Crime Is Local: An Exploration of Violent Crime in St. Louis

Beth M. Huebner
University of Missouri-St. Louis
Explore St. Louis
And Get Murdered.

THE MOST VIOLENT CITY IN AMERICA
Problems with Crime Rankings

- What crimes are included in the rankings?
- How is crime measured?
- What is the geographic region covered by the rankings?
- Do the results consider changes in crime over time?
  - More information on crime trends in St. Louis and other cities
  - See – [www.crimetrends.com](http://www.crimetrends.com) produced by Richard Rosenfeld, Curators Professor, UMSL
What does the ‘crime problem’ look like in St. Louis?

Explanations of Risk
## District Aggravated Assault and Murder Rates

<table>
<thead>
<tr>
<th></th>
<th>Aggravated Assault Rate (per 10,000)</th>
<th>Murder Rate (per 10,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Average*</td>
<td>30.65</td>
<td>0.65</td>
</tr>
<tr>
<td>U.S. Districts of Comparable Size**</td>
<td>25.99</td>
<td>0.51</td>
</tr>
<tr>
<td>Eastern District of Missouri</td>
<td>35.52</td>
<td>0.73</td>
</tr>
</tbody>
</table>

*90 U.S. federal judicial districts  
**Districts ranging from 2,100,000 to 3,500,000
Aggravated Assaults w/Firearm 2003-2005 in St. Louis

Concentration of Assaults

Low

Medium

High

Data provided by St. Louis Police Department
Gun Seizures and Aggravated Assaults w/Firearm 2003-2005 in St. Louis

Legend
- Gun Seizures
- Concentration of Assaults

Data provided by St. Louis Police Department
Density of Gang Members Across St. Louis*

Legend
Kernal Density Function:
Gang Members per Square Mile

- 0 - 9
- 10 - 17
- 18 - 26
- 27 - 36
- 36 - 43
- 44 - 52
- 53 - 61
- 62 - 70
- 71 - 78
- 79 - 87
- 88 - 96
- 97 - 104
- 105 - 113
- 114 - 122
- 123 - 130
- 131 - 139
- 140 - 148
- 149 - 157
- 158 - 165
- 166 - 174
- 175 - 183
- 184 - 191
- 192 - 200
- 201 - 209
- 210 - 217

*Average Nearest Neighbor Test Indicates Significant Clustering (p<.01)

Source: REJIS Gang Tracking System, St. Louis, MO
Neighborhood Disadvantage

- < HS Education
- Female Headed Households
- Public Assistance
- Poverty

- Most Disadvantaged
- St. Louis
- National
Gun Crime in St. Louis

Where we live
Who we live by
Concentration of Aggravated Assaults w/Firearm in St. Louis

Neighborhoods listed by Number of Incidents and Name
94 The Greater Ville
91 Wells/Goodfellow
89 Jeff VanderLou
87 Baden
86 O'Fallon
70 Dutchtown
60 Penrose
50 Walnut Park East
48 Mark Twain
46 Gravois Park

Number of Aggravated Assaults

Data provided by St. Louis Police Department
Concentration of Murders in St. Louis

Neighborhoods listed by Number of Incidents and Name

12  Wells/Goodfellow
  8  Fairground Neighborhood
  7  Walnut Park West
  7  Jeff VanderLou
  4  College Hill
  4  The Greater Ville
  4  Hyde Park
  4  Dutchtown
  3  Riverview
  3  Walnut Park East

Number of Murders

<table>
<thead>
<tr>
<th>Number of Murders</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1-2</td>
<td>1</td>
</tr>
<tr>
<td>3-12</td>
<td>2</td>
</tr>
</tbody>
</table>

Data provided by St. Louis Police Department

0  15  3  6 Kilometers
## Rates of Aggravated Assault with a Firearm

<table>
<thead>
<tr>
<th>Location</th>
<th>Population</th>
<th>Incidents</th>
<th>Rate (per 1,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis City</td>
<td>352,022</td>
<td>2,272</td>
<td>6.45</td>
</tr>
<tr>
<td>Wells/Goodfellow</td>
<td>8,193</td>
<td>91</td>
<td>11.11</td>
</tr>
<tr>
<td>Dutchtown</td>
<td>17,222</td>
<td>70</td>
<td>4.06</td>
</tr>
<tr>
<td>St. Louis County</td>
<td>1,068,262</td>
<td>506</td>
<td>0.47</td>
</tr>
<tr>
<td>Jennings</td>
<td>15,056</td>
<td>34</td>
<td>2.26</td>
</tr>
<tr>
<td>University City</td>
<td>37,493</td>
<td>58</td>
<td>1.55</td>
</tr>
</tbody>
</table>
Disadvantage

Poverty – 41%
Unemployment – 23%
< H.S. – 40%
Disadvantage
Poverty – 30%
Unemployment – 12%
< H.S. – 36%
Spatial Distribution of Gun Assaults and Resource Deprivation in St. Louis

Legend

- < -1.5 S.D. - Very Low Deprivation
- -1.5 to -0.5 S.D. - Lower than Average Deprivation
- -0.5 to 0.5 S.D. - Average Deprivation/Affluence
- 0.5 to 1.5 S.D. - Higher than Average Deprivation
- 1.5 to 2.2 S.D. - Very High Deprivation
- < -1.5 S.D. - Very Low Gun Assault Rate
- -1.5 to -0.5 S.D. - Lower than Average Gun Assault Rate
- -0.5 to 0.5 S.D. - Average Gun Assault Rate
- 0.5 to 1.5 S.D. - Higher than Average Gun Assault Rate
- > 1.5