Supplemental Materials

*How does adversity relate to performance across different abilities in the same person?*

This document contains three parts. First, we provide correlations and descriptive statistics for all indicators used to create aggregate variables for harshness and unpredictability. Second, we provide full regression tables for both primary and secondary analyses. Third, we provide figures for both primary and secondary analyses where WJ scores are uncentered. Note that these analyses are the same, however, centering WJ scores allows for better visual comparison of each subtest slope. The uncentered scores retain visual information about mean differences in performance across subtest types.

Below are links to each of these sections:

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## Correlations Among All Harshness and Unpredictability Indicators

| **Supplemental Table 1a. Correlations and descriptive statistics among all harshness indicators.** | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1. Family Income Disadvantage | - | 1138 | 1138 | 1138 | 1138 | 1138 | 1138 | 1138 |
| 2. Neigh. Socioeconomic Disadvantage | 0.45\*\* | - | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| 3. Neigh. % Poverty | 0.38\*\* | 0.90\*\* | - | 1139 | 1139 | 1139 | 1139 | 1139 |
| 4. Neigh. HH Income | 0.54\*\* | 0.83\*\* | 0.69\*\* | - | 1139 | 1139 | 1139 | 1139 |
| 5. Neigh. Gini | 0.23\*\* | 0.79\*\* | 0.75\*\* | 0.60\*\* | - | 1139 | 1139 | 1139 |
| 6. Neigh. % Renting | 0.27\*\* | 0.64\*\* | 0.53\*\* | 0.50\*\* | 0.42\*\* | - | 1139 | 1139 |
| 7. Neigh. % Unemploy | 0.22\*\* | 0.65\*\* | 0.52\*\* | 0.35\*\* | 0.34\*\* | 0.32\*\* | - | 1139 |
| 8. Neigh. % No Degree | 0.39\*\* | 0.68\*\* | 0.57\*\* | 0.60\*\* | 0.43\*\* | 0.10\*\* | 0.36\*\* | - |
| N | 1154 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| Mean | -3.52 | -0.02 | 13.24 | -36687.79 | 0.38 | 33.56 | 3.23 | 19.76 |
| SD | 2.68 | 0.74 | 11.26 | 15267.95 | 0.06 | 19.13 | 2.26 | 13.24 |
| Min | -23.79 | -1.95 | 0.00 | -125415.00 | 0.25 | 0.00 | 0.00 | 0.00 |
| Median | -2.87 | -0.10 | 9.88 | -33750.00 | 0.37 | 31.09 | 2.79 | 16.85 |
| Max | -0.17 | 3.35 | 76.64 | -5578.00 | 0.68 | 99.47 | 21.50 | 77.26 |
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| **Supplemental Table 1b. Correlations and descriptive statistics among all unpredictability indicators.** | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1. Fam. Transitions | - | 1153 | 1139 | 1153 | 1146 | 1140 | 1146 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| 2. Partner Changes | 0.73\*\* | - | 1137 | 1153 | 1146 | 1140 | 1146 | 1137 | 1137 | 1137 | 1137 | 1137 | 1137 | 1137 |
| 3. Job Changes | 0.74\*\* | 0.39\*\* | - | 1137 | 1131 | 1125 | 1131 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| 4. Res. Moves | 0.62\*\* | 0.13\*\* | 0.16\*\* | - | 1146 | 1140 | 1146 | 1137 | 1137 | 1137 | 1137 | 1137 | 1137 | 1137 |
| 5. Fam. Income (SD) | -0.11\*\* | -0.04 | -0.08\*\* | -0.11\*\* | - | 1140 | 1146 | 1131 | 1131 | 1131 | 1131 | 1131 | 1131 | 1131 |
| 6. Fam. Income (Residual SD) | -0.10\*\* | -0.04 | -0.09\*\* | -0.08\*\* | 0.95\*\* | - | 1140 | 1125 | 1125 | 1125 | 1125 | 1125 | 1125 | 1125 |
| 7. Fam. Income (Percent Change) | 0.29\*\* | 0.23\*\* | 0.21\*\* | 0.17\*\* | 0.16\*\* | 0.19\*\* | - | 1131 | 1131 | 1131 | 1131 | 1131 | 1131 | 1131 |
| 8. Neigh. SE (SD) | 0.44\*\* | 0.23\*\* | 0.60\*\* | 0.09\*\* | -0.06\* | -0.06 | 0.09\*\* | - | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| 9. Neigh. % Poverty (SD) | 0.39\*\* | 0.22\*\* | 0.49\*\* | 0.11\*\* | -0.08\*\* | -0.07\* | 0.10\*\* | 0.84\*\* | - | 1139 | 1139 | 1139 | 1139 | 1139 |
| 10. Neigh. HH Income (SD) | 0.22\*\* | 0.09\*\* | 0.37\*\* | -0.01 | 0.04 | 0.04 | 0.02 | 0.72\*\* | 0.46\*\* | - | 1139 | 1139 | 1139 | 1139 |
| 11. Neigh. Gini (SD) | 0.36\*\* | 0.18\*\* | 0.50\*\* | 0.08\* | -0.07\* | -0.06\* | 0.07\* | 0.84\*\* | 0.73\*\* | 0.53\*\* | - | 1139 | 1139 | 1139 |
| 12. Neigh. % Renting (SD) | 0.33\*\* | 0.16\*\* | 0.48\*\* | 0.05 | -0.06 | -0.06\* | 0.06\* | 0.81\*\* | 0.57\*\* | 0.61\*\* | 0.62\*\* | - | 1139 | 1139 |
| 13. Neigh. % Unemploy (SD) | 0.36\*\* | 0.19\*\* | 0.45\*\* | 0.10\*\* | -0.06\* | -0.06\* | 0.09\*\* | 0.74\*\* | 0.57\*\* | 0.36\*\* | 0.52\*\* | 0.49\*\* | - | 1139 |
| 14. Neigh. % No Degree (SD) | 0.41\*\* | 0.22\*\* | 0.54\*\* | 0.09\*\* | -0.06 | -0.06\* | 0.09\*\* | 0.79\*\* | 0.63\*\* | 0.45\*\* | 0.59\*\* | 0.53\*\* | 0.54\*\* | - |
| N | 1155 | 1153 | 1139 | 1153 | 1146 | 1140 | 1146 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 | 1139 |
| Mean | 0.04 | 0.45 | 1.24 | 1.61 | 1.11 | 1.02 | 0.59 | 0.02 | 4.06 | 4813.56 | 0.03 | 9.64 | 1.04 | 4.45 |
| SD | 0.71 | 1.04 | 1.49 | 1.27 | 1.17 | 1.10 | 0.83 | 0.80 | 6.33 | 7226.06 | 0.04 | 12.30 | 1.51 | 5.95 |
| Min | -0.82 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | -0.69 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Median | -0.15 | 0.00 | 1.00 | 1.50 | 0.82 | 0.74 | 0.35 | -0.11 | 0.87 | 1412.80 | 0.01 | 3.24 | 0.36 | 1.48 |
| Max | 3.86 | 10.00 | 11.00 | 10.00 | 17.78 | 14.39 | 12.16 | 3.09 | 40.98 | 68115.60 | 0.24 | 69.25 | 10.23 | 46.36 |
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## Full Family Income Disadvantage Results

