A NON-ITERATIVE EXTENSION OF THE MULTIVARIATE RANDOM EFFECTS META-ANALYSIS

SUPPLEMENTARY TABLES

Table S1 Simulation results for bias, $m = 20$: $B_{x,DL} \equiv$ bias of $\hat{\tau}^2_{x,DL}$, $B_{x,HM} \equiv$ bias of $\hat{\tau}^2_{x,HM}$, $B_{xy,DL} \equiv$ bias of $\hat{\tau}_{xy,DL}$ and $B_{xy,HM} \equiv$ bias of $\hat{\tau}_{xy,HM}$

Run	τ^2_x	τ^2_y	κ	ρ_i	$B_{x,DL}$	$B_{x,HM}$	$B_{xy,DL}$	$B_{xy,HM}$
1	0	0	0	0	0.008	0.005	0	0
2	0	0.026	0	0	0.008	0.005	0	0
3	0	0.23	0	0	0.008	0.005	0	0
4	0.026	0	0	0	0.002	0.001	0	0
5	0.026	0.026	0	0	0.003	0.002	0	0
6	0.026	0.23	0	0	0.003	0.001	0	0
7	0.23	0	0	0	0.001	0.002	0	0
8	0.23	0.026	0	0	0	0.001	0.001	0.001
9	0.23	0.23	0	0	0.001	0.003	0	0
10	0.026	0.026	0.300	0.300	0.003	0.002	0.001	0
11	0.026	0.23	0.300	0.300	0.003	0.002	0.003	0.002
12	0.23	0.026	0.300	0.300	0	-0.001	0.002	0.002
13	0.23	0.23	0.300	0.300	0	0.001	0.002	0.003
14	0.026	0.026	0.800	0.800	0.003	0.001	0.001	0
15	0.026	0.23	0.800	0.800	0.003	0.002	0.008	0.003
16	0.23	0.026	0.800	0.800	0.002	0.003	0.007	0.003
17	0.23	0.23	0.800	0.800	0	0.001	0.002	0.003
18	0.026	0.026	0.300	0	0.003	0.002	-0.002	-0.001
19	0.026	0.23	0.300	0	0.003	0.002	-0.006	-0.003
20	0.23	0.026	0.300	0	-0.001	-0.002	-0.005	-0.002
21	0.23	0.23	0.300	0	0	-0.001	-0.012	-0.006
22	0.026	0.026	0.800	0	0.002	0.001	-0.007	-0.003
23	0.026	0.23	0.800	0	0.003	0.002	-0.014	-0.006
24	0.23	0.026	0.800	0	0	-0.001	-0.014	-0.006
25	0.23	0.23	0.800	0	0	0.001	-0.030	-0.012

Table S2 Simulation results for mean square error (MSE), $m = 20 : MSE_{x,DL} \equiv$ MSE of $\hat{\tau}^2_{x,DL}$, $MSE_{x,HM} \equiv$ MSE of $\hat{\tau}^2_{x,HM}$, $MSE_{xy,DL} \equiv$ MSE of $\hat{\tau}_{xy,DL}$ and $MSE_{xy,HM} \equiv$ MSE of $\hat{\tau}_{xy,HM}$.

Run	τ^2_x	τ^2_y	κ	ρ_i	$MSE_{x,DL}$	$MSE_{x,HM}$	$MSE_{xy,DL}$	$MSE_{xy,HM}$
1	0	0	0	0	0	0	0	0
2	0	0.026	0	0	0	0	0	0
3	0	0.23	0	0	0	0	0.001	0.001
4	0.026	0	0	0	0.001	0.001	0	0
5	0.026	0.026	0	0	0.001	0.001	0	0.001
6	0.026	0.23	0	0	0.001	0.001	0.001	0.003
7	0.23	0	0	0	0.017	0.043	0.001	0.001
8	0.23	0.026	0	0	0.017	0.046	0.001	0.003
9	0.23	0.23	0	0	0.017	0.045	0.007	0.022
10	0.026	0.026	0.300	0.300	0.001	0.001	0	0.001
11	0.02	0.23	0.300	0.300	0.001	0.001	0.002	0.004
12	0.23	0.026	0.300	0.300	0.016	0.042	0.001	0.003
13	0.23	0.23	0.300	0.300	0.017	0.044	0.007	0.022
14	0.026	0.026	0.800	0.800	0.001	0.001	0.001	0.001
15	0.026	0.23	0.800	0.800	0.001	0.001	0.003	0.006
16	0.23	0.026	0.800	0.800	0.017	0.044	0.003	0.005
17	0.23	0.23	0.800	0.800	0.016	0.042	0.013	0.035
18	0.026	0.026	0.300	0	0.001	0.001	0	0.001
19	0.026	0.23	0.300	0	0.001	0.001	0.001	0.003
20	0.23	0.026	0.300	0	0.016	0.041	0.001	0.003
21	0.23	0.23	0.300	0	0.016	0.040	0.007	0.021
22	0.026	0.026	0.800	0	0.001	0.001	0	0.001
23	0.026	0.23	0.800	0	0.001	0.001	0.002	0.005
24	0.23	0.026	0.800	0	0.016	0.043	0.002	0.004
25	0.23	0.23	0.800	0	0.017	0.044	0.012	0.033

