Supplemental Material 1

Cross-Twin Correlations for Men (Panel A) and Women (Panel B)

Panel A

MZ	RRSB1	RRSR1	RRQRU1	RRQRE1	MDD1	EDEQ1	CES-D1	DV1
RRSB2	**0.57**							
RRSR2	**0.36**	**0.50**						
RRQRU2	**0.47**	**0.35**	**0.57**					
RRQRE2	0.09	**0.23**	0.14	**0.37**				
MDD2	**0.34**	**0.30**	**0.31**	0.12	*0.34*			
EDEQ2	0.09	0.05	0.11	0.04	-0.02	**0.61**		
CES-D2	**0.40**	**0.35**	**0.43**	0.10	**0.39**	0.15	**0.55**	
DV2	0.03	0.05	0.03	0.11	**0.23**	0.01	0.05	**0.33**

DZ								
RRSB2	0.10							
RRSR2	0.01	0.14						
RRQRU2	0.00	0.02	-0.08					
RRQRE2	0.08	0.07	0.04	0.09				
MDD2	0.05	-0.11	-0.05	0.01	0.20			
EDEQ2	-0.09	-0.05	0.00	0.07	0.03	0.12		
CES-D2	-0.03	-0.05	**-0.22**	0.07	-0.06	-0.04	-0.05	
DV2	0.04	-0.13	0.06	0.06	0.09	0.04	0.06	**0.30**

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Panel B

MZ	RRSB1	RRSR1	RRQRU1	RRQRE1	MDD1	EDEQ1	CES-D1	DV1
RRSB2	**0.23**							
RRSR2	*0.14*	*0.17*						
RRQRU2	**0.29**	**0.22**	**0.30**					
RRQRE2	**0.16**	**0.26**	**0.15**	**0.35**				
MDD2	0.05	0.00	*0.13*	*0.13*	**0.36**			
EDEQ2	**0.15**	*0.12*	**0.16**	0.05	0.11	**0.50**		
CES-D2	**0.24**	0.11	**0.28**	0.11	**0.27**	*0.14*	**0.35**	
DV2	0.12	0.07	0.03	**0.26**	**0.22**	0.06	**0.27**	**0.51**

DZ	RRSB1	RRSR1	RRQRU1	RRQRE1	MDD1	EDEQ1	CES-D1	DV1
RRSB2	0.02							
RRSR2	0.07	0.12						
RRQRU2	*0.17*	0.09	**0.25**					
RRQRE2	-0.10	0.01	*-0.13*	**0.41**				
MDD2	0.06	0.03	*0.21*	*-0.09*	0.30			
EDEQ2	0.12	-0.04	0.09	**-0.21**	-0.01	0.19		
CES-D2	0.07	-0.02	*0.13*	-0.12	0.11	**0.19**	0.24	
DV2	0.01	0.04	0.13	-0.05	0.06	0.00	0.09	**0.25**

Note. Bold values indicate significance at $p < .05$, italicized indicates $p < .10$. "1" after variable name indicates measure for first twin in twin pair, "2" after variable name indicates second twin in twin pair. RRS-B = Ruminative Responses Scale-Brooding; RRS-R = Ruminative Responses Scale-Reflection; RRQ-Ru = Rumination-Reflection Questionnaire-Rumination; RRQ-Re = Rumination-Reflection Questionnaire-Reflection; MDD = Major Depressive Disorder; GAD = Generalized Anxiety Disorder; CES-D = Center for

Epidemiological Studies-Depression; EDEQ = Eating Disorder Examination Questionnaire; DV = Dependence vulnerability.