| **Supplemental Table 2. Full model results for Family Income Disadvantage.** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.10 (0.27) | 0.01 [-0.03, 0.04] | 0.716 | 0.000 |
| Child Race Ethnicity | -2.94 (0.36) | -0.15 [-0.19, -0.12] | 0.000 | 1.000 |
| Maternal Education | 3.87 (0.33) | 0.26 [ 0.21, 0.30] | 0.000 | 1.000 |
| Family Income Disadvantage | -1.51 (0.33) | -0.10 [-0.14, -0.06] | 0.000 | 0.509 |
| Applied Problems | -0.84 (0.26) | -0.06 [-0.09, -0.02] | 0.003 | 0.005 |
| Calculations | -0.45 (0.27) | -0.03 [-0.07, 0.01] | 0.117 | 0.000 |
| Auditory Processing | 2.20 (0.27) | 0.15 [ 0.11, 0.18] | 0.000 | 0.995 |
| Letter-Word Pronunciation | -0.19 (0.26) | -0.01 [-0.05, 0.02] | 0.456 | 0.000 |
| Auditory-Visual Associations | 1.20 (0.27) | 0.08 [ 0.05, 0.11] | 0.000 | 0.126 |
| Short-Term Memory | -0.62 (0.26) | -0.04 [-0.08, -0.01] | 0.028 | 0.000 |
| Picture Vocab | -1.24 (0.26) | -0.08 [-0.12, -0.05] | 0.000 | 0.154 |
| Passage Comprehension | -0.33 (0.27) | -0.02 [-0.06, 0.01] | 0.240 | 0.000 |
| Verbal Analogies | -0.45 (0.27) | -0.03 [-0.07, 0.00] | 0.117 | 0.000 |
| Unfamiliar Words | 0.73 (0.27) | 0.05 [ 0.01, 0.08] | 0.013 | 0.002 |
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| **Supplemental Table 3. Simple Effects for Family Income Disadvantage.** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | -2.35 [-3.16, -1.53] | 0.000 | 0.979 |
| Calculations | -1.96 [-2.78, -1.13] | 0.000 | 0.859 |
| Auditory Processing | 0.69 [-0.14, 1.53] | 0.116 | 0.029 |
| Letter-Word Pronunciation | -1.70 [-2.52, -0.88] | 0.000 | 0.685 |
| Auditory-Visual Associations | -0.31 [-1.14, 0.52] | 0.461 | 0.002 |
| Short-Term Memory | -2.13 [-2.95, -1.31] | 0.000 | 0.934 |
| Picture Vocab | -2.74 [-3.56, -1.93] | 0.000 | 0.999 |
| Passage Comprehension | -1.84 [-2.66, -1.01] | 0.000 | 0.787 |
| Verbal Analogies | -1.96 [-2.79, -1.13] | 0.000 | 0.861 |
| Unfamiliar Words | -0.78 [-1.61, 0.05] | 0.080 | 0.045 |
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## Full Neighborhood Disadvantage Results

