Supplementary Material S1

Syntax used for literature search

(1) regarding tDCS, the terms used were: "transcranial direct current stimulation", “transcranial electric stimulation”, “tDCS”, “tES”;
(2) regarding depressive disorder, we used: “depression”, "depressed", "depressive", “depression”, “major depression”, “MDD”;
(3) regarding clinical trials, we used: "randomized clinical trial", "randomised clinical trial”, "placebo-controlled", "controlled trial".

Within each category, the boolean term OR was used, whereas for the final syntax, the term AND was used to identify references for syntaxes (1), (2), and (3).

In **PubMed/Medline**, the full search string reads:
(('transcranial direct current stimulation' OR 'transcranial electric stimulation' OR 'tdcs' OR 'tes') AND ('depression' OR 'depressed' OR 'depressive' OR 'depression' OR 'major depression' OR 'mdd')) AND ('randomized clinical trial' OR 'randomised clinical trial' OR ‘placebo-controlled’ OR ‘controlled trial’)
Total of 310 records retrieved.

In **EMBASE**, the full search string reads:
('transcranial direct current stimulation':ab,ti OR 'transcranial electric stimulation':ab,ti OR 'tdcs':ab,ti OR 'tes':ab,ti) AND ('depressed':ab,ti OR 'depressive':ab,ti OR 'depression':ab,ti OR 'major depression':ab,ti OR 'mdd':ab,ti) AND ('randomized clinical trial':ab,ti OR 'randomised clinical trial':ab,ti OR 'placebo-controlled':ab,ti OR 'controlled trial':ab,ti)
Total of 166 records retrieved.

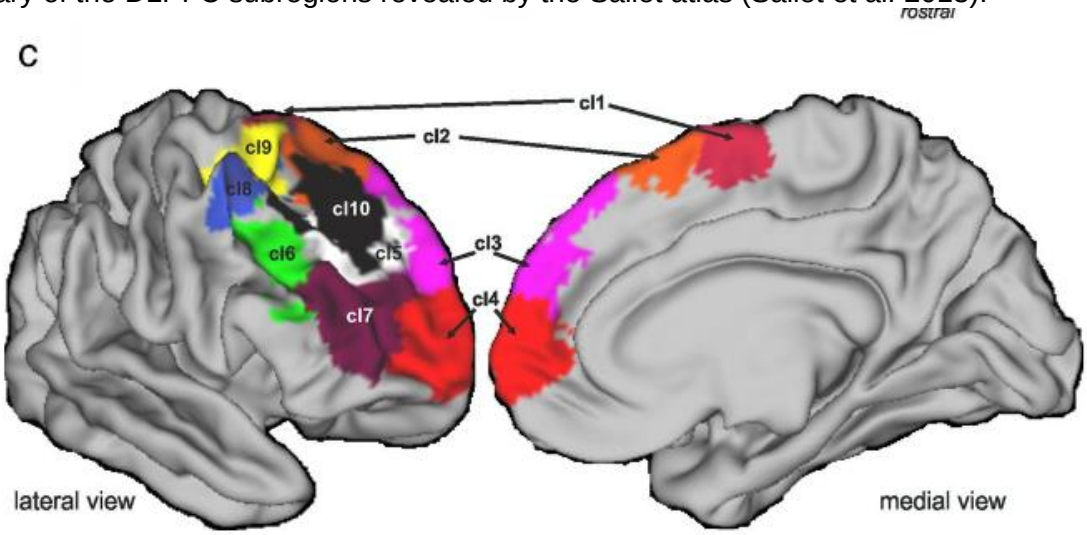
In **Web of Science**, the full search string reads:
'transcranial direct current stimulation' OR 'transcranial electric stimulation' OR 'tdcs' OR 'tes' (All Fields) and 'depression' OR 'depressed' OR 'depressive' OR 'depression' OR 'major depression' OR 'mdd' (All Fields) and 'randomized clinical trial' OR 'randomised clinical trial' OR ‘placebo-controlled’ OR ‘controlled trial’ (All Fields)
Total of 470 results retrieved.

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Supplementary Material S2

Brain regions of interest based on the Sallet atlas

Dorsolateral prefrontal cortex (DLPFC)
Summary of the DLPFC subregions revealed by the Sallet atlas (Sallet et al. 2013).



For our analysis we used:
Subregion A: a more frontal part of the DLPFC including cluster 3, cluster 4, and cluster 7;
Subregion B: a medial part of the DLPFC including cluster 5, cluster 6, and cluster 10;
Subregion C: a posterior part of the DLPFC including cluster 8.

