

Supporting Information: Predicting alcohol dependence symptoms by young adulthood: A co-twin comparisons study.

Table S1. Factor loadings for exploratory factor analysis in the first split-half sample.

		λ	95% CI	
ACAD	Factor 1			
	PR grades (age 12)	0.26	[0.14, 0.37]	
	TR grades (age 12)	0.97	[0.72, 1.21]	
	TR grades (age 14)	0.69	[0.51, 0.87]	
SUB	Factor 1			
	Frequency of alcohol use	0.74	[0.53, 0.62]	
	Frequency of intoxication	0.78	[0.70, 0.86]	
	Alcohol dependence symptoms	0.72	[0.64, 0.80]	
	Cigarette smoking	0.61	[0.53, 0.70]	
	Daily smoking	0.26	[0.15, 0.38]	
EXT	Factor 1			
	ADHD symptoms	0.53	[0.44, 0.62]	
	FR impulsivity (age 12)	0.14	[0.00, 0.27]	
	PR impulsivity (age 12)	0.19	[0.07, 0.31]	
	TR impulsivity (age 12)	0.16	[0.01, 0.30]	
	TR impulsivity (age 14)	0.43	[0.31, 0.54]	
	SR impulsivity (age 14)	0.59	[0.49, 0.69]	
	CR impulsivity (age 14)	0.53	[0.42, 0.63]	
	Conduct disorder symptoms	0.51	[0.41, 0.61]	
	Oppositional defiant disorder	0.39	[0.29, 0.49]	
	FR aggression (age 12)	0.09	[-0.06, 0.24]	
	PR aggression (age 12)	0.12	[-0.03, 0.27]	
	TR aggression (age 12)	0.19	[0.06, 0.31]	
	TR aggression (age 14)	0.38	[0.27, 0.50]	
	SR aggression (age 14)	0.46	[0.35, 0.56]	
	CR aggression (age 14)	0.42	[0.31, 0.53]	
	Marijuana abuse symptoms	0.11	[0.02, 0.21]	
	Truancy	0.29	[0.20, 0.39]	
		Factor 2		
		ADHD symptoms	-0.06	[-0.06, -0.06]
	FR impulsivity (age 12)	-0.73	[-0.86, -0.60]	
	PR impulsivity (age 12)	-0.17	[-0.27, -0.07]	
	TR impulsivity (age 12)	-0.24	[-0.37, -0.12]	
	TR impulsivity (age 14)	-0.32	[-0.43, -0.21]	
	SR impulsivity (age 14)	-0.12	[-0.23, -0.01]	
	CR impulsivity (age 14)	-0.18	[-0.30, -0.07]	
	Conduct disorder symptoms	-0.11	[-0.21, 0.00]	
	Oppositional defiant disorder	-0.02	[-0.12, 0.07]	

	λ	95% CI
FR aggression (age 12)	-0.96	[-1.10, -0.83]
PR aggression (age 12)	-0.02	[-0.14, 0.09]
TR aggression (age 12)	-0.28	[-0.41, -0.14]
TR aggression (age 14)	-0.28	[-0.39, -0.16]
SR aggression (age 14)	0.00	[-0.12, 0.11]
CR aggression (age 14)	-0.05	[-0.16, 0.06]
Marijuana abuse symptoms	-0.07	[-0.16, 0.02]
Truancy	-0.01	[-0.10, 0.08]
Factor 3		
ADHD symptoms	0.02	[0.02, 0.02]
FR impulsivity (age 12)	0.10	[0.10, 0.10]
PR impulsivity (age 12)	0.51	[0.39, 0.62]
TR impulsivity (age 12)	0.14	[0.02, 0.26]
TR impulsivity (age 14)	0.09	[-0.01, 0.18]
SR impulsivity (age 14)	0.04	[-0.07, 0.15]
CR impulsivity (age 14)	0.15	[0.04, 0.26]
Conduct disorder symptoms	0.11	[0.01, 0.21]
Oppositional defiant disorder	0.03	[-0.07, 0.13]
FR aggression (age 12)	0.10	[-0.03, 0.24]
PR aggression (age 12)	0.99	[0.78, 1.19]
TR aggression (age 12)	0.15	[0.05, 0.25]
TR aggression (age 14)	0.05	[-0.05, 0.15]
SR aggression (age 14)	0.06	[-0.05, 0.16]
CR aggression (age 14)	0.23	[0.12, 0.34]
Marijuana abuse symptoms	-0.02	[-0.11, 0.07]
Truancy	0.06	[-0.03, 0.15]
Factor 4		
ADHD symptoms	-0.15	[-0.15, -0.15]
FR impulsivity (age 12)	-0.44	[-0.44, -0.44]
PR impulsivity (age 12)	-0.33	[-0.33, -0.33]
TR impulsivity (age 12)	-0.96	[-1.19, -0.72]
TR impulsivity (age 14)	-0.37	[-0.48, -0.27]
SR impulsivity (age 14)	-0.19	[-0.32, -0.07]
CR impulsivity (age 14)	-0.28	[-0.39, -0.17]
Conduct disorder symptoms	-0.11	[-0.22, -0.01]
Oppositional defiant disorder	0.04	[-0.06, 0.14]
FR aggression (age 12)	-0.25	[-0.49, -0.01]
PR aggression (age 12)	-0.07	[-0.27, 0.14]
TR aggression (age 12)	-0.66	[-0.74, -0.58]
TR aggression (age 14)	-0.26	[-0.39, -0.12]
SR aggression (age 14)	-0.10	[-0.22, 0.03]
CR aggression (age 14)	-0.05	[-0.16, 0.06]

