

Supplemental Digital Content 3 Univariate model-fitting statistics for the leisure-time physical activity (LTPA) and academic performance (AP) variables.

		Model fit statistics					
		-2LL	df	AIC	Δ LL	Δ df	<i>p</i> -value
LTPA at age 12							
	ACE: sex-specific variances	16139.58	4822	6495.58	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	16151.23	4823	6509.23	15.65	1	7.6E-05
	ACE: constraining variances to be equal in males and females	16151.50	4825	6501.50	11.92	3	0.008
	ACE: constraining standardized variances to be equal in males and females	16146.38	4825	6496.38	6.80	1	0.009
	AE compared to ACE	16203.33	4824	6555.33	63.75	2	1.4E-14
LTPA at age 14							
	ACE: sex-specific variances	15856.36	4442	6972.36	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	15858.90	4443	6972.90	2.54	1	0.11
	ACE: constraining variances to be equal in males and females	15857.34	4445	6967.34	0.98	3	0.81
	ACE: constraining standardized variances to be equal in males and females	15857.34	4445	6967.34	0.98	1	0.32
	AE compared to ACE	15867.36	4444	6979.36	11.00	2	0.004
LTPA at age 17							
	ACE: sex-specific variances	14805.83	4012	6781.83	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	14807.39	4013	6781.39	1.56	1	0.21
	ACE: constraining variances to be equal in males and females	14816.48	4015	6786.48	10.65	3	0.01

	ACE: constraining standardized variances to be equal in males and females	14814.22	4015	6784.22	8.39	1	0.004
	AE compared to ACE	14811.46	4014	6783.46	5.63	2	0.06
LTPA at age 24							
	ACE: sex-specific variances	11363.94	3152	5059.94	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	11364.37	3153	5058.37	0.43	1	0.51
	ACE: constraining variances to be equal in males and females	11368.23	3155	5058.24	4.29	3	0.23
	ACE: constraining standardized variances to be equal in males and females	11368.18	3155	5058.18	4.24	1	0.04
	AE compared to ACE	11364.11	3154	5056.11	0.17	2	0.92
AP at age 12							
	ACE: sex-specific variances	7446.62	4100	-753.39	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	7502.44	4101	-699.56	55.82	1	7.9E-14
	ACE: constraining variances to be equal in males and females	7456.72	4103	-749.24	10.10	3	0.02
	ACE: constraining standardized variances to be equal in males and females	7450.38	4103	-755.62	3.77	1	0.05
	AE compared to ACE	7459.30	4102	-744.70	12.68	2	0.002
AP at age 14							
	ACE: sex-specific variances	6209.64	2795	619.64	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	6215.02	2796	623.02	5.38	1	0.02
	ACE: constraining variances to be equal in males and females	6230.75	2798	634.75	21.11	3	10.0E-05
	ACE: constraining standardized variances to be equal in males and females	6211.50	2798	615.50	1.86	1	0.17
	AE compared to ACE	6244.84	2797	650.83	35.19	2	2.3E-08

AP at age 17							
	ACE: sex-specific variances	6045.05	4006	-1966.96	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	6052.22	4007	-1961.78	7.17	1	0.007
	ACE: constraining variances to be equal in males and females	6052.98	4009	-1965.02	7.93	3	0.05
	ACE: constraining standardized variances to be equal in males and females	6050.93	4009	-1967.07	5.89	1	0.02
	AE compared to ACE	6086.98	4008	-1929.03	41.93	2	7.9E-10
AP at age 24							
	ACE: sex-specific variances	7832.08	3018	1796.08	-	-	-
	ACE: constraining the genetic correlation among opposite-sex twin pairs to be 0.5	7835.59	3019	1797.59	3.51	1	0.06
	ACE: constraining variances to be equal in males and females	7846.48	3021	1804.48	14.40	3	0.002
	ACE: constraining standardized variances to be equal in males and females	7833.34	3021	1791.34	1.25	1	0.26
	AE compared to ACE	7846.24	3020	1806.24	14.16	2	0.001