USDA Food and Nutrition Service Research Program on Child Hunger Task Order I.
Research objectives

• Identify the household conditions that distinguish among households experiencing:
  – Very low food security in children (VLFS)
  – Food insecurity but not VLFS
  – Food secure households

• Identify the community conditions that distinguish among the three groups of households
Study Population

- Eight counties in midlands region of South Carolina
  - 470 block groups
  - 80,600 households
Study design
1,660 Food systems stakeholders

- Grocery
- Restaurants
- Emergency food
- Food assistance

Randomly selected recruitment sites (249 urban/178 rural)

- Key informant interviews
  Purposely selected

- Clients, customers, visitors, participants recruited from site

Respondents allowed to invite up to 4 others

Final sample: 200 VLFS, 200 Food insecure, 200 food secure
## Demographic Characteristics of Sample

<table>
<thead>
<tr>
<th></th>
<th>All</th>
<th>Food Secure</th>
<th>Food Insecure</th>
<th>VLFSC</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>512</td>
<td>151</td>
<td>210</td>
<td>151</td>
</tr>
<tr>
<td><strong>Female caregiver</strong></td>
<td>474</td>
<td>93% (138)</td>
<td>93% (194)</td>
<td>94%</td>
</tr>
<tr>
<td># children</td>
<td>2.1</td>
<td>2.1</td>
<td>2.0</td>
<td>2.2</td>
</tr>
<tr>
<td>% with &gt;4 children</td>
<td>12.9%</td>
<td>12.9%</td>
<td>11.6%</td>
<td>14.6%</td>
</tr>
<tr>
<td># adults</td>
<td>1.8</td>
<td>1.8</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>% with 1 adult</td>
<td>43.7%</td>
<td>38.9%</td>
<td>44.7%</td>
<td>47.0%</td>
</tr>
<tr>
<td>Less than college degree</td>
<td>75.1%</td>
<td>61.5%</td>
<td>78.9%</td>
<td>83.3%</td>
</tr>
<tr>
<td>Black</td>
<td>78.7%</td>
<td>70.2%</td>
<td>78.6%</td>
<td>87.4%</td>
</tr>
</tbody>
</table>
Data management and analysis

• Data cleaning and merges in SAS
• Composite variables developed per author guidance
• Data analysis in STATA 12
  – Bivariate analyses (anova, chi-squared tests) used for variable selection
  – Models developed based on theoretical constructs
  – Final model most parsimonious fit
ADAPTATION PHASE

