Testing the Bottom-Up and Top-Down Models of Self-Esteem: A Meta-Analysis of Longitudinal Studies

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Supplemental Materials

Contents

Part A: Alternative Procedure Using Univariate Meta-Analysis of Standardized Regression Coefficients

Method

In addition to the multivariate approach reported in the main article (i.e., one-stage MASEM; see Jak & Cheung, 2020; Jak et al., 2021), we also used a univariate approach based on standardized regression coefficients. Whereas one-stage MASEM has the important advantage that it allows estimating the complete model in a single step, the meta-analytic procedure based on standardized regression coefficients has other advantages, including better possibilities for conducting outlier analyses and examining funnel graphs to assess publication bias.

In the univariate approach, the meta-analytic computations were conducted with the metafor package, version 2.4 (Viechtbauer, 2010, 2020) for R, version 4.0.3 (R Core Team, 2020). In the analyses, we examined the same effects as in the main article (i.e., bottom-up effects, top-down effects, and stability effects). In contrast to the multivariate approach, however, the input variables were standardized regression coefficients (not correlation coefficients), where the effect of prior levels of the other construct was already controlled for. Because standardized regression coefficients were not reported in any of the articles, we computed these coefficients in a preparatory step on the basis of the relevant zero-order correlations (i.e., correlations between Time 1 global self-esteem, Time 2 global self-esteem, Time 1 domain-specific self-esteem, and Time 2 domain-specific self-esteem), by using the following equation (Cohen et al., 2003, p. 68), which is applicable when a criterion variable (Y) is influenced by two predictors (X_1, X_2):

$$\beta_{Y1.2} = \left(\frac{r_{Y1} - r_{Y2}r_{12}}{1 - r_{12}^2}\right).$$

Here, $\beta_{Y1.2}$ is the standardized regression coefficient of X_1 predicting Y, controlling for the effect of X_2 (e.g., the effect of academic self-esteem at Time 1 on global self-esteem at

Time 2, controlling for global self-esteem at Time 1); r_{Y1} and r_{Y2} are the zero-order correlations between each predictor (X_1, X_2; e.g., academic self-esteem at Time 1, global self-esteem at Time 1) and the criterion (*Y*; e.g., global self-esteem at Time 2); and r_{12} is the correlation between the two predictors (X_1 and X_2; e.g., the cross-sectional correlation between academic and global self-esteem at Time 1).

Thus, effect size measures were correlation coefficients (i.e., correlations between global and domain-specific self-esteem at Time 1) and standardized regression coefficients (for prospective effects). For the analyses, all coefficients were converted to Fisher's *z*-values. The within-study variance of the transformed values is given by

$$v_i = \left(\frac{1}{n_i - 3}\right),$$

where n_i is the sample size in study *i*. Random-effects models (for estimating weighted mean effect sizes) and mixed-effects meta-regression models (for testing moderators) were used following recommendations by Borenstein et al. (2009) and Raudenbush (2009). For both types of models, study weights are given by

$$\omega_i = \left(\frac{1}{v_i + \tau^2}\right),$$

where ω_i is the study weight for study *i*, v_i is the within-study variance for study *i*, and τ^2 is the estimate of between-study heterogeneity. Between-study heterogeneity (i.e., τ^2) was estimated with restricted maximum likelihood estimation (REML; Harville, 1977), as recommended by Langan et al. (2019). To account for uncertainty in the estimate of τ^2, we used the Knapp and Hartung (2003) method, following recommendations by Viechtbauer et al. (2015).

Results

Preliminary Analyses

For all effect sizes, influential outliers were searched using the "influence" command of the metafor package (Viechtbauer, 2020). According to Viechtbauer and Cheung (2010), studies with absolute studentized deleted residuals larger than 1.96 should be inspected more closely. There were only few relevant cases: No outlier for the athletic domain, one outlier each for the appearance, morality, and social domain, two outliers each for the academic and mathematics domain, three outliers for the verbal abilities domain, and four outliers for the romantic domain. Nevertheless, when an effect size was qualified as potential outlier and, in addition, was considered influential (following the cut-off values implemented in the metafor package), the meta-analytic computation of the weighted mean effect size was repeated without this study in sensitivity analyses. The results suggested that excluding these studies did not change the pattern of findings and did not lead to any different conclusions (Supplemental Table S1). Moreover, we double-checked the codings for these studies, which did not suggest that there were any errors or implausible values in the effect sizes. For these reasons, all effect sizes were retained for the subsequent analyses, which is consistent with methodological literature advising against routine deletion of outliers (Viechtbauer & Cheung, 2010).

Three methods were used to test for publication bias. First, we examined funnel graphs, which exhibited a relatively symmetrical shape typical of nonbiased meta-analytic datasets (Supplemental Figure S1). Second, Egger's regression test (Egger et al., 1997) was nonsignificant for all effect sizes, suggesting that the funnel graphs did not deviate significantly from a symmetrical shape (Supplemental Table S2). Given that 16 tests were conducted (for eight domains and both directions of the effects), the significance level was adjusted to $p < .003$, following the Bonferroni correction (i.e., dividing .05 by 16). Third, effect sizes that were published in the articles were compared to effect sizes that were not published (but obtained from the studies' authors upon request), using mixed-effects meta-regression models. The significance level was adjusted to $p < .003$, following the Bonferroni method (i.e., dividing .05 by 16). All tests were nonsignificant, except for the bottom-up effect in the domain of romantic self-esteem (Supplemental Table S2). However, in the case of the significant difference, unpublished effects were larger than published effects, which is evidence against publication bias. Thus, all three methods suggested that there was no evidence of publication bias in the meta-analytic dataset.

Effect Size Analyses

For each self-esteem domain, weighted mean effect sizes were estimated for (a) the cross-lagged effects between global and domain-specific self-esteem, (b) the stability effects of global and domain-specific self-esteem, and (c) the Time 1 correlation between global and domain-specific self-esteem. Supplemental Table S3 reports the results of the effect size analyses and Supplemental Figure S2 provides a graphical summary of the weighted mean effect sizes. Forest plots for the cross-lagged effects are available in Supplemental Figure S3.

Similar to the results revealed by the multivariate approach, for the academic, appearance, athletic, morality, romantic, and social domain, significant cross-lagged effects emerged in the direction of both bottom-up and top-down processes. The cross-lagged effects ranged from .06 to .19 for bottom-up effects and from .05 to .11 for top-down effects. No formal test of the difference between the two directions (i.e., bottom-up and top-down effects) is available, because the samples on which these effects were based overlapped partially, but not fully. However, the 95% confidence intervals of the weighted mean effect sizes can be used as an approximate means of comparing the effects. For all domains but appearance, the confidence intervals suggested that the top-down and bottom-up effects did not differ significantly. For the domain of appearance self-esteem, the confidence intervals indicated that the bottom-up effect was larger than the top-down effect.

For the academic subdomains of mathematics and verbal abilities, only the bottom-up effects were significant. Moreover, for mathematics self-esteem, the comparison of the confidence intervals suggested that the bottom-up effect was larger than the top-down effect.

Moderator Analyses

The findings reported in Supplemental Table S3 suggested that there was significant heterogeneity in effect sizes for most domains. For reasons of statistical power, moderator analyses were conducted only for the academic, appearance, athletic, morality, romantic, and social domain (Borenstein et al., 2009; Cooper et al., 2019; Viechtbauer et al., 2015). The five moderators were tested simultaneously using mixed-effects meta-regression models. The variables age, proportion of gender, time lag, and publication year were continuous and included as such in the moderator analyses, whereas the variable measure was dichotomous. Supplemental Table S4 shows the results of the moderator analyses. Because of the large number of tests, the significance level was adjusted to $p < .001$, following the Bonferroni correction (i.e., dividing .05 by 60). The results indicated that none of the moderators were significant, except for the effect of publication year on the bottom-up effect in the athletic domain.