| **Supplemental Table 4. Full model results for Neighborhood Socioeconomic Disadvantage.** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.16 (0.28) | 0.01 [-0.03, 0.05] | 0.570 | 0.000 |
| Child Race Ethnicity | -2.48 (0.39) | -0.13 [-0.17, -0.09] | 0.000 | 0.994 |
| Maternal Education | 4.16 (0.30) | 0.27 [ 0.24, 0.31] | 0.000 | 1.000 |
| Neigh. Socioeconomic Disadvantage | -1.57 (0.32) | -0.11 [-0.15, -0.06] | 0.000 | 0.581 |
| Applied Problems | -0.89 (0.26) | -0.06 [-0.09, -0.03] | 0.001 | 0.010 |
| Calculations | -0.64 (0.27) | -0.04 [-0.08, -0.01] | 0.028 | 0.001 |
| Auditory Processing | 1.94 (0.27) | 0.13 [ 0.10, 0.17] | 0.000 | 0.951 |
| Letter-Word Pronunciation | 0.28 (0.26) | 0.02 [-0.02, 0.05] | 0.368 | 0.000 |
| Auditory-Visual Associations | 1.74 (0.26) | 0.12 [ 0.08, 0.15] | 0.000 | 0.815 |
| Short-Term Memory | -0.19 (0.26) | -0.01 [-0.05, 0.02] | 0.470 | 0.000 |
| Picture Vocab | -1.02 (0.26) | -0.07 [-0.10, -0.03] | 0.000 | 0.032 |
| Passage Comprehension | -0.22 (0.27) | -0.01 [-0.05, 0.02] | 0.459 | 0.000 |
| Verbal Analogies | -1.28 (0.27) | -0.09 [-0.12, -0.05] | 0.000 | 0.205 |
| Unfamiliar Words | 0.28 (0.26) | 0.02 [-0.02, 0.05] | 0.368 | 0.000 |
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| **Supplemental Table 5. Simple Effects for Neighborhood Socioeconomic Disadvantage.** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | -2.46 [-3.26, -1.65] | 0.000 | 0.990 |
| Calculations | -2.21 [-3.02, -1.39] | 0.000 | 0.954 |
| Auditory Processing | 0.37 [-0.44, 1.19] | 0.410 | 0.003 |
| Letter-Word Pronunciation | -1.29 [-2.09, -0.48] | 0.002 | 0.301 |
| Auditory-Visual Associations | 0.17 [-0.64, 0.99] | 0.681 | 0.001 |
| Short-Term Memory | -1.75 [-2.56, -0.95] | 0.000 | 0.731 |
| Picture Vocab | -2.58 [-3.39, -1.78] | 0.000 | 0.996 |
| Passage Comprehension | -1.78 [-2.60, -0.96] | 0.000 | 0.751 |
| Verbal Analogies | -2.84 [-3.67, -2.02] | 0.000 | 0.999 |
| Unfamiliar Words | -1.29 [-2.10, -0.47] | 0.002 | 0.305 |
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## Full Family Transitions Results

