

eTable 1. Applied keywords and the search results from each database

Database	Keywords	Filter	Date (yyyy/mm/dd)	Result
PubMed	(adhd OR hkd OR add OR Attention deficit hyperactivity disorder OR attention deficit OR hyperactivity OR inattentive OR impulsivity) and (rTMS OR repetitive transcranial magnetic stimulation OR brain stimulation)	RCT	2023/02/26	258
Embase	(adhd OR hkd OR add OR Attention deficit hyperactivity disorder OR attention deficit OR hyperactivity OR inattentive OR impulsivity) and (rTMS OR repetitive transcranial magnetic stimulation OR brain stimulation)	RCT	2023/02/26	173
Cochrane	(adhd OR hkd OR add OR Attention deficit hyperactivity disorder OR attention deficit OR hyperactivity OR inattentive OR impulsivity) and (rTMS OR repetitive transcranial magnetic stimulation)	Trials	2023/02/26	340
CENTRAL	(Attention deficit hyperactivity disorder) and (repetitive transcranial magnetic stimulation)	NA	2023/02/26	7

Abbreviations: NA, not applied; RCT, randomized controlled trial

eTable 2 Reasons for study exclusion

Reason	Number of excluded studies	References
No rTMS treatment group	11	[1-11]
Not for patients with ADHD	12	[12-23]
No outcome for cognitive functions	2	[24, 25]
Not Randomized	2	[26, 27]
Not clinical trials	2	[28, 29]

rTMS repetitive transcranial magnetic stimulation

ADHD Attention deficit hyperactivity disorder

RCT randomized controlled trials

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eTable 3. Grading of Recommendations Assessments, Development and Evaluation (GRADE) assessment of the strength of evidence for standard weighted meta-analysis

Outcome	Design	Risk of bias	Indirectness	Inconsistency	Imprecision	Publication bias	Grade Quality
Sustained attention	RCTx5	No serious	No serious indirectness	No serious inconsistency	Serious imprecision	Serious publication bias	⊕⊕OO ^{4,5}
Memory	RCT x 3	No serious	No serious indirectness	Serious inconsistency	Serious imprecision	Serious publication bias	⊕OOO ^{4,5}
Processing speed	RCT x 3	No serious	No serious indirectness	No serious inconsistency	Serious imprecision	Serious publication bias	⊕⊕OO ^{4,5}
Executive function	RCT x 2	No serious	No serious indirectness	Serious inconsistency	Serious imprecision	Serious publication bias	⊕OOO ^{3,4,5}

*Risk of bias was estimated using Cochrane risk of bias , studies were classified as having low risk of bias if none of the domains above was rated as high risk of bias and three or less were rated as unclear risk; moderate if one was rated as high risk of bias or none was rated as high risk of bias but four or

more were rated as unclear risk, and all other cases were assumed to pertain to high risk of bias.

Down-graded due to: ¹ risk of bias, ² indirectness, ³ Inconsistency, ⁴ Imprecision, ⁵ publication bias

GRADE Working Group grades of evidence:

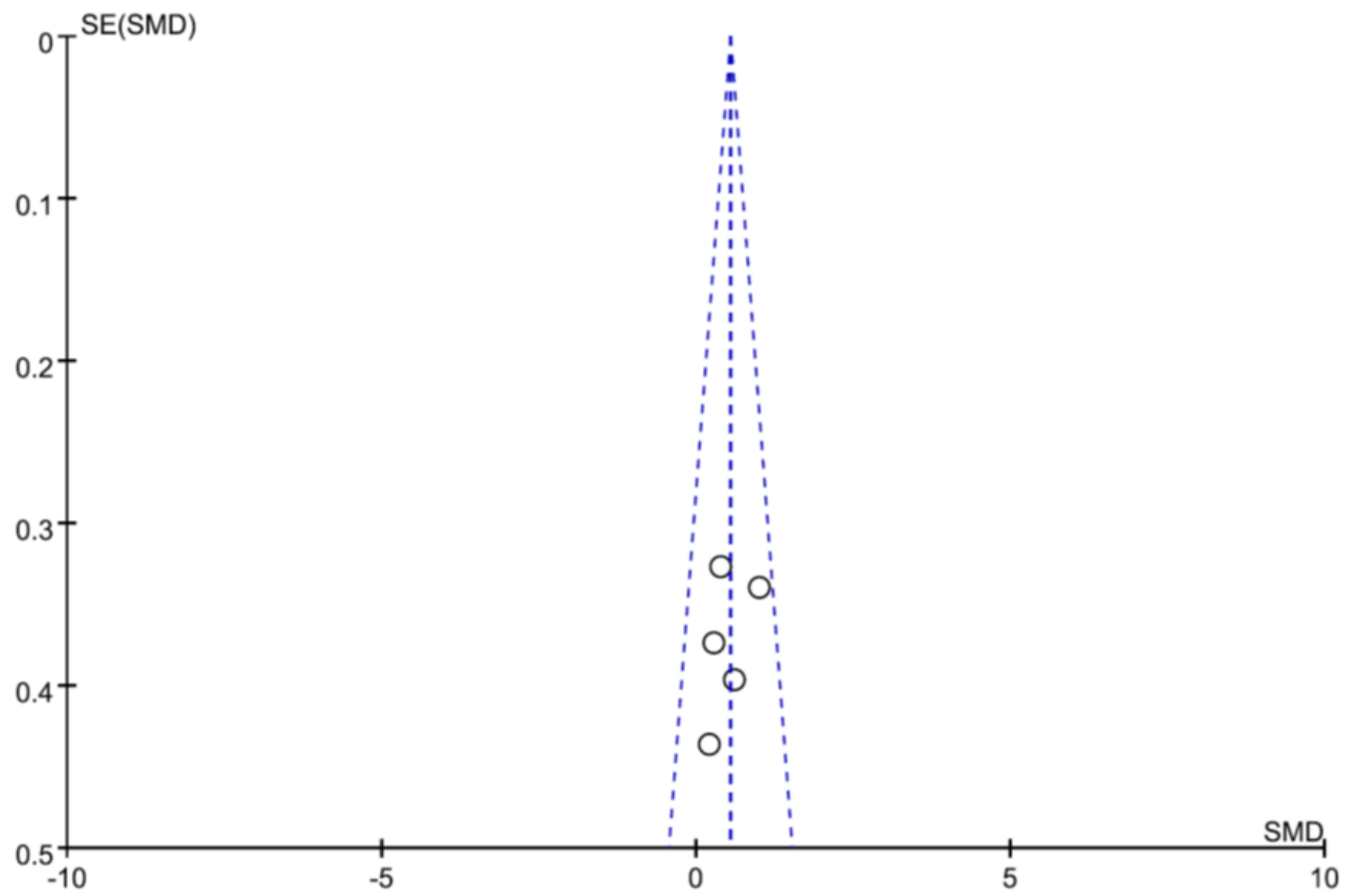
-**High certainty:** We are very confident that the true effect lies close to that of the estimate of the effect

-**Moderate certainty:** We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different.

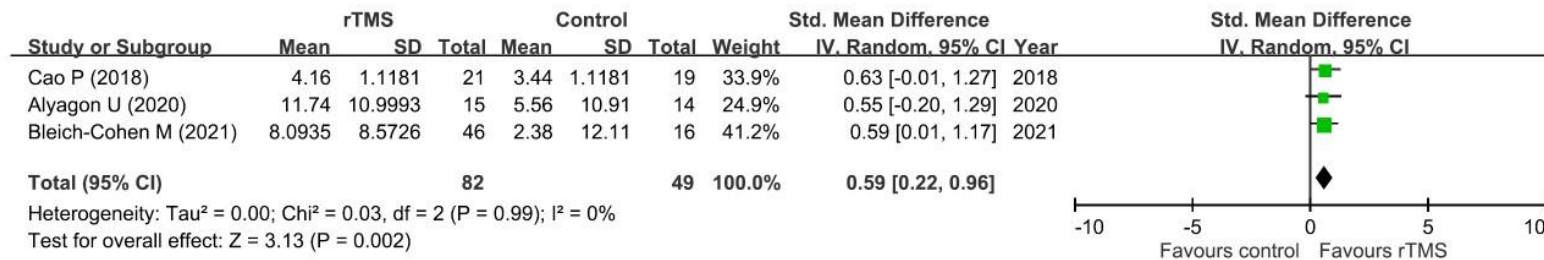
-**Low certainty:** Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.