Conclusion

Taken together, the results of the univariate approach based on standardized regression coefficient were very similar to the results of the multivariate approach (one-stage MASEM) reported in the main text. This strengthens the validity of the meta-analytic findings of the present research.

Table S1. *Results With and Without Influential Outliers (Univariate Meta-Analysis of Standardized Regression Coefficients)*

	Results with influential outliers				Results without influential outliers			
Variable	*k*	*N*	Weighted mean effect size	95% CI	*k*	*N*	Weighted mean effect size	95% CI
Academic								
$r_{G,D}$	26	17,534	.53*	[.47, .59]	–	–	–	–
D→G	26	17,534	.12*	[.09, .15]	25	13,803	.11*	[.09, .14]
G→D	26	17,534	.10*	[.07, .13]	–	–	–	–
G→G	26	17,534	.47*	[.40, .53]	–	–	–	–
D→D	26	17,534	.53*	[.47, .58]	25	17,444	.51*	[.46, .56]
Appearance								
$r_{G,D}$	25	15,118	.62*	[.58, .66]	–	–	–	–
D→G	25	15,118	.19*	[.16, .23]	24	14,444	.20*	[.17, .24]
G→D	23	14,855	.11*	[.07, .14]	–	–	–	–
G→G	25	15,118	.38*	[.32, .44]	–	–	–	–
D→D	23	14,855	.49*	[.42, .56]	–	–	–	–
Athletic								
$r_{G,D}$	17	12,084	.36*	[.32, .39]	–	–	–	–
D→G	17	12,084	.07*	[.03, .11]	–	–	–	–
G→D	17	12,084	.05*	[.03, .07]	–	–	–	–
G→G	17	12,084	.51*	[.45, .57]	–	–	–	–
D→D	17	12,084	.64*	[.56, .71]	–	–	–	–
Morality								
$r_{G,D}$	15	8,050	.47*	[.39, .54]	14	7,800	.49*	[.43, .54]
D→G	15	8,050	.08*	[.05, .12]	–	–	–	–
G→D	15	8,050	.10*	[.06, .14]	–	–	–	–
G→G	15	8,050	.46*	[.37, .54]	–	–	–	–
D→D	15	8,050	.44*	[.36, .51]	–	–	–	–
Romantic								
$r_{G,D}$	11	10,235	.35*	[.28, .42]	10	9,826	.33*	[.27, .38]
D→G	11	10,235	.06*	[.02, .09]	10	6,504	.07*	[.04, .10]
G→D	11	10,235	.10*	[.07, .13]	10	6,504	.11*	[.09, .14]
G→G	11	10,235	.57*	[.52, .62]	–	–	–	–
D→D	11	10,235	.55*	[.45, .64]	10	9,923	.52*	[.44, .59]
Social								
$r_{G,D}$	32	20,174	.46*	[.41, .50]	–	–	–	–
D→G	32	20,174	.10*	[.06, .13]	31	18,932	.09*	[.06, .12]
G→D	31	19,791	.09*	[.06, .12]	–	–	–	–
G→G	32	20,174	.50*	[.45, .55]	–	–	–	–
D→D	31	19,791	.52*	[.47, .57]	–	–	–	–
Mathematics								
$r_{G,D}$	4	6643	.45*	[.30, .58]	3	6,159	.56*	[.32, .73]
D→G	4	6643	.10*	[.09, .11]	–	–	–	–
G→D	4	6643	.01	[-.04, .06]	–	–	–	–
G→G	4	6643	.58*	[.44, .68]	3	4,345	.62*	[.60, .64]
D→D	4	6643	.68*	[.38, .85]	–	–	–	–
Verbal								
$r_{G,D}$	4	6643	.45*	[.22, .63]	–	–	–	–
D→G	4	6643	.08*	[.04, .11]	3	2,912	.06*	[.02, .10]
G→D	4	6643	.09	[-.09, .26]	3	6.513	.05	[-.06, .15]
G→G	4	6643	.59*	[.45, .70]	3	4,345	.62*	[.59, .65]
D→D	4	6643	.62*	[.52, .70]	–	–	–	–

Note. Summary of effect sizes for relations between domain-specific self-esteem (D) and global self-esteem (G) for the total meta-analytic dataset (left half of table) and for the dataset without influential outliers (right half of table). The effect sizes examined were correlation coefficients (concurrent correlation between global and domain-specific self-esteem at Time 1, denoted as $r_{G,D}$) and standardized regression coefficients. Computations were made with random-effects models. Dash indicates that there were no influential outliers for the effect. *k* = number of samples; *N* = total number of participants in the *k* samples; CI = confidence interval. * $p < .05$.

Table S2. *Tests of Publication Bias in Cross-Lagged Effects (Univariate Meta-Analysis of Standardized Regression Coefficients)*

Variable	Egger's regression test			Effect size data published versus not published in article		
	t	*df*	*p*	*F*	*df1, df2*	*p*
Academic						
D→G	-1.08	24	.293	1.77	1, 24	.196
G→D	-1.21	24	.239	1.02	1, 24	.323
Appearance						
D→G	0.75	23	.462	5.20	1, 23	.032
G→D	-0.46	21	.649	0.38	1, 21	.543
Athletic						
D→G	-1.01	15	.330	2.03	1, 15	.175
G→D	-0.29	15	.779	0.38	1, 15	.547
Morality						
D→G	1.25	13	.233	0.34	1, 13	.570
G→D	0.06	13	.954	1.01	1, 13	.333
Romantic						
D→G	1.18	9	.270	29.28	1, 9	< .001
G→D	0.77	9	.460	6.99	1, 9	.027
Social						
D→G	1.11	30	.277	1.83	1, 30	.186
G→D	0.07	29	.943	0.80	1, 29	.380
Mathematics						
D→G	-2.34	2	.144	3.80	1, 2	.191
G→D	0.51	2	.660	1.91	1, 2	.301
Verbal						
D→G	-0.73	2	.544	7.57	1, 2	.111
G→D	2.50	2	.130	0.07	1, 2	.811

Note. The differences between effect sizes from studies for which effect size data were published in article (effect size data published = 1) versus not published in article (effect size data not published = 0) were tested with mixed-effects meta-regression models. The significance level was adjusted to $p < .003$ (Bonferroni correction). D = domain-specific self-esteem; G = global self-esteem.