Subgenual anterior cingulate cortex (sgACC)
For our analysis we used the Brainnetome Atlas to identify the sgACC (Fan et al., 2016)



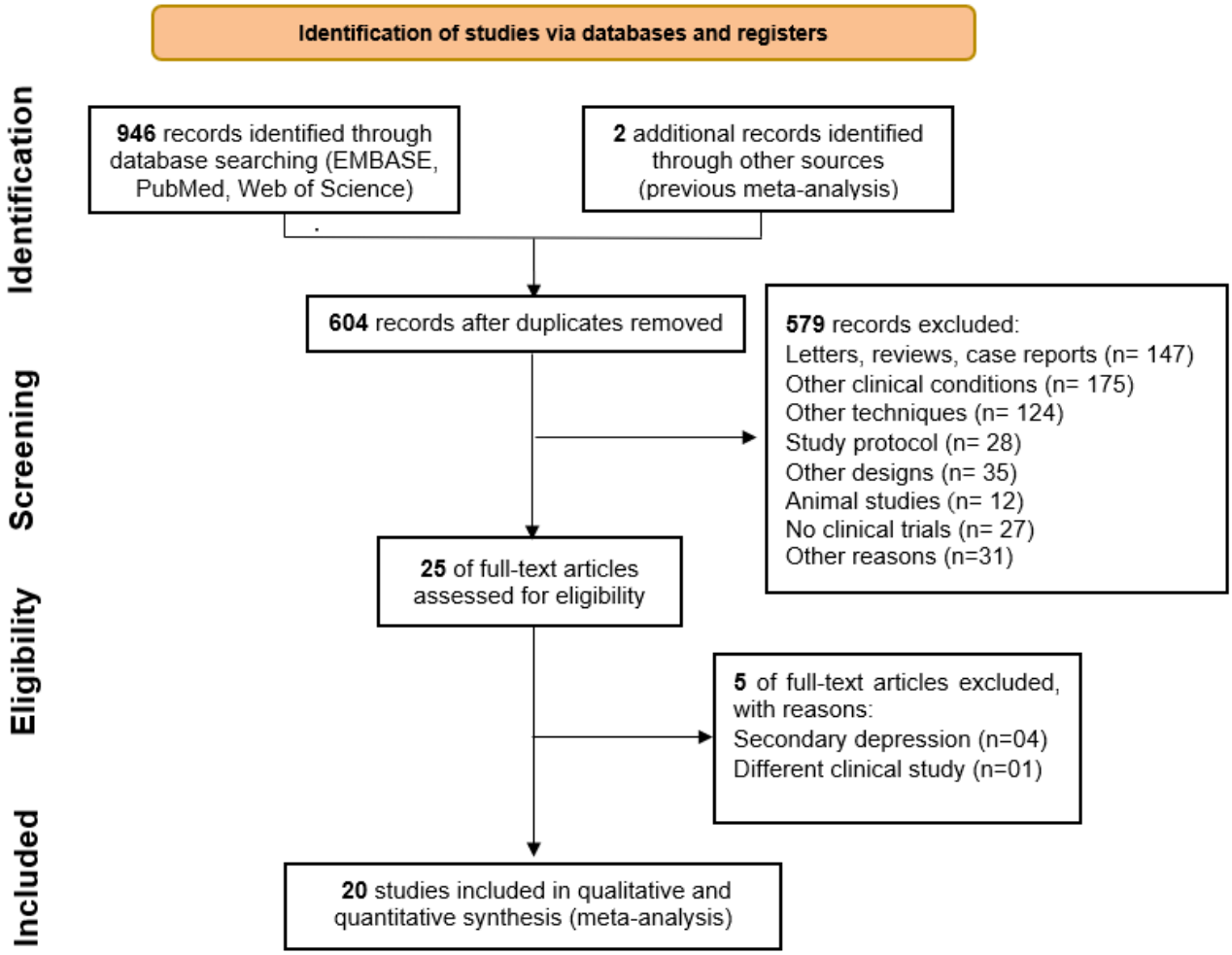
References

Fan L, Li H, Zhuo J, Zhang Y, Wang J, Chen L, et al. The human brainnetome atlas: a new brain atlas based on connectional architecture. Cereb Cortex. 2016;26:3508-26.

Sallet J, Mars RB, Noonan MP, Neubert FX, Jbabdi S, O'Reilly JX, et al. The organization of dorsal frontal cortex in humans and macaques. J Neurosci. 2013;33:12255-74.

