

**Supplementary Information for**

Disruption to Test Scores after Hurricanes in the United States

Gabriella Y. Meltzer1,2\*, G. Brooke Anderson3, Joan A. Casey4, Joel Schwartz5, Michelle L. Bell6, Yoshira Ornelas Van Horne1, Jared Fox7, Marianthi-Anna Kioumourtzoglou1,Robbie M. Parks1

1. Department of Environmental Health Sciences, Columbia University Mailman School of Public Health, New York, New York, USA
2. Department of Epidemiology, Columbia University Mailman School of Public Health, New York, New York, USA
3. Department of Environmental & Radiological Health Sciences, Colorado State University, Fort Collins, Colorado, USA
4. Department of Environmental and Occupational Health Sciences, University of Washington School of Public Health, Seattle, Washington, USA
5. Department of Environmental Health, Harvard T.H. Chan School of Public Health, Boston, Massachusetts, USA
6. Department of Environmental Health, Yale University School of the Environment, New Haven, Connecticut, USA
7. Fox EduConsulting, Chevy Chase, MD, USA

\*Gabriella Y. Meltzer, Department of Environmental Health Sciences, Mailman School of Public Health, Columbia University, 722 W. 168th Street, New York, New York, 10032

**Email:**  gm3085@cumc.columbia.edu

**This PDF file includes:**

Table S1

| *Variable* | **Math**  (β, 95% CrI, probability) | **Reading/Language Arts**  (β, 95% CrI, probability) |
| --- | --- | --- |
| Storm Exposure by State |  |  |
| National | 0.00 (-0.05, 0.05), 50.0% | 0.00 (-0.04, 0.04), 50.0% |
| Alabama | 0.13 (-0.04, 0.32), 93.0% | 0.03 (-0.09, 0.16), 70.1% |
| Florida | 0.19 (0.11, 0.27), >99.9% | 0.05 (-0.01, 0.12), 95.5% |
| Georgia | -0.06 (-0.16, 0.04), 90.3% | 0.01 (-0.07, 0.09), 56.5% |
| Louisiana | -0.01 (-0.25, 0.22), 54.5% | 0.00 (-0.15, 0.16), 52.2% |
| New Jersey | -0.13 (-0.33, 0.06), 88.8% | -0.02 (-0.16, 0.10), 64.0% |
| North Carolina | -0.15 (-0.26, -0.04), 99.5% | 0.03 (-0.05, 0.12), 78.2% |
| South Carolina | -0.19 (-0.40, 0.00), 97.2% | 0.02 (-0.11, 0.15), 59.8% |
| Texas | -0.09 (-0.21, 0.02), 94.9% | -0.12 (-0.20, -0.04), 99.9% |
| Grade-Cohort Percent Race/Ethnicity |  |  |
| American Indian/Alaska Native | -1.17 (-1.99, -0.35), 99.8% | -1.70 (-2.41, -0.99), >99.9% |
| Asian | 2.85 (1.95, 3.75), >99.9% | 2.72 (1.97, 3.48), >99.9% |
| Hispanic | -0.97 (-1.13, -0.80), >99.9% | -1.60 (-1.74, -1.46), >99.9% |
| Black | -2.02 (-2.19, -1.85), >99.9% | -2.24 (-2.39, -2.10), >99.9% |
| Percent Grade-Cohort Receiving Free Lunch | -0.28 (-0.35, -0.21), >99.9% | 0.09 (0.03, 0.15), 99.9% |
| Percent Grade-Cohort Economically Disadvantaged | -0.05 (-0.12, 0.02), 93.9% | -0.57 (-0.63, -0.51), >99.9% |
| Percent County English Language Learners | 0.60 (0.13, 1.07), 99.4% | -1.07 (-1.45, -0.68), >99.9% |
| Percent County Urban Schools | 0.13 (-0.02, 0.28), 95.2% | 0.20 (0.07, 0.33), 99.9% |
| Percent County Special Education Students | 0.31 (-0.02, 0.64), 95.9% | 0.87 (0.59, 1.16), >99.9% |
| Percent County College-Educated Adults | 2.05 (1.72, 2.39), >99.9% | 1.74 (1.46, 2.01), >99.9% |
| County Poverty Rate | -0.83 (-1.11, -0.54), >99.9% | -0.08 (-0.31, 0.16), 64.4% |
| Percent County Single Mother Households | 0.05 (-0.25, 0.36), 52.2% | 0.07 (-0.19, 0.32), 72.5% |

**Table S1.** National and State-Specific Associations between Hurricane-Force Tropical Cyclones and Standardized Test Scores; 95% CrI = 95% credible interval, probability = Posterior probability of positive/negative association