**Supplemental Tables**

**Shared and distinct developmental pathways to ASD and ADHD phenotypes  
among infants at familial risk**

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**Supplemental Table 1.** Abbreviated descriptions of coded behaviors.

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| **Behavior** | **Description** |
| Inattention | Any instance of inattentive/bored/distracted behavior |
| Out-of-seat | Any instance in which, in a clear attempt to get free, contact between the child’s bottom is severed from the parent’s lap or chair, and/or clear attempts to get out of seat/parent’s lap or chair even if contact is not severed. |
| Grab | Attempts (successful or unsuccessful) to obtain objects intrusively and/or when it is inappropriate to do so. |
| Negative affect | Displays of negative affect in either facial expressions, vocalizations, or behavior. |

**Supplemental Table 2.** Descriptive statistics and estimated MSEL scores, examiner ratings, and coded behavior for LPA groups at 12, 18, 24, and 36 months of age.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | ***TD***  (*n* = 108) | ***ADHD***  (*n* = 39) | ***ASD***  (*n* = 19) | ***TD*** | ***ADHD*** | ***ASD*** |
| **Variable** | *Mean* (*SD*) | *Mean* (*SD*) | *Mean* (*SD*) | *Estimate* (95% *CI*) | Estimate (95% *CI*) | Estimate (95% *CI*) |
| **MSEL Scores** | | | | | | |
| **Verbal**a |  |  |  |  |  |  |
| 12 months | 12.7 (1.8) | 12.0 (1.7) | 11.0 (1.9) | 12.3 (11.8 – 12.8) | 11.9 (11.0 – 12.8) | 11.1 (9.9 – 12.3) |
| 18 months | 18.8 (3.1) | 15.8 (2.3) | 12.9 (3.9) | 18.2 (17.6 – 18.7)e | 15.8 (14.9 – 16.8)f | 12.8 (11.7 – 14.0)g |
| 24 months | 25.0 (3.4) | 21.1 (4.1) | 16.5 (5.6) | 24.1 (23.5 – 24.8)e | 20.8 (19.6 – 22.0)f | 16.1 (14.7 – 17.6)g |
| 36 months | 33.2 (3.3) | 30.5 (4.0) | 24.3 (8.0) | 32.8 (32.0 – 33.7)e | 30.4 (28.9 – 32.0)f | 24.2 (22.1 – 26.2)g |
| **Nonverbal**b |  |  |  |  |  |  |
| 12 months | 16.5 (1.5) | 16.3 (1.4) | 15.0 (1.4) | 16.1 (15.8 – 16.4) | 16.3 (15.7 – 16.8) | 15.4 (14.7 – 16.1) |
| 18 months | 21.4 (1.6) | 20.8 (1.9) | 19.5 (1.9) | 21.1 (20.8 – 21.4)e | 20.5 (19.9 – 21.0)f | 18.8 (18.2 – 19.5)g |
| 24 months | 26.7 (2.6) | 24.6 (2.3) | 22.8 (2.0) | 26.0 (25.6 – 26.5)e | 24.5 (23.8 – 25.3)f | 22.1 (21.1 – 23.1)g |
| 36 months | 35.9 (3.4) | 32.0 (4.3) | 28.1 (5.9) | 35.3 (34.5 – 36.0)e | 32.2 (30.8 – 33.5)f | 28.2 (26.5 – 29.9)g |
| **Examiner Social Engagement Ratings**c | | |  |  |  |  |
| 12 months | 12.1 (1.9) | 12.1 (1.5) | 10.4 (2.0) | 12.1 (11.7 – 12.5)e | 11.8 (11.2 – 12.5)e | 10.6 (9.7 – 11.4)f |
| 18 months | 12.2 (1.8) | 10.6 (2.0) | 8.5 (2.8) | 12.2 (11.9 – 12.5)e | 11.1 (10.6 – 11.6)f | 8.9 (8.2 – 9.6)g |
| 24 months | 12.4 (1.8) | 11.0 (1.9) | 8.0 (2.1) | 12.3 (11.9 – 12.6)e | 10.8 (10.2 – 11.4)f | 8.0 (7.1 – 8.8)g |
| 36 months | 12.2 (1.7) | 11.5 (2.5) | 8.3 (2.2) | 12.2 (11.8 – 12.6)e | 11.6 (10.8 – 12.3)e | 8.4 (7.5 – 9.3)f |