-**Very low certainty:** We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.

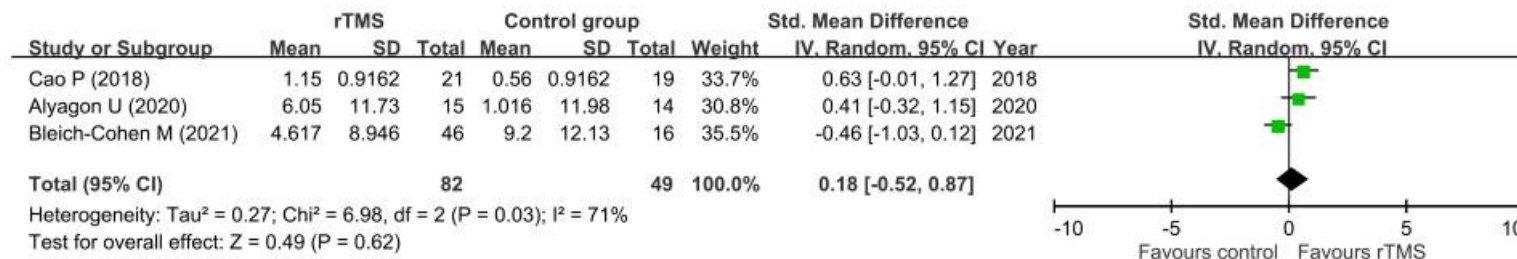
eFigure 1. Funnel plot – sustained attention



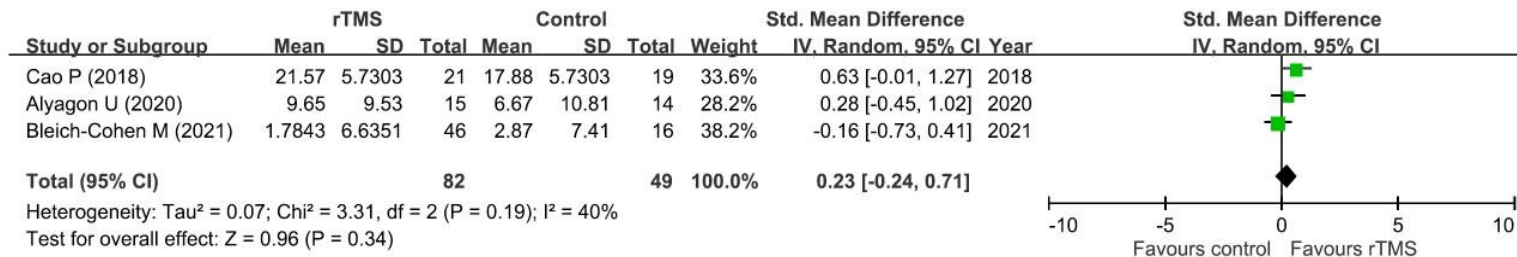
eFigure 2. Forest plot of effect size for comparing the difference in the improvement of processing speed between rTMS and control groups



