

Table S1. CU^a Descriptive Statistics

	<i>Age 2</i>	<i>Age 3</i>
	M(SD)	M(SD)
Female Participants	1.45 (1.44)	1.13 (1.21)
Male Participants	1.62 (1.51)	1.39 (1.41)

Note: CU=Callous-Unemotional Behaviors

^aMeans are for non-transformed CU scores
for ease of interpretation.

Table S2. Twin Intraclass and Cross Correlations

	MZ	DZ
Intraclass Correlations		
CU ^a Age 2	.72 (.64, .78)	.41 (.28, .53)
CU Age 3	.63 (.52, .71)	.41 (.27, .52)
NEG Age 2	.88 (.84, .91)	.69 (.60, .75)
NEG Age 3	.84 (.78, .88)	.63 (.53, .70)
Cross-Correlations		
CU 2—NEG 2	.32 (.23, .41)	.22 (.12, .31)
CU 3—NEG 3	.30 (.20, .39)	.19 (.09, .29)
NEG 2—CU 3	.26 (.17, .35)	.17 (.07, .27)
CU 2—NEG 3	.31 (.22, .39)	.17 (.07, .27)
NEG 2—NEG 3	.64 (.58, .70)	.55 (.47, .62)
CU 2—CU 3	.41 (.32, .49)	.27 (.17, .37)

Note: CU=Callous-Unemotional Behaviors;

NEG=negative parenting; MZ=monozygotic; DZ=dizygotic.

^aCU scores residualized for sex and conduct problems.

Table S3. Fit Statistics for Cross-Lagged Models

<i>CU^a and Negative Parenting</i>										
Model	Overall Fit of Model ^b							Relative Fit of Model ^c		
	-2LL	df	χ^2	Δdf	p	AIC	RMSEA	$\Delta\chi^2$	Δdf	p
Saturated	6304.453	2344								
Full	6397.990	2394	93.537	50	.000	-6.463	.053			
Drop CU stability	6466.014	2395	161.561	51	.000	59.561	.083	68.024	1	.000
Drop NEG stability	6636.638	2395	332.185	51	.000	230.185	.133	238.649	1	.000
Drop CU→NEG	6403.858	2395	99.405	51	.000	-2.595	.056	5.868	1	.015
Drop NEG→CU	6399.689	2395	95.236	51	.000	-6.764	.053	1.699	1	.192
Best-Fit Model	6404.658	2403	100.205	59	.001	-17.795	.047	6.668	9	.672

Note: Best fitting model indicated in bold. -2LL=Likelihood Statistic; χ^2 =Chi-square fit statistic;

AIC=Akaike’s Information Criterion; CU=Callous-Unemotional Behaviors; *df*=Degrees of freedom;

NEG=negative parenting; POS=positive parenting; RMSEA=Root Mean Square Error of Approximation.

^aCU residualized for sex and conduct problems.

^bOverall fit of the model is determined by the difference in -2LL of the model and that of a saturated model.

^cRelative fit of the model determined by the χ^2 difference ($\Delta\chi^2$) between full bivariate ACE model and reduced model.

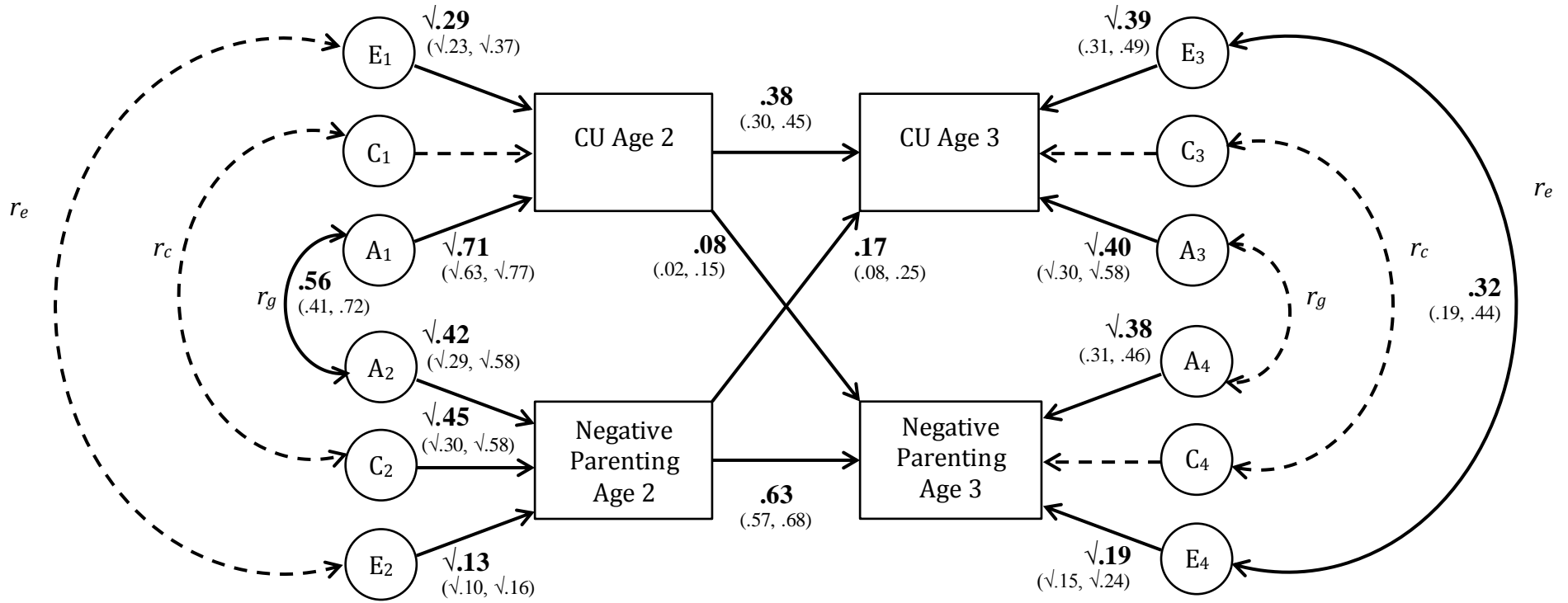


Figure S1. Cross-Lagged Results for Negative Parenting and Callous-Unemotional Behaviors without controlling for conduct problems