Rural-urban differences in exposure to Adverse Childhood Experiences (ACEs) among South Carolina adults

Elizabeth Radcliff, PhD 1; Elizabeth Crouch, PhD 1; Melissa Strompolis, PhD 2

1 Division of Maternal and Child Health, South Carolina Rural Health Research Center; Arnold School of Public Health, University of South Carolina, Columbia, SC
2 Children's Trust of South Carolina, Columbia, SC

Discussion

Good News for rural areas

• Compared to their urban counterparts, rural respondents in SC were less likely to report exposure to 4 or more ACEs and to report each type of ACE
• Literature shows rural children are well connected to families and communities
• Social connection are considered one of the five critical protective factors that can support and strengthen families

Challenge for rural areas

• Despite reporting less ACE exposure than urban counterparts, almost 60% of rural residents reported at least one ACE and 15% reported experiencing four or more ACEs
• Care coordination, social support services, and access ot health care are limited in rural areas
• Thus, families in rural areas may be less equipped to mitigate and manage the effects of ACEs

Public/State Policy Applications

Fund infrastructure to provide ACE-related programs and services to rural communities

Expand the Quality through Technology and Innovation in Pediatrics (QITIP) program (a program that integrates mental/behavioral health and ACE-like assessments into pediatric settings)

Fund opportunities to promote availability and access to parenting skills programs and pediatric care in rural communities.

Engage rural health care providers as advocates for an ACE assessment as part of any comprehensive pediatric medical exam

Train all public health providers in rural communities on ACEs:
• the effect of ACEs on child development
• the impact of ACEs on life trajectory
• importance of positive parenting
• how to build child and family resilience

Promote policies and programs that facilitate access to social, mental, or public health services in rural areas, including access to transportation.

Strengths and limitations

Strengths

• Use of new SC data
• Large sample size

Limitations

• Cross-sectional study with retrospective report of ACE exposure
• Institutionalized adults excluded
• Based on current residence, rather than childhood residence

Background

Adverse Childhood Experiences (ACES)

Traumatic events that occur in a child’s life between birth and 18 years of age. 1

ACE exposure is linked to risky health behaviors and chronic health conditions in adulthood. 1

ACE exposure may also result in an intergenerational cycle of negative experiences. 2,3

Rural children are different from urban children in some ways: 4

• More likely to live in poor families
• More likely to live with someone who smokes
• Less likely to be breastfed
• More likely to spend an hour+ each weekday watching television or videos

Rural parents/families are different from urban families in some ways: 4,5

• More likely to share a family meal with their child daily
• Less likely to report usually or always feeling parenting stress
• More likely to report that they live in safe and supportive communities
• More likely to attend religious services weekly

Methods

Design

• Statewide, cross-sectional analysis

Data source

• Behavioral Risk Factor Surveillance System (BRFSS)

• ACE module (11 questions)

• South Carolina data from 2014 and 2015

Variable construction

• ACEs tabulated by number and types

• Urban influence codes (UIC) determined rurality

• Covariates documented as demographic

• CDC survey sampling weights corrected for BRFSS sampling strategy

• Descriptive statistics

• Multivariable regression modeling

Description of study sample

• SC BRFSS respondents

• Responded to ACES module

• Complete demographic data

15.9% rural residents
52.8% female
68.1% non-Hispanic white
35.3% some college
35.2% < 40 years old
51.0% 40-69 years
35.2% annual income of $50,000 or more

Results

Table 1. Characteristics associated with exposure to 4 or more ACES among SC residents, 2014-2015 BRFSS

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Odds ratio *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>0.75</td>
</tr>
<tr>
<td>Female</td>
<td>1.59</td>
</tr>
<tr>
<td>Black, non-Hispanic</td>
<td>0.49</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.64</td>
</tr>
<tr>
<td>At least some college</td>
<td>0.82</td>
</tr>
<tr>
<td>Income of $25,000-49,000</td>
<td>0.69</td>
</tr>
<tr>
<td>Income of ≥ $50,000</td>
<td>0.45</td>
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</tbody>
</table>

Table 2. Rural-urban comparison of ACE exposure, by ACE type*

<table>
<thead>
<tr>
<th>ACE</th>
<th>RURAL (%)</th>
<th>URBAN (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mental illness</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>Misuse of alcohol</td>
<td>22</td>
<td>25</td>
</tr>
<tr>
<td>Misuse of drugs</td>
<td>9</td>
<td>12</td>
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<tr>
<td>Incarceration</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>Separation/divorce</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Domestic violence</td>
<td>18</td>
<td>19</td>
</tr>
<tr>
<td>Physical abuse</td>
<td>12</td>
<td>14</td>
</tr>
<tr>
<td>Emotional abuse</td>
<td>26</td>
<td>30</td>
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<tr>
<td>Sexual abuse 1</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Sexual abuse 2</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Sexual abuse 3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

* All reported findings are statistically significant

Figure 1. ACE exposure among all adults responding to the SC BRFSS survey, 2014-2015

Figure 2. Rural-urban comparison of ACE exposure by number of ACEs experienced

References


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For additional information, please contact Beth Radcliff, radclife@mailbox.sc.edu

For more about the SC Rural Health Research Center, visit http://rhr.sph.sc.edu