Does Violent Crime Affect Student Achievement?
Evidence from Chicago, Illinois

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Background: Why might violent crime matter for educational achievement? There are underlying mechanisms (social and cultural processes) that connect structural processes to individual outcomes. Social/psychological burdens of living in neighborhoods with high rates of crime lead to higher levels of stress, and subsequently, academic disengagement. Due to direct exposure or experience, injury of close friends or family, knowledge that violence occurs near home.

About Chicago, IL
Community areas that experience high rates of violent crime also experience high poverty concentration and severe racial segregation. MAP: Per Capita Income by Community Area
*Community areas outlined in red are the top ten most violent neighborhoods in Chicago.

MAPS: Racial Composition by Community Area

%African American
%Hispanic

Percent African American PCT A

Percent Hispanic PCT A

DESCRIPTIVE STATISTICS: Violent Crime (City-Wide & by location)

<table>
<thead>
<tr>
<th>CRIME TYPE</th>
<th>2009 CITY TOTAL</th>
<th>2010 CITY TOTAL</th>
<th>2011 CITY TOTAL</th>
<th>2012 CITY TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assault</td>
<td>12205 10.8%</td>
<td>12162 11.0%</td>
<td>12082 10.5%</td>
<td>12152 11.0%</td>
</tr>
<tr>
<td>Robbery</td>
<td>17542 15.6%</td>
<td>19526 17.7%</td>
<td>18613 16.5%</td>
<td>19300 16.8%</td>
</tr>
<tr>
<td>Total</td>
<td>29747 26.4%</td>
<td>31688 28.7%</td>
<td>30795 27.0%</td>
<td>31452 27.8%</td>
</tr>
</tbody>
</table>

Since 2009, the top ten most dangerous community areas have accounted for more than one third of all violent crimes committed in Chicago.

Research Questions
1. What is impact of violent crime on student achievement?
2. Do certain types of crimes affect student achievement more than others?
3. Are these effects stronger among poor, ethnically homogenous communities?

Data

Chicago Public Schools

School-level characteristics:
- Racial composition
- % Qualify for free lunch
- % With individualized education plan
- % Bilingual
- Results from Illinois State Achievement Test
- % Who met expectations
- % Who are below poverty level
- % SGed 25+ without HS diploma

Grades 3 – 8 of Chicago public school students in 2009 to 2010 to 2012 – 2013
- Number of total observations = 2,106 schools
  - 499 schools located in community areas that one of the top ten most dangerous
  - 1,607 schools located in other 67 community areas

Measures

Outcome:
- Percent of students who meet expectations for ISAT Math
- Percent of students who meet expectations for ISAT Reading

Predictors:
- Community characteristics: racial composition, per capita income, % without high school diploma, % households below poverty line
- School characteristics: racial composition, % bilingual, % qualify for free lunch, % with individualized education plan

Discussion of Findings
- Results were inconclusive due to invariance of community area demographic data.

Limitations
- The effects of violence are cumulative.
- Outcomes does not consider non-cognitive achievement.
- There is variation in timing of social/psychological mechanisms that connect violent crime to student achievement. Some effects are more immediate than others.
- Residential designation is not random.
- Data is school-level; should have used student-level.
- Analysis should analyze other indicators of student performance.
  - Surveys – would help us understand students’ perception of violence
  - Grade Point Average – would allow us to control for student behavior and standing within the classroom, overall effort

Next Steps
- Further quantitative and qualitative research needed to understand the experience of students who grow up in violent environments
- Find a way to quantify factors that are active in the relationship between violent crime and education outcomes
- Development of alternative or “oppositional” culture
- Peer effects
- Student perception

Thank you!
- Professor Weinstein for your tireless help
- Institute for Education and Social Policy

Alternative Models
- Model 2: Instead of measuring the impact of violent crimes as a whole, this model included variables for each type of violent crime.
  - Impact of each type of crime is statistically insignificant for both math and reading.
- Model 3: Instead of measuring the impact of violent crime across all community areas, this model looks at the impact within the top ten most violent community areas and within those not included in this group.
  - Impact of violent crimes on the percent of students who meet expectations is statistically significant for reading among schools located in the top ten most violent community areas.