| **Supplemental Table 6. Full model results for Family Transitions.** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.17 (0.28) | 0.01 [-0.03, 0.05] | 0.546 | 0.000 |
| Child Race Ethnicity | -3.11 (0.36) | -0.16 [-0.20, -0.13] | 0.000 | 1.000 |
| Maternal Education | 4.54 (0.30) | 0.30 [ 0.26, 0.34] | 0.000 | 1.000 |
| Family Transitions | -0.32 (0.29) | -0.02 [-0.06, 0.02] | 0.266 | 0.000 |
| Applied Problems | -0.58 (0.26) | -0.04 [-0.07, -0.01] | 0.059 | 0.000 |
| Calculations | -1.07 (0.27) | -0.07 [-0.11, -0.04] | 0.001 | 0.052 |
| Auditory Processing | 0.78 (0.26) | 0.05 [ 0.02, 0.09] | 0.010 | 0.003 |
| Letter-Word Pronunciation | 0.07 (0.26) | 0.00 [-0.03, 0.04] | 0.795 | 0.000 |
| Auditory-Visual Associations | 0.97 (0.26) | 0.07 [ 0.03, 0.10] | 0.001 | 0.022 |
| Short-Term Memory | -0.14 (0.26) | -0.01 [-0.04, 0.02] | 0.743 | 0.000 |
| Picture Vocab | -0.48 (0.25) | -0.03 [-0.07, 0.00] | 0.102 | 0.000 |
| Passage Comprehension | -0.15 (0.26) | -0.01 [-0.05, 0.03] | 0.743 | 0.000 |
| Verbal Analogies | 0.08 (0.27) | 0.01 [-0.03, 0.04] | 0.795 | 0.000 |
| Unfamiliar Words | 0.51 (0.26) | 0.04 [ 0.00, 0.07] | 0.098 | 0.000 |
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| **Supplemental Table 7. Simple Effects for Family Transitions.** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | -0.90 [-1.66, -0.14] | 0.098 | 0.060 |
| Calculations | -1.39 [-2.16, -0.62] | 0.004 | 0.391 |
| Auditory Processing | 0.45 [-0.31, 1.22] | 0.351 | 0.004 |
| Letter-Word Pronunciation | -0.26 [-1.02, 0.50] | 0.593 | 0.001 |
| Auditory-Visual Associations | 0.65 [-0.12, 1.42] | 0.240 | 0.015 |
| Short-Term Memory | -0.46 [-1.22, 0.30] | 0.351 | 0.004 |
| Picture Vocab | -0.80 [-1.55, -0.04] | 0.127 | 0.034 |
| Passage Comprehension | -0.47 [-1.24, 0.30] | 0.351 | 0.004 |
| Verbal Analogies | -0.25 [-1.02, 0.53] | 0.593 | 0.001 |
| Unfamiliar Words | 0.19 [-0.58, 0.96] | 0.627 | 0.000 |
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## Full Neighborhood Socioeconomic Variability

