*Twin Research and Human Genetics*

Supplemental Materials for
 **Educational Attainment Polygenic Scores: Examining Evidence for Gene-Environment Interplay with Adolescent Alcohol, Tobacco, and Cannabis Use**

Christal N. Davis, Ian R. Gizer, Lucía Colodro-Conde, Dixie J. Statham, Nicholas G. Martin, & Wendy S. Slutske

Contents

Table S1. Incremental effects of EA-PGS after accounting for adolescent alcohol use.

Table S2. Incremental effects of EA-PGS after accounting for adolescent tobacco use.

Table S3. Incremental effects of EA-PGS after accounting for adolescent cannabis use.

|  |
| --- |
| Table S1. Incremental effects of EA-PGS after accounting for adolescent alcohol use. |
| EA-PGS threshold | Estimate | Standard Error | p-value | ΔR2 |
| **p < 5\*10-8** | **0.20** | **0.03** | **1.65\*10-10** | **0.024** |
| **p < 1\*10-5** | **0.22** | **0.03** | **7.41\*10-13** | **0.030** |
| **p < 0.001** | **0.26** | **0.03** | **<2.2\*10-16** | **0.042** |
| **p < 0.01** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.056** |
| **p < 0.05** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.058** |
| **p < 0.1** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.057** |
| **p < 0.5** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.058** |
| **p < 1** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.057** |
| *Note:* Bold indicates significance at *p* < 0.05. EA-PGS = educational attainment polygenic scores. |

|  |
| --- |
| Table S2. Incremental effects of EA-PGS after accounting for adolescent tobacco use. |
| EA-PGS threshold | Estimate | Standard Error | p-value | ΔR2 |
| **p < 5\*10-8** | **0.21** | **0.03** | **2.35\*10-10** | **0.026** |
| **p < 1\*10-5** | **0.23** | **0.03** | **7.85\*10-13** | **0.034** |
| **p < 0.001** | **0.26** | **0.03** | **2.61\*10-16** | **0.043** |
| **p < 0.01** | **0.31** | **0.03** | **< 2.2\*10-16** | **0.060** |
| **p < 0.05** | **0.32** | **0.03** | **< 2.2\*10-16** | **0.064** |
| **p < 0.1** | **0.32** | **0.03** | **< 2.2\*10-16** | **0.065** |
| **p < 0.5** | **0.32** | **0.03** | **< 2.2\*10-16** | **0.064** |
| *Note:* Bold indicates significance at *p* < 0.05. EA-PGS = educational attainment polygenic scores. |

|  |
| --- |
| Table S3. Incremental effects of EA-PGS after accounting for adolescent cannabis use. |
| EA-PGS threshold | Estimate | Standard Error | p-value | ΔR2 |
| **p < 5\*10-8** | **0.25** | **0.04** | **5.21\*10-11** | **0.039** |
| **p < 1\*10-5** | **0.25** | **0.04** | **3.28\*10-11** | **0.040** |
| **p < 0.001** | **0.26** | **0.04** | **3.28\*10-12** | **0.044** |
| **p < 0.01** | **0.30** | **0.04** | **< 2.2\*10-16** | **0.059** |
| **p < 0.05** | **0.30** | **0.04** | **2.73\*10-16** | **0.058** |
| **p < 0.1** | **0.31** | **0.04** | **< 2.2\*10-16** | **0.060** |
| **p < 0.5** | **0.32** | **0.04** | **< 2.2\*10-16** | **0.063** |
| **p < 1** | **0.32** | **0.04** | **< 2.2\*10-16** | **0.062** |
| *Note:* Bold indicates significance at *p* < 0.05. EA-PGS = educational attainment polygenic scores. |