

LANGUAGE

Study

Std. Mean Difference
IV, Random, 95% CI

Expressive language

Sleep-related breathing disorders

O'Brien 2004 (Ped) (PS)	0.57 [0.16; 0.99]
Honaker 2009 (PS)	0.41 [0.09; 0.73]
Honaker 2009 (PS)	-0.06 [-0.38; 0.26]
Beebe 2010 (PS)	0.07 [-0.43; 0.57]
Bourke 2011 (PS)	5.69 [4.76; 6.61]
Beebe 2010 (Mild OSA)	-0.03 [-0.45; 0.38]
Bourke 2011 (Mild OSA)	5.33 [4.22; 6.44]
Honaker 2009 (OSA)	0.70 [0.37; 1.03]
Honaker 2009 (OSA)	0.71 [0.38; 1.04]
Honaker 2009 (OSA)	-0.05 [-0.36; 0.27]
Hannon 2012 (OSA and obesity)	1.18 [0.48; 1.88]
Beebe 2010 (MS OSA)	-0.14 [-0.58; 0.30]
Bourke 2011 (MS OSA)	2.82 [2.04; 3.60]
Total (95% CI)	1.19 [0.62; 1.77]

Heterogeneity: $\tau^2 = 1.0$; $\chi^2 = 275.52$, $df = 12$

Test for overall effect: $Z = 4.06$ ($P < 0.001$)

Insomnia disorders

Central disorders of hypersomnolence

Sleep-related neurological disorders

Baglietto 2011 (Epilepsy)	1.34 [0.31; 2.38]
Baglietto 2011 (Epilepsy)	0.72 [-0.24; 1.67]
Total (95% CI)	1.00 [0.30; 1.71]

Receptive language

Sleep-related breathing disorders

O'Brien 2004 (Ped) (PS)	0.48 [0.06; 0.89]
O'Brien 2004 (Ped) (PS)	0.24 [-0.17; 0.65]
Honaker 2009 (PS)	0.20 [-0.12; 0.52]
Kurnatowski 2006 (OSA)	0.35 [0.04; 0.66]
Kurnatowski 2006 (OSA)	0.57 [0.07; 1.07]
Kheirandeh-Gozal 2014 (OSA)	0.26 [-0.71; 1.23]
Honaker 2009 (OSA)	0.45 [0.13; 0.77]
Total (95% CI)	0.36 [0.21; 0.51]

Heterogeneity: $\tau^2 = 0$; $\chi^2 = 2.6$, $df = 6$

Test for overall effect: $Z = 4.80$ ($P < 0.001$)

Insomnia disorders

O'Brien 2004 (Ped) (PS)	0.24 [-0.17; 0.65]
Honaker 2009 (PS)	0.38 [0.06; 0.70]
Honaker 2009 (PS)	-0.01 [-0.33; 0.31]
Honaker 2009 (PS)	-0.13 [-0.45; 0.19]
Shetty 2023 (PS)	-0.27 [-1.15; 0.61]
Hagström 2020 (PS)	-0.04 [-0.64; 0.57]
O'Brien 2004 (JSR) (SBD)	0.47 [-0.01; 0.94]
Honaker 2009 (OSA)	0.79 [0.46; 1.12]
Honaker 2009 (OSA)	0.16 [-0.15; 0.48]
Honaker 2009 (OSA)	0.22 [-0.10; 0.54]
Shetty 2023 (Mild OSA)	0.44 [-0.45; 1.33]
Shetty 2023 (MS OSA)	-0.55 [-1.45; 0.34]
Total (95% CI)	0.20 [0.01; 0.38]

Heterogeneity: $\tau^2 < 0.1$; $\chi^2 = 25.02$, $df = 11$

Test for overall effect: $Z = 2.08$ ($P = 0.04$)

Insomnia disorders

Central disorders of hypersomnolence

Sleep-related neurological disorders

Total (95% CI) **0.59 [0.36; 0.82]**

Heterogeneity: $\tau^2 = 0.4$; $\chi^2 = 318.32$, $df = 33$ ($P < 0.001$); $I^2 = 90\%$

Test for subgroup differences: $\chi^2 = 14.23$, $df = 3$ ($P = 0.003$)

SDC performed better HC performed better