## Supplemental Table S1. Standardized estimates from alternate model: Parental substance use disorders (alcohol use disorder, AUD, or drug abuse, DA) only (N=451,054)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Adolescence | Emerging Adulthood | Young Adulthood |
|  | Criminal Behaviors | Grades  | Resilience | Criminal Behaviors | Social Functioning | AUD ages 18-25 | AUD ages 26-30 |
| **Path estimates** | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) |
| Parental AUD or DA | 0.269 (0.004) | \*\* | -0.213 (0.002) | \*\* | -0.060 (0.004) | \*\* | 0.133 (0.005) | \*\* | -0.069 (0.004) | \*\* | 0.139 (0.007) | \*\* | 0.119 (0.009) | \*\* |
| Lower parental education | 0.072 (0.004) | \*\* | -0.247 (0.002) | \*\* | -0.133 (0.005) | \*\* | 0.000 (0.006) |  | 0.028 (0.004) | \*\* | -0.045 (0.010) | \*\* | 0.005 (0.011) |  |
| Criminal behaviors (CB) during adolescence  |  |  |  |  | -0.226 (0.004) | \*\* | 0.496 (0.005) | \*\* | -0.192 (0.004) | \*\* | 0.316 (0.008) | \*\* |  |  |
| Grades during adolescence |  |  |  |  | 0.602 (0.003) | \*\* | -0.227 (0.004) | \*\* | 0.203 (0.003) | \*\* | -0.183 (0.006) | \*\* |  |  |
| Resilience at age 18 |  |  |  |  |  |  | -0.044 (0.002) | \*\* | 0.085 (0.001) | \*\* | -0.046 (0.003) | \*\* | -0.062 (0.004) | \*\* |
| CB in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | 0.236 (0.009) | \*\* |
| Social functioning in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | -0.118 (0.008) | \*\* |
| AUD in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | 0.579 (0.012) | \*\* |
| **Correlations** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Parental AUD or DA with lower parental education | 0.037 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| Grade with CB during adolescence | -0.348 (0.002) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with CB in emerging adulthood | 0.314 (0.007) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with social functioning | -0.165 (0.007) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| Social functioning with CB in emerging adulthood | -0.233 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| **R-square** | 0.073 |  | 0.117 |  | 0.193 |  | 0.344 |  | 0.162 |  | 0.215 |  | 0.488 |  |

\*\* *p*<.001. Degrees of freedom (df) = 2. Measures of model fit: RMSEA (95% CI) = 0.014 (0.012; 0.016); CFI = 0.999; TLI = 0.989.

## Supplemental Table S2. Standardized estimates from alternate model: Parental criminal behaviors only (N=451,054)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Adolescence | Emerging Adulthood | Young Adulthood |
|  | Criminal Behaviors | Grades  | Resilience | Criminal Behaviors | Social Functioning | AUD ages 18-25 | AUD ages 26-30 |
| **Path estimates** | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) |
| Parental criminal behaviors (CB) | 0.327 (0.004) | \*\* | -0.248 (0.002) | \*\* | -0.089 (0.004) | \*\* | 0.172 (0.005) | \*\* | -0.102 (0.004) | \*\* | 0.094 (0.007) | \*\* | 0.077 (0.009) | \*\* |
| Lower parental education | 0.063 (0.004) | \*\* | -0.240 (0.002) | \*\* | -0.133 (0.005) | \*\* | -0.001 (0.006) |  | 0.028 (0.004) | \*\* | -0.048 (0.009) | \*\* | 0.005 (0.011) |  |
| CB during adolescence  |  |  |  |  | -0.179 (0.004) | \*\* | 0.477 (0.006) | \*\* | -0.179 (0.005) | \*\* | 0.314 (0.008) | \*\* |  |  |
| Grades during adolescence |  |  |  |  | 0.596 (0.003) | \*\* | -0.221 (0.004) | \*\* | 0.197 (0.003) | \*\* | -0.189 (0.006) | \*\* |  |  |
| Resilience at age 18 |  |  |  |  |  |  | -0.042 (0.002) | \*\* | 0.084 (0.001) | \*\* | -0.045 (0.003) | \*\* | -0.060 (0.004) | \*\* |
| CB in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | 0.235 (0.009) | \*\* |
| Social functioning in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | -0.117 (0.008) | \*\* |
| AUD in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  | 0.591 (0.012) | \*\* |
| **Correlations** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Parental CB with lower parental education | 0.060 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| Grade with CB during adolescence | -0.331 (0.002) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with CB in emerging adulthood | 0.316 (0.006) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with social functioning | -0.164 (0.007) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| Social functioning with CB in emerging adulthood | -0.228 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |
| **R-square** | 0.102 |  | 0.134 |  | 0.195 |  | 0.350 |  | 0.166 |  | 0.208 |  | 0.485 |  |

