Poverty and its Effects

Painting a Picture of Current Trends and Why they Matter
Poverty, Inequality, and the Achievement Gap
“Achievement Gap”

Age 17

Scale score


White

Black

Score gap
Black–White Achievement Gap on NAEP Math Tests

- Age 9
- Age 13
- Age 17
- Average gap

Points

College Students at the top 160 Institutions

- Top Quartile of the income distribution: 75%
- 3rd Quartile: 15%
- 2nd Quartile: 7%
- Bottom Quartile: 3%
College Completion

Figure 3: Fraction of Students Completing College, by Income Quartile and Year of Birth

Bailey & Dynarski, 2011
EDUCATIONAL ATTAINMENT BY HOMEWORK FOR THREE SES GROUPS

DeLuca & Rosenbaum, 2001
Education Gap

The United States once led the world in educating large numbers of its citizens, but that is no longer true. Compared with most other advanced industrial nations, the United States ranks near the bottom in the share of its working-age citizens who surpass the educational attainment of their parents.

Educational attainment of 25 to 64-year-olds who have finished school, compared with that of their parents

Source: Organization for Economic Cooperation and Development
Causes of the Achievement Gap
Home vs. School Influence

- “The Coleman Report” (1966) first established that non-school factors are better predictors of achievement than are in-school factors.

- About 2/3 of variance in achievement can be explained by non-school factors (Rothstein, 2004).

- Kids spend only about 13–15% of their waking hours in school from birth to age 18.
Large gap present at start of school (Lee & Burkam, 2002)

Achievement gap between races and classes grows during summer breaks (Entwisle & Alexander, 1992; Heyns, 1978; Stein, 2009)

About ¾ of the Achievement Gap forms outside of school hours (Murphy, 2009)
Growth of Achievement Gap

Summary of Reading Achievement Trajectories

Average Reading Achievement Level

Kindergarten  Summer  First Grade  Summer  Second Grade  Summer  Third Grade  Summer  Fourth Grade  Summer

Middle-Income Students (no summer school)  Low-Income Students (no summer school)
### Table 5: Results of Evaluations of Individual Factors/Conditions

<table>
<thead>
<tr>
<th>Factor/Condition</th>
<th>Empirical Evidence</th>
<th>Theory</th>
<th>Policy Malleability</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strong Evidence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vision</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Home Environment</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>8</td>
</tr>
<tr>
<td>Violence/Crime</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Homeownership</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Mobility/Homelessness</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Nutrition</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Physical Fitness</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Stress</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Environmental Toxins/Pollution</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Prenatal Care</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Parenting Styles</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Language Exposure</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td><strong>Moderate Evidence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Conditions</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Mental Health</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Noise</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Teen Pregnancy</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Disorder</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Social Organization</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Crowding</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td><strong>Weak Evidence</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public Housing</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Obesity</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>1.81</td>
<td>2.57</td>
<td>1.71</td>
<td></td>
</tr>
</tbody>
</table>

Economic Inequality
Source: Michael I. Norton, Harvard Business School; Dan Ariely, Duke University
Growth in Median Income, by Quintile (1966=1)
Rising income disparity

Gini index of income inequality

<table>
<thead>
<tr>
<th>1970s</th>
<th>'80s</th>
<th>'90s</th>
<th>2000s</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.38</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.42</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.44</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.46</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0.48</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Economic Mobility
A Matter of Degrees
Change between 2000 and 2010 in inflation-adjusted average earnings by educational attainment; bar height measures change in earnings, bar width measures share of employment.

<table>
<thead>
<tr>
<th>Educational Attainment</th>
<th>Share of Jobs</th>
<th>Earnings Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than High School</td>
<td>12.4%</td>
<td>-10.9%</td>
</tr>
<tr>
<td>High School Graduate</td>
<td>30.7%</td>
<td></td>
</tr>
<tr>
<td>Some College</td>
<td>26.4%</td>
<td></td>
</tr>
<tr>
<td>College Graduate</td>
<td>19.5%</td>
<td></td>
</tr>
<tr>
<td>Masters Degree</td>
<td>8.0%</td>
<td></td>
</tr>
<tr>
<td>M.D., J.D., M.B.A.</td>
<td>1.5%</td>
<td></td>
</tr>
<tr>
<td>Ph.D.</td>
<td>1.5%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Census Bureau via Matthew Slaughter
U.S. Economic Mobility

Source: Economic Mobility Project, Pew Center on the States | Graphic: Hagit Bachrach
Figure 18

College Graduates Are More Upwardly Mobile from the Bottom and Less Likely to Fall from the Top and Middle

Chances of moving up or down the family income ladder, by education and parents’ quintile

Note: Income is adjusted for family size.
Costs for Americans...

... have soared for education, child care and health care.

