Appendix

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1 Introduction

We created an appendix of meta-analysis paper. To be able to visualize the output, we used an example dataset taken from Gibson et al. 2011. The appendix includes forest plots, funnel plots and tables visualizing the results created in the meta-analysis.

The forest plot shows

Table 1: Results of the meta-analysis.ES = Effect Size, Q = Test for residual heterogeneity, I^2 = residual heterogeneity, Egger's test and the fails-safe number for publication bias testing.

	ES	SE of ES	CI (lb)	CI (ub)	P(ES)	Q	P(Q)	I^2	Egger	P(Egger)	FSN
Meta-Analysis	-0.28	0.12	-0.52	-0.04	0.02	47.05	0.12	27.22	-0.44	0.66	77.00

Table 2: Results of the meta-regression (mixed-effects model). The model results are shown taking a moderator into account and displaying the coefficients. Results for the whole model are displayed as Q = Test for residual heterogeneity, I^2 = residual heterogeneity and QM = Test of Moderators.

	ES	SE of ES	CI (lb)	CI (ub)	P(ES)	Q	P(Q)	I^2	QM	P(QM)
intrcpt	-0.353	0.766	-1.85	1.15	0.645	22.7	0.54	0.000493	24.4	0.0278
continentAS	-0.377	0.423	-1.21	0.452	0.373					
continentCA	-0.0485	0.61	-1.24	1.15	0.937					
continentSA	-0.627	0.375	-1.36	0.108	0.0945					
metricric	0.119	0.254	-0.38	0.617	0.641					
disturbanceagf	0.331	0.745	-1.13	1.79	0.657					
disturbanceagr	0.701	0.936	-1.13	2.54	0.454					
disturbancebur	0.723	0.731	-0.709	2.15	0.322					
disturbanceoth	0.728	0.903	-1.04	2.5	0.42					
disturbancepas	-0.0589	0.979	-1.98	1.86	0.952					
disturbancepla	-0.203	0.868	-1.9	1.5	0.815					
disturbancesec	0.399	0.723	-1.02	1.82	0.581					
disturbancesel	0.796	0.691	-0.559	2.15	0.25					
disturbanceshd	-0.908	0.783	-2.44	0.626	0.246					

if (rma.REpval < 0.05)if(length(which(sens.REpval > 0.05) > 0)) paste0("The leave-one out analysis shows that the following study(ies) lead to insignificance of the meta analysis:", (which(sens.REpval > 0.05)))elsepaste0("The leave − oneoutanalysisshowsthatnoleft − outstudiesyield < 0.05) > 0))) paste0(The leave-one out analysis shows that study ", which(sens.REpval < 0.05))elsepaste("The leave − oneoutanalysisshowsthatnoleft − outstudiesyieldsignificanceoftheorigin

