The Science and Practice of Resilience Interventions for Children Exposed to Disasters

The Rethinkers, New Orleans 2007

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4 Questions

1. What is the long-term impact of disasters on children & youth? ...(and how does it relate to resilience and recovery?)

2. What does a resilience trajectory look like?

3. How does one balance promoting positive traits and protecting against pathophysiological states?

4. How can resilience be activated?
Katrina, 2005
Sandy, 2012
Moore, Okla., May 24, 2013 -- Toys and mementos were placed on a fence outside Plaza Tower Elementary School, where seven children were killed by an EF-5 tornado on May 20th. Andrea Booher/FEMA
Overarching findings: Exposure to disasters, impacts, & recovery

- Disasters exert enduring impacts on children and youth
  - “toxic stressors” may extend effects into adult years, leading to complex co-morbidities

- Children’s health and well-being is highly contingent upon functioning support systems in their lives: their parents, their households, their schools and other community institutions, and their neighborhoods

- Children and youth often want to be actively engaged in their recovery
An Illustration: The Gulf Coast Child & Family Health Study (2006-2010)

- Longitudinal cohort study of 1,079 randomly sampled displaced and highly-impacted households in Louisiana and Mississippi, post-Katrina
- Respondents interviewed annually
  - Baseline: January & August 2006
  - Wave 2: April-August 2007
  - Wave 3: June-November 2008
  - Wave 4: November 2009-April 2010
- At last round, 87.6% of eligible respondents found & interviewed
- 427 households with children enrolled at baseline
  - Funded by Children’s Health Fund (CHF)
## Portrait of Katrina’s Children’s Lives Over Time

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009/10</th>
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</thead>
<tbody>
<tr>
<td>% living in trailer or hotel</td>
<td>83.8</td>
<td>50.8</td>
<td>15.9</td>
<td>7.5</td>
</tr>
<tr>
<td>% parents not coping well</td>
<td>13.0</td>
<td>17.1</td>
<td>21.1</td>
<td>13.2</td>
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<tr>
<td>% parents with MH distress</td>
<td>61.3</td>
<td>54.1</td>
<td>44.5</td>
<td>42.6</td>
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<tr>
<td>% kids not safe in school</td>
<td>24.6</td>
<td>34.4</td>
<td>37.3</td>
<td>28.8</td>
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<tr>
<td>% who moved in past year</td>
<td>99.3</td>
<td>62.8</td>
<td>67.1</td>
<td>55.0</td>
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</tbody>
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What “systems” in children’s lives had an effect on their mental health?

- **Parental constraints**: Mental health distress; little informal social support; minimal sense of community; little sense of “life recovery”

- **Household stressors**: Unstably housed; loss of income; not enough $$ for food; poor family functioning

- **Social disorder**: drug sales, prostitution, gangs and crime
Findings

• Household stressors accounted for the most effect
• Parents had greatest DIRECT effect
• Social disorder had substantial and significant effect
• Prior social adversity had a minimal effect
• Nearly five years after Katrina these Katrina-affected children and youth had rates of Serious Emotional Disturbance 5 times the national average of a comparable group
• ...and understanding long-term impacts can help inform resilience interventions, and recovery expectations
What outcome?
- % without pathophysiology?
- % at age-appropriate grade?
- % with subjective sense of “stability”?

How often do we have multiple pre-disaster data points?

How often do we have multiple post-disaster data points?

What does a resilience trajectory look like?

Question: What does a resilience trajectory look like?
The Four Waves of Resilience Research

• Wave 1: Identifying individual resilience factors
• Wave 2: Embedding resilience in social processes
• Wave 3: Fostering resilience (interventions)
• Wave 4: The biology and epigenetics of resilience (from “Neurons to Neighborhoods”)

Promote and/or Protect

A

“Resilience-based”
Objective: Promote optimal development
Approaches: (1) Enhance healthy and adaptive cognitive, emotional and social processes; (2) Develop skills in problem-solving, expressing emotion, forming relationships

By enhancing A, B is avoided

B

“Symptom-based”
Objective: Reduce or address mental health problems
Approaches: (1) Decrease psychological symptoms through individual and group therapies; (2) Use graded exposure or inoculation to decrease stress activation; (3) apply “meaning making” to traumatic histories

By addressing B, A is achieved

How are children’s resilience “activated”?  

• Through policy decisions (extemporaneous)  
  – Joplin School decision to open 87 days after 6 of 10 schools destroyed or comprehensively damaged  

• Through policy advocacy and community engagement  
  – Resilient & Ready Communities Initiative  
  – Communities Advancing Resilience Toolkit (CART)  

• Through programs and interventions  
  – Pre-disaster moderators: Preparedness education, stress-reduction training (Primary prevention)  
  – Risk-activated moderators: VAYLA, Rethinkers (Secondary prevention)  

• Through providers and workforce  
  – Joplin Child Care Task Force  
  – Children’s Health Fund Operation Assist (school nurses, teachers)
Protective and Promotive Factors: The “Short List”