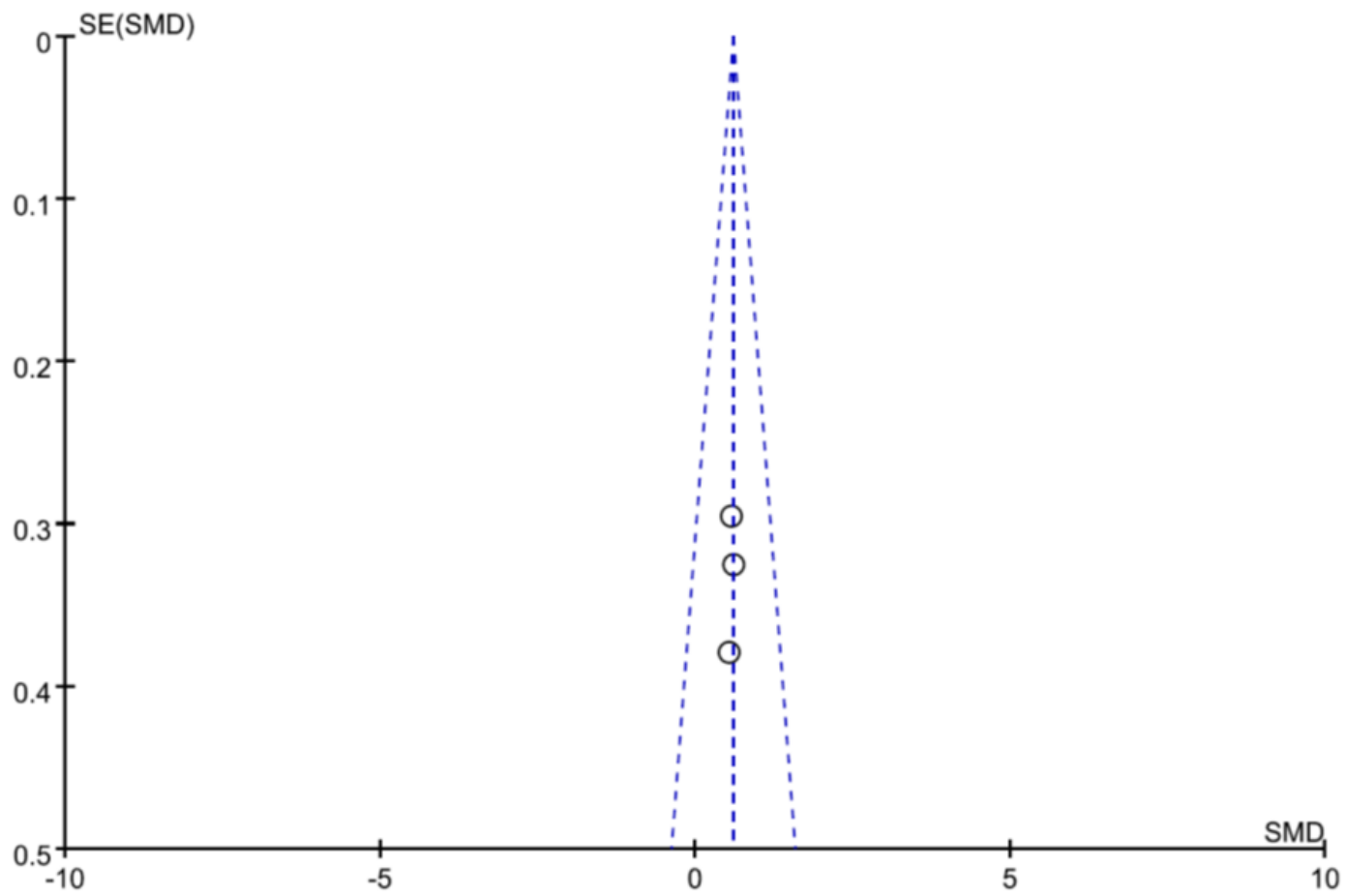
eFigure 3. Forest plot of effect size for comparing the difference in the improvement of memory between rTMS and control groups



