**Disruption to Test Scores after Tropical Cyclones in the United States**

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**Background and Aim**

In the United States, hurricanes and other tropical cyclones have a devastating impact on society. Knowledge of how tropical cyclones impact student educational attainment is essential to understanding the full burden of climate-related disasters. Our aim is to examine the association between the tropical cyclones and educational attainment among elementary and middle school-age students in the United States.

**Methods**

We based educational attainment on county-level average standardized test scores in math and reading/language arts (RLA) among third to eighth grade students during 2009–2018. Our exposure of interest was tropical cyclones, developed from a comprehensive record of tropical cyclone occurrence over 10 years, defined as counties with a sustained maximal wind speed ≥34 knots, as well as a subset of the data including only gale-to-violent storms (≥34 knots and <64 knots) or hurricanes (≥64 knots). We developed a difference-in-difference model, associating tropical cyclones and annual average test scores, while controlling for covariates at the county and grade cohort level, including student-level racial/ethnic composition, student-level socioeconomic status, county-level urbanicity, and county-level socioeconomic status.

**Results**

In initial results, for hurricane-exposed counties in Florida during 2009–2018, we found that exposure to hurricane force-winds was associated with a -0.098 SD (95% CrI: -0.172,-0.125) decrease in average Math scores. For RLA scores, the 0.002 SD increase (95% CrI: -0.048, 0.053) was not clear of the null. In our presentation, we will also examine how associations varied by strength of tropical cyclone, state, and proportion of non-white and socioeconomically disadvantaged students.

**Conclusion**

Our results indicate that exposure to hurricane-force winds within a county was associated with lower academic performance among elementary and middle school-age students, though further work is needed to conclude this definitively. Disaster preparedness should include resilience to the impacts of climate-related stressors on overall academic achievement across the lifespan.