Table S3. *Summary of Effect Sizes for Relations Between Global and Domain-Specific Self-Esteem (Univariate Meta-Analysis of Standardized Regression Coefficients)*

Variable	*k*	*N*	Weighted mean effect size	95% CI	Heterogeneity *Q*	τ^2	I^2
Academic							
$r_{G,D}$	26	17,534	.53*	[.47, .59]	1181.6*	.04	96.5
D→G	26	17,534	.12*	[.09, .15]	99.1*	.00	67.2
G→D	26	17,534	.10*	[.07, .13]	93.0*	.00	75.3
G→G	26	17,534	.47*	[.40, .53]	311.5*	.04	95.9
D→D	26	17,534	.53*	[.47, .58]	334.3*	.03	95.0
Appearance							
$r_{G,D}$	25	15,118	.62*	[.58, .66]	385.6*	.02	92.5
D→G	25	15,118	.19*	[.16, .23]	159.0*	.01	76.9
G→D	23	14,855	.11*	[.07, .14]	57.3*	.00	69.0
G→G	25	15,118	.38*	[.32, .44]	469.3*	.03	93.5
D→D	23	14,855	.49*	[.42, .56]	388.6*	.05	96.4
Athletic							
$r_{G,D}$	17	12,084	.36*	[.32, .39]	40.9*	.00	66.1
D→G	17	12,084	.07*	[.03, .11]	51.0*	.00	65.9
G→D	17	12,084	.05*	[.03, .07]	15.1	.00	0.1
G→G	17	12,084	.51*	[.45, .57]	227.1*	.02	93.6
D→D	17	12,084	.64*	[.56, .71]	332.7*	.06	97.2
Morality							
$r_{G,D}$	15	8,050	.47*	[.39, .54]	130.3*	.03	92.1
D→G	15	8,050	.08*	[.05, .12]	19.1	.00	24.9
G→D	15	8,050	.10*	[.06, .14]	27.1	.00	50.8
G→G	15	8,050	.46*	[.37, .54]	276.1*	.03	93.4
D→D	15	8,050	.44*	[.36, .51]	274.6*	.02	90.9
Romantic							
$r_{G,D}$	11	10,235	.35*	[.28, .42]	72.3*	.01	89.4
D→G	11	10,235	.06*	[.02, .09]	20.1	.00	47.5
G→D	11	10,235	.10*	[.07, .13]	14.4	.00	33.5
G→G	11	10,235	.57*	[.52, .62]	122.5*	.01	89.9
D→D	11	10,235	.55*	[.45, .64]	334.7*	.04	96.7
Social							
$r_{G,D}$	32	20,174	.46*	[.41, .50]	515.1*	.03	93.8
D→G	32	20,174	.10*	[.06, .13]	130.2*	.01	75.9
G→D	31	19,791	.09*	[.06, .12]	83.6*	.00	63.6
G→G	32	20,174	.50*	[.45, .55]	608.2*	.03	95.0
D→D	31	19,791	.52*	[.47, .57]	351.4*	.03	95.2
Mathematics							
$r_{G,D}$	4	6,643	.45*	[.30, .58]	25.0*	.01	93.2
D→G	4	6,643	.10*	[.09, .11]	0.3	.00	0.0
G→D	4	6,643	.01	[-.04, .06]	3.9	.00	22.2
G→G	4	6,643	.58*	[.44, .68]	70.2*	.01	93.8
D→D	4	6,643	.68*	[.38, .85]	161.7*	.07	98.8

Verbal							
$r_{G,D}$	4	6,643	.45*	[.22, .63]	47.8*	.02	96.8
D→G	4	6,643	.08*	[.04, .11]	2.0	.00	3.1
G→D	4	6,643	.09	[-.09, .26]	15.3*	.01	90.7
G→G	4	6,643	.59*	[.45, .70]	68.7*	.01	94.0
D→D	4	6,643	.62*	[.52, .70]	26.1*	.01	87.5

Note. The effect sizes examined were correlation coefficients (concurrent correlation between global self-esteem and domain-specific self-esteem at Time 1, denoted as $r_{G,D}$) and standardized regression coefficients (longitudinal bottom-up effects, top-down effects, and stability effects). Computations were based on random-effects models. *k* = number of samples; *N* = total number of participants in the *k* samples; CI = confidence interval; *Q* = statistic used in heterogeneity test; τ^2 = estimated amount of total heterogeneity; I^2 = ratio of total heterogeneity by total variability (given in percent); D = domain-specific self-esteem; G = global self-esteem.

* $p < .05$.

Table S4. *Mixed-Effects Meta-Regression Models for Sample, Study and Methodological Characteristics Predicting Bottom-Up and Top-Down Effects (Univariate Meta-Analysis of Standardized Regression Coefficients)*

	Bottom-up (D→G)				Top-down (G→D)			
Moderator	*k*	*B*	*SE*	*p*	*k*	*B*	*SE*	*p*
Academic	26				26			
Mean age at T1		-.00	.00	.222		.00	.01	.784
Female (proportion)		-.00	.00	.021		-.00	.00	.273
Measure[a]		-.00	.02	.892		-.02	.05	.717
Time lag		-.01	.02	.411		-.04	.03	.145
Publication year		.00	.00	.430		.00	.00	.852
Appearance	25				23			
Mean age at T1		.01	.01	.239		-.01	.00	.123
Female (proportion)		-.00	.00	.777		-.00	.00	.522
Measure[a]		.08	.05	.106		.10	.04	.013
Time lag		-.02	.02	.291		-.05	.02	.008
Publication year		.00	.00	.483		-.00	.00	.712
Athletic	17				17			
Mean age at T1		.00	.00	.196		-.00	.00	.973
Female (proportion)		-.00	.00	.027		-.00	.00	.383
Measure[a]		.09	.04	.068		-.03	.05	.604
Time lag		-.02	.02	.319		-.02	.02	.532
Publication year		.01	.00	<.001		.00	.00	.589
Morality	15				15			
Mean age at T1		-.01	.01	.170		-.00	.00	.952
Female (proportion)		-.00	.00	.889		.00	.00	.879
Measure[a]		.01	.06	.906		-.03	.04	.458
Time lag		-.01	.03	.736		-.03	.03	.232
Publication year		-.00	.01	.964		-.01	.01	.074
Romantic	11				11			
Mean age at T1		.01	.00	.161		-.01	.00	.023
Female (proportion)		-.00	.00	.666		-.00	.00	.192
Measure[a]		.05	.03	.183		.07	.02	.029
Time lag		-.01	.03	.818		-.02	.02	.444
Publication year		.00	.00	.619		-.01	.00	.134
Social	32				31			
Mean age at T1		-.01	.00	.064		-.00	.00	.298
Female (proportion)		-.00	.00	.309		-.00	.00	.761
Measure[a]		.03	.04	.526		.02	.04	.526
Time lag		-.01	.02	.795		-.02	.02	.429
Publication year		.00	.00	.785		-.00	.00	.441

Note. Regression coefficients of moderators are unstandardized. For the domains of mathematics and verbal abilities, the number of studies did not provide sufficient power for testing moderators. The significance level was adjusted to $p < .001$ (Bonferroni correction). *k* = number of samples; D = domain-specific self-esteem; G = global self-esteem.
[a] 0 = Marsh, 1 = Harter

Figure S1. *Funnel Graphs (Univariate Meta-Analysis of Standardized Regression Coefficients)*