• Positive self-identity (self-efficacy; self-worth and self-esteem)
• Executive control and self-regulation
• Coping skills (problem-solving competence; stress reduction)
• Supportive relationships (parents, siblings, peer, trusted adults)
• Opportunities for “pro-social behavior” (helping others)
• Positive worldview (hopefulness; faith; communal solidarity; contextualized understanding of hazard/catastrophe)
• Stability
  – Parental
  – Household
  – Institutional
  – Communal
  – Social routines
Example: Increase self-efficacy

- Teen CERT
- Masters of Disasters (ARC)
- Youth Council (FEMA)
- Boy Scouts/Girl Scouts patches / awards
- Wisconsin READY Camp and Class
Boy Scouts (Preparedness Badge) +
Girl Scouts (Emergency Preparedness Patch)

- Understand hazard phases
- Demonstrate personal and family preparedness, including kits, evacuation plans, communication plans
- Engage community emergency management community
  - Learn community preparedness plans, including alerts & warnings
  - Assist in drills and exercises
- Demonstrate specific response skills [Boy Scouts] (transporting or rescuing victims from specific hazards)
- Demonstrate the “science” of natural hazards [Girl Scouts]
- Conduct troop exercise and after-action report [Boy Scouts]
- Understand emotional responses to emergencies [Girl Scouts]
Example: Promote positive worldview

- The 9/12 Generation Project
- VAYLA
- Rethinkers
- Urban Resilience Program (Israel)
- Disaster Readiness Actions for Teens
The Rethinkers (worldview + agency)

• Begun in June 2006 with twenty middle school students in New Orleans, as a summer program
  – “Kids Rethink New Orleans Schools”
• Students evaluate schools from their perspective: safety, cleanliness and bathrooms, school supplies and books, cafeterias and food
• The Rethinkers produce reports, hold news conferences, make recommendations
• Rethinkers have led campaigns to change school bathrooms, food and cafeterias, and discipline policies
• Weekend Rethinker Committees include Architecture, Digital Media, Food Justice, Garden, Restorative Justice
Challenges to building an evidence base

• Definitional
  – Challenge to measure, little pre-disaster data
  – Presence of positive state or absence of pathological state?
  – Only manifest in face of stressor

• Operational
  – Rare and unpredictable events
  – Complex, multi-level systems

• Political
  – Federal government generally does not fund child resilience strategies or programs, thus little incentive to evaluate
  – Most programming in voluntary and philanthropic sectors little appetite for funding research
  – “Root cause” theories focus on structural problems (e.g., health disparities, social inequities)
From Research to Action: An evolving case study
GULF COAST POPULATION IMPACT PROJECT

GOALS

- To identify communities along the Gulf Coast - from Panama City, FL to the western border of LA - in which children were adversely affected by the Deepwater Horizon oil spill.

- To characterize the ways that the oil spill have affected children along the Gulf Coast.

- To identify the resources and services that would be most helpful to these children.
Approach

• Analysis of secondary data to create Oil Spill Impact Score
  – National Oceanic and Atmospheric Administration (NOAA) oil spill data
  – BP individuals and business compensation claims data
• Household survey based on stratified cluster sampling, n=1,437 across four states (LA, MS, AL, FL)
• Focus groups with parents, grandparents, and children
• Key informant interviews with health care providers, administrators, educators, advocates, and community leaders
Poor physical or mental health among children

- Historical communal poverty
- Cumulative stressors (Katrina, income inequality)
- Limited access to health care
- Exposure to oil spill
- BP compensation (anticipated or received)
- Current household poverty

Factors contributing to poor physical or mental health among children:
- Historical communal poverty
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Key Themes from Community Engagement

- Significant issues related to children’s health and well-being
  - Access to care, esp. specialty and MH
  - Clusters of unexplained symptoms
  - Unsupervised children, unsafe behaviors
  - Dwindling recreational and occupational opportunities
- Rising economic pressures on families, cascading stressors
  - Not enough food
  - Parental depression
  - Eroding / disappearing cultures
- Communities losing ability to sustain economic opportunities, social safety net programs, sufficient provider networks
- “Oiled” communities and chronic stressor communities
  - Lingering effects of Hurricane Katrina
The Story “Behind” the Numbers

• Not so much two disasters, as it is one continuous disaster
• Acute stressors layer upon chronic stressors
  – Katrina + lack of health care access + fewer jobs + oil spill + unstable housing + food insecurity + vanishing jobs + vanishing way of life + parental despair...
• In one fishing community there are 90 teenage pregnant girls in the high school (~1 in 11)
  – “The only thing to do around here,” said one community leader, “is go fishing, get high, or get pregnant.”
• Researchers have a responsibility
  – To help communities understand the connections
  – To compel action
Research to Action: The SHOREline Project

• **S**kills
  - Youth in disaster-affected communities helping themselves, their families, their communities, and youth in other disaster affected communities

• **H**opes
  - Building a network of school based chapters

• **O**pportunities
  - Initial five chapters in New Orleans, Lafourche, Grand Isle, Gulfport, Southern Mobile county

• **R**ecovery
  - Developing/enhancing agency, self-efficacy, positive worldview, pro-social behavior

• **E**ngagement
Thank you!

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