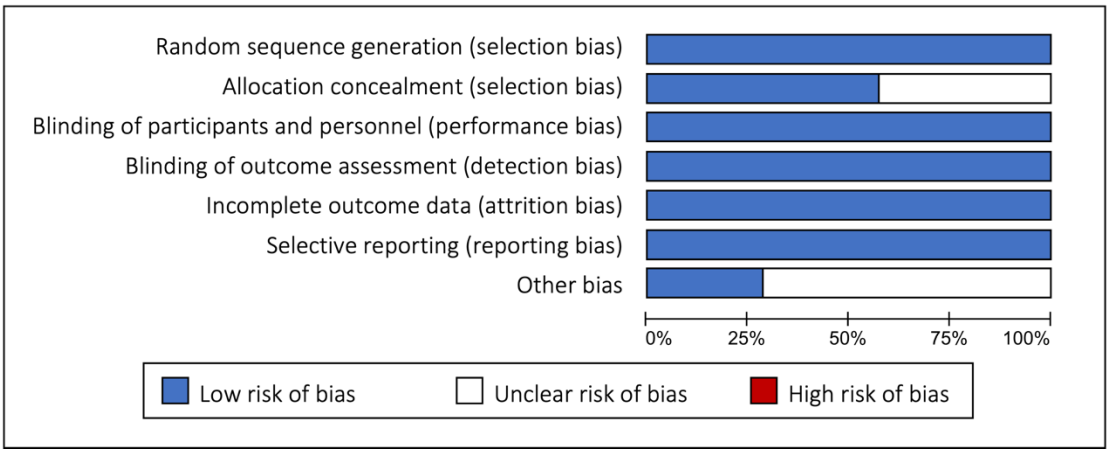
eFigure 1

A



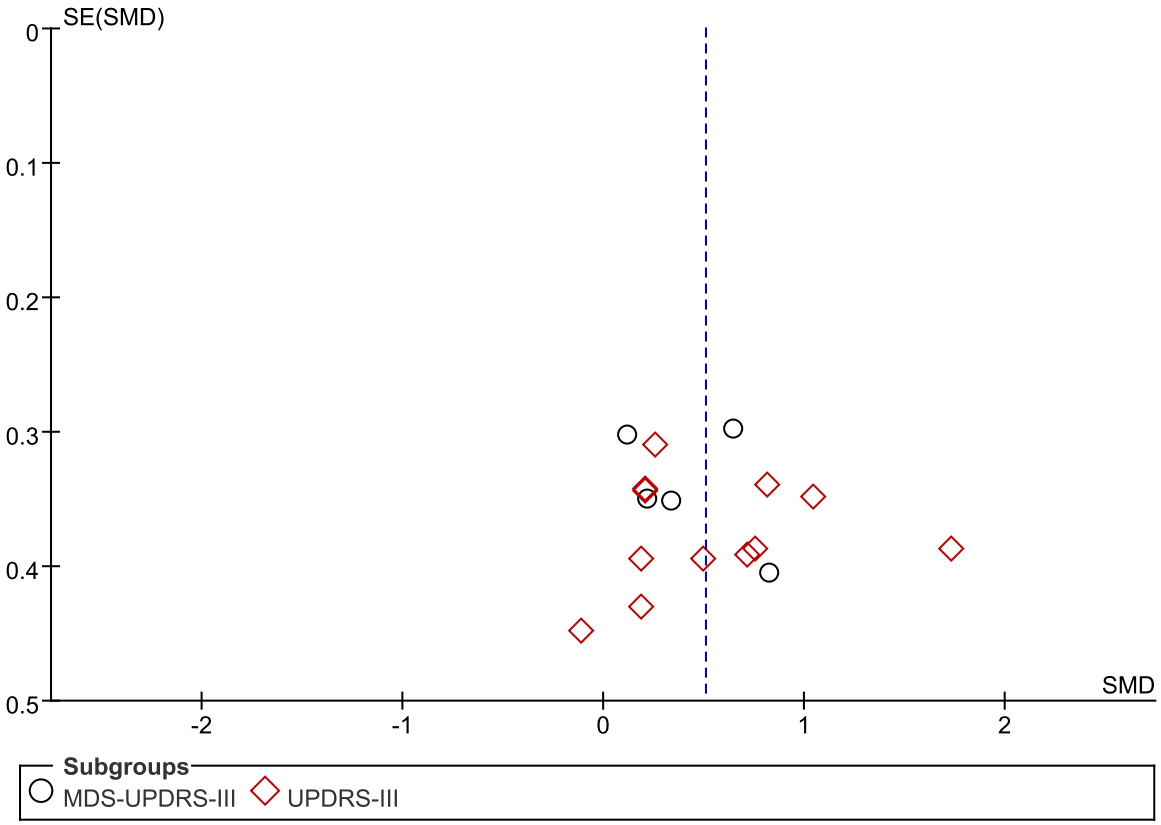
B

	(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)
Benninger et al. (2012)	+	?	+	+	+	+	?
Brys et al. (2016)	+	+	+	+	+	+	?
Buard et al. (2018)	+	+	+	+	+	+	+
Chung et al. (2020)	+	+	+	+	+	+	?
Cohen et al. (2018)	+	?	+	+	+	+	?
Filipović et al (2010)	+	?	+	+	+	+	?
Khedr et al. (2019)	+	+	+	+	+	+	?
Kim et al. (2015)	+	?	+	+	+	+	?
Li et al. (2020)	+	+	+	+	+	+	?
Makkos et al. (2016)	+	?	+	+	+	+	?