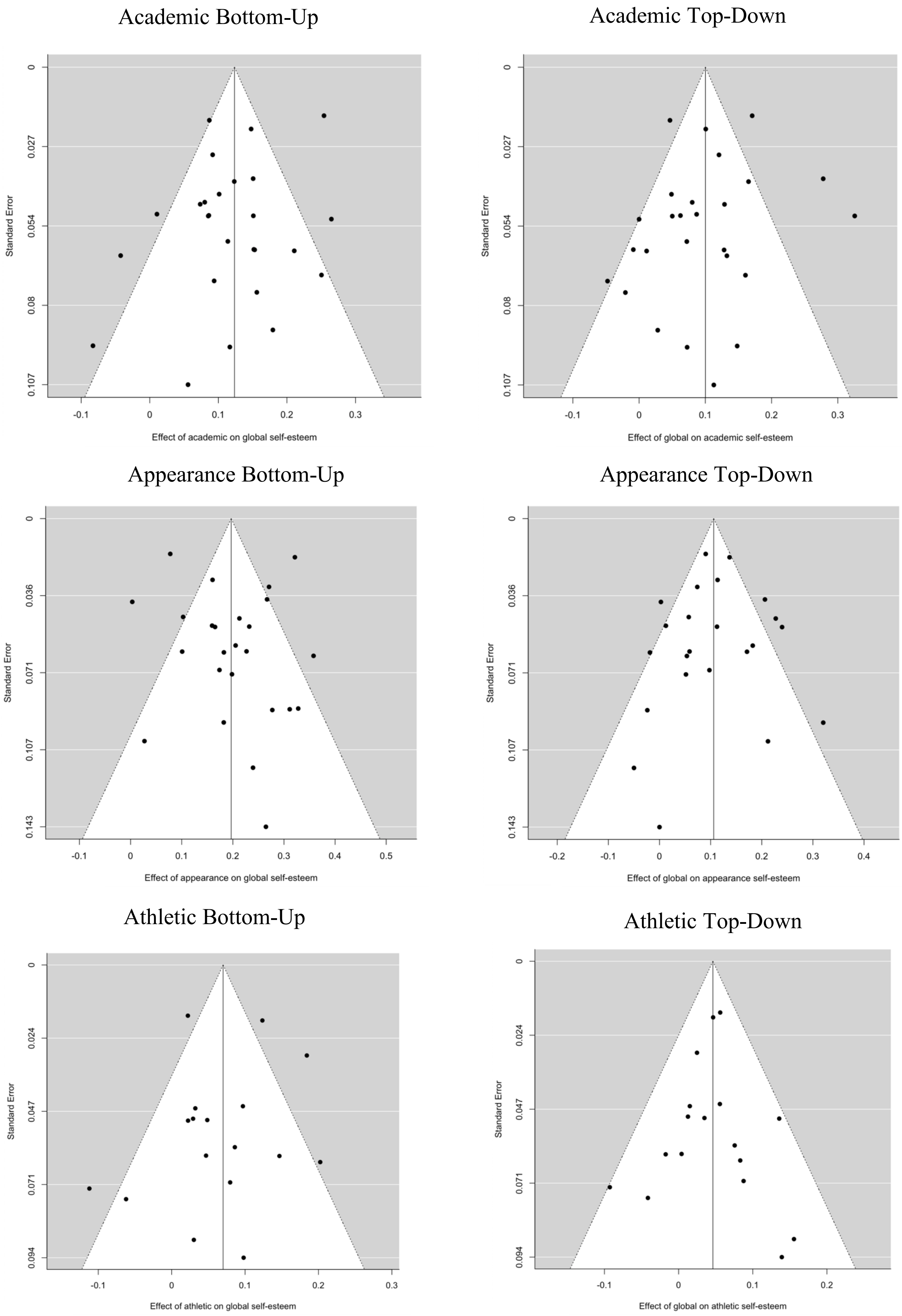
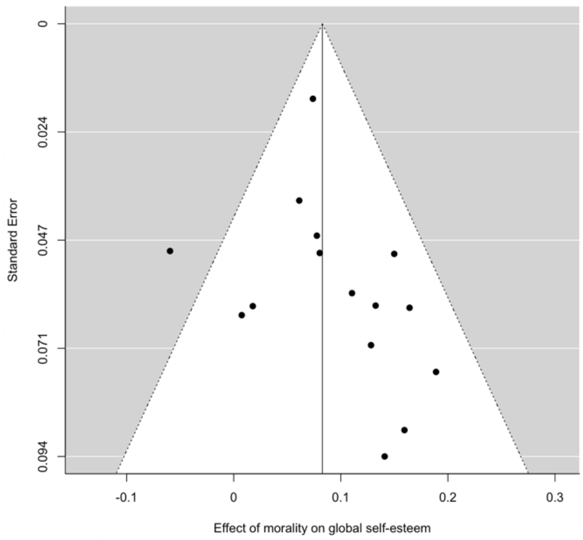
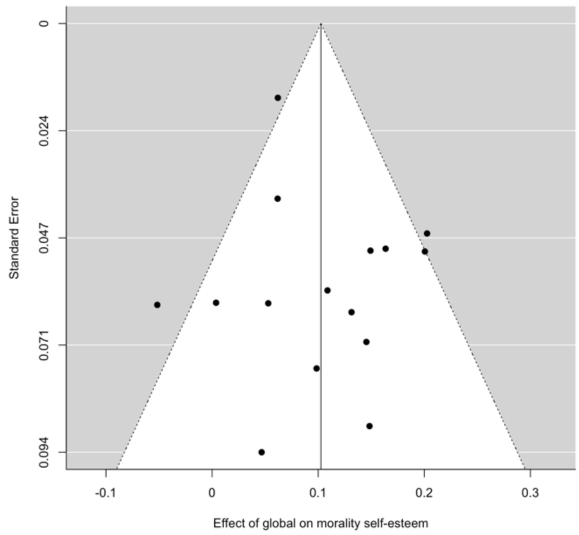