To assess possible publication bias, funnel plots can be used for visualization purposes.When publication bias is absent, the plot should have a symmetrical shape of a funnel around the mean effect size. This is because the precision of the estimation of effect size, should increase with sample size (smaller standard error).
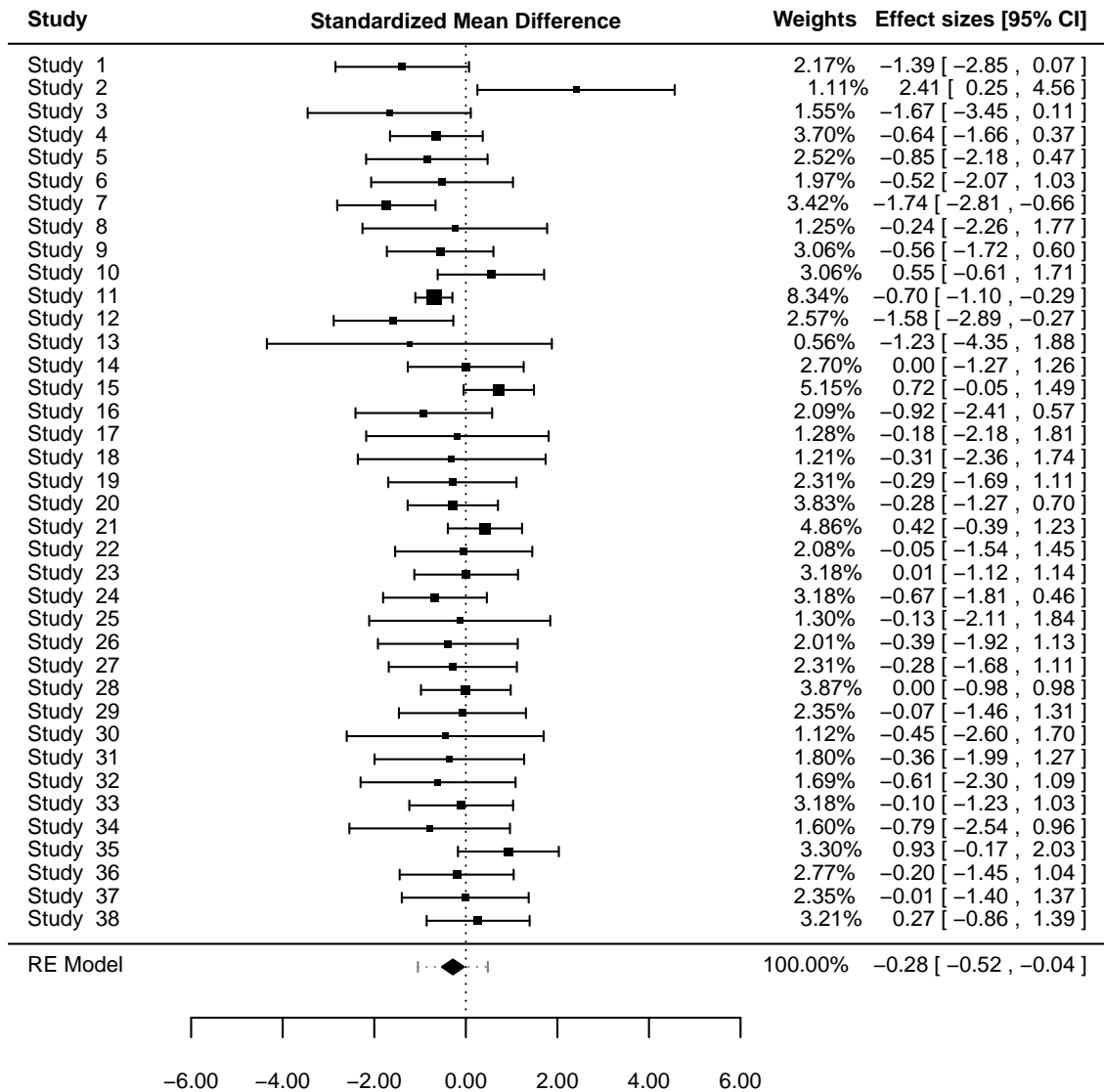
Study	Standardized Mean Difference	Weights	Effect sizes [95% CI]
Study 1		2.17%	−1.39 [−2.85 , 0.07]
Study 2		1.11%	2.41 [0.25 , 4.56]
Study 3		1.55%	−1.67 [−3.45 , 0.11]
Study 4		3.70%	−0.64 [−1.66 , 0.37]
Study 5		2.52%	−0.85 [−2.18 , 0.47]
Study 6		1.97%	−0.52 [−2.07 , 1.03]
Study 7		3.42%	−1.74 [−2.81 , −0.66]
Study 8		1.25%	−0.24 [−2.26 , 1.77]
Study 9		3.06%	−0.56 [−1.72 , 0.60]
Study 10		3.06%	0.55 [−0.61 , 1.71]
Study 11		8.34%	−0.70 [−1.10 , −0.29]
Study 12		2.57%	−1.58 [−2.89 , −0.27]
Study 13		0.56%	−1.23 [−4.35 , 1.88]
Study 14		2.70%	0.00 [−1.27 , 1.26]
Study 15		5.15%	0.72 [−0.05 , 1.49]
Study 16		2.09%	−0.92 [−2.41 , 0.57]
Study 17		1.28%	−0.18 [−2.18 , 1.81]
Study 18		1.21%	−0.31 [−2.36 , 1.74]
Study 19		2.31%	−0.29 [−1.69 , 1.11]
Study 20		3.83%	−0.28 [−1.27 , 0.70]
Study 21		4.86%	0.42 [−0.39 , 1.23]
Study 22		2.08%	−0.05 [−1.54 , 1.45]
Study 23		3.18%	0.01 [−1.12 , 1.14]
Study 24		3.18%	−0.67 [−1.81 , 0.46]
Study 25		1.30%	−0.13 [−2.11 , 1.84]
Study 26		2.01%	−0.39 [−1.92 , 1.13]
Study 27		2.31%	−0.28 [−1.68 , 1.11]
Study 28		3.87%	0.00 [−0.98 , 0.98]
Study 29		2.35%	−0.07 [−1.46 , 1.31]
Study 30		1.12%	−0.45 [−2.60 , 1.70]
Study 31		1.80%	−0.36 [−1.99 , 1.27]
Study 32		1.69%	−0.61 [−2.30 , 1.09]
Study 33		3.18%	−0.10 [−1.23 , 1.03]
Study 34		1.60%	−0.79 [−2.54 , 0.96]
Study 35		3.30%	0.93 [−0.17 , 2.03]
Study 36		2.77%	−0.20 [−1.45 , 1.04]
Study 37		2.35%	−0.01 [−1.40 , 1.37]
Study 38		3.21%	0.27 [−0.86 , 1.39]
RE Model		100.00%	−0.28 [−0.52 , −0.04]