Maruo et al. (2013)	+	?	+	+	+	+	?
Mi et al. (2019)	+	+	+	+	+	+	+
Pal et al. (2010)	+	+	+	+	+	+	+
Yokoe et al. (2017)	+	+	+	+	+	+	+

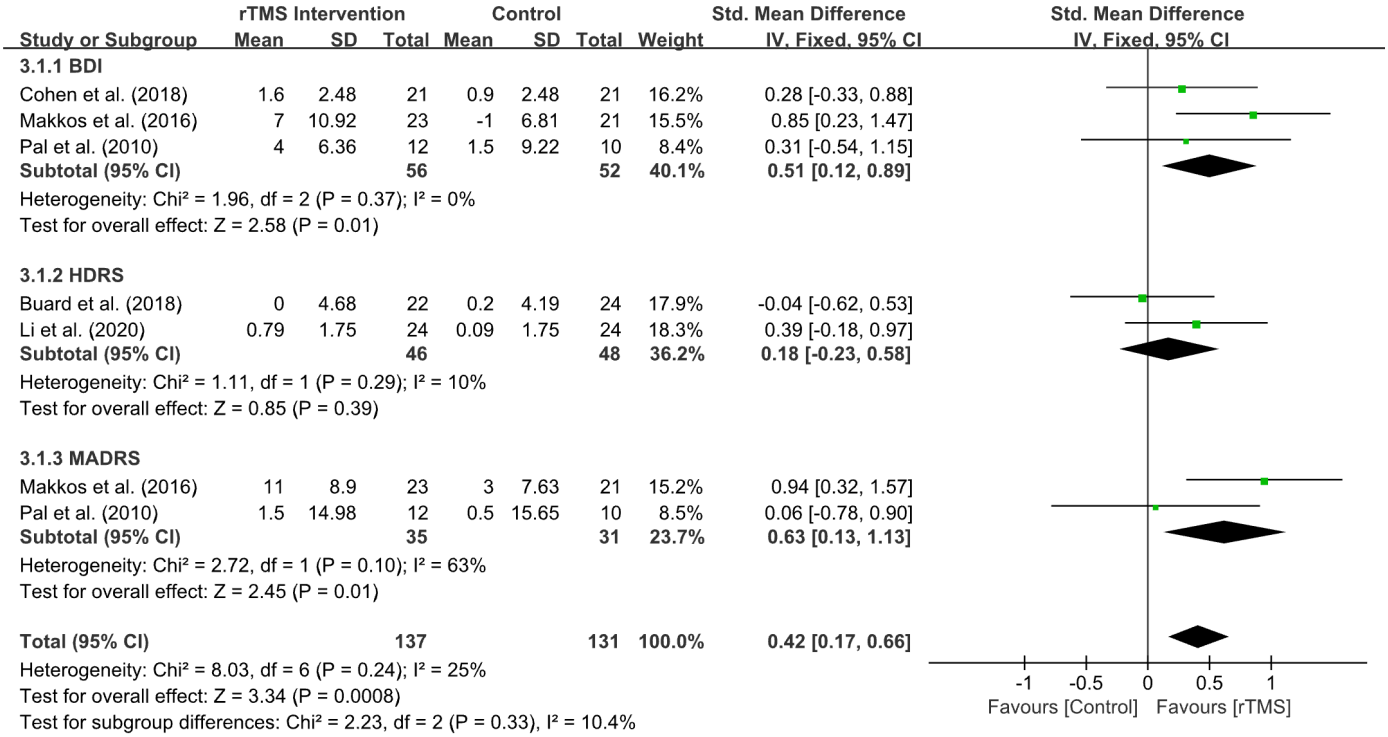
Risk of bias:
(I) Random sequence generation (selection bias)
(II) Allocation concealment (selection bias)
(III) Blinding of participants and personnel (performance bias)
(IV) Blinding of outcome assessment (detection bias)
(V) Incomplete outcome data (attrition bias)
(VI) Selective reporting (reporting bias)
(VII) Other bias