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Figure S1 Flow diagram of study inclusion



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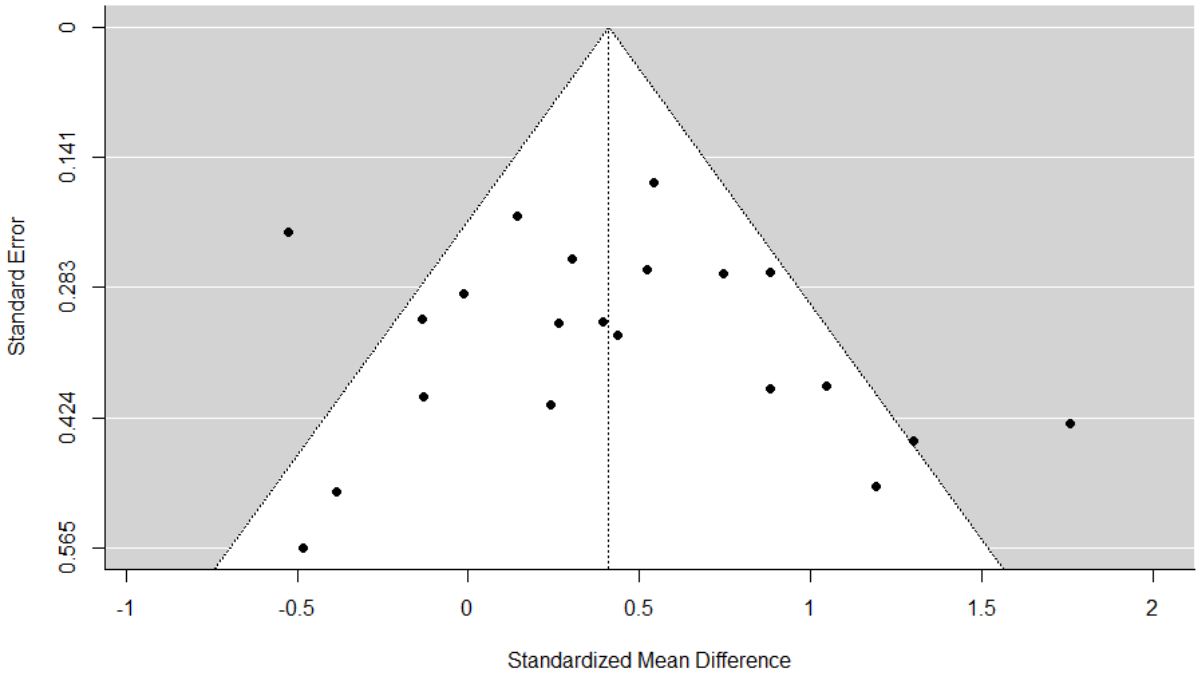
Table S1 Results of risk of bias assessment

Author and year[†]	Randomization and allocation	Blinding of participants	Missing data	Blinding of personnel	Selective reporting	Overall bias
Aust et al.[32]	Low	Low	Low	Low	Low	Low
Bennabi et al.[33]	Low	Low	Some concerns 1	Low	High 2	Some concerns 3
Blumberger et al.[34]	Low	Low	Low	Low	Low	Low
Boggio et al.[35]	Low	Low	Low	Low	Some concerns 4	Low
Brunoni et al.[36]	Low	Low	Low	Low	Low	Low
Brunoni et al.[37]	Low	Low	Some concerns 5	Low	Low	Low
Brunoni et al.[14]	Low	Low	Low	Low	Low	Low
Fregni et al.[13]	Some concerns 6	Some concerns 7	Low	Some concerns 9	High 10	High 11
Loo et al.[38]	Low	Low	Low	Low	Some concerns 12	Low
Loo et al.[39]	Low	Low	Low	Low	Low	Low
Loo et al.[15] (Unipolar)	Low	Low	Low	Low	Low	Low
Mayur et al.[40]	Some concerns 6	Some concerns 7	Some concerns 13	Some concerns 9	Some concerns 4	High 11
Moirand et al.[41]	Low	Low	Low	Low	Low	Low
Nord et al.[48]	Low	Low	Low	Some concerns 14	Low	Low
Pavlova et al.[42]	Some concerns 15	Some concerns 16	Low	Some concerns 17	Some concerns 4	High 18
Salehinejad et al.[43]	Low	Some concerns 7	Some concerns 1	Some concerns 9	Some concerns 4	High 11
Salehinejad et al.[44]	Low	Some concerns 7	Some concerns 1	Some concerns 9	Some concerns 4	High 11
Segrave et al.[45]	Low	Low	Low	Low	Low	Low
Sharafi et al.[46]	Some concerns 6	Low	Low	Some concerns 14	High 10	High 11
Welch et al.[47]	Some concerns 6	Low	Low	Some concerns 9	Low	Some concerns