−6.00   −4.00   −2.00   0.00   2.00   4.00   6.00

Figure 1: Forest plot of a random effects model. The study and its respectice effect size (ES) is shown. The weight given to the study (%) as well as the effect size (ES) [+- 95% CI] are shown.
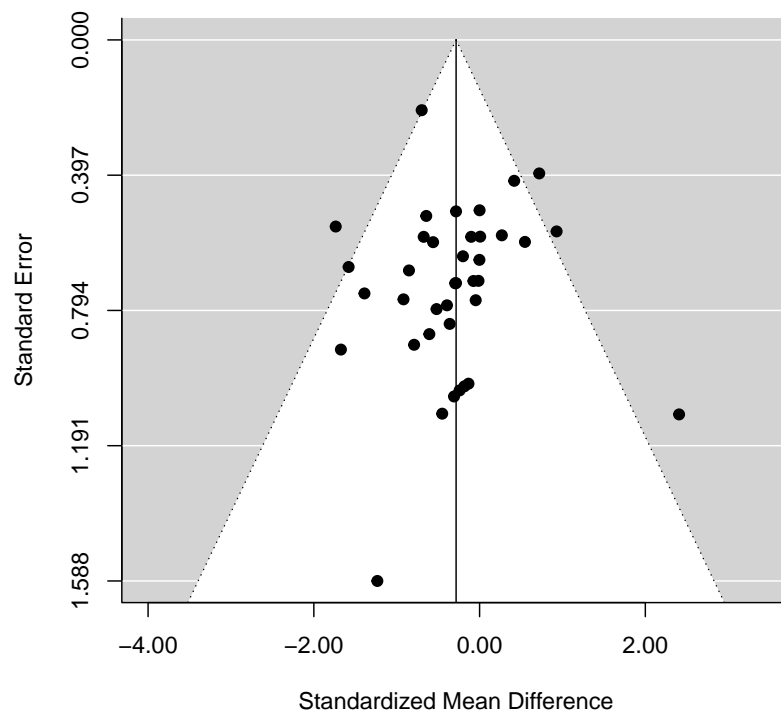
2