Change in prices relative to a 23% increase in prices for all items, 2005-2014

... and have plummeted for televisions, toys and phones, relative to other prices.
How Poverty Affects Society
“The rich must not ignore the poor because both rich and poor are tied together in a single garment of destiny. All life is interrelated and all men are interdependent.”

–Rev. Dr. Martin Luther King, Jr.
Nobel Prize Acceptance Speech, 1964
Economic Costs of Poverty

- Each high school dropout costs our country $127,000 (Belfield & Levin, 2007)

- Childhood poverty costs our country $500 Billion annually (Holzer et al., 2007)
Growing evidence that inequality harms health (Marmot, 2004; Wilkinson & Pickett, 2010) and economic growth (Jencks, 2002; Stiglitz, 2012)

And may have led to the Great Recession (Rajan, 2010; Galbraith, 2012)
Lower–Income Children:

- more negative life events (McLoyd, 1990)
- exposed to more violence (Foster & Brooks-Gunn, 2009), crime (Goldmann, et al., 2011) and disorder (Hill, et al., 2009)
- less residential stability and more homelessness and mobility (Banyard & Graham-Bermann, 1998)
- live amidst more physical deterioration and in lower quality housing (Evans, et al., 2001)
- reside in noisier (Evans & Kantrowitz, 2002), more crowded (Evans & English, 2002), and more polluted (Evans & Kantrowitz, 2002) areas
- experience more family disruption (McLanahan, 1985)
- possess fewer resources with which to combat problems (Banerjee & Mullainathan, 2008)
Allostatic Load

- The degree to, and frequency with, which the body’s stress management system has to act
- Firefighters metaphor
- Higher income/More education = lower allostatic load (Seeman et al., 2008)
- Adults who’d spend more time in poverty had higher allostatic loads (Gruenewald et al., 2012)
Play Spent Simulation

http://playspent.org/playspent.html
Results of Stress
Cognitive Ability

- Simulating financial dilemmas of poverty resulted in treatment group losing 13 IQ points (Mani et al., 2013)
- Time spent in poverty between birth and age 17 explains lower working memory (Evans & Schamberg, 2009)
Adverse Childhood Experiences

- Original studies asked about 7 different experiences
  - ½ reported 1 event, ¼ reported at least 2
- People with ACE score of 4+ 40–1200% more likely to experience a wide array of health problems (Felitti, et al., 1998)
- People with ACE score of 6 die 20 years earlier (Brown et al., 2009)
- Average inmate had ACE score of 6 (Abram et al., 2004)
Students who had experienced more negative life events displayed less self-control (Duckworth, et al., 2013)

Stresses of living in poverty can deplete self-control over time (Spears, 2011)

Constant need to focus on immediate survival tasks reduces attention to more long-run activities (Banerjee & Mullainathan, 2008)
Self-Control and Health
We all struggle to:
- Lose weight
- Exercise more
- Eat healthier
- Quit smoking
LET'S SEE... I'LL GRILL THE CHICKEN BREAST, STEAM THIS BROCCOLI...

OOH AND I'LL HAVE A FEW OF THESE CHIPS ON THE SIDE!

10 MINUTES LATER.

OH NO.

Source: http://maximumble.thebookofbiff.com/2013/11/14/730-plans/
If you were exhausted . . .

- Which would you choose?
Comparison Shopping:
McDonald’s for Four

$27.89

- 2 Big Macs
- 1 cheeseburger
- 1 6-pc. Chicken McNuggets
- 2 medium fries
- 2 small fries
- 2 medium Cokes
- 2 small Cokes

Nutrition facts per person

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CALORIES</strong></td>
<td>900 (average)</td>
<td></td>
</tr>
<tr>
<td><strong>FAT</strong></td>
<td>37 grams</td>
<td></td>
</tr>
<tr>
<td><strong>CARBOHYDRATES</strong></td>
<td>123 grams</td>
<td></td>
</tr>
<tr>
<td><strong>PROTEIN</strong></td>
<td>23 grams</td>
<td></td>
</tr>
</tbody>
</table>
Chicken, Potatoes and Salad for Four

$13.78

A savings of $14.11, or 51%, over the McDonald’s meal. Prices per item:

- $1.50
- $2.98
- $1.49
- $5.96
- 5 cents
- 55 cents
- 75 cents

Nutrition facts per person and difference from McDonald’s meal:

- CALORIES: 934 (+4%)
- FAT: 39 grams (+5%)
- CARBOHYDRATES: 80 grams (-35%)
- PROTEIN: 67 grams (+191%)
Conclusion

- Poverty impacts individuals in myriad ways
  - And these impacts are growing
- Partly as a result, it affects society as a whole
  - Yes, it affects you if your neighbors struggle
The Competition

- What problems are people facing related to food, nutrition, and hunger as a result of poverty?
Thank you

cbower@niagara.edu