| **Supplemental Table 8. Full model results for Neighborhood Socioeconomic Variability.** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.18 (0.28) | 0.01 [-0.02, 0.05] | 0.518 | 0.000 |
| Child Race Ethnicity | -3.19 (0.37) | -0.17 [-0.20, -0.13] | 0.000 | 1.000 |
| Maternal Education | 4.62 (0.29) | 0.31 [ 0.27, 0.34] | 0.000 | 1.000 |
| Neigh. Socioeconomic Variabibiliy | -0.04 (0.29) | -0.00 [-0.04, 0.04] | 0.888 | 0.000 |
| Applied Problems | -0.45 (0.26) | -0.03 [-0.06, 0.00] | 0.274 | 0.000 |
| Calculations | -0.65 (0.27) | -0.04 [-0.08, -0.01] | 0.078 | 0.001 |
| Auditory Processing | 0.31 (0.27) | 0.02 [-0.01, 0.06] | 0.506 | 0.000 |
| Letter-Word Pronunciation | 0.22 (0.26) | 0.01 [-0.02, 0.05] | 0.635 | 0.000 |
| Auditory-Visual Associations | 0.73 (0.27) | 0.05 [ 0.01, 0.08] | 0.059 | 0.002 |
| Short-Term Memory | 0.20 (0.26) | 0.01 [-0.02, 0.05] | 0.635 | 0.000 |
| Picture Vocab | -0.38 (0.26) | -0.03 [-0.06, 0.01] | 0.375 | 0.000 |
| Passage Comprehension | -0.09 (0.27) | -0.01 [-0.04, 0.03] | 0.830 | 0.000 |
| Verbal Analogies | -0.05 (0.27) | -0.00 [-0.04, 0.03] | 0.860 | 0.000 |
| Unfamiliar Words | 0.16 (0.27) | 0.01 [-0.02, 0.05] | 0.685 | 0.000 |
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| **Supplemental Table 9. Simple Effects for Neighborhood Socioeconomic Variability.** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | -0.49 [-1.25, 0.27] | 0.674 | 0.005 |
| Calculations | -0.70 [-1.47, 0.08] | 0.397 | 0.021 |
| Auditory Processing | 0.27 [-0.51, 1.04] | 0.824 | 0.001 |
| Letter-Word Pronunciation | 0.18 [-0.58, 0.94] | 0.824 | 0.000 |
| Auditory-Visual Associations | 0.69 [-0.08, 1.46] | 0.397 | 0.020 |
| Short-Term Memory | 0.16 [-0.60, 0.92] | 0.824 | 0.000 |
| Picture Vocab | -0.42 [-1.17, 0.34] | 0.704 | 0.003 |
| Passage Comprehension | -0.13 [-0.90, 0.64] | 0.824 | 0.000 |
| Verbal Analogies | -0.09 [-0.87, 0.69] | 0.824 | 0.000 |
| Unfamiliar Words | 0.12 [-0.65, 0.89] | 0.824 | 0.000 |
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## Full Family Income Variability (SD)