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Supplemental Material 2
Best Fitting Univariate ACE Models and Reduced Models for Rumination, Self-Reflection, and Psychopathology

| Model Number	χ^2	df	TLI	RMSEA	$\Delta\chi2$(df)	*P*	A	C	E	A^2	C^2	E^2
ACE Models												
1. RLV	91.13	74	0.98	0.049	--		**.63(.07)**	0	**.78(.06)**	.40	0	.60
							.58(.08)	*0*	*.81(.06)*	*.34*	*0*	*.66*
2. RLV	91.23	82	0.99	0.034	.10(8)	1	**.63(.09)**	--	**.78(.06)**	.40	--	.60
							.58(.08)	--	*.81(.06)*	*.34*	--	*.66*
1. RRQ-RE	15.34	12	0.98	0.054	--		**.64(.07)**	0	**.77(.06)**	.41	0	.59
							.42(.28)	*.48(.20)*	*.77(.06)*	*.18*	*.23*	*.60*
2. RRQ-RE	16.7	14	0.98	0.045	1.35(2)	0.51	**.64(.07)**	--	**.77(.06)**	.41	--	.59
							.66(.06)	--	*.75(.05)*	*.44*	--	*.56*
1. MDD	14.44	14	0.99	0.018	--		.52(.51)	.26(.84)	**.81(.11)**	.27	.07	.66
							.34(.68)	*.49(.40)*	*.80(.09)*	*.11*	*.24*	*.64*
2. MDD	14.97	16	1	0	.41(2)	0.81	**.59(.13)**	--	**.81(.10)**	.35	--	.65
							.62(.10)	--	*.78(.08)*	*.39*	--	*.61*
1. DV	9.81	12	1	0	--		.19(.72)	**.53(.20)**	**.83(.06)**	.03	**.28**	.69
							.56(.22)	*.37(.29)*	*.75(.05)*	*.31*	*.13*	*.56*
2. DV	11.73	14	1	0	1.92(2)	0.38	**.60(.07)**	--	**.80(.05)**	.35	--	.65
							.68(.05)	--	*.74(.05)*	*.46*	--	*.54*
1. CESD	19.62	12	0.93	0.08	--		**.65(.07)**	0	**.76(.06)**	.42	--	.58
							.34(.39)	*.42(.27)*	*.84(.05)*	*.12*	*.18*	*.70*
2. CESD	20.21	14	0.95	0.069	.59(2)	0.75	**.65(.07)**	--	**.76(.06)**	.42	--	.58
							.56(.07)	--	*.83(.05)*	*.31*	--	*.69*
1. EDEQ	17.25	12	0.97	0.068	--		**.70(.06)**	0	**.71(.06)**	.49	--	.50
							.71(.05)	*0*	*.71(.05)*	*.50*	--	*.50*
2. EDEQ	17.25	14	0.98	0.05	.00(2)	1	**.70(.06)**	--	**.71(.06)**	.49	--	.50
							.71(.05)	--	*.71(.05)*	*.50*	--	*.50*

Note. A, C, and E values are standardized parameter estimates. A^2, C^2, and E^2 values are squared parameter estimates. Bold values

indicate significance at $p < .05$. Results for women are presented in italics, below the results for men. Standard errors in parentheses.

Model 1 is full ACE model, Model 2 is reduced model (with all non-significant C paths fixed at zero). RLV = Rumination Latent

Variable; RRQ-RE = Rumination-Reflection Questionnaire-Reflection; MDD = Major Depressive Disorder; CES-D = Center for

Epidemiological Studies-Depression; EDEQ = Eating Disorder Examination Questionnaire; DV = Dependence vulnerability.