Figure S1. *(continued)*

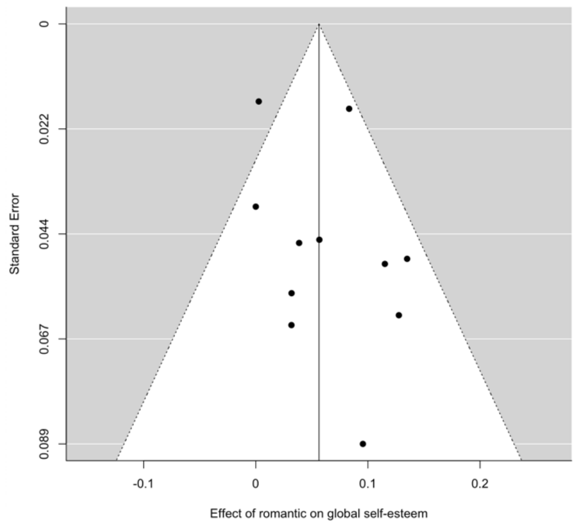
Morality Bottom-Up



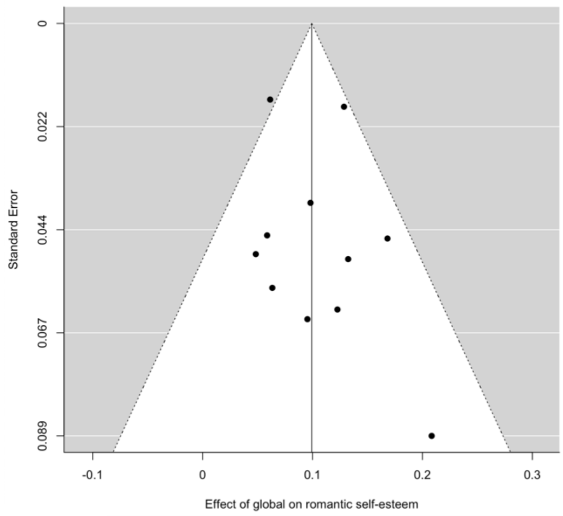
Morality Top-Down



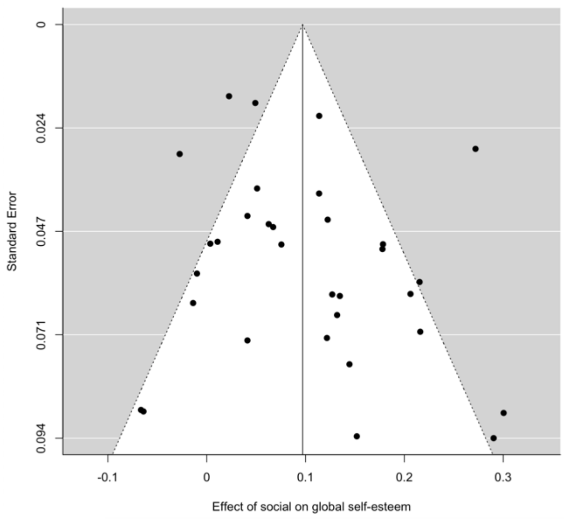
Romantic Bottom-Up



Romantic Top-Down



Social Bottom-Up



Social Top-Down

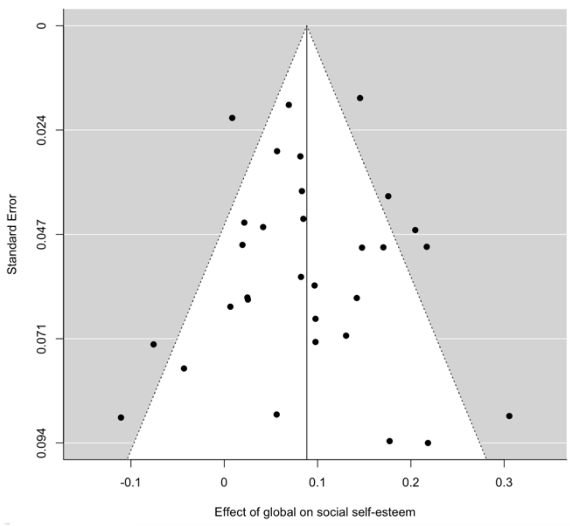
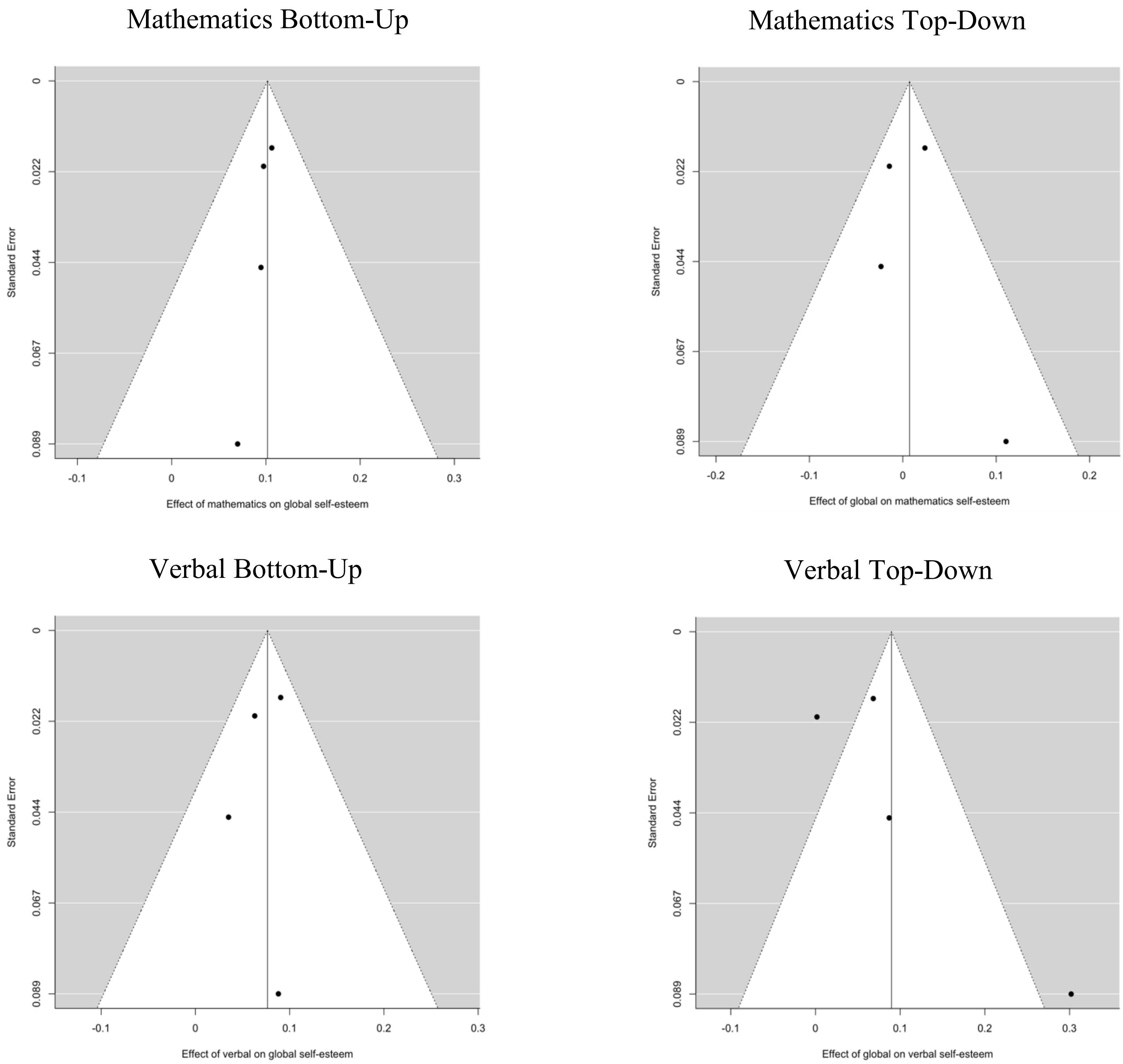


Figure S1. *(continued)*



Note. Funnel graphs for cross-lagged effects between global and domain-specific self-esteem. The vertical line indicates the weighted mean effect size.

Figure S2. *Graphical Summary of Weighted Mean Effect Sizes (Univariate Meta-Analysis of Standardized Regression Coefficients)*

