0.605
Straudi 2016 [65]	Independent groups (Sample size, p)	-0.096	0.418	0.174	-0.915	0.722	-0.230	0.818
Triccas 2015 [46]	Independent groups (means, SD's)	0.080	0.418	0.174	-0.739	0.898	0.191	0.848
<b>Overall</b>		0.040	0.078	0.006	-0.113	0.192	0.508	0.611
<b><i>Lower Limb Rehabilitation</i></b>								
Danzl 2013 [53]	Independent groups (means, SD's)	1.511	0.802	0.643	-0.061	3.082	1.884	0.060
Geroiin 2011 [57]	Independent groups (Sample size, p)	0.690	0.460	0.212	-0.212	1.593	1.500	0.134
Leon 2017 [47]	Independent groups (Sample size, p)	0.100	0.393	0.155	-0.671	0.872	0.255	0.798
Picelli 2015 [37]	Independent groups (Sample size, p)	1.287	0.491	0.241	0.324	2.250	2.620	0.009
Seo 2017 [64]	Independent groups (Sample size, p)	0.619	0.447	0.200	-0.258	1.495	1.383	0.167
<b>Overall</b>		0.693	0.237	0.056	0.228	1.157	2.924	0.003

*Abbreviations.* CI: confidence interval; ES: effect size; LL: lower limit; S: single effect size (not combined); SE: standard error; SD: standard deviation; SMD: standardized mean difference; UL: upper limit.

**Table S2. Specific data format and meta-analytic calculation data (continued)**

Study	Data Format	SMD	SE	Variance	95%CI-LL	95%CI-UL	Z-value	p-value
<b><i>Upper Limb Rehabilitation: Long-Term Effect</i></b>								
Ang 2015 [51]	Independent groups (Sample size, p)	-0.074	0.460	0.211	-0.975	0.827	-0.161	0.872
Chew 2020 [52]	Independent groups (means, SD's)	-0.218	0.461	0.212	-1.121	0.686	-0.472	0.637
Edwards 2019 [56]	Independent groups (means, p)	-0.379	0.243	0.059	-0.855	0.097	-1.561	0.119
Hesse 2011 [59]	Independent groups (means, SD's)	0.040	0.250	0.063	-0.451	0.530	0.158	0.874
Hesse 2011 [59]	Independent groups (means, SD's)	0.063	0.250	0.063	-0.427	0.553	0.252	0.801
Hong 2017 [60]	Independent groups (means, SD's)	0.255	0.473	0.224	-0.673	1.182	0.538	0.591
Hu 2021 [66]	Independent groups (means, SD's)	1.116	0.510	0.260	0.118	2.115	2.191	0.028
Kasashima 2015 [45]	Independent groups (means, SD's)	1.113	0.553	0.305	0.030	2.197	2.015	0.044
Maxfield-Panker 2011 [61]	Independent groups (means, SD's)	0.051	0.471	0.222	-0.873	0.975	0.108	0.914
Triccas 2015 [46]	Independent groups (means, SD's)	0.008	0.417	0.174	-0.810	0.826	0.020	0.984
<b>Overall</b>		0.075	0.134	0.018	-0.188	0.338	0.559	0.576
<b><i>Lower Limb Rehabilitation</i></b>								
Danzl 2013 [53]	Independent groups (means, SD's)	1.197	0.768	0.590	-0.308	2.702	1.559	0.119
Geroiin 2011 [57]	Independent groups (Sample size, p)	0.901	0.469	0.220	-0.018	1.821	0.921	0.055
Picelli 2015 [37]	Independent groups (means, SD's)	0.100	0.449	0.201	-0.779	0.979	0.223	0.824
Seo 2017 [64]	Independent groups (Sample size, p)	0.993	0.515	0.256	-0.016	2.002	1.928	0.054
<b>Overall</b>		0.692	0.258	0.067	0.186	1.198	2.678	0.007

*Abbreviations.* CI: confidence interval; ES: effect size; LL: lower limit; S: single effect size (not combined); SE: standard error; SD: standard deviation; SMD: standardized mean difference; UL: upper limit.