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Supplemental Material 3

ACE model for the rumination latent variable (RLV) with standardized parameter

estimates (standard errors in parentheses)
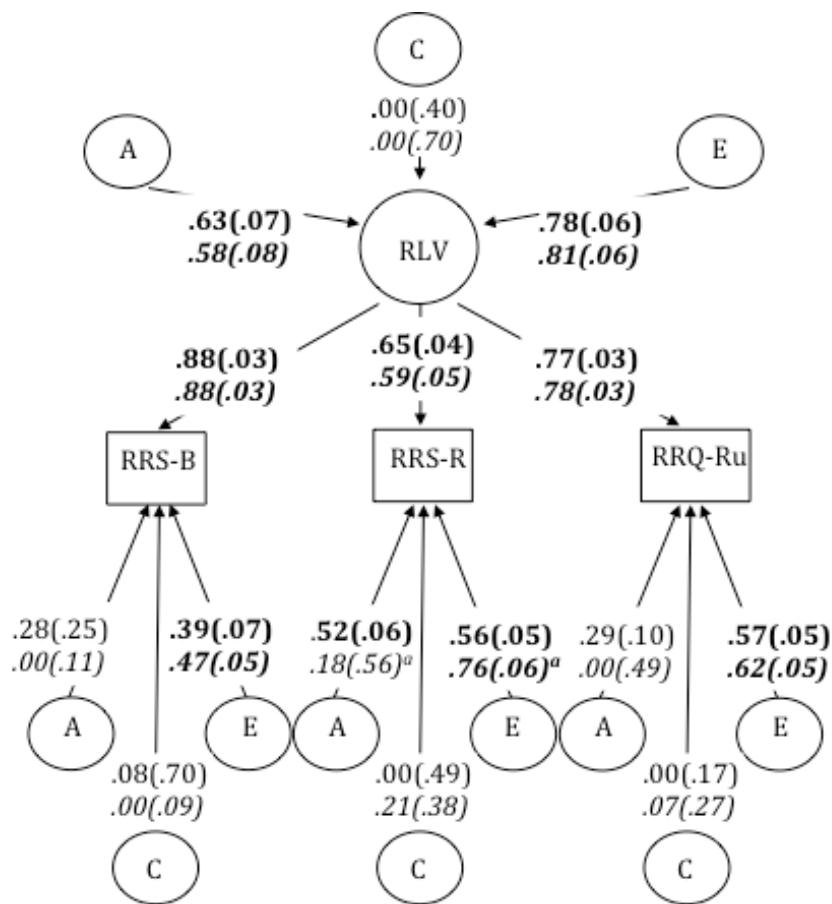
Note. A, C, and E values are parameter estimates; these values can be squared to calculate heritability, shared environmental and nonshared environmental influences. Standard errors in parentheses. Bold values indicate significance at $p < .05$. Parameters for women in italics. A = genetic influences; C = shared environmental influences; E = nonshared environmental influences; RRS-B = Ruminative Responses Scale-Brooding; RRS-R = Ruminative Responses Scale-Reflection; RRQ-Ru = Rumination-Reflection Questionnaire-Rumination. [a]Statistically significant gender difference ($p<.05$) in the unstandardized parameter estimates.