| **Supplemental Table 10. Full model results for Family Income Variability (SD).** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.15 (0.28) | 0.01 [-0.03, 0.05] | 0.589 | 0.000 |
| Child Race Ethnicity | -3.14 (0.36) | -0.16 [-0.20, -0.13] | 0.000 | 1.000 |
| Maternal Education | 4.38 (0.29) | 0.29 [ 0.25, 0.33] | 0.000 | 1.000 |
| Family Income Variability | 0.74 (0.28) | 0.05 [ 0.01, 0.09] | 0.008 | 0.003 |
| Applied Problems | 0.35 (0.25) | 0.02 [-0.01, 0.06] | 0.275 | 0.000 |
| Calculations | 0.34 (0.26) | 0.02 [-0.01, 0.06] | 0.275 | 0.000 |
| Auditory Processing | -1.09 (0.26) | -0.08 [-0.11, -0.04] | 0.000 | 0.055 |
| Letter-Word Pronunciation | 0.33 (0.25) | 0.02 [-0.01, 0.06] | 0.275 | 0.000 |
| Auditory-Visual Associations | -0.91 (0.26) | -0.06 [-0.10, -0.03] | 0.002 | 0.011 |
| Short-Term Memory | 0.56 (0.25) | 0.04 [ 0.00, 0.07] | 0.072 | 0.000 |
| Picture Vocab | 0.58 (0.25) | 0.04 [ 0.01, 0.08] | 0.071 | 0.000 |
| Passage Comprehension | 0.06 (0.26) | 0.00 [-0.03, 0.04] | 0.811 | 0.000 |
| Verbal Analogies | -0.12 (0.26) | -0.01 [-0.04, 0.03] | 0.749 | 0.000 |
| Unfamiliar Words | -0.11 (0.26) | -0.01 [-0.04, 0.03] | 0.749 | 0.000 |
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| **Supplemental Table 11. Simple Effects for Family Income Variability (SD).** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | 1.09 [ 0.36, 1.83] | 0.009 | 0.140 |
| Calculations | 1.08 [ 0.34, 1.83] | 0.009 | 0.137 |
| Auditory Processing | -0.35 [-1.09, 0.40] | 0.401 | 0.001 |
| Letter-Word Pronunciation | 1.07 [ 0.33, 1.81] | 0.009 | 0.126 |
| Auditory-Visual Associations | -0.17 [-0.92, 0.58] | 0.654 | 0.000 |
| Short-Term Memory | 1.30 [ 0.56, 2.03] | 0.003 | 0.293 |
| Picture Vocab | 1.32 [ 0.59, 2.06] | 0.003 | 0.319 |
| Passage Comprehension | 0.80 [ 0.05, 1.55] | 0.059 | 0.034 |
| Verbal Analogies | 0.62 [-0.13, 1.37] | 0.131 | 0.011 |
| Unfamiliar Words | 0.63 [-0.12, 1.38] | 0.131 | 0.011 |
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## Full Family Income Variability (Residual SD)

| **Supplemental Table 12. Full model results for Family Income Variability (Residual SD).** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.18 (0.28) | 0.01 [-0.02, 0.05] | 0.520 | 0.000 |
| Child Race Ethnicity | -3.16 (0.36) | -0.17 [-0.20, -0.13] | 0.000 | 1.000 |
| Maternal Education | 4.42 (0.29) | 0.29 [ 0.26, 0.33] | 0.000 | 1.000 |
| Residual Standard Deviation | 0.59 (0.28) | 0.04 [ 0.00, 0.08] | 0.036 | 0.001 |
| Applied Problems | 0.24 (0.25) | 0.02 [-0.02, 0.05] | 0.481 | 0.000 |
| Calculations | 0.34 (0.26) | 0.02 [-0.01, 0.06] | 0.312 | 0.000 |
| Auditory Processing | -0.98 (0.26) | -0.07 [-0.10, -0.03] | 0.001 | 0.021 |
| Letter-Word Pronunciation | 0.38 (0.25) | 0.03 [-0.01, 0.06] | 0.280 | 0.000 |
| Auditory-Visual Associations | -0.83 (0.26) | -0.06 [-0.09, -0.02] | 0.007 | 0.005 |
| Short-Term Memory | 0.42 (0.26) | 0.03 [-0.01, 0.06] | 0.246 | 0.000 |
| Picture Vocab | 0.65 (0.25) | 0.04 [ 0.01, 0.08] | 0.037 | 0.000 |
| Passage Comprehension | 0.06 (0.26) | 0.00 [-0.03, 0.04] | 0.830 | 0.000 |
| Verbal Analogies | -0.09 (0.26) | -0.01 [-0.04, 0.03] | 0.815 | 0.000 |
| Unfamiliar Words | -0.20 (0.26) | -0.01 [-0.05, 0.02] | 0.563 | 0.000 |
|  | | | | |
|  | | | | |