EXT

	λ	95% CI	
Marijuana abuse symptoms	0.05	[-0.05, 0.14]	
Truancy	-0.10	[-0.19, -0.01]	
Factor 1			
Overanxious disorder	0.36	[0.27, 0.45]	
Depressive symptoms (age 12)	0.54	[0.44, 0.65]	
Depressive symptoms (age 14)	0.82	[0.73, 0.91]	
FR depression (age 12)	0.06	[-0.15, 0.27]	
PR depression (age 12)	0.16	[-0.02, 0.33]	
TR depression (age 12)	0.13	[0.00, 0.26]	
TR depression (age 14)	0.08	[-0.05, 0.22]	
SR depression (age 14)	0.66	[0.57, 0.74]	
CR depression (age 14)	0.22	[0.05, 0.38]	
Anorexia nervosa	0.16	[0.06, 0.26]	
Bulimia	0.12	[0.01, 0.24]	
Self-esteem	-0.60	[-0.69, -0.51]	
PR social anxiety (age 12)	0.04	[-0.17, 0.24]	
TR social anxiety (age 12)	0.09	[-0.04, 0.22]	
FR social anxiety (age 12)	-0.04	[-0.25, 0.17]	
TR social anxiety (age 14)	0.00	[-0.15, 0.14]	
SR social anxiety (age 14)	0.42	[0.32, 0.53]	
CR social anxiety (age 14)	0.05	[-0.16, 0.27]	
INT	Factor 2		
	Overanxious disorder	-0.12	[-0.12, -0.12]
	Depressive symptoms (age 12)	0.00	[-0.19, 0.18]
	Depressive symptoms (age 14)	-0.10	[-0.38, 0.17]
	FR depression (age 12)	-0.06	[-0.59, 0.48]
	PR depression (age 12)	-0.02	[-0.40, 0.37]
	TR depression (age 12)	0.06	[-0.13, 0.25]
	TR depression (age 14)	-0.13	[-0.41, 0.16]
	SR depression (age 14)	-0.26	[-0.45, -0.06]
	CR depression (age 14)	-0.62	[-0.92, -0.32]
	Anorexia nervosa	0.07	[-0.07, 0.21]
	Bulimia	0.03	[-0.18, 0.23]
	Self-esteem	0.15	[-0.07, 0.36]
	PR social anxiety (age 12)	-0.18	[-0.73, 0.38]
	TR social anxiety (age 12)	-0.04	[-0.27, 0.20]
	FR social anxiety (age 12)	-0.16	[-0.71, 0.40]
	TR social anxiety (age 14)	-0.20	[-0.54, 0.13]
	SR social anxiety (age 14)	-0.35	[-0.60, -0.11]
	CR social anxiety (age 14)	-0.83	[-1.24, -0.41]
	Factor 3		
Overanxious disorder	-0.07	[-0.07, -0.07]	

