Conference Abstract

Characterizing discrepancies in school recovery after disasters

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Background: Academic institutions provide consistency and routine to children. When disasters damage schools, students often suffer in a variety of ways, and racial minority students are often impacted disproportionately. However, minimal research exists exploring these discrepancies. This presentation examines racial disparities in school systems affected by Hurricane Ike (2008).

Methods: This study, funded by the National Science Foundation, uses publicly available Texas Education Agency data from approximately 600 schools affected by Hurricane Ike. Schools were included in the study based on two criteria: if they were declared "disaster areas" by FEMA and if they were closed for at least 10 school days after Hurricane Ike.

Results: Descriptive analyses were conducted comparing school characteristics and pass rates for all students in grades 3-11 on the Texas Assessment of Knowledge and Skills (TAKS) standardized test during pre- and post-hurricane school years (i.e., 2003 – 2011). Mean pass rates on the TAKS varied greatly by race/ethnicity and other factors. Of African American students, 60.7% (SD=17.4) passed the TAKS in 2004 compared to 69.9% in 2011 (SD=15.0); 68.0% (SD=15.7) of Hispanic students passed in 2004 as opposed to 76.23% (SD=12.2) in 2011; 78.8% (SD=14.8) of White students passed in 2004 versus 83.1% in 2011. Further analyses will explore various other determinants influencing academic performance.

Conclusions: Preliminary findings show discrepancies at baseline in academic outcomes between racial/ethnic groups. These discrepancies persisted post-hurricane, though all groups saw an increase in pass-rates. Further research utilizing advanced statistical approaches and geographic information system (GIS) analysis could yield insights on variation of academic performance between schools and school districts, as well as physical exposure and risk factors. These insights can inform strategies for improving schools' academic trajectories after disasters and optimizing community recovery as a whole.

Key words: academic recovery; disasters; public health preparedness