| **Supplemental Table 13. Simple Effects for Family Income Variability (Residual SD).** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | 0.83 [ 0.09, 1.57] | 0.055 | 0.038 |
| Calculations | 0.93 [ 0.18, 1.68] | 0.038 | 0.068 |
| Auditory Processing | -0.39 [-1.14, 0.35] | 0.339 | 0.002 |
| Letter-Word Pronunciation | 0.96 [ 0.22, 1.70] | 0.036 | 0.077 |
| Auditory-Visual Associations | -0.24 [-0.99, 0.51] | 0.532 | 0.000 |
| Short-Term Memory | 1.01 [ 0.27, 1.75] | 0.036 | 0.097 |
| Picture Vocab | 1.23 [ 0.49, 1.97] | 0.011 | 0.241 |
| Passage Comprehension | 0.64 [-0.11, 1.39] | 0.154 | 0.012 |
| Verbal Analogies | 0.50 [-0.25, 1.25] | 0.276 | 0.004 |
| Unfamiliar Words | 0.39 [-0.36, 1.14] | 0.339 | 0.002 |
|  | | | |
|  | | | |

## Full Family Income Variability (Average Percent Change)

| **Supplemental Table 14. Full model results for Family Income Variability (Average Percent Change).** | | | | |
| --- | --- | --- | --- | --- |
|  | *b* | *B* [95% CI] | *p* | ROPE *p* |
| Sex Assigned at Birth | 0.19 (0.28) | 0.01 [-0.02, 0.05] | 0.499 | 0.000 |
| Child Race Ethnicity | -3.19 (0.37) | -0.17 [-0.21, -0.13] | 0.000 | 1.000 |
| Maternal Education | 4.61 (0.29) | 0.31 [ 0.27, 0.34] | 0.000 | 1.000 |
| Average Percent Change | 0.20 (0.29) | 0.01 [-0.02, 0.05] | 0.475 | 0.000 |
| Applied Problems | -0.32 (0.26) | -0.02 [-0.06, 0.01] | 0.378 | 0.000 |
| Calculations | 0.52 (0.27) | 0.03 [-0.00, 0.07] | 0.143 | 0.000 |
| Auditory Processing | 0.66 (0.27) | 0.04 [ 0.01, 0.08] | 0.075 | 0.001 |
| Letter-Word Pronunciation | 0.01 (0.26) | 0.00 [-0.03, 0.04] | 0.961 | 0.000 |
| Auditory-Visual Associations | 0.53 (0.27) | 0.04 [ 0.00, 0.07] | 0.143 | 0.000 |
| Short-Term Memory | -0.15 (0.26) | -0.01 [-0.04, 0.02] | 0.641 | 0.000 |
| Picture Vocab | -0.80 (0.26) | -0.05 [-0.09, -0.02] | 0.024 | 0.004 |
| Passage Comprehension | -0.17 (0.27) | -0.01 [-0.05, 0.02] | 0.641 | 0.000 |
| Verbal Analogies | -0.49 (0.27) | -0.03 [-0.07, 0.00] | 0.143 | 0.000 |
| Unfamiliar Words | 0.21 (0.27) | 0.01 [-0.02, 0.05] | 0.631 | 0.000 |
|  | | | | |
|  | | | | |

