

Table S1: Skewness of variables before and after log transformation

Variable	Skewness of untransformed variable	Skewness of log transformed variable
OCS at Time 1	1.19	.34
OCS at Time 2	1.55	.12
Anxiety sensitivity at Time 1	.60	.10
Anxiety sensitivity at Time 2	1.16	.64
Anxiety composite at Time 1	1.00	.34
Depression at Time 1	1.35	.45

Note: OCS = obsessive-compulsive symptoms

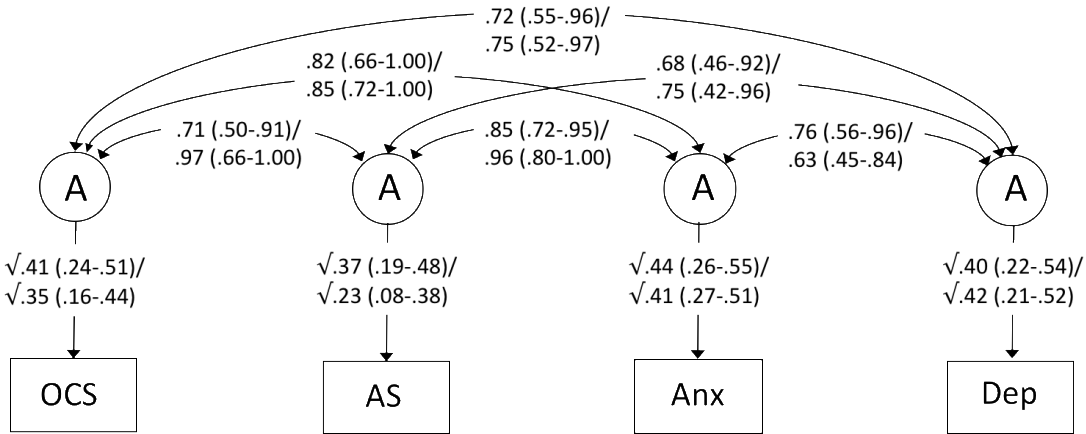
Table S2: Twin correlations within-trait, across-trait and across-time (cross-lag model)

		Twin 2			
		OCS T1	AS T1	OCS T2	AS T2
Monozygotic					
Twin 1	OCS T1	.47	.32	.31	.18
	AS T1	-	.45	.21	.19
	OCS T2	-	-	.39	.29
	AS T2	-	-	-	.29
Dizygotic					
Twin 1	OCS T1	.24	.18	.16	.13
	AS T1	-	.21	.12	.17
	OCS T2	-	-	.16	.13
	AS T2	-	-	-	.19

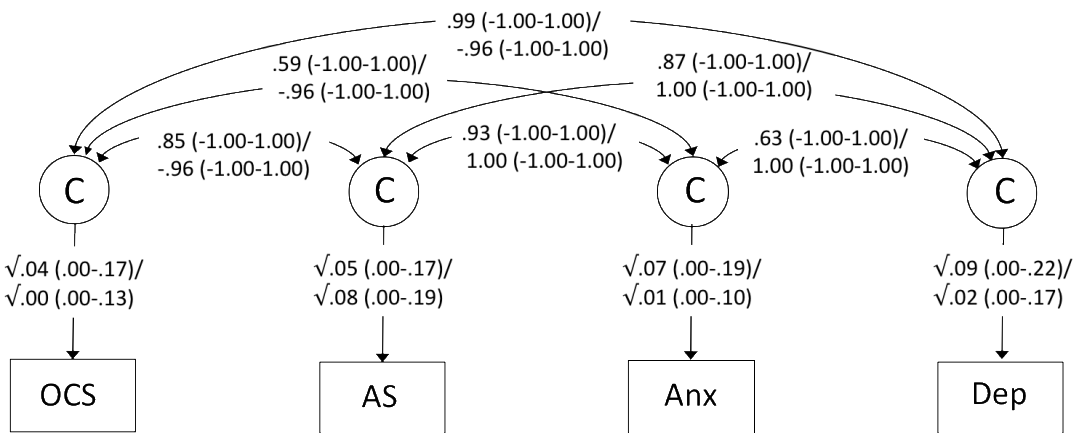
Note: OCS = obsessive-compulsive symptoms; AS = anxiety sensitivity; T1 = Time 1; T2 = Time 2

Figure S1: Multivariate correlated factors models showing genetic and environmental influences on anxiety sensitivity, obsessive-compulsive, anxiety and depressive symptoms at Time 1/Time 2