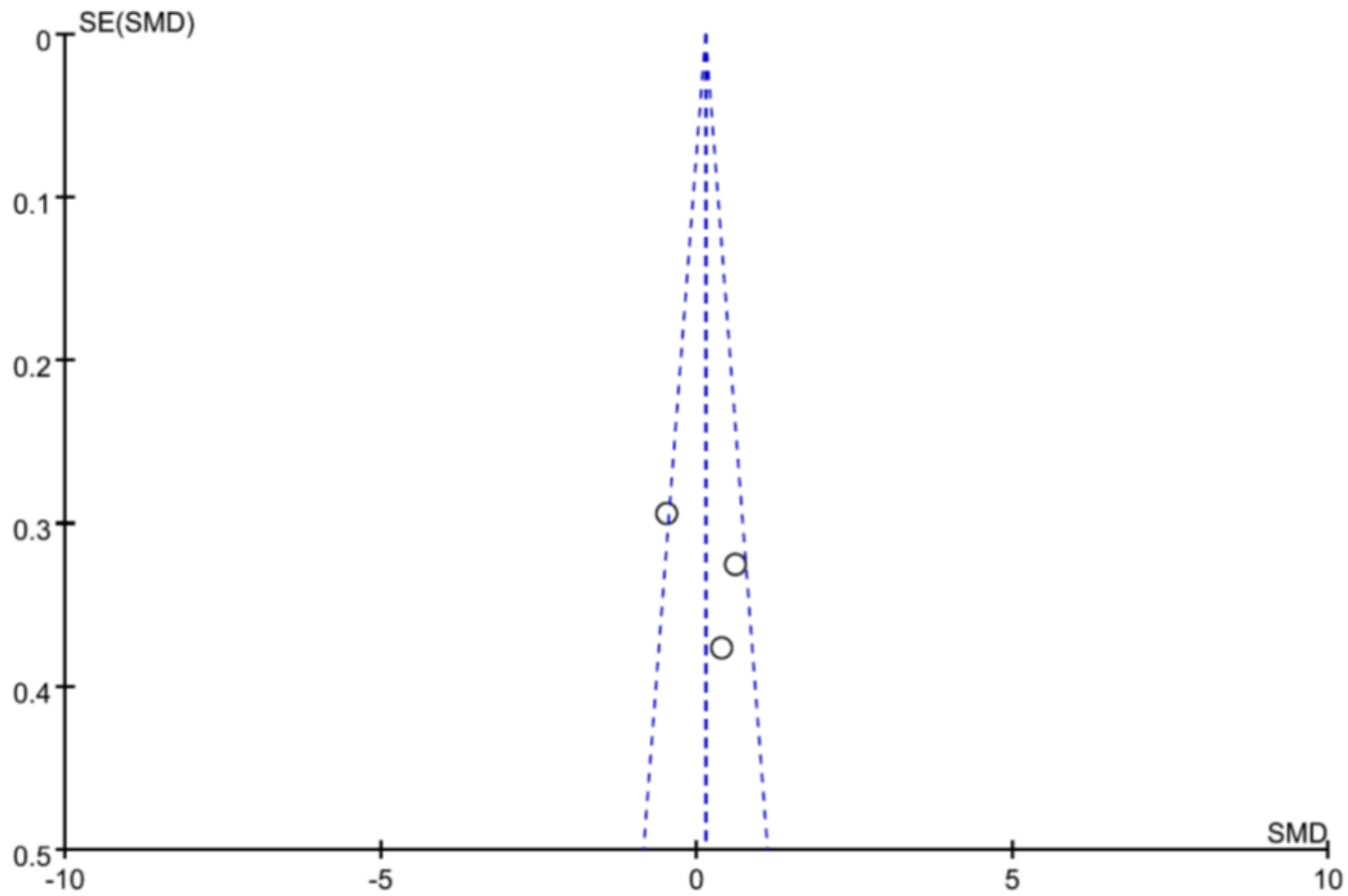
eFigure 4. Forest plot of effect size for comparing the difference in the improvement of executive function between rTMS and control groups



eFigure 5. Funnel plot – processing speed



eFigure 6. Funnel plot – memory



eFigure 7. Funnel plot – executive function

