Identifying environmental health priorities in underserved minority populations: a study of rural versus urban communities

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Introduction:
Persistent health disparities suggest traditional interventions may not always be effective for underserved populations across the urban-rural continuum, particularly in the South. Community-based participatory research (CBPR) involves the inclusion of community members as partners in all stages of the research. This approach can be effective in identifying and minimizing health effects related to environmental exposures by building capacity, resources, and skill sets within communities.1-4 A CBPR framework also bridges the gap between academic institutions and communities to alleviate misconceptions, fears, or suspicions.5 Each partner contributes unique skills and knowledge to the project to initiate sustainable, effective change that is relevant to the communities’ health needs.6 UAB partnered with community organizations—Friends of West End (Birmingham, AL) and West Central Alabama Community Health Improvement League (WCACHIL) in Camden, AL

Aims:
To establish a clear picture of community members’ concerns and priorities in order to better understand and formulate a plan to effectively address persistent health disparities in minority communities.

1. To determine the positive attributes of their communities
2. To determine how the communities define the term environment
3. To understand how views of underserved urban vs. rural communities differ regarding their environmental health issues

Methods:
A total of 8 focus groups were conducted: 4 in rural (West Central Alabama) and 4 in urban (Birmingham, AL) communities. The participants also filled out a survey to establish environmental priorities. Data were analyzed both qualitatively and quantitatively to identify patterns and trends.

Study Populations

Table 1: Summary of Rural and Urban Demographics

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>% Female</th>
<th>% Black or African American</th>
<th>% Income Less Than $20,000</th>
<th>% College Courses or Associate’s Degree</th>
<th>Median Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Camden, AL</td>
<td>40</td>
<td>80.0</td>
<td>97.5</td>
<td>50.0</td>
<td>32.5</td>
<td>52</td>
</tr>
<tr>
<td>Birmingham, AL</td>
<td>33</td>
<td>72.7</td>
<td>84.8</td>
<td>48.5</td>
<td>56.0</td>
<td>32</td>
</tr>
</tbody>
</table>

Aim 1
Urban participants referenced the convenient location and community involvement as their community’s top positive attributes while rural participants attributed the outdoors and low crime. Both communities indicated positive attributes of quiet, family-oriented community with friendly people.

Aim 2
No clear differences between urban and rural groups in defining environment were evident when answers were coded as physical environment (Rural N=16, Urban N=15), social environment (Rural N=7, Urban N=6), or both physical and social environment (Rural N=6, Urban N=8).

Results

Figure 1. Map of focus group participant’s county or neighborhood of residences. Rural focus group participants were from counties highlighted in blue (5 counties).

Table 2: Summary of Rural and Urban Demographics

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Figure 2. Venn diagram of positive attributes of participants’ communities. Numbers in parentheses reflect the total number of people who identified the attribute followed by the number of focus groups represented. Average positive attributes per urban participant (1.27); average positive attributes per rural participant (1).

Figure 3. Network diagram of environmental priorities in urban and rural communities. Size of nodes based on number of participants multiplied by number of focus groups identifying the item in discussion (triangles) or on list (circles). Categorization of items (color) described in the key. Edges (lines) between nodes based on discussion (triangle to triangle) or on list of similarities (triangle to circle).

Summary of Results

- Both communities emphasized quiet, family-oriented communities with friendly people while urban referenced the location convenience, community involvement and rural emphasized the outdoors and low crime as positive attributes.
- No clear differences between urban and rural groups in defining environment were evident; both incorporated the physical social aspects of the environment.
- There were important areas of overlap in priorities between urban and rural communities; both emphasized the importance of the social environment and shared a concern over air pollution from industrial sources.
- Urban focus groups prioritized abandoned houses and their social and physical sequelae.
- Rural communities prioritized concerns about adequate sewer and water services and road maintenance.

Conclusions:
This study was able to identify environmental health priorities in urban versus rural minority communities. In contrast to previous risk perception research, our results suggest prioritization of tangible, known risks in everyday life instead of rare, disaster-related events, even in communities that have recently experienced devastating damage from tornadoes. The findings can help inform future efforts to study, understand and effectively address environmental issues, and are particularly relevant to developing locally effective climate change adaptation strategies in vulnerable communities.

References:
4. Parker GA, Chung H, Izard BA, Reyes A, Wilkins D. Community organizing network for environmental health: using a community health development approach to increase community capacity and reduce exposure as part of the 2005-2010 NTHS.

Acknowledgements:
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