Figure 2: Funnel plot of random effects model displaying possible publication bias. The true ES is displayed by the solid verical line.
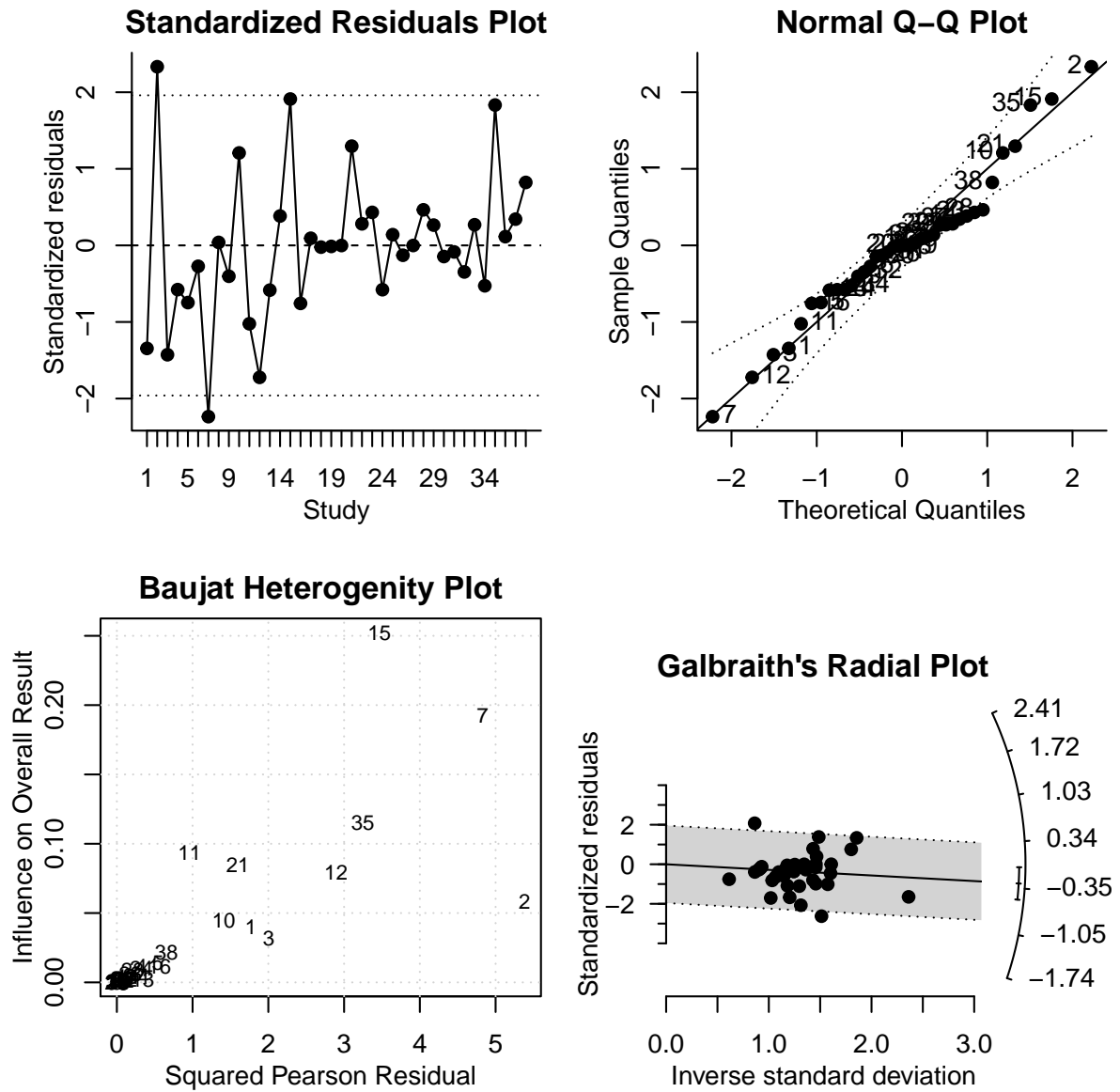
Figure 3: Diagnostic plots for diagnostics of meta analysis. Standardized residual plot, normal Q-Q plot, Baujat heterogeneity plot and Galbrath's radial plot are shown.

