**Supplemental Tables and Figures**

**Supplemental Table 1.** Bivariate correlations between study variables.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | PAS T1 | PAS T2 | PAS T3 | NE T1 | NE T2 | NE T3 | RCO T1 | RCO T2 | RCO T3 | Internalizing | Externalizing |
| PAS T1 | – |  |  |  |  |  |  |  |  |  |  |
| PAS T2 | .504\*\* | – |  |  |  |  |  |  |  |  |  |
| PAS T3 | .379\*\* | .534\*\* | – |  |  |  |  |  |  |  |  |
| NE T1 | .084\*\* | .056\* | .082\*\* | – |  |  |  |  |  |  |  |
| NE T2 | .039 | .151\*\* | .109\*\* | .465\*\* | – |  |  |  |  |  |  |
| NE T3 | .035 | .087\*\* | .185\*\* | .374\*\* | .497\*\* | – |  |  |  |  |  |
| RCO T1 | .350\*\* | .279\*\* | .241\*\* | -.128\*\* | -.152\*\* | -.079\*\* | – |  |  |  |  |
| RCO T2 | .232\*\* | .311\*\* | .263\*\* | -.100\*\* | -.217\*\* | -.125\*\* | .449\*\* | – |  |  |  |
| RCO T3 | .220\*\* | .242\*\* | .327\*\* | -.116\*\* | -.140\*\* | -.153\*\* | .366\*\* | .527\*\* | – |  |  |
| Internalizing | -.057 | -.070\* | -.127\*\* | .148\*\* | .234\*\* | .201\*\* | -.125\*\* | -.182\*\* | -.191\*\* | – |  |
| Externalizing | -.060 | -.053 | -.067\* | .239\*\* | .256\*\* | .243\*\* | -.128\*\* | -.247\*\* | -.321\*\* | .606\*\* | – |

Note: T1 = 3-months, T2=6-months, T3=12-months. NE = Negative Emotionality; RCO = Regulatory Capacity/Orienting; PAS = Positive Affectivity/Surgency. \*p ≤ .05, \*\*p ≤ .01.

**Supplemental Table 2.** Chi-square values for pairwise comparisons of intercepts (above diagonal) and slopes (below diagonal) for latent trajectories within each dimension of temperament.

|  |
| --- |
| **Negative Emotionality (NE)** |
| Trajectory Class | 1. | 2. | 3. | 4. | 5. |
| 1. | - | 244.10\*\*\* | 33.20\*\*\* | 33.01\*\*\* | 513.34\*\*\* |
| 2. | 4.26 | - | 12.30\*\*\* | 1.56 | 232.98\*\*\* |
| 3. | 15.99\*\*\* | 22.17\*\*\* | - | 5.11\* | 0.33 |
| 4. | 21.32\*\*\* | 24.64\*\*\* | 28.98\*\*\* | - | 59.79\*\*\* |
| 5. | 13.31\*\* | 22.77\*\*\* | 10.11\*\* | 50.08\*\*\* | - |
| **Regulatory Capacity/Orienting (RCO)** |
| Trajectory Class | 1. | 2. | 3. | 4. | 5. |
| 1. | - | 155.41\*\*\* | 19.43\*\*\* | 358.64\*\*\* | 537.53\*\*\* |
| 2. | a | - | 8.07\*\* | 135.60\*\*\* | 306.25\*\*\* |
| 3. | a | 41.94\*\*\* | - | 80.76\*\*\* | 143.78\*\*\* |
| 4. | a | 3.69\* | 75.90\*\*\* | - | 112.38\*\*\* |
| 5. | a | 19.05\*\*\* | 39.41\*\*\* | 19.88\*\*\* | - |
| **Positive Affect/ Surgency (PAS)** |
| Trajectory Class | 1. | 2. | 3. | 4. |  |
| 1. | - | 21.36\*\*\* | 158.52\*\*\* | 581.89\*\*\* |  |
| 2. | 18.73\*\*\* | - | 263.20\*\*\* | 738.23\*\*\* |  |
| 3. | 22.62\*\*\* | 36.36\*\*\* | - | 293.29\*\*\* |  |
| 4. | 74.02\*\*\* | 229.332\*\*\* | 75.92\*\*\* | - |  |

Note: a Class 1 for the RCO model was estimated with only an intercept (see Table 5).