[†] Reference numbers correspond to the reference list in the main text.
1) Dropouts not described/reported. 2) Deviations in study protocol as reported in clinicaltrials.gov: primary endpoint and primary scale were changed, long term follow-up not reported. 3) Deviations in study protocol; in addition, some outcomes not fully reported (e.g., dropout rate, endpoint values). 4) Not registered in clinicaltrials.gov. 5) No drop-out information. 6) Randomization/allocation were not clearly described. 7) Blinding was not described. 8) High attrition rate. 9) Primary scale not defined. 10) No primary outcome described or no trial preregister. 11) Biases in critical study aspects. 12) Primary scale not defined in clinicaltrials.gov (minor deviation). 13) Missing information in the results. 14) Not described. 15) Some concern regarding the description of the procedures. 16) Device was single-blinded/technicians were unblinded. 17) Duration of active protocols was not blinded. 18) Unusually high response rates, groups were not blinded, duration of active treatments was not blinded, low active dose, protocol not registered in publicly available database. 19) Unable to locate IRCT ID.

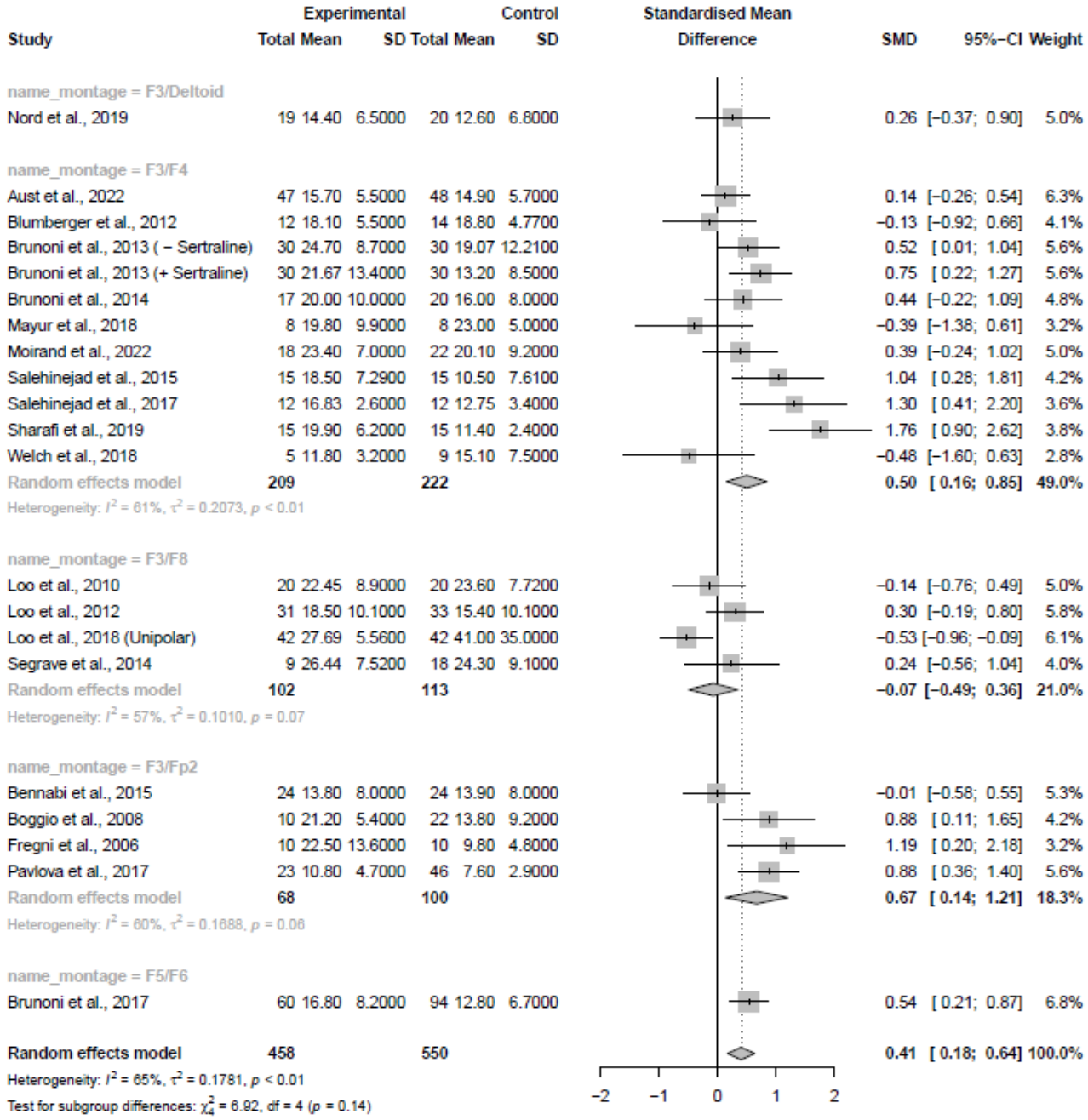
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Figure S2 Funnel plot