| **Supplemental Table 15. Simple Effects for Family Income Variability (Average Percent Change).** | | | |
| --- | --- | --- | --- |
|  | *b* [95% CI] | *p* | ROPE *p* |
| Applied Problems | -0.11 [-0.88, 0.65] | 0.928 | 0.000 |
| Calculations | 0.73 [-0.06, 1.51] | 0.229 | 0.026 |
| Auditory Processing | 0.86 [ 0.09, 1.63] | 0.229 | 0.053 |
| Letter-Word Pronunciation | 0.22 [-0.54, 0.98] | 0.822 | 0.000 |
| Auditory-Visual Associations | 0.73 [-0.03, 1.50] | 0.229 | 0.025 |
| Short-Term Memory | 0.06 [-0.70, 0.82] | 0.928 | 0.000 |
| Picture Vocab | -0.59 [-1.35, 0.17] | 0.317 | 0.009 |
| Passage Comprehension | 0.04 [-0.75, 0.82] | 0.928 | 0.000 |
| Verbal Analogies | -0.29 [-1.07, 0.49] | 0.781 | 0.001 |
| Unfamiliar Words | 0.41 [-0.36, 1.18] | 0.591 | 0.003 |
|  | | | |
|  | | | |

## Supplemental Figure 1

![](data:application/pdf;base64,)

## Supplemental Figure 2

![](data:application/pdf;base64,)

## WJ Subtest Correlations Across Time (Reviewer Requested)

| Passage Comprehension | 1 | 2 | 3 |
| --- | --- | --- | --- |
| 1. Grade 3 | - |  |  |
| 2. Grade 5 | 0.75\*\* | - |  |
| 3. Age 15 | 0.66\*\* | 0.67\*\* | - |

| Picture Vocab | 1 | 2 | 3 | 4 | 5 |
| --- | --- | --- | --- | --- | --- |
| 1. 54 month | - |  |  |  |  |
| 2. Grade 1 | 0.67\*\* | - |  |  |  |
| 3. Grade 3 | 0.63\*\* | 0.72\*\* | - |  |  |
| 4. Grade 5 | 0.61\*\* | 0.69\*\* | 0.79\*\* | - |  |
| 5. Age 15 | 0.61\*\* | 0.70\*\* | 0.75\*\* | 0.81\*\* | - |

| Calculations | 1 | 2 |
| --- | --- | --- |
| 1. Grade 3 | - |  |
| 2. Grade 5 | 0.65\*\* | - |

| Verbal Analogies | 1 | 2 |
| --- | --- | --- |
| 1. Grade 3 | - |  |
| 2. Age 15 | 0.65\*\* | - |

| Letter-Word Pronunciation | 1 | 2 | 3 | 4 |
| --- | --- | --- | --- | --- |
| 1. 54 month | - |  |  |  |
| 2. Grade 1 | 0.56\*\* | - |  |  |
| 3. Grade 3 | 0.51\*\* | 0.77\*\* | - |  |
| 4. Grade 5 | 0.50\*\* | 0.66\*\* | 0.85\*\* | - |

| Short-Term Memory | 1 | 2 | 3 |
| --- | --- | --- | --- |
| 1. 54 month | - |  |  |
| 2. Grade 1 | 0.57\*\* | - |  |
| 3. Grade 3 | 0.56\*\* | 0.77\*\* | - |

| Applied Problems | 1 | 2 | 3 | 4 | 5 |
| --- | --- | --- | --- | --- | --- |
| 1. 54 month | - |  |  |  |  |
| 2. Grade 1 | 0.64\*\* | - |  |  |  |
| 3. Grade 3 | 0.58\*\* | 0.70\*\* | - |  |  |
| 4. Grade 5 | 0.56\*\* | 0.71\*\* | 0.76\*\* | - |  |
| 5. Age 15 | 0.50\*\* | 0.64\*\* | 0.65\*\* | 0.73\*\* | - |

| Auditory Processing | 1 | 2 |
| --- | --- | --- |
| 1. 54 month | - |  |
| 2. Grade 1 | 0.37\*\* | - |

| Unfamiliar Words | 1 | 2 |
| --- | --- | --- |
| 1. Grade 1 | - |  |
| 2. Grade 3 | 0.72\*\* | - |

| Auditory-Visual Associations | 1 | 2 |
| --- | --- | --- |
| 1. Grade 1 | - |  |
| 2. Grade 3 | 0.63\*\* | - |