Study	Standardized Mean Difference	Weights	Effect sizes [95% CI]
Study 1		1.66%	−1.39 [−2.85 , 0.07]
Study 2		0.76%	2.41 [0.25 , 4.56]
Study 3		1.11%	−1.67 [−3.45 , 0.11]
Study 4		3.45%	−0.64 [−1.66 , 0.37]
Study 5		2.01%	−0.85 [−2.18 , 0.47]
Study 6		1.48%	−0.52 [−2.07 , 1.03]
Study 7		3.07%	−1.74 [−2.81 , −0.66]
Study 8		0.87%	−0.24 [−2.26 , 1.77]
Study 9		2.61%	−0.56 [−1.72 , 0.60]
Study 10		2.62%	0.55 [−0.61 , 1.71]
Study 11		21.65%	−0.70 [−1.10 , −0.29]
Study 12		2.07%	−1.58 [−2.89 , −0.27]
Study 13		0.37%	−1.23 [−4.35 , 1.88]
Study 14		2.21%	0.00 [−1.27 , 1.26]
Study 15		6.00%	0.72 [−0.05 , 1.49]
Study 16		1.59%	−0.92 [−2.41 , 0.57]
Study 17		0.89%	−0.18 [−2.18 , 1.81]
Study 18		0.84%	−0.31 [−2.36 , 1.74]
Study 19		1.81%	−0.29 [−1.69 , 1.11]
Study 20		3.63%	−0.28 [−1.27 , 0.70]
Study 21		5.38%	0.42 [−0.39 , 1.23]
Study 22		1.58%	−0.05 [−1.54 , 1.45]
Study 23		2.76%	0.01 [−1.12 , 1.14]
Study 24		2.76%	−0.67 [−1.81 , 0.46]
Study 25		0.90%	−0.13 [−2.11 , 1.84]
Study 26		1.52%	−0.39 [−1.92 , 1.13]
Study 27		1.81%	−0.28 [−1.68 , 1.11]
Study 28		3.68%	0.00 [−0.98 , 0.98]
Study 29		1.84%	−0.07 [−1.46 , 1.31]
Study 30		0.77%	−0.45 [−2.60 , 1.70]
Study 31		1.33%	−0.36 [−1.99 , 1.27]
Study 32		1.23%	−0.61 [−2.30 , 1.09]
Study 33		2.76%	−0.10 [−1.23 , 1.03]
Study 34		1.15%	−0.79 [−2.54 , 0.96]
Study 35		2.91%	0.93 [−0.17 , 2.03]
Study 36		2.28%	−0.20 [−1.45 , 1.04]
Study 37		1.84%	−0.01 [−1.40 , 1.37]
Study 38		2.80%	0.27 [−0.86 , 1.39]