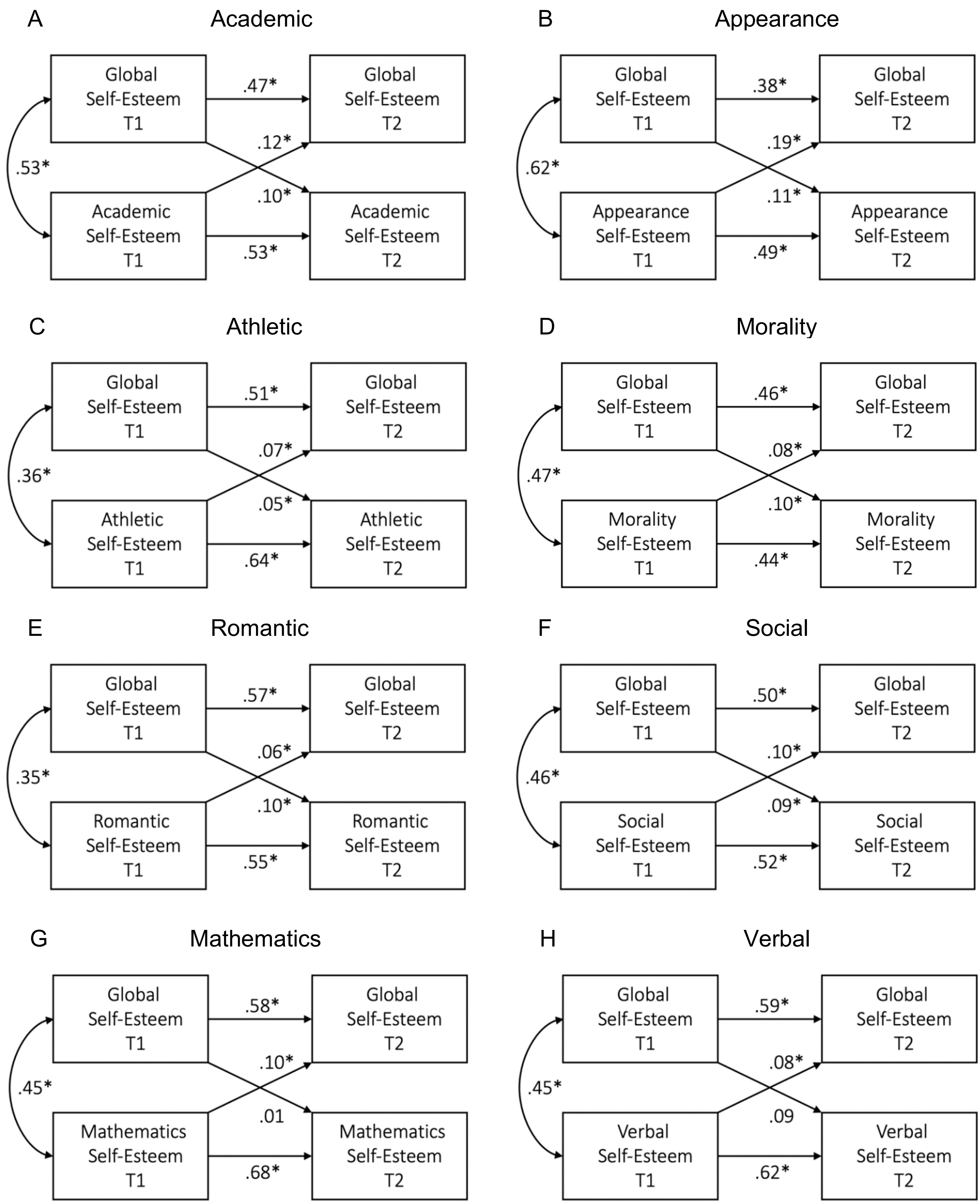
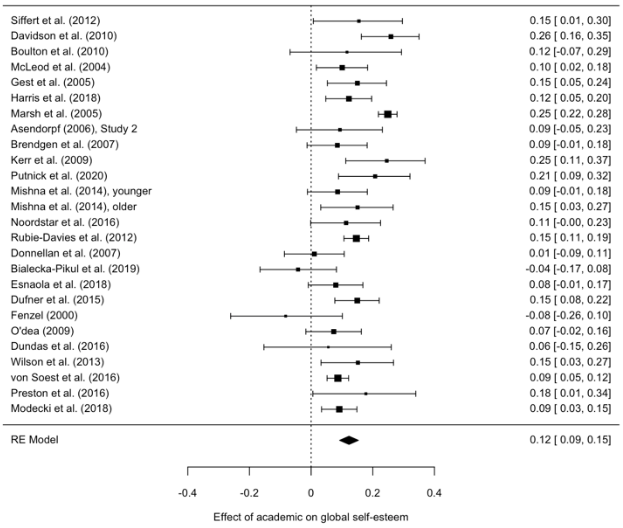
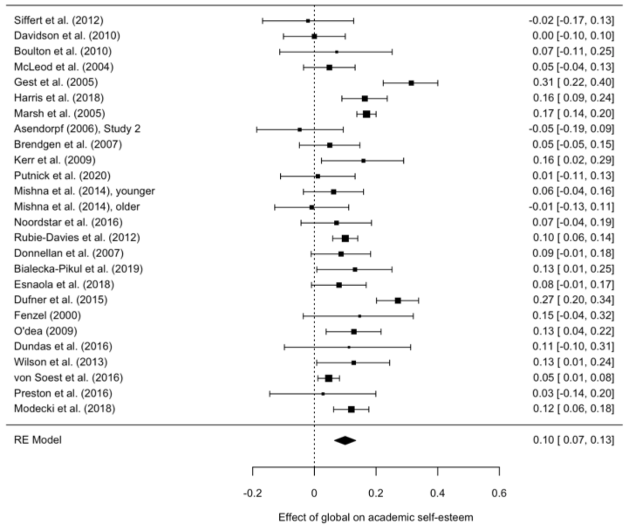


Figure S3. *Forest Plots (Univariate Meta-Analysis of Standardized Regression Coefficients)*