Key:
"+" = Low risk of bias
"?" = Unclear risk of bias
"-" = High risk of bias

eFigure 2


SE(SMD)
0
0.1
0.2
0.3
0.4
0.5
SMD
-2
-1
0
1
2
Subgroups
MDS-UPDRS-III
UPDRS-III

eFigure 3


rTMS Intervention
Control
Std. Mean Difference
Std. Mean Difference
Study or Subgroup Mean SD Total Mean SD Total Weight IV, Fixed, 95% CI
IV, Fixed, 95% CI
3.1.1 BDI
Cohen et al. (2018) 1.6 2.48 21 0.9 2.48 21 16.2% 0.28 [-0.33, 0.88]
Makkos et al. (2016) 7 10.92 23 -1 6.81 21 15.5% 0.85 [0.23, 1.47]
Pal et al. (2010) 4 6.36 12 1.5 9.22 10 8.4% 0.31 [-0.54, 1.15]
Subtotal (95% CI) 56 52 40.1% 0.51 [0.12, 0.89]
Heterogeneity: Chi² = 1.96, df = 2 (P = 0.37); I² = 0%
Test for overall effect: Z = 2.58 (P = 0.01)
3.1.2 HDRS
Buard et al. (2018) 0 4.68 22 0.2 4.19 24 17.9% -0.04 [-0.62, 0.53]
Li et al. (2020) 0.79 1.75 24 0.09 1.75 24 18.3% 0.39 [-0.18, 0.97]
Subtotal (95% CI) 46 48 36.2% 0.18 [-0.23, 0.58]
Heterogeneity: Chi² = 1.11, df = 1 (P = 0.29); I² = 10%
Test for overall effect: Z = 0.85 (P = 0.39)
3.1.3 MADRS
Makkos et al. (2016) 11 8.9 23 3 7.63 21 15.2% 0.94 [0.32, 1.57]
Pal et al. (2010) 1.5 14.98 12 0.5 15.65 10 8.5% 0.06 [-0.78, 0.90]
Subtotal (95% CI) 35 31 23.7% 0.63 [0.13, 1.13]
Heterogeneity: Chi² = 2.72, df = 1 (P = 0.10); I² = 63%
Test for overall effect: Z = 2.45 (P = 0.01)
Total (95% CI) 137 131 100.0% 0.42 [0.17, 0.66]
Heterogeneity: Chi² = 8.03, df = 6 (P = 0.24); I² = 25%
Test for overall effect: Z = 3.34 (P = 0.0008)
Test for subgroup differences: Chi² = 2.23, df = 2 (P = 0.33), I² = 10.4%
-1
-0.5
0
0.5
1
Favours [Control]
Favours [rTMS]