\*\* *p*<.001. Degrees of freedom (df) = 2. Measures of model fit: RMSEA (95% CI) = 0.014 (0.013; 0.016); CFI = 0.999; TLI = 0.989.

## Supplemental Table S3. Standardized estimates from alternate model: Education and employment during emerging adulthood (N=451,054)

|  |  |  |  |
| --- | --- | --- | --- |
|  | Adolescence | Emerging Adulthood | Young Adulthood |
|  | Criminal Behaviors | Grades | Resilience | Criminal Behaviors | Educational Attainment | Employment | AUD ages 18-25 | AUD ages 26-30 |
| Path estimates | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) | Estimate (SE) |
| Parental externalizing behaviors (EB) | 0.321 (0.004) | \*\* | -0.242 (0.002)  | \*\* | -0.075 (0.004) | \*\* | 0.167 (0.004)  | \*\* | -0.104 (0.003) | \*\* | -0.023 (0.003) | \*\* | 0.111 (0.007) | \*\* | 0.084 (0.000) | \*\* |
| Lower parental education | 0.062 (0.004) | \*\* | -0.240 (0.003) | \*\* | -0.133 (0.004) | \*\* | 0.000 (0.006) |  | -0.175 (0.004) | \*\* | 0.108 (0.004) | \*\* | -0.037 (0.009) | \*\* | -0.045 (0.012) | \*\* |
| Criminal behaviors (CB) during adolescence  |  |  |  |  | -0.217 (0.004) | \*\* | 0.478 (0.005)  | \*\* | -0.148 (0.004)  | \*\* | -0.152 (0.004)  | \*\* | 0.311 (0.008)  | \*\* |  |  |
| Grades during adolescence |  |  |  |  | 0.599 (0.003) | \*\* | -0.219 (0.004) | \*\* | 0.820 (0.003) | \*\* | -0.277 (0.003) | \*\* | -0.173 (0.006) | \*\* |  |  |
| Resilience at age 18 |  |  |  |  |  |  | -0.044 (0.002) | \*\* | 0.043 (0.001) | \*\* | 0.062 (0.001)  | \*\* | -0.049 (0.003) | \*\* | -0.048 (0.004) | \*\* |
| CB in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.194 (0.009)  | \*\* |
| Educational attainment in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.149 (0.008) | \*\* |
| Employment in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -0.150 (0.010)  | \*\* |
| AUD in emerging adulthood |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0.556 (0.012) | \*\* |
| Correlations |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Parental EB with lower parental education | 0.063 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Grades with CB during adolescence | -0.334 (0.002) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with CB in emerging adulthood | 0.323 (0.007)  | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with educational attainment | -0.093 (0.006) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| AUD in emerging adulthood with employment | -0.164 (0.007) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Educational attainment with CB in emerging adulthood | -0.141 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employment with CB in emerging adulthood | -0.193 (0.004) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Employment with educational attainment | -0.281 (0.002) | \*\* |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| R-squared | 0.099 |  | 0.130 |  | 0.194 |  | 0.348 |  | 0.503 |  | 0.074 |  | 0.206 |  | 0.485 |  |

\*\* *p*<.001. Degrees of freedom (df) = 2. Measures of model fit: RMSEA (95% CI) = 0.009 (0.008; 0.011); CFI = 1.000; TLI = 0.997.