Table S3 Simulation results for bias, MSE and coverage probability of $\hat{\mu}_{x,DL}$ and $\hat{\mu}_{x,HM}$: $m = 20$ and $\mu = (0, 0)'$

					Bias of	Bias	MSE of	MSE	Z Coverage		t Coverage	
Run	τ_x^2	τ_y^2	κ	ρ_i	$\hat{\mu}_{x,DL}$	$\hat{\mu}_{x,HM}$	$\hat{\mu}_{x,DL}$	$\hat{\mu}_{x,HM}$	$\hat{\mu}_{x,DL}$	$\hat{\mu}_{x,HM}$	$\hat{\mu}_{x,DL}$	$\hat{\mu}_{x,HM}$
1	0	0	0	0	0.002	0.002	0.003	0.003	0.965	0.964	0.986	0.984
2	0	0.026	0	0	0	0	0.003	0.003	0.966	0.962	0.985	0.983
3	0	0.23	0	0	0	0	0.003	0.003	0.958	0.954	0.983	0.980
4	0.026	0	0	0	0.001	0.001	0.006	0.006	0.931	0.921	0.961	0.956
5	0.026	0.026	0	0	0	0	0.006	0.006	0.929	0.921	0.960	0.955
6	0.026	0.23	0	0	0	0	0.006	0.006	0.922	0.914	0.957	0.952
7	0.23	0	0	0	0.002	0.001	0.018	0.019	0.921	0.895	0.956	0.928
8	0.23	0.026	0	0	0	0	0.018	0.018	0.925	0.899	0.958	0.934
9	0.23	0.23	0	0	-0.002	-0.002	0.019	0.19	0.925	0.892	0.957	0.932
10	0.026	0.026	0.300	0.300	-0.001	0	0.006	0.006	0.933	0.925	0.961	0.958
11	0.026	0.23	0.300	0.300	0.001	0.001	0.006	0.006	0.923	0.912	0.954	0.948
12	0.23	0.026	0.300	0.300	-0.002	-0.002	0.018	0.018	0.925	0.895	0.955	0.932
13	0.23	0.23	0.300	0.300	0	0	0.018	0.018	0.930	0.896	0.959	0.933
14	0.026	0.026	0.800	0.800	0	0	0.006	0.006	0.923	0.914	0.955	0.949
15	0.026	0.23	0.800	0.800	0.001	0.001	0.005	0.006	0.927	0.922	0.960	0.956
16	0.23	0.026	0.800	0.800	0.001	0.001	0.018	0.018	0.925	0.899	0.953	0.931
17	0.23	0.23	0.800	0.800	0	0	0.018	0.019	0.923	0.888	0.957	0.928
18	0.026	0.026	0.300	0	0	0	0.006	0.006	0.924	0.923	0.956	0.955
19	0.026	0.23	0.300	0	-0.001	-0.001	0.006	0.006	0.922	0.917	0.953	0.948
20	0.23	0.026	0.300	0	0.001	0.001	0.018	0.019	0.925	0.892	0.955	0.930
21	0.23	0.23	0.300	0	-0.001	-0.001	0.019	0.019	0.921	0.890	0.953	0.926
22	0.026	0.026	0.800	0	-0.001	-0.001	0.006	0.006	0.930	0.924	0.960	0.957
23	0.026	0.23	0.800	0	0	0	0.005	0.005	0.934	0.927	0.963	0.959
24	0.23	0.026	0.800	0	0.001	0.001	0.018	0.018	0.924	0.893	0.958	0.929
25	0.23	0.23	0.800	0	-0.001	-0.001	0.018	0.018	0.920	0.891	0.954	0.928