**Supplemental Table 3.** Overall associations between temperament trajectory groups and internalizing and externalizing behaviors.

|  |  |  |  |
| --- | --- | --- | --- |
| Temperament Dimension | Internalizing |  | Externalizing |
|  | *F*(10,1130) | *p* |  | *F*(10,1130) | *p* |
| NE | 6.91 | <.001 |  | 11.11 | <.001 |
| RCO | 5.15 | <.001 |  | 9.82 | <.001 |
| PAS | 1.63 | .11 |  | 1.10 | .36 |

Note: NE = Results are for main effects of trajectory groups in two-way ANCOVAs with trajectory group and sex as fixed factors and child age at T4 (24-months) as a covariate. NE = Negative Emotionality; RCO = Regulatory Capacity/Orienting; PAS = Positive Affectivity/Surgency.

**Supplemental Table 4.** Estimated marginal means for associations between trajectory groups and internalizing and externalizing behaviors.

|  |  |  |  |
| --- | --- | --- | --- |
| Temperament Dimension | Internalizing |  | Externalizing |
|  | *Estimate* | *95% CI* |  | *Estimate* | *95% CI* |
| NE Trajectory Group |  |  |  |  |  |
|  1. Low | -.308 | -.419, -.198 |  | -.379 | -.488, -.271 |
|  2. Moderate | .049 | -.027, .124 |  | .037 | -.038, .111 |
|  3. Decreasing | -.595 | -1.200, .010 |  | -.535 | -1.129, .059 |
|  4. Increasing | .602 | .320, .884 |  | .555 | .278, .832 |
|  5. High | .317 | .143, .488 |  | .564 | .396, .732 |
| RCO Trajectory Group |  |  |  |  |  |
|  1. Low | .542 | .410, .944 |  | .839 | .444, 1.233 |
|  2. Moderate | .250 | .126, .375 |  | .321 | .200, .443 |
|  3. Increasing | -.267 | -.589, .055 |  | -.245 | -.560, .070 |
|  4. High decreasing | .009 | -.068, .086 |  | .011 | -.064, .087 |
|  5. High stable | -.431 | -.478, -.205 |  | -.460 | -.594, -.326 |
| PAS Trajectory Group |  |  |  |  |  |
|  1. Low | .122 | -.085, .329 |  | .113 | -.094, .320 |
|  2. Low-moderate | .057 | -.030, .145 |  | .031 | -.057, .119 |
|  3. High-moderate | -.025 | -.120, .069 |  | -.005 | -.100, .090 |
|  4. High | -.244 | -.435, -.052 |  | -.199 | -.391, -.007 |

Note: Estimates are based on z-scores. Covariate is infant age at assessment of internalizing and externalizing symptoms. NE = Negative Emotionality; RCO = Regulatory Capacity/Orienting; PAS = Positive Affectivity/Surgency. The estimates reported here are the basis of Figures 4.







**Supplemental Figure 1.** Individual NE trajectories and associated predicted trajectory for each latent NE trajectory class. Solid black lines indicate the mean predicted trajectory. Dashed black lines indicate the upper and lower 95% CI for the mean predicted trajectory.





****

**Supplemental Figure 2.** Individual RCO trajectories and associated predicted trajectory for each latent RCO trajectory class. Solid black lines indicate the mean predicted trajectory. Dashed black lines indicate the upper and lower 95% CI for the mean predicted trajectory.





**Supplemental Figure 3.** Individual PAS trajectories and associated predicted trajectory for each latent PAS trajectory class. Solid black lines indicate the mean predicted trajectory. Dashed black lines indicate the upper and lower 95% CI for the mean predicted trajectory.