	λ	95% CI
INT	Depressive symptoms (age 12)	-0.22 [-0.22, -0.22]
	Depressive symptoms (age 14)	-0.08 [-0.24, 0.08]
	FR depression (age 12)	-0.83 [-1.21, -0.44]
	PR depression (age 12)	-0.25 [-0.86, 0.36]
	TR depression (age 12)	-0.37 [-0.59, -0.14]
	TR depression (age 14)	-0.37 [-0.56, -0.18]
	SR depression (age 14)	-0.13 [-0.35, 0.08]
	CR depression (age 14)	-0.08 [-0.54, 0.38]
	Anorexia nervosa	0.03 [-0.08, 0.14]
	Bulimia	0.06 [-0.11, 0.23]
	Self-esteem	0.03 [-0.16, 0.21]
	PR social anxiety (age 12)	-0.20 [-1.05, 0.65]
	TR social anxiety (age 12)	-0.36 [-0.58, -0.13]
	FR social anxiety (age 12)	-0.81 [-1.08, -0.54]
	TR social anxiety (age 14)	-0.34 [-0.62, -0.07]
	SR social anxiety (age 14)	-0.16 [-0.48, 0.15]
	CR social anxiety (age 14)	-0.11 [-0.74, 0.52]
	Factor 4	
	Overanxious disorder	0.00 [0.00, 0.00]
	Depressive symptoms (age 12)	-0.08 [-0.08, -0.08]
Depressive symptoms (age 14)	-0.03 [-0.03, -0.03]	
FR depression (age 12)	0.02 [-0.67, 0.71]	
PR depression (age 12)	-0.58 [-0.82, -0.35]	
TR depression (age 12)	-0.18 [-0.44, 0.08]	
TR depression (age 14)	-0.17 [-0.58, 0.24]	
SR depression (age 14)	-0.06 [-0.30, 0.18]	
CR depression (age 14)	-0.06 [-0.79, 0.66]	
Anorexia nervosa	-0.02 [-0.21, 0.16]	
Bulimia	0.10 [-0.04, 0.24]	
Self-esteem	0.04 [-0.08, 0.16]	
PR social anxiety (age 12)	-0.76 [-1.04, -0.47]	
TR social anxiety (age 12)	-0.22 [-0.52, 0.08]	
FR social anxiety (age 12)	-0.12 [-0.88, 0.64]	
TR social anxiety (age 14)	-0.25 [-0.72, 0.22]	
SR social anxiety (age 14)	-0.18 [-0.57, 0.21]	
CR social anxiety (age 14)	-0.12 [-1.13, 0.89]	
PEER ENV	Factor 1	
	Leisure time activities (age 12)	0.65 [0.52, 0.78]
	Leisure time activities (age 14)	0.69 [0.55, 0.83]
	Peer deviance	0.10 [-0.03, 0.23]
	Peer drinking	0.01 [-0.12, 0.13]
	Peer drug use	0.13 [0.01, 0.25]

	λ	95% CI
Peer smoking	0.11	[-0.02, 0.24]
PR adjustment (age 12)	0.05	[-0.07, 0.16]
TR adjustment (age 12)	-0.17	[-0.30, -0.05]
FR adjustment (age 12)	-0.22	[-0.34, -0.10]
TR adjustment (age 14)	-0.02	[-0.16, 0.12]
SR adjustment (age 14)	0.06	[-0.06, 0.17]
CR adjustment (age 14)	0.04	[-0.08, 0.16]
Organized activities (age 12)	0.17	[0.07, 0.28]
Organized activities (age 14)	0.02	[-0.09, 0.12]
Sports participation (age 12)	0.08	[-0.03, 0.20]
Sports participation (age 14)	-0.01	[-0.13, 0.11]
Factor 2		
Leisure time activities (age 12)	0.06	[0.06, 0.06]
Leisure time activities (age 14)	0.18	[0.07, 0.30]
Peer deviance	0.99	[0.64, 1.34]
Peer drinking	0.85	[0.57, 1.14]
Peer drug use	0.56	[0.28, 0.85]
Peer smoking	0.86	[0.58, 1.14]
PR adjustment (age 12)	0.02	[-0.29, 0.33]
TR adjustment (age 12)	-0.01	[-0.48, 0.45]
FR adjustment (age 12)	-0.04	[-0.44, 0.37]
TR adjustment (age 14)	0.00	[-0.44, 0.45]
SR adjustment (age 14)	-0.09	[-0.37, 0.19]
CR adjustment (age 14)	-0.01	[-0.35, 0.33]
Organized activities (age 12)	0.05	[-0.09, 0.19]
Organized activities (age 14)	0.10	[-0.08, 0.27]
Sports participation (age 12)	-0.05	[-0.52, 0.42]
Sports participation (age 14)	0.02	[-0.43, 0.46]
Factor 3		
Leisure time activities (age 12)	0.06	[0.06, 0.06]
Leisure time activities (age 14)	0.12	[0.12, 0.12]
Peer deviance	0.04	[-0.75, 0.83]
Peer drinking	0.03	[-0.66, 0.71]
Peer drug use	0.00	[-0.49, 0.49]
Peer smoking	0.06	[-0.62, 0.75]
PR adjustment (age 12)	-0.42	[-0.79, -0.05]
TR adjustment (age 12)	-0.61	[-0.92, -0.29]
FR adjustment (age 12)	-0.54	[-0.82, -0.26]
TR adjustment (age 14)	-0.57	[-0.92, -0.22]
SR adjustment (age 14)	-0.43	[-0.97, 0.12]
CR adjustment (age 14)	-0.47	[-0.90, -0.05]
Organized activities (age 12)	-0.07	[-0.36, 0.21]