- crisis
- crisis
- crisis

MEANINGS
- situational
- global

DEMANDS
- stressors
- strains

ADAPTIVE CAPABILITIES
- resources
- coping

FAMILY ADAPTATION
- +
Saranson et al.
Life Experiences Survey. 1978

*, p<0.000
<table>
<thead>
<tr>
<th></th>
<th>Demands</th>
<th>Food Secure B(p value)</th>
<th>Food Insecure B(p value)</th>
<th>VLFSC B(p value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rent ($100)</td>
<td>Reference</td>
<td>-0.04(0.337)</td>
<td>-0.01(0.893)</td>
</tr>
<tr>
<td></td>
<td>Transportation ($100)</td>
<td>Reference</td>
<td>0.07(0.519)</td>
<td>-0.01(0.946)</td>
</tr>
<tr>
<td></td>
<td>Electricity ($100)</td>
<td>Reference</td>
<td>0.22(0.062)</td>
<td>0.17(0.205)</td>
</tr>
<tr>
<td></td>
<td>Homelessness</td>
<td>Reference</td>
<td>0.36(0.285)</td>
<td>0.88(0.016)</td>
</tr>
<tr>
<td></td>
<td>Domestic Violence</td>
<td>Reference</td>
<td>0.47(0.155)</td>
<td>0.49(0.167)</td>
</tr>
<tr>
<td></td>
<td>CHAOS</td>
<td>Reference</td>
<td>0.06(0.318)</td>
<td>0.09(0.153)</td>
</tr>
<tr>
<td>Adaptive Capabilities</td>
<td>Wages ($500)</td>
<td>Reference</td>
<td>-0.08(0.256)</td>
<td>-0.23(0.014)</td>
</tr>
<tr>
<td></td>
<td>SNAP($100)</td>
<td>Reference</td>
<td>-0.02(0.734)</td>
<td>-0.10(0.180)</td>
</tr>
<tr>
<td></td>
<td>Social Support</td>
<td>Reference</td>
<td>-0.06(0.171)</td>
<td>-0.14(0.005)</td>
</tr>
<tr>
<td></td>
<td>Speeding Up</td>
<td>Reference</td>
<td>0.30(0.221)</td>
<td>0.44(0.110)</td>
</tr>
<tr>
<td></td>
<td>Individualizing Meals</td>
<td>Reference</td>
<td>0.28(0.390)</td>
<td>0.79(0.030)</td>
</tr>
<tr>
<td></td>
<td>Planning</td>
<td>Reference</td>
<td>-0.78(0.000)</td>
<td>-0.65(0.009)</td>
</tr>
<tr>
<td>Crises</td>
<td>Life Events</td>
<td>Reference</td>
<td>-0.01(0.203)</td>
<td>-0.03(0.020)</td>
</tr>
<tr>
<td>Global Stress Appraisals and</td>
<td>Perceived Stress</td>
<td>Reference</td>
<td>0.07(0.013)</td>
<td>0.06(0.052)</td>
</tr>
<tr>
<td>Meanings</td>
<td>Intrinsic Religiosity</td>
<td>Reference</td>
<td>-0.19(0.007)</td>
<td>-0.12(0.072)</td>
</tr>
<tr>
<td></td>
<td>Demand</td>
<td>Food Secure</td>
<td>Food Insecure</td>
<td>VLFSC B(p value)</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Demands</td>
<td>Homelessness</td>
<td>Reference</td>
<td>0.47(.107)</td>
<td>1.07(0.001)</td>
</tr>
<tr>
<td>Adaptive Capabilities</td>
<td>Wages ($500)</td>
<td>Reference</td>
<td>-0.05(.460)</td>
<td>-0.18(.034)</td>
</tr>
<tr>
<td></td>
<td>SNAP ($100)</td>
<td>Reference</td>
<td>-0.04(.471)</td>
<td>-0.11(.083)</td>
</tr>
<tr>
<td></td>
<td>Social Support</td>
<td>Reference</td>
<td>-0.11(.004)</td>
<td>-0.17(&lt;.000)</td>
</tr>
<tr>
<td></td>
<td>Individualizing Meals</td>
<td>Reference</td>
<td>0.60(.045)</td>
<td>1.06(.001)</td>
</tr>
<tr>
<td></td>
<td>Planning</td>
<td>Reference</td>
<td>-0.03(.002)</td>
<td>-0.05(&lt;.000)</td>
</tr>
<tr>
<td>Crises</td>
<td>Life Events</td>
<td>Reference</td>
<td>-0.02(.070)</td>
<td>-0.02(.070)</td>
</tr>
</tbody>
</table>

**Demands**
- Homelessness: Reference, 0.47(.107), 1.07(0.001)
- Wages ($500): Reference, -0.05(.460), -0.18(.034)
- SNAP ($100): Reference, -0.04(.471), -0.11(.083)
- Social Support: Reference, -0.11(.004), -0.17(<.000)
- Individualizing Meals: Reference, 0.60(.045), 1.06(.001)
- Planning: Reference, -0.03(.002), -0.05(<.000)

**Adaptive Capabilities**
- Wages ($500): Reference, -0.13(.082)
- SNAP ($100): Reference, -0.07(.187)
- Social Support: Reference, -0.06(.063)
- Individualizing Meals: Reference, 0.46(.073)
- Planning: Reference, -0.07(.710)

**Cries**
- Life Events: Reference, -0.02(.070)
Preliminary thoughts on implications

• Policy solutions:
  – Fair wages
  – Housing
  – SNAP nutrition education to help with meal planning
  – SNAP formulas for families that are homeless
Strengths and Limitations

• Strengths
  – One of largest samples of VLFSC families in US
  – Excellent study recruitment
  – High quality data cleaning & management (little data loss)
  – Family Adaptation Framework

• Limitations
  – Cross-sectional design
  – Limited power without additional 100 families
  – Disentangling level of program participation
Acknowledgements

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  – Jim, Craig, Sarah

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• Study team: Carrie Draper, Michael Burke, Lauren Martini, Sherretta Thomas, Nick Younginer, Emily, Amanda

• Work study students