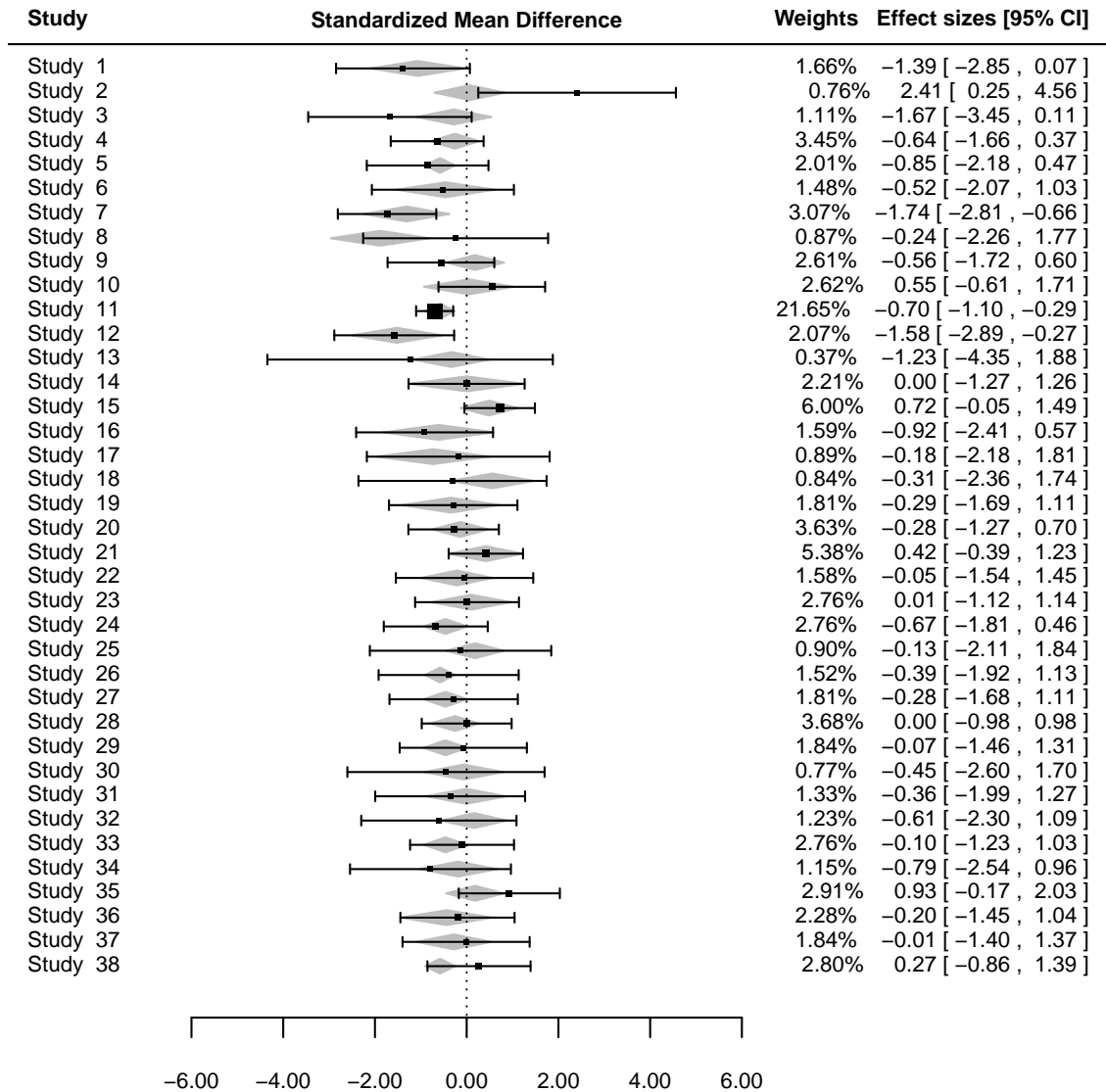−6.00   −4.00   −2.00   0.00   2.00   4.00   6.00

Figure 4: Forest plot of a random effects regression model. The column on the left represents the study. The weighted percentage is shown as well as the effect size (ES) [+- 95% CI]

5

Table 3: This output of the sensitivity analysis (leave1out analysis) shows the results of the meta analysis when a study is left out. This table reports the top most influential studies on the effect size, sorted by absolute change in effect size. The Left-out study indicates which study is left out to produce the results. ES = effectsize, SE = Standard error, CI = 95 percent confidence interval, P(ES) = p-value of estimate, Q = Test for residual heterogeneity, P(Q) = p-value of heterogenity value, I^2 = residual heterogeneity

left-out study	ES	ES change	SE of ES	CI (lb)	CI (ub)	P(ES)	Q	P(Q)	I^2
15	-0.342	-0.0589	0.117	-0.572	-0.113	0.0035	39.6	0.311	17.5
7	-0.232	0.0517	0.118	-0.463	-0.000631	0.0494	40.1	0.293	20.1
35	-0.324	-0.0409	0.121	-0.56	-0.088	0.00715	42	0.227	23.1
11	-0.244	0.0389	0.127	-0.493	0.00424	0.054	42.6	0.208	22.9