Supplemental Material 4

Trivariate ACE Models for Rumination, Self-reflection and CES-D (Panel A), MDD

*(Panel B), DV (Panel C)*

Panel A
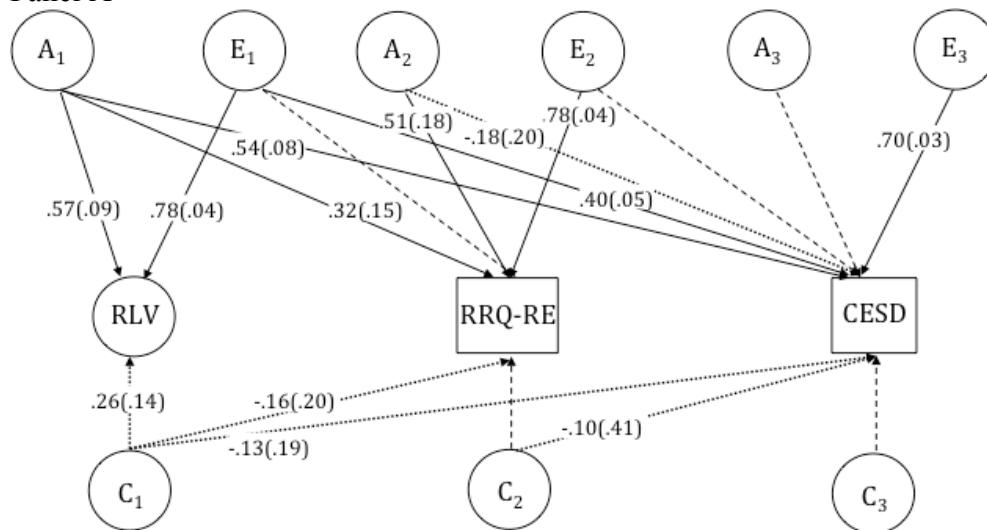
Panel B
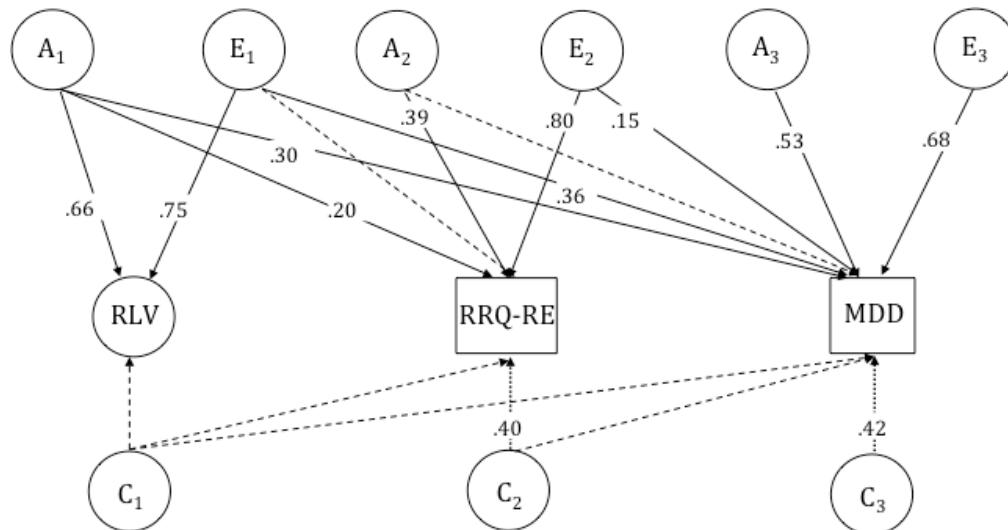
Panel C
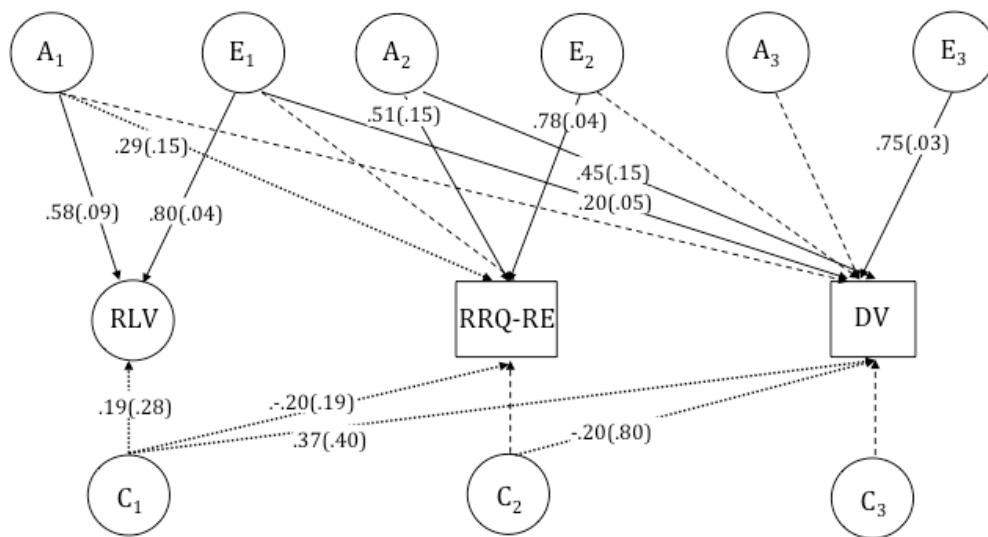
Note. Standardized parameter estimates. Standard errors in parentheses. Statistically

significant parameter estimates are presented with a solid line; nonsignificant parameter

estimates (<-.10 or >.10) are presented with dotted lines; dashed lines indicate

nonsignificant parameter estimates with negligible magnitudes (0 ± .10); RLV =

Rumination Latent Variable; RRQ-Re = Rumination-Reflection Questionnaire-

Reflection; CES-D = Center for Epidemiological Studies-Depression; MDD = Major

Depressive Disorder; DV = Dependence vulnerability; A = genetic influences; E =

nonshared environmental influences. When using the WLSMV estimator (analyses with

MDD), Mplus does not provide standard errors for standardized parameters when a

covariate is included in the model.

Supplemental Material 5

Multivariate ACE Models for Rumination Measures and EDEQ for males (Panel A) and females

(Panel B)

Panel A

Panel B

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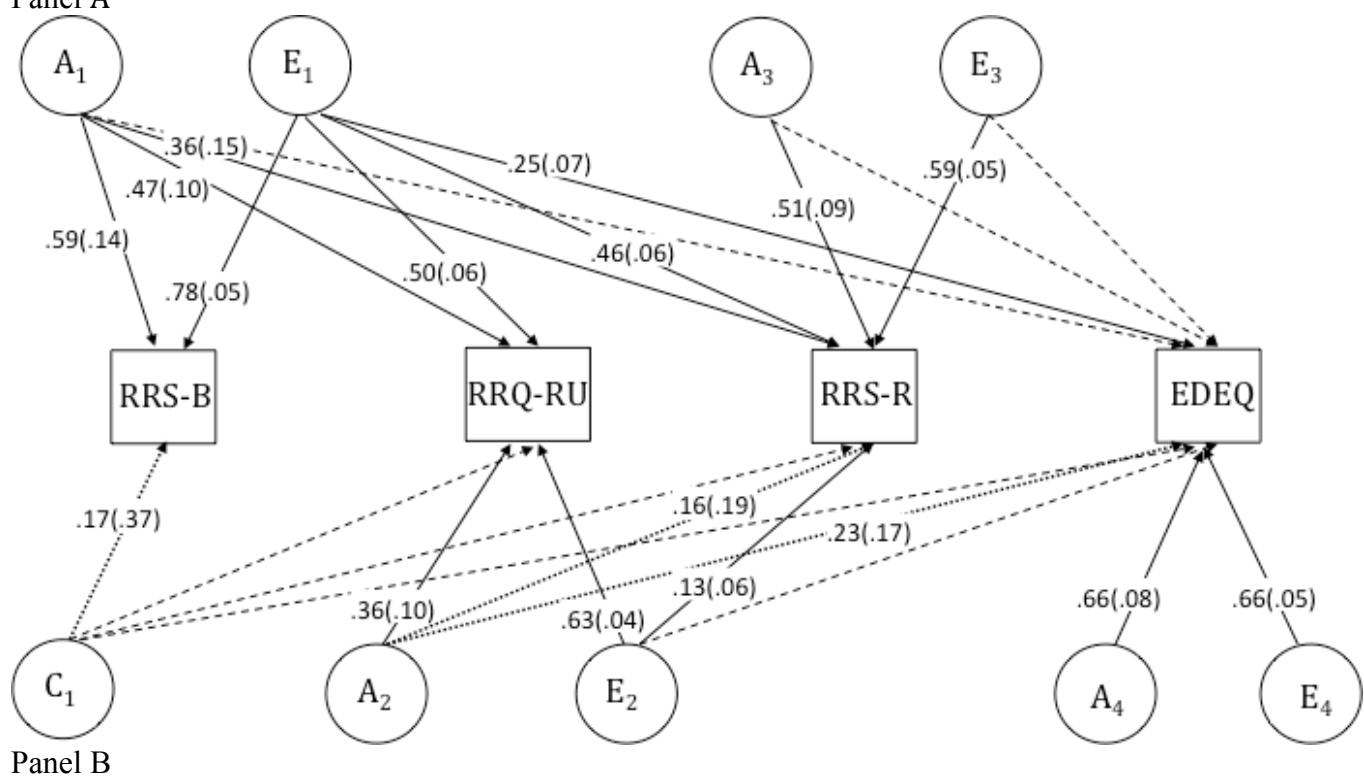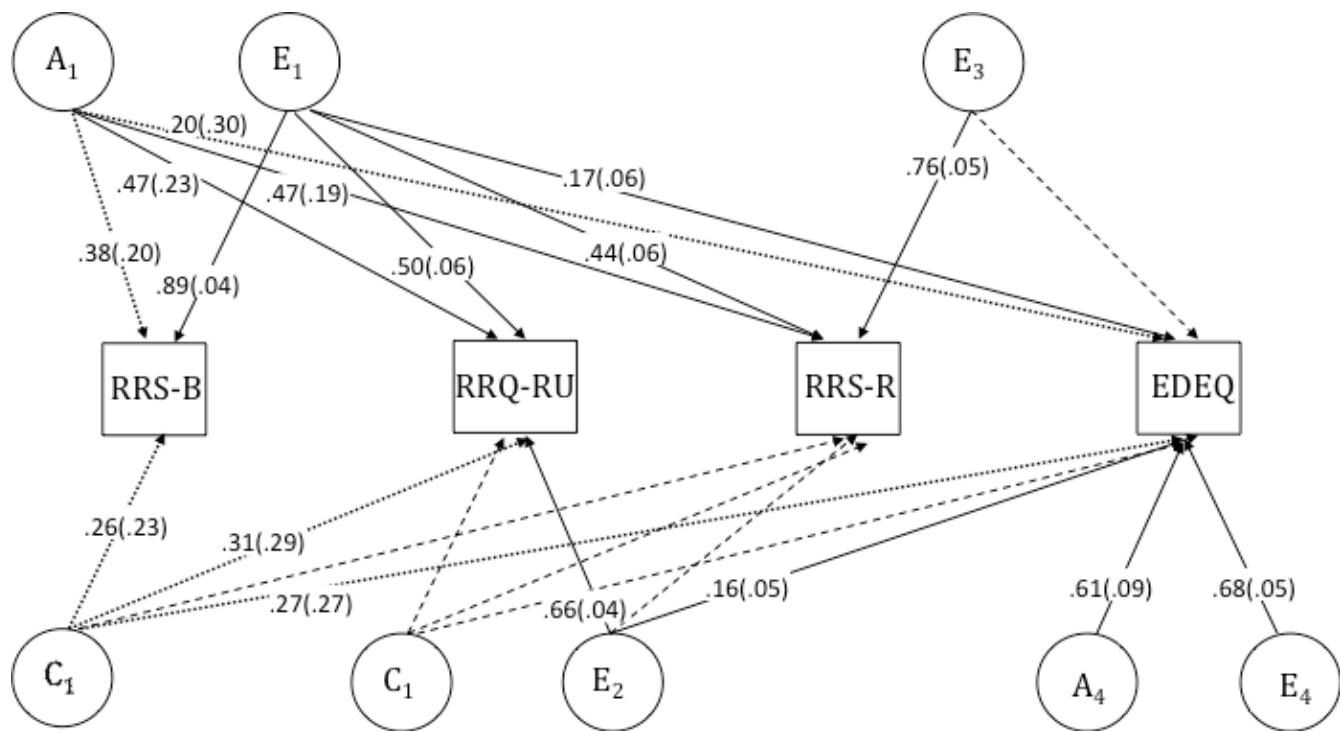
Note. The latent variable (A_2) and paths representing shared genetic variance between RRQRU, RRSR and EDEQ were dropped from the model due to negligible loadings on the rumination measures. Standardized parameter estimates are shown. Standard errors in parentheses. Statistically significant parameter estimates are presented with a solid line; nonsignificant parameter estimates (<-.10 or >.10) are presented with dotted lines; dashed lines indicate nonsignificant parameter estimates with negligible magnitudes (0 ± .10); For clarity, parameters fixed at zero are not shown; RRS-B = Ruminative Responses Scale-Brooding; RRS-R = Ruminative Responses Scale-Reflection; RRQ-Ru = Rumination-Reflection Questionnaire-Rumination; EDEQ = Eating Disorder Examination Questionnaire; A = genetic influences; E = nonshared environmental influences.