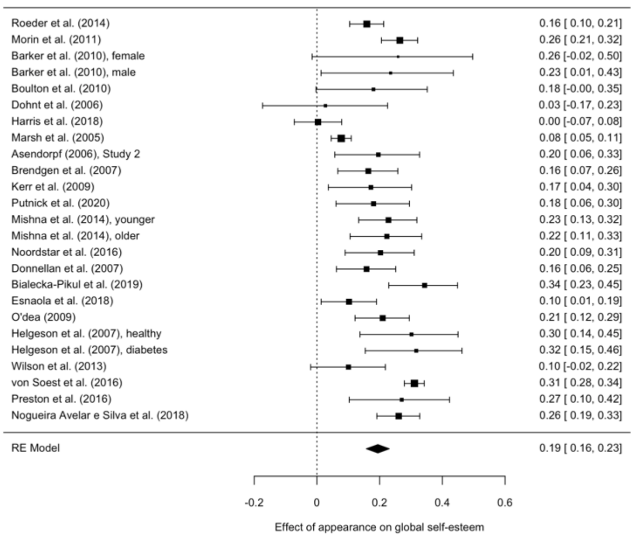
Academic Bottom-Up



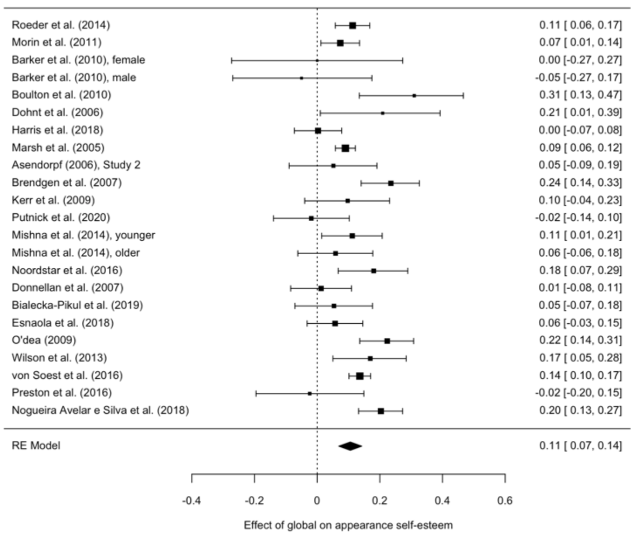
Academic Top-Down



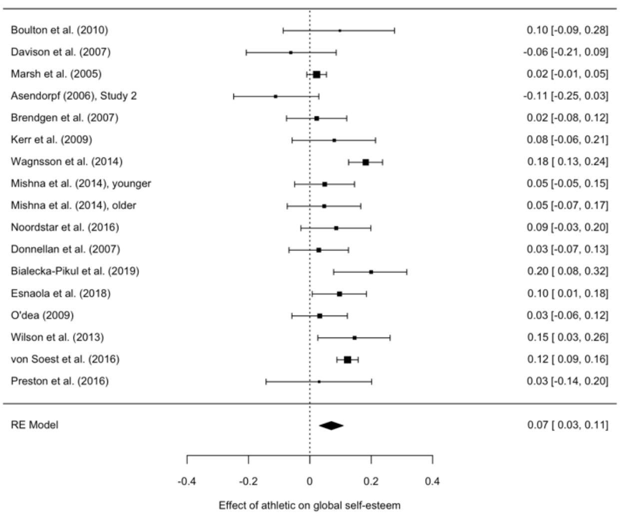
Appearance Bottom-Up



Appearance Top-Down



Athletic Bottom-Up



Athletic Top-Down

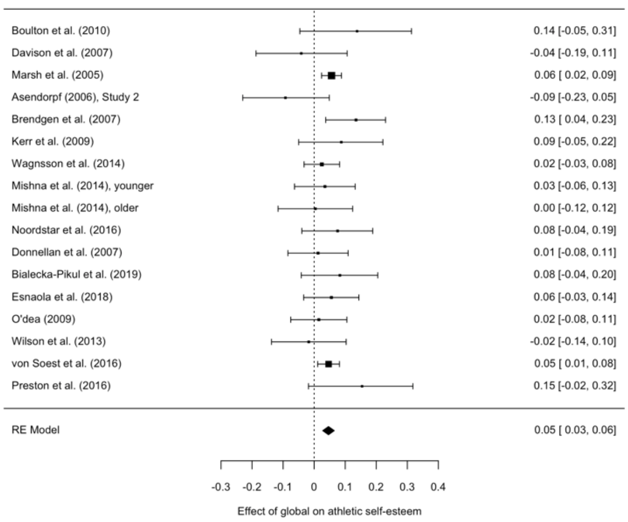
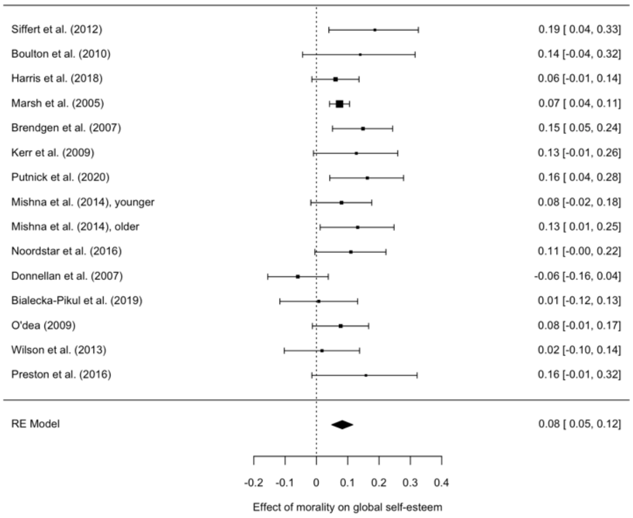
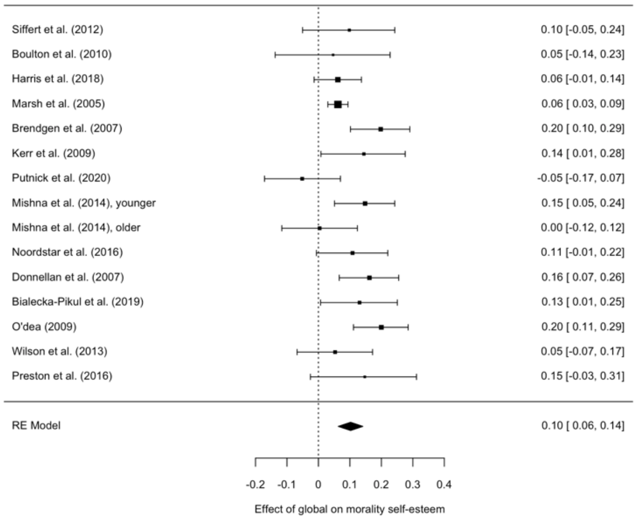


