Can Education Overcome Life Course Effects of Childhood Adversity in the United States?

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Background, Contributions, and Hypotheses

- Childhood experiences may affect health in later life (e.g., Laditka & Laditka, 2017). We estimated the associations of 5 adverse conditions in childhood with active life expectancy, with separate estimates for African American and white women and men.
- Active life expectancy measures both life expectancy and the proportions of remaining life with and without disability.
- Research has shown that low education is associated with much shorter lives with much more disability (e.g., Laditka & Laditka, 2016).
- In this study, we examine whether education moderates the association between childhood adversity and active life expectancy; we present separate results for individuals with and without childhood adversities with high education (at least a college degree) and low education (5th grade 8).

Hypothesis 1: childhood adversity associated with more disability and shorter life
Hypothesis 2: education moderates effects of childhood adversity

Data and Methods

- Data were from the Panel Study of Income Dynamics, representing African American and white women and men ages 55+ (11 waves 1992-2013, N=4,259, 18,878 functional status transitions).
- Participants reported 5 measures of childhood health and adversity in 1999, 2001, and 2003:
  - Fair or poor childhood health
  - Growing up in a family with a single parent
  - Growing up in a family that was poor
  - Having a father with a limited education
  - Smoking during childhood
- Multinomial logistic Markov models estimated probabilities of death and difficulty in activities of daily living adjusted for age, sex, race/ethnicity, and education.
- Microsimulation created large populations to identify outcomes, with bootstrap confidence intervals.

Summary of Results

We describe results for African American women (see Table 1)

Asterisks indicate statistically significant comparisons between those with no childhood adversities and those with all 5 adversities, indicated by 95% confidence intervals for the two groups that do not include overlapping values *(p<0.05).

From age 40, life expectancy for African American women with high education with no childhood adversities was to age 80.3. The comparable expectancy with all 5 childhood adversities was 74.4.

From age 40, African American women with high education with no childhood adversities lived 13.0% of remaining life with disability compared with 36.7% for women with all 5 childhood adversities.

White women (Table 2); African American men (Table 3); White men (Table 4)

For all results, education moderated the effects of childhood adversities

Table 1. Association of Adverse Childhood Circumstances with Life Expectancy and ADL Disability, African American Women, Ages 40 and 70*

<table>
<thead>
<tr>
<th>From</th>
<th>Life Expectancy</th>
<th>Percent of Life</th>
<th>Education: ≤ Grade 8</th>
<th>All measured adversities</th>
<th>College Graduate</th>
<th>No measured adversities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 40</td>
<td>mean</td>
<td>LB</td>
<td>UB</td>
<td>mean</td>
<td>LB</td>
<td>UB</td>
</tr>
<tr>
<td>40</td>
<td>81.3</td>
<td>32.8</td>
<td>40.3</td>
<td>11.2</td>
<td>12.4</td>
<td>15.7</td>
</tr>
<tr>
<td>70</td>
<td>74.9</td>
<td>31.3</td>
<td>29.6</td>
<td>12.2</td>
<td>16.0</td>
<td>21.9</td>
</tr>
</tbody>
</table>

*p<0.05, comparing people with all measured adversities to those with no measured adversities.

Table 2. Association of Adverse Childhood Circumstances with Life Expectancy and ADL Disability, White Women, Ages 40 and 70*

<table>
<thead>
<tr>
<th>From</th>
<th>Life Expectancy</th>
<th>Percent of Life</th>
<th>Education: ≤ Grade 8</th>
<th>All measured adversities</th>
<th>College Graduate</th>
<th>No measured adversities</th>
</tr>
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<tbody>
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<td>Age 40</td>
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Discussion and Implications

- African American and White women and men who experienced good health and socioeconomic advantages in childhood lived longer lives with a smaller percentage disabled than adults who experienced poorer health and socioeconomic disadvantages in childhood
- More education moderated the effects of poorer health and socioeconomic disadvantages in childhood
- Childhood adversity had larger effects on disabled life expectancy than did education
- Results highlight the important roles of childhood health and education at older ages and underscore the usefulness of policies to increase education and improve social and economic conditions for children

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Related research

Photos: The National Archives, Washington, DC.