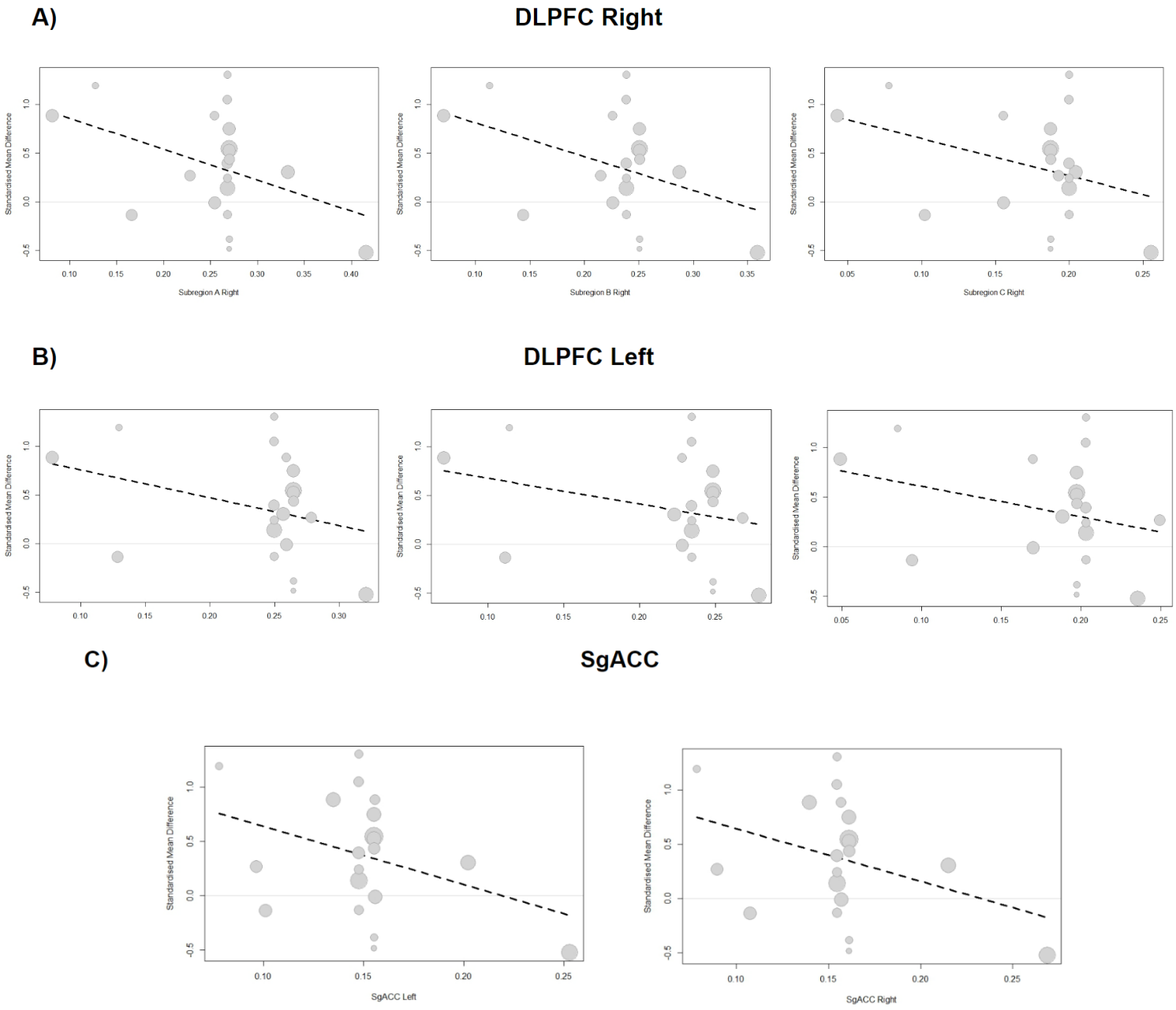
http://doi.org/10.47626/1516-4446-2023-3116
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Figure S3 Effect size per tDCS montage



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Figure S4 Bubble plots of correlation between electric field of three head models and effect size per study



Note: y-axis represents the standard mean difference, while the x-axis represents the mean electric field strength. Bubble sizes represent the sample size of each study.