

## Supplementary Online Content

Vergunst F, Commisso M, Geoffroy MC, et al. Association of childhood externalizing, internalizing, and comorbid symptoms with long-term economic and social outcomes. *JAMA Netw Open*. 2023;6(1):e2249568. doi:10.1001/jamanetworkopen.2022.49568

**eTable 1.** Measurement Invariance for the Behavioral Symptom Trajectories

**eTable 2.** Missing Data Patterns

**eTable 3.** Multivariable Models of Association Between Child Longitudinal Symptom Profiles and Adult Life Economic and Social Outcomes for the Nonimputed Sample

This supplementary material has been provided by the authors to give readers additional information about their work.

**eTable 1.** Measurement Invariance for the Behavioral Symptom Trajectories

Measurement invariance model	$\chi^2(df)$	CFI	RMSEA	$\Delta$ CFI	$\Delta$ RMSEA
<b>Externalizing factor</b>					
Configural (no equality constraints)	7783.2 (1255)	0.823	0.063		
Metric (loadings)	8597.3 (1291)	0.802	0.066	0.023	0.003
Scalar (loadings + intercepts)	10161.9 (1327)	0.761	0.071	0.041	0.006
<b>Internalizing factor</b>					
Configural (no equality constraints)	1160.7 (159)	0.879	0.062		
Metric (loadings)	1253.4 (171)	0.869	0.063	0.010	0.000
Scalar (loadings + intercepts)	1299.0 (183)	0.865	0.061	0.004	0.001

Note. df=degrees of freedom, CFI=comparative fit index, RMSEA=Root Mean Square Error Approximation,  $\Delta$ =change in value.

**eTable 2** Missing data patterns

	N	(%)
<b>Predictor and outcome</b>		
Symptom profiles, age 6-12 years	<5	(<1%)
Sex	<5	(<1%)
Verbal IQ	1310	(43.3%)
Mother’s age at birth of first child	422	(14.0%)
Father’s age at birth of first child	630	(21.0%)
Mother’s years of education	100	(3.4%)
Father’s years of education	350	(11.4%)
Parents’ household income	60	(2.0%)
Intact family structure	880	(29.2%)
Annual employment earnings, age 33-37 years	140	(4.6%)

Note. Predictors of missingness in the outcome (n=159) were male sex (p=.001) and being in the comorbid group (p=.001). Other predictors were not significantly associated with missingness. Counts are rounded to base ten and scores below 5 are suppressed due to Statistics Canada data protection requirements. Missing data were handled using multiple imputations by chained equations. Results were pooled and analyses conducted across 50 datasets.

**eTable 3** Multivariable models of association between child longitudinal symptom profiles and adult life economic and social outcomes for the non-imputed sample (n=1260)

	Personal earnings, age 33-37 years		Welfare receipt, age 19-37 years		Married/cohabiting, age 19-37 years		Children in household, age 19-37 years	
	b	95%CI	IRR	95%CI	IRR	95%CI	IRR	95%CI
(No symptoms)								
Externalising	-6016	-9326 – -2706**	2.06	1.38 – 3.07 **	0.93	0.83 – 1.04	0.95	0.90 – 1.01
Internalising	-8235	-12437 – -4032**	2.16	1.29 – 3.61 **	0.92	0.79 – 1.06	0.96	0.89 – 1.04
Co-morbid	-14470	-19793 – -9147**	3.30	1.81 – 6.06 **	0.75	0.62 – 0.91 **	0.87	0.80 – 0.96 **
Sex (m)	13344	10577 – 16110**	0.83	0.59 – 1.17 **	0.79	0.71 – 0.86 **	0.91	0.86 – 0.96 **
(Externalising)								
No symptoms	5817	2658 – 8976 **	0.49	0.33 – 0.73 **	1.08	0.96 – 1.21	1.05	0.99 – 1.11
Internalising	-2122	-6535 – 2291	1.05	0.61 – 1.80	0.98	0.84 – 1.16	1.01	0.93 – 1.10
Co-morbid	-7998	-13060 – -2937 **	1.61	0.86 – 3.0	0.81	0.67 – 0.98 *	0.92	0.99 – 1.11†
(Internalising)								
No symptoms	7939	3934 – 11944 **	0.46	0.28 – 0.77 **	1.09	0.94 – 1.26	1.04	0.96 – 1.12
Externalising	2122	-2291 – 6536	0.95	0.55 – 1.63	1.01	0.86 – 1.19	0.99	0.91 – 1.08
Co-morbid	-5876	-11739 – -13 *	1.53	0.76 – 3.07	0.82	0.66 – 1.02 †	0.91	0.81 – 1.12 †

Note. b=unstandardised beta coefficient, IRR=incident rate ratio. Reference group is shown in parentheses. All models adjusted for sex, child IQ, parents' age at birth of first child, parents' years of education, parents' household income, family structure, the child's relative age in the classroom, and cohort type. \*\* p<0.01. \* p<0.05. † p<0.10