Supplementary Table 1: Sex differences univariate and bivariate model parameter estimates for social aggression, physical aggression, and their covariation

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Males | | | | | | Females | | | | | |
|  | A | C | E | rG | rC | rE | A | C | E | rG | rC | rE |
| Maternal Report | |  |  |  |  |  |  |  |  |  |  |  |
| Social Aggression | 0.4201\*  [0.2733, 0.5832] | 0.3684\*  [0.2077, 0.5263] | 0.2005\*  [0.1667, 0.2441] | 0.7411\*  [0.5633, 0.8892] | 0.8288\*  [0.5822, 1.000] | 0.4984\*  [0.3923, 0.5919] | 0.1293  [0.00, 0.2845] | 0.6098\*  [0.4579, 0.7673] | 0.2752\*  [0.2267, 0.3386] | 0.4686\*  [0.4528, 1.00] | 1.00\*  [0.8769, 1.00] | 0.5601\*  [0.4583, 0.6480] |
| Physical Aggression | 0.4560\*  [0.2773, 0.6504] | 0.2429\*  [0.0674, 0.4108] | 0.2612\*  [0.2171, 0.3180] | 0.4423\*  [0.2374, 0.6604] | 0.2843\*  [0.0891, 0.4721] | 0.3124\*  [0.2584, 0.3822] |
| Teacher Report | |  |  |  |  |  |  |  |  |  |  |  |
| Social Aggression | 0.4981\*  [0.2016, 0.7751] | 0.1558  [0.00, 0.4010] | 0.3639\*  [0.2858, 0.4722] | 0.7834\*  [0.5732, 0.9739] | 1.00  [-1.00, 1.00] | 0.6026\*  [0.4781, 0.7009] | 0.2153  [0.00, 0.5345] | 0.3271\*  [0.0612, 0.5728] | 0.4406\*  [0.3442, 0.5728] | 0.7947\*  [0.3385, 1.00] | 0.9932  [-1.00, 1.00] | 0.6390\* [0.5193, 0.7333] |
| Physical Aggression | 0.5081\*  [0.2445, 0.7827] | 0.1832\*  [0.0198, 0.4128] | 0.3065\*  [0.2407, 0.3980] | 0.5791\*  [0.2927, 0.8145] | 0.1048  [0.00, 0.3524] | 0.3178\*  [0.2480, 0.4153] |

Note: Additive genetic, shared environmental, and non-shared environmental influences are represented with A, C, and E, respectively. 95% confidence intervals are presented below the point estimate in brackets. \*p < 0.05. The ACE no sex differences model was the best fitting model for both informants.

Supplementary Table 2: Model fitting results for all possible bivariate models for the covariation of social and physical aggression

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | | -2LnL | *df* | AIC | BIC | SABIC | DIC |
| Maternal Report | |  |  |  |  |  |  |
| **ACE** | **No Sex Differences** | **9012.74** | **3937** | **1138.74** | **-9087.61** | **-2835.55** | **-5469.75** |
| ACE | Sex Differences | 9004.37 | 3934 | 1136.37 | -9081.43 | -2834.14 | -5466.33 |
|  | Sex Differences in CE (A equal) | 9011.81 | 3935 | 1141.81 | -9081.16 | -2832.28 | -5465.14 |
|  | Sex Differences in AE (C equal) | 9009.18 | 3935 | 1139.19 | -9082.47 | -2833.59 | -5466.45 |
|  | Sex Differences in AC (E equal) | 9009.66 | 3935 | 1139.66 | -9082.24 | -2833.36 | -5466.22 |
|  | Sex Differences in A (CE equal) | 9011.94 | 3936 | 1139.94 | -9084.55 | -2834.08 | -5467.11 |
|  | Sex Differences in C (AE equal) | 9012.51 | 3936 | 1140.51 | -9084.27 | -2833.80 | -5467.32 |
|  | Sex Differences in E (AC equal) | 9011.91 | 3936 | 1139.91 | -9084.57 | -2834.10 | -5467.62 |
| Teacher Report | |  |  |  |  |  |  |
| **ACE** | **No Sex Differences** | **6207.54** | **2644** | **919.54** | **-5637.35** | **-1439.51** | **-3207.68** |
| ACE | Sex Differences | 6205.90 | 2641 | 923.90 | -5628.25 | -1435.18 | -3201.34 |
|  | Sex Differences in CE (A equal) | 6207.25 | 2642 | 923.25 | -5630.88 | -1436.22 | -3203.05 |
|  | Sex Differences in AE (C equal) | 6206.50 | 2642 | 922.50 | -5631.26 | -1436.59 | -3203.42 |
|  | Sex Differences in AC (E equal) | 6206.92 | 2642 | 922.92 | -5631.05 | -1436.38 | -3203.21 |
|  | Sex Differences in A (CE equal) | 6207.07 | 2643 | 921.07 | -5634.28 | -1438.03 | -3205.52 |
|  | Sex Differences in C (AE equal) | 6207.37 | 2643 | 921.37 | -5634.13 | -1437.88 | -3205.37 |
|  | Sex Differences in E (AC equal) | 6207.51 | 2643 | 921.51 | -5634.06 | -1437.81 | -3205.31 |

Note: Additive genetic, shared environmental, and non-shared environmental influences are represented with A, C, and E, respectively. The best fitting model for each informant (as indicated by the lowest -2LnL, AIC, BIC, SABIC, and DIC values for at least 3 of the 5 fit indices) is highlighted in bold font.