Twin Research and Human Genetics

Supplementary Material

Intergenerational transmission of BMI and educational outcomes in children and adolescents

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Supplementary Table S1: Chi-squared (likelihood ratio) test statistics for path model fit of transmission coefficients equality constraint across male and female offspring (see figure1).

Constrained path	df	x^2	x^2 diff	df diff	p (>x^2)
Full model	374	5319.7	-	-	-
All paths (Omnibus test)	386	5337	17.3	12	.139
P BMI → O BMI4	375	5319.8	.01	1	.906
M BMI → O BMI4	375	5323.7	3.95	1	.047
P EA → O BMI4	375	5322.0	2.30	1	.050
M EA → O BMI4	375	5319.8	.06	1	.136
P BMI → O BMI12	375	5325.8	6.08	1	.804
M BMI → O BMI12	375	5319.9	.14	1	.014
P EA → O BMI12	375	5321.3	1.58	1	.710
M EA → O BMI12	375	5320.0	.26	1	.612
P BMI → O CITO	375	5319.8	.08	1	.778
M BMI → O CITO	375	5319.8	.04	1	.842
P EA → O CITO	375	5320.3	.57	1	.452
M EA → O CITO	375	5319.9	.11	1	.739

Abbreviations: df, degrees of freedom; x^2, chi-square; diff, difference; P, paternal; M, maternal; EA, educational attainment; BMI, body mass index.

Supplementary Table S2: Chi-square (likelihood ratio) test results for path model fit of transmission coefficients equality constraint across fathers and mothers (see figure 1).

Constrained path	Df	x^2	x^2 diff	df diff	p (>x^2)
Full model	386	5337.0	-	-	-
All paths (Omnibus test)	392	5348.5	11.51	6	.074
P BMI → O BMI4	387	5337.5	.46	1	.500
P EA → O BMI4	387	5343.0	5.95	1	.015
P BMI → O BMI12	387	5338.8	1.78	1	.182
P EA → O BMI12	387	5339.2	2.14	1	.143
P BMI → O CITO	387	5339.2	2.15	1	.142
P EA → O CITO	387	5337.0	.00	1	.961

Abbreviations: df, degrees of freedom; x^2, chi-square; diff, difference; P, parent; O, offspring; EA, educational attainment; BMI, body mass index; m, male offspring; f, female offspring.

Supplementary Table S3: model fit measures for full model and model with equality constraints across parental and offspring gender for transmission parameters

	Model 1 (full model)	Model 2 (parsimonious)
χ^2	5319.749	5348.545
df	374	392
cfi	.833	.833
rmsea	.069	.067
rmsea lower ci	.067	.066
rmsea upper ci	.071	.069
srmr	.061	.061