Figure S3. *(continued)*

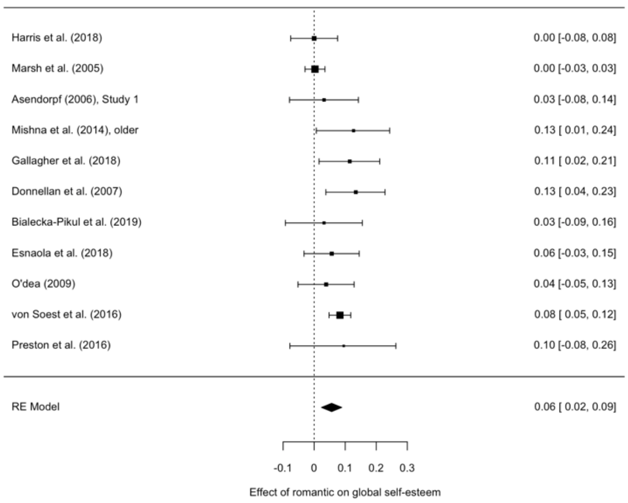
Morality Bottom-Up



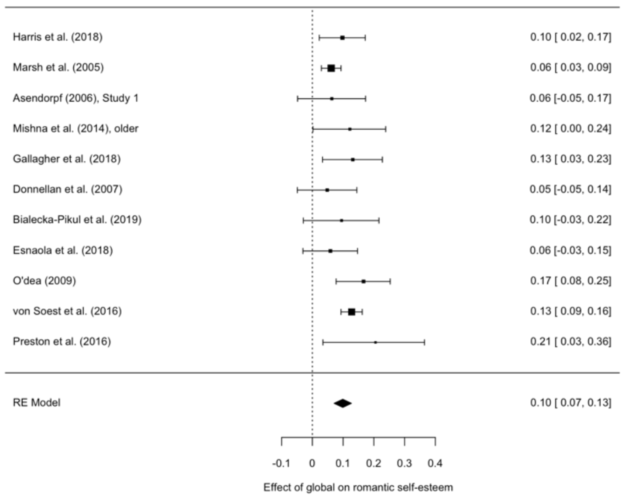
Morality Top-Down



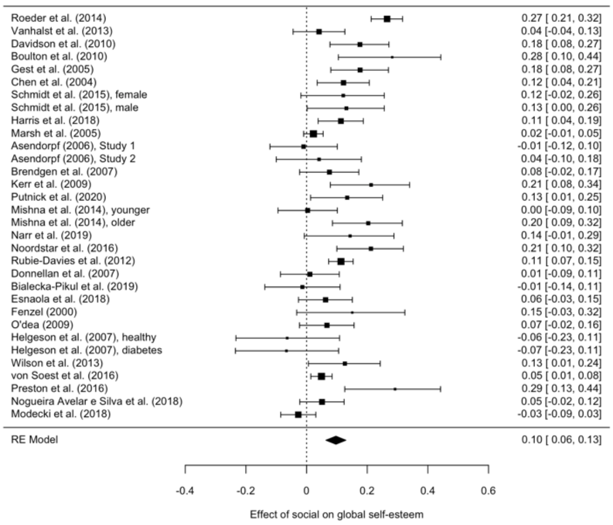
Romantic Bottom-Up



Romantic Top-Down



Social Bottom-Up



Social Top-Down

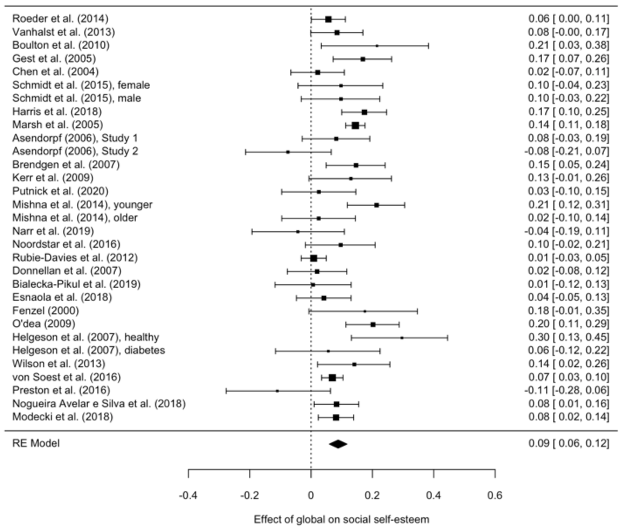
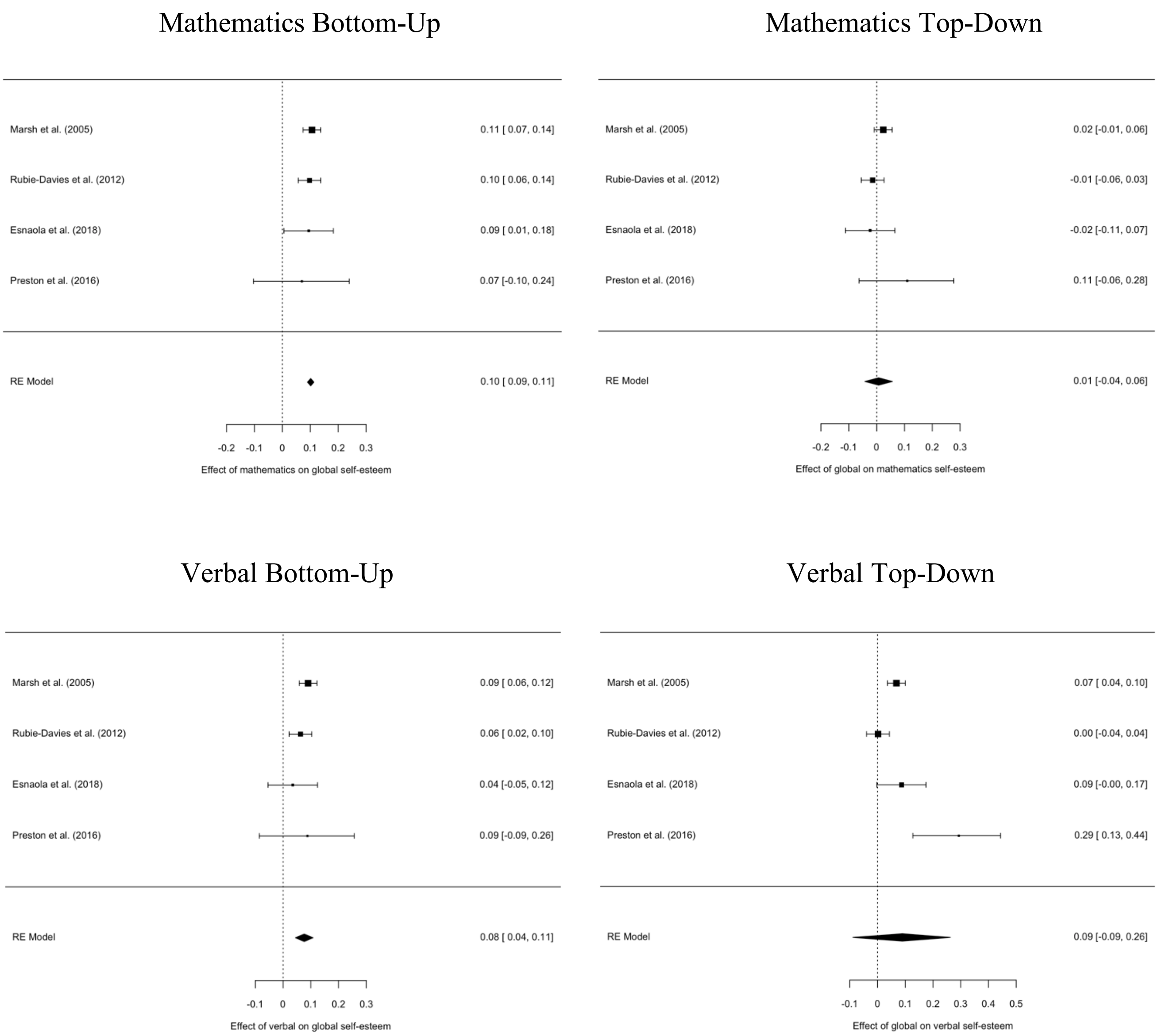


Figure S3. *(continued)*



Note. Forest plots for cross-lagged effects between global and domain-specific self-esteem. RE Model = random-effects model.

Part B: Supplemental Table for Multivariate Meta-Analysis

Table S5. *Egger's Regression Tests for Correlations Used in Meta-Analytic Structural Equation Modeling*

Correlation	*t*	*df*	*p*
Academic			
G_{T1},D_{T1}	-1.49	24	.149
D_{T1},G_{T2}	-1.28	24	.214
G_{T1},D_{T2}	-1.08	24	.291
G_{T1},G_{T2}	0.52	24	.607
D_{T1},D_{T2}	1.17	24	.252
G_{T2},D_{T2}	-2.05	24	.051
Appearance			
G_{T1},D_{T1}	0.11	23	.910
D_{T1},G_{T2}	-1.34	23	.195
G_{T1},D_{T2}	-1.63	21	.118
G_{T1},G_{T2}	-2.83	23	.010
D_{T1},D_{T2}	-2.39	21	.026
G_{T2},D_{T2}	-0.13	21	.901
Athletic			
G_{T1},D_{T1}	0.62	15	.542
D_{T1},G_{T2}	-1.82	15	.089
G_{T1},D_{T2}	-0.67	15	.510
G_{T1},G_{T2}	-2.18	15	.046
D_{T1},D_{T2}	-1.83	15	.087
G_{T2},D_{T2}	-0.42	15	.680
Morality			
G_{T1},D_{T1}	0.68	13	.507
D_{T1},G_{T2}	0.33	13	.744
G_{T1},D_{T2}	-0.18	13	.863
G_{T1},G_{T2}	-1.15	13	.271
D_{T1},D_{T2}	-0.68	13	.511
G_{T2},D_{T2}	0.84	13	.417
Romantic			
G_{T1},D_{T1}	1.34	9	.213
D_{T1},G_{T2}	1.47	9	.176
G_{T1},D_{T2}	2.12	9	.063
G_{T1},G_{T2}	-0.34	9	.739
D_{T1},D_{T2}	-0.06	9	.955
G_{T2},D_{T2}	2.67	9	.026
Social			
G_{T1},D_{T1}	-1.08	30	.288
D_{T1},G_{T2}	-0.00	30	.998
G_{T1},D_{T2}	-0.32	29	.750
G_{T1},G_{T2}	-0.62	30	.541
D_{T1},D_{T2}	0.96	29	.345
G_{T2},D_{T2}	-0.13	29	.898

Mathematics			
G_{T1},D_{T1}	-0.34	2	.766
D_{T1},G_{T2}	-0.52	2	.657
G_{T1},D_{T2}	-0.16	2	.884
G_{T1},G_{T2}	0.23	2	.837
D_{T1},D_{T2}	-0.52	2	.652
G_{T2},D_{T2}	-0.12	2	.915
Verbal			
G_{T1},D_{T1}	-1.68	2	.234
D_{T1},G_{T2}	-1.07	2	.396
G_{T1},D_{T2}	0.48	2	.680
G_{T1},G_{T2}	0.23	2	.837
D_{T1},D_{T2}	-0.40	2	.729
G_{T2},D_{T2}	-0.67	2	.572

Note. Egger’s regression tests were conducted with metafor (including the Knapp and Hartung adjustment). The significance level was adjusted to $p < .001$ (Bonferroni correction). D = domain-specific self-esteem; G = global self-esteem.

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