Assessing Katrina's Impact on the Mississippi Gulf Coast: A Report on Completed Research

The NSF-funded study being done by Ole Miss on Katrina's impacts is testing a hypothesis that examines the effect of involvement in social networks on a person's response to the impact of Katrina. However, in examining this hypothesis the study is generating data in a three-step process that provide an empirical estimate of housing and population effects in the Mississippi Gulf Coast area at the epicenter of Katrina's impact:

Population & Housing Effects

(1) We can compare our housing unit counts with those from Census 2000 on a block-by-block basis and account for any change between census 2000 and August 29th, 2005. This gives empirical numbers for the absolute and relative numbers of total houses that were destroyed and damaged by type of housing unit. Our research shows that approximately four months after it struck, Hurricane Katrina's impact resulted in a population decline of 7,155 people, a decrease of about 40% from the pre-Katrina number of 18,105.

(2) Our data indicate that just before Katrina stuck, there were 8,535 (permanent) housing units in the 346 blocks we canvassed, an increase of nearly 10% over the 2000 census count of 7,793. About 27% of the Pre-Katrina housing stock was destroyed and 47% damaged, leaving 26 percent habitable. After Katrina, 2,012 temporary units were in the study area, of which 94% were occupied.

Social Network Effects

Hypothesis: A person embedded in a larger personal network group will perceive lower levels of disturbance* in his or her economic, health, and social well-being than a person in a smaller personal group network.

Findings:

Our results indicate strong support for the hypothesis:

A person embedded in a larger personal network group will perceive lower levels of disturbance in his or her economic, health, and social well-being than a person in a smaller personal group network

The social network coefficients are negative and statistically significant for financial, economic, psychological well-being, as well as that of professional relationships; there is no statistically significant effect on physical well-being and on personal relationships.

* Disturbance refers to the difference between responses for "now" (four months after the hurricane) and those for "before" (before the hurricane). Social networks can have an immediate impact in lessening disturbance by helping people maintain their status quo levels of well-being (economic, health, social relationships).

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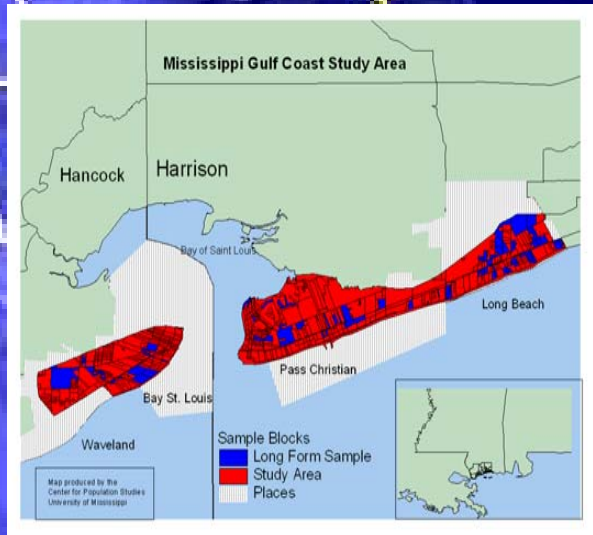
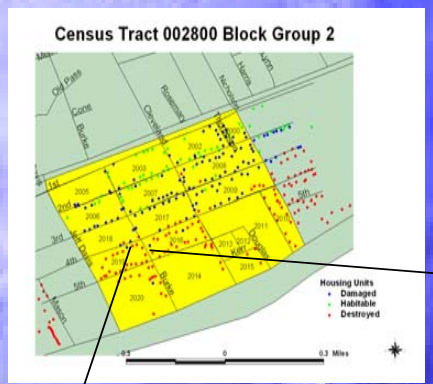


Results to date

Study Area: 573 blocks in portions of two census tracts in Hancock County (030100 and 030200) and four in Harrison County (002700, 002800, 002900, & 003000): Epicenter of Katrina's Landfall in Mississippi

Full enumeration "short form" and sample "long form." Substantial effort was made to minimize measurement error, response error, and coverage error in the short form and the long form, as well as sample error in the long form. Block by block canvassing, with callbacks, for "short form"

Stratified, Random Start, Systematic Selection Cluster Sample using blocks as Primary Sampling Units for "long form," with block by block canvassing and callbacks.
This effort entailed a number of operational challenges, but the team was successful in collecting "short form" data comprised of 10,547 completed surveys from 346 of the targeted 573 blocks and "long form" data comprised of 400 completed surveys from 71 blocks, 68 of which were from the 126 blocks targeted for "long form" data collection and three of which were from "short form" blocks erroneously canvassed. The data (N=10,547) for the 346 blocks represent a complete enumeration of all housing, permanent and temporary, a determination of their condition (habitable, damaged, or destroyed) and occupancy status.



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