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| --- | --- | --- | --- | --- | --- | --- |
| **Coded Behavior**d | *M [Q1-Q3]* | *M [Q1-Q3]* | *M [Q1-Q3]* | *Estimate (95% CI)* | *Estimate (95% CI)* | *Estimate (95% CI)* |
| **Inattention** |  |  |  |  |  |  |
| 12 months | 2 [1 – 4] | 2 [1 – 5] | 2 [0 – 4] | 2.8 (2.3 – 3.2) | 2.7 (2.0 – 3.3) | 2.2 (1.5 – 2.9) |
| 18 months | 3 [2 – 6] | 3 [2 – 6] | 2 [2 – 4] | 3.2 (2.9 – 3.6) | 3.6 (2.9 – 4.2) | 3.5 (2.7 – 4.4) |
| 24 months | 2 [1 – 4] | 4 [2 – 5] | 4 [3 – 6] | 3.1 (2.7 – 3.5)e | 3.9 (3.2 – 4.7)f | 4.6 (3.5 – 5.6)f |
| 36 months | 1 [0 – 2] | 2 [1 – 5] | 4 [2 – 5] | 1.5 (1.2 – 1.8)e | 2.5 (1.7 – 3.3)f | 4.1 (2.7 – 5.5)g |
| **Out of Seat** |  |  |  |  |  |  |
| 12 months | 0 [0 – 1] | 0 [0 – 2] | 1 [0 – 4] | 1.1 (0.7 – 1.4)e | 1.3 (0.6 – 2.0) | 2.4 (1.1 – 3.8)f |
| 18 months | 1 [0 – 3] | 2 [0 – 4] | 1 [0 – 2] | 1.5 (1.2 – 1.8) | 2.0 (1.4 – 2.7) | 1.9 (1.1 – 2.7) |
| 24 months | 0 [0 – 2] | 1 [0 – 4] | 1 [0 – 3] | 1.7 (1.3 – 2.1) | 2.6 (1.7 – 3.5) | 1.7 (0.8 – 2.6) |
| 36 months | 1 [0 – 2] | 2 [0 – 3] | 2 [0 – 3] | 1.3 (1.0 – 1.7)e | 2.3 (1.5 – 3.2)f | 2.3 (1.2 – 3.4)f |
| **Grab** |  |  |  |  |  |  |
| 12 months | 3 [1 – 5] | 3 [2 – 5] | 2 [1 – 4] | 3.6 (3.2 – 4.1) | 4.1 (3.2 – 5.0) | 3.0 (2.0 – 3.9) |
| 18 months | 3 [1 – 4.5] | 3.5 [2 – 6] | 2 [1 – 3] | 2.7 (2.4 – 3.0)e | 3.4 (2.8 – 4.0)f | 2.8 (2.1 – 3.5) |
| 24 months | 2 [0 – 3] | 2 [1 – 4] | 2 [1 – 3] | 2.1 (1.8 – 2.3)e | 2.8 (2.3 – 3.3)f | 2.7 (2.0 – 3.4) |
| 36 months | 1 [0 – 2] | 1 [0 – 3] | 2 [0 – 5] | 1.2 (0.9 – 1.4)e | 1.9 (1.2 – 2.6)f | 2.4 (1.4 – 3.5)f |
| **Negative affect** |  |  |  |  |  |  |
| 12 months | 1 [0 – 2.5] | 2 [0 – 4] | 3 [0 – 5] | 1.7 (1.2 – 2.1)e | 2.5 (1.4 – 3.5) | 3.1 (1.3 – 4.9)f |
| 18 months | 1 [0 – 4] | 1 [0 – 2] | 1 [0 – 2] | 2.1 (1.6 – 2.6) | 1.8 (1.0 – 2.7) | 1.9 (0.7 – 3.2) |
| 24 months | 0 [0 – 2] | 1 [0 – 2] | 2 [0 – 3] | 1.3 (0.9 – 1.6)e | 1.5 (0.8 – 2.2) | 2.9 (1.3 – 4.5)f |
| 36 months | 0 [0 – 1] | 0 [0 – 2] | 1 [0 – 5] | 0.5 (0.3 – 0.7)e | 1.0 (0.4 – 1.6) | 2.4 (0.7 – 4.1)f |

*Note.* LPA = latent profile analysis; ASD = Autism Spectrum Disorder; M = Median; Q1 = First quartile; Q3 = Third quartile. Summaries (means, SD, median, Q1, Q3) are reported for LPA groups defined using maximum probability assignment. To account for the uncertainty in class assignments in analysis, we used 100 pseudo-class draws to randomly classify children into latent classes 100 times based on their distribution of posterior probabilities from the best fitting LPA model, performed the analyses 100 times (i.e., for each draw) and combined results across draws using standard methods for multiple imputation for missing data. Analyses were linear mixed-effects regression models for MSEL composites and examiner ratings and linear mixed-effects Poisson regression models for behavior codes.

Data are missing for: a*n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 12 months; *n* = 6 (*TD*), 4 (*ADHD*), and 2 (*ASD*) at 18 months; *n* = 10 (*TD*) and 2 (*ADHD, ASD*) at 24 months; *n* = 1 (*TD, ADHD*) at 36 months; b*n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 12 months; *n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 18 months; *n* = 10 (*TD*), 2 (*ADHD*), and 1 (*ASD*) at 24 months; *n* = 1 (*TD, ADHD*) at 36 months; c*n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 12 months; *n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 18 months; *n* = 11 (*TD*), 2 (*ADHD*), and 1 (*ASD*) at 24 months; *n* = 2 (*TD*) and 1 (*ADHD*) at 36 months; d*n* = 4 (*TD, ADHD*) and 2 (*ASD*) at 12 months; *n* = 4 (*TD*), 5 (*ADHD*), and 2 (*ASD*) at 18 months; *n* = 13 (*TD*) and 2 (*ADHD, ASD*) at 24 months; *n* = 3 (*TD*) at 36 months.

e,f,gGroups with different superscripts are significantly different (*p* < .05).