PEER ENV

	λ	95% CI	
PEER ENV	Organized activities (age 14)	-0.08	[-0.45, 0.28]
	Sports participation (age 12)	-0.01	[-0.91, 0.89]
	Sports participation (age 14)	-0.07	[-0.97, 0.84]
	Factor 4		
	Leisure time activities (age 12)	0.04	[0.04, 0.04]
	Leisure time activities (age 14)	0.06	[0.06, 0.06]
	Peer deviance	0.08	[0.08, 0.08]
	Peer drinking	0.13	[0.07, 0.19]
	Peer drug use	-0.07	[-0.21, 0.06]
	Peer smoking	0.10	[0.04, 0.17]
	PR adjustment (age 12)	0.11	[-0.46, 0.68]
	TR adjustment (age 12)	-0.04	[-0.89, 0.81]
	FR adjustment (age 12)	-0.05	[-0.79, 0.70]
	TR adjustment (age 14)	0.01	[-0.80, 0.83]
	SR adjustment (age 14)	0.20	[-0.35, 0.75]
	CR adjustment (age 14)	0.11	[-0.54, 0.77]
	Organized activities (age 12)	0.19	[0.06, 0.31]
	Organized activities (age 14)	0.26	[0.15, 0.37]
	Sports participation (age 12)	0.68	[0.42, 0.94]
Sports participation (age 14)	0.68	[0.49, 0.88]	
PARENTS	Factor 1		
	Autonomy granting (age 12)	0.71	[0.62, 0.81]
	Autonomy granting (age 14)	0.18	[0.07, 0.29]
	Monitoring (age 12)	0.45	[0.36, 0.54]
	Monitoring (age 14)	0.22	[0.12, 0.33]
	Warmth (age 12)	0.76	[0.67, 0.85]
	Warmth (age 14)	0.28	[0.16, 0.39]
	Discipline (age 12)	-0.07	[-0.19, 0.04]
	Discipline (age 14)	0.00	[-0.11, 0.12]
	Tension (age 12)	-0.47	[-0.57, -0.38]
	Tension (age 14)	-0.16	[-0.27, -0.05]
	Time with parents (age 12)	0.23	[0.13, 0.32]
	Time with parents (age 14)	0.14	[0.04, 0.24]
	Factor 2		
	Autonomy granting (age 12)	0.22	[0.22, 0.22]
	Autonomy granting (age 14)	0.74	[0.65, 0.83]
	Monitoring (age 12)	0.17	[0.07, 0.27]
Monitoring (age 14)	0.48	[0.38, 0.58]	
Warmth (age 12)	0.23	[0.11, 0.36]	
Warmth (age 14)	0.84	[0.75, 0.94]	
Discipline (age 12)	-0.01	[-0.14, 0.12]	
Discipline (age 14)	-0.07	[-0.19, 0.05]	

	λ	95% CI
Tension (age 12)	-0.19	[-0.30, -0.08]
Tension (age 14)	-0.58	[-0.69, -0.48]
Time with parents (age 12)	0.11	[0.01, 0.21]
Time with parents (age 14)	0.29	[0.18, 0.39]
Factor 3		
Autonomy granting (age 12)	-0.01	[-0.01, -0.01]
Autonomy granting (age 14)	-0.05	[-0.05, -0.05]
Monitoring (age 12)	-0.07	[-0.19, 0.05]
Monitoring (age 14)	-0.08	[-0.20, 0.03]
Warmth (age 12)	-0.14	[-0.26, -0.03]
Warmth (age 14)	-0.03	[-0.14, 0.08]
Discipline (age 12)	0.55	[0.39, 0.71]
Discipline (age 14)	0.56	[0.39, 0.72]
Tension (age 12)	0.32	[0.19, 0.45]
Tension (age 14)	0.27	[0.14, 0.41]
Time with parents (age 12)	0.10	[-0.03, 0.23]
Time with parents (age 14)	0.07	[-0.06, 0.21]

Notes. Indicators shown in bold font were carried forward for confirmatory factor analysis in the first split-half sample. *Abbreviations.* CI = confidence interval; ACA = Academic Performance; SUB = Early Adolescent Substance Use; EXT = Externalizing Problems; INT = Internalizing Problems; PEER ENV = Peer Environment; PARENTS = Relationship with Parents; CR = co-twin-reported; FR = peer-reported; PR = parent-reported; SR = self-reported; TR = teacher-reported.