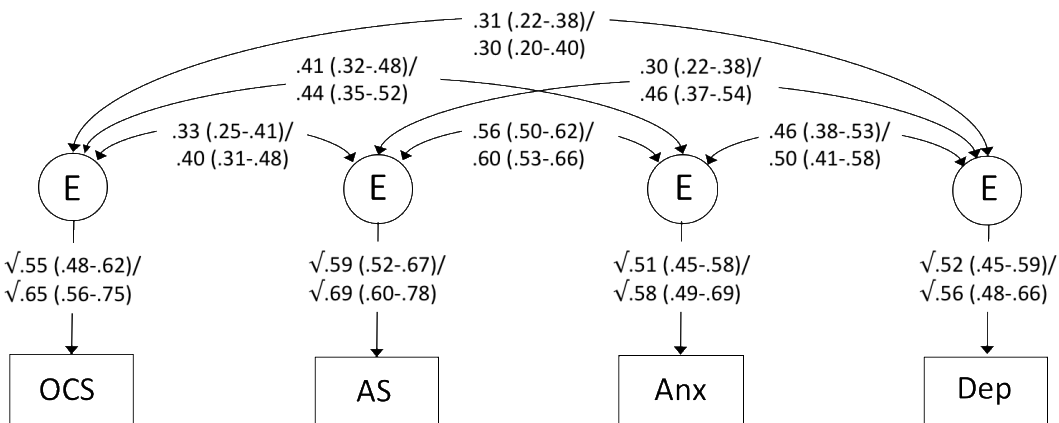
(i) Genetic influences



(ii) Shared environmental influences



(iii) Non-shared environmental influences



Note: AS = anxiety sensitivity; OCS = obsessive-compulsive symptoms; Anx = anxiety symptoms; Dep = depressive symptoms; A = additive genetic effects; C = shared environmental effects; E = non-shared environmental effects; values on single-headed arrows are standardized path estimates; values on double-headed arrows are correlation coefficients; 95% confidence intervals in parentheses.

Table S3: Fit comparisons for ACE cross-lagged model

Base model	Comparison model	-2LL	df	diff LL	diff df	<i>p</i>	AIC
Saturated model	N/A	24670.43	8007	N/A	N/A	N/A	8656.43
Saturated model	ACE model	24741.39	8061	70.96	54	.06	8619.39

Note: -2LL = minus twice the log likelihood; AIC = Akaike's information criterion; A = additive genetic influence; C= shared environmental influences; E = non-shared environmental influences.

Table S4: Mean scores on study measures at Time 3 (standard deviations in parentheses).

	Time 3
	(<i>n</i> = 1182 – 1214)

RCADS	
OCS subscale score	3.13 (3.10)
Anxiety composite score	5.49 (3.20)
ASI score	15.5 (9.41)

Note: Revised Children’s Anxiety and Depression Scale; OCS = obsessive-compulsive symptoms; ASI = Anxiety Sensitivity Index. The ASI comprises 16 items. The RCADS includes 6 OCS items and 30 anxiety items.

Summary statistics are presented on untransformed and unregressed variables for comparison with other published samples.

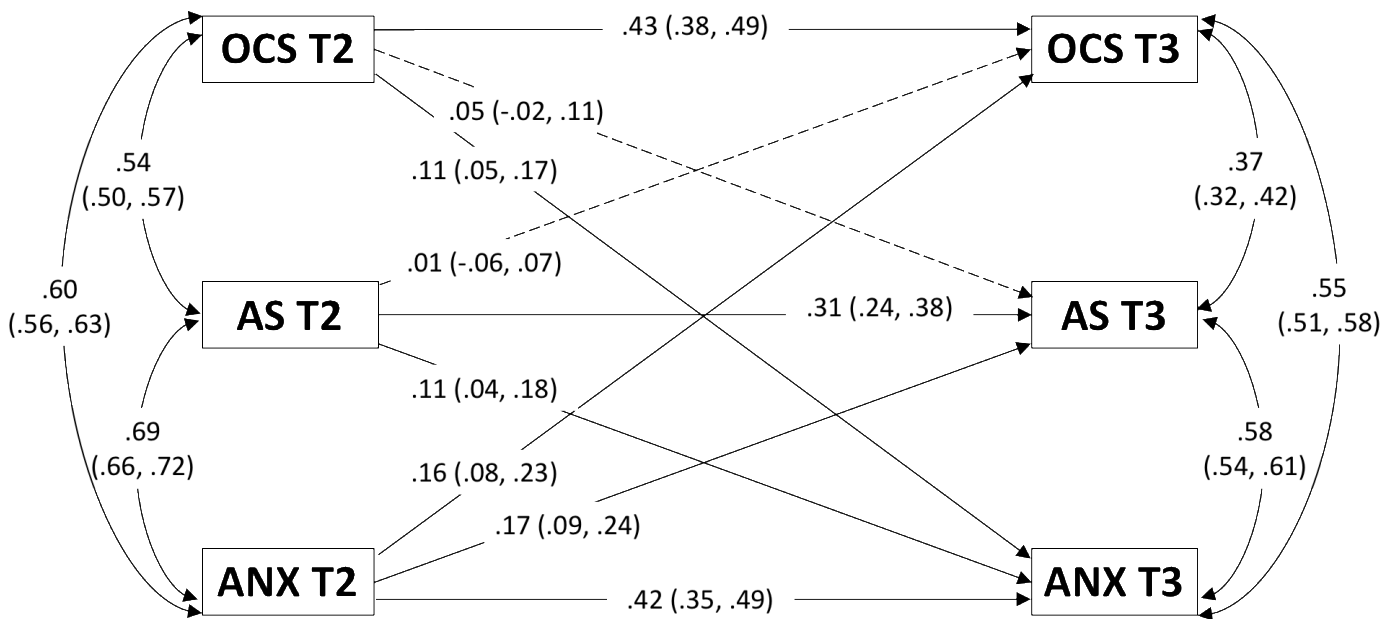
Table S5: Results of linear regression models predicting OCS severity at Time 3 from anxiety sensitivity at Time 2

		OCS severity at Time 2	
		β	R ²
Univariate model			
	AS at Time 1	.36 (.30 - .41) ***	.13
Multivariate model I			
	OCS at Time 1	.48 (.42 - .54) ***	
	AS at Time 1	.08 (.02 - .14) **	.29
Multivariate model II			
	OCS at Time 1	.43 (.36 - .49) ***	
	Anxiety at Time 1	.13 (.05 - .21) **	
	Depression at Time 1	.06 (-.00 - .13) ^{ns}	.30
	AS at Time 1	-.01 (-.08 - .06) ^{ns}	

Note: AS = anxiety sensitivity; OCS = obsessive-compulsive symptoms; β = standardized coefficient; 95% confidence intervals in parentheses. Analyses were conducted using robust clustering for twin pairs; all analyses adjusted for age and gender.

* $p < .05$ ** $p < .01$ *** $p < .001$

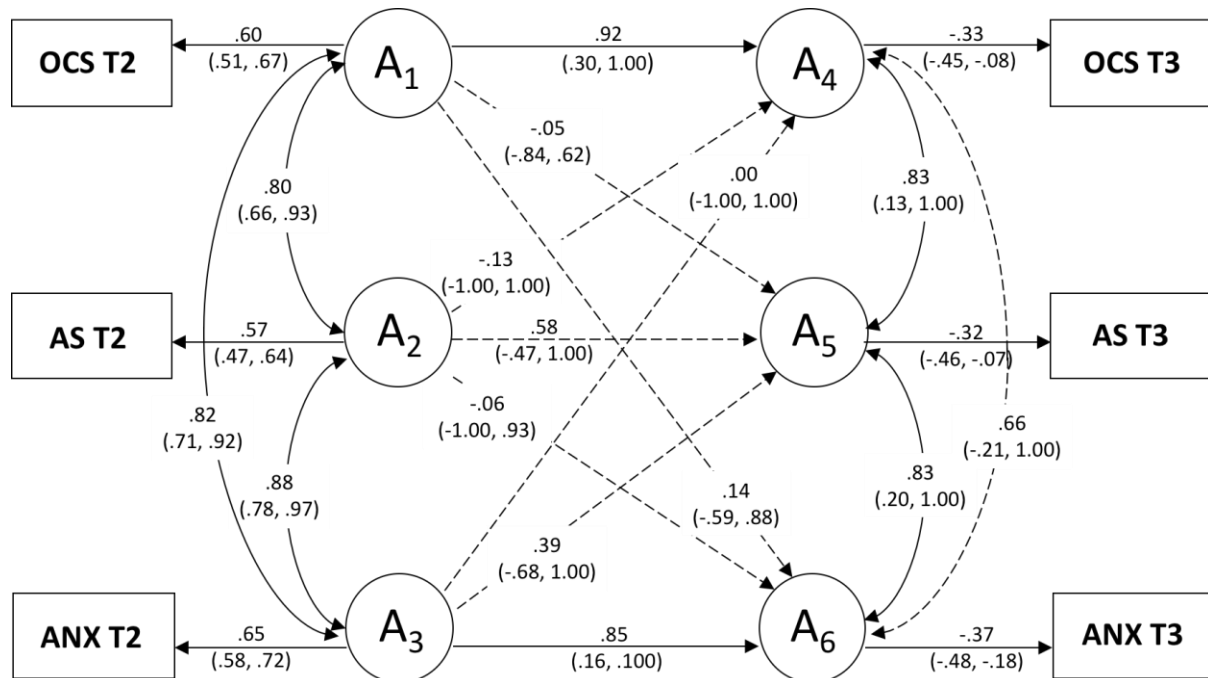
Figure S2: Standardized path estimates of the phenotypic cross-lagged model showing the associations between variables over time.



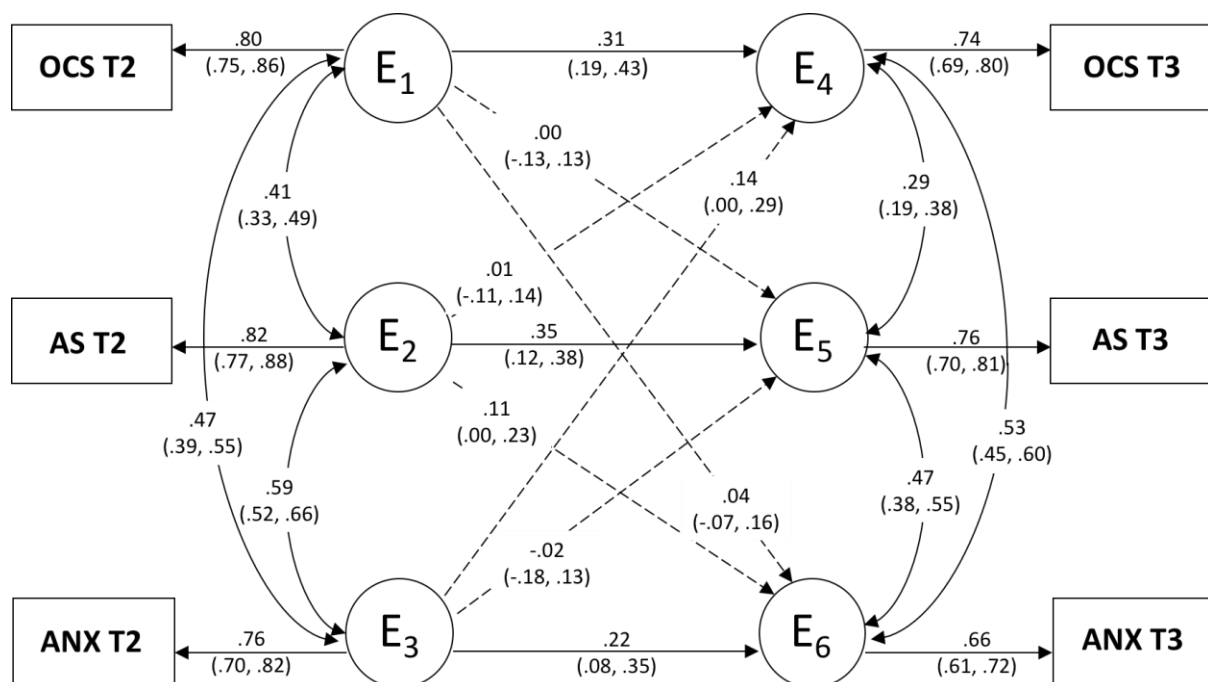
Note: OCS = obsessive-compulsive symptoms; AS = anxiety sensitivity; ANX = anxiety symptoms; T2 = time 2; T3 = time 3. Values on single-headed arrows from Time 2 to Time 3 variables are standardized partial regression coefficients. These coefficients can be squared to calculate the proportion of variance explained. Values on double-headed arrows between variables within the same timepoint are correlation coefficients; the correlation at Time 3 is a residual, indexing the relationship between OCS and anxiety sensitivity at Time 3 that is not explained by their association at Time 2. 95% confidence intervals in parentheses.

Figure S3: AE cross-lagged model showing genetic and environmental influences on anxiety sensitivity and OCS over time.

(i) Genetic influences



(ii) Non-shared environmental influences



Note: OCS = obsessive-compulsive symptoms; AS = anxiety sensitivity; ANX = anxiety symptoms; T2 = time 2; T3= time 3; A= additive genetic effects; E = non-shared environmental effects. Values on single-headed arrows are standardized path estimates; values on double-headed arrows are correlation coefficients; 95% confidence intervals in parentheses. Solid lines represent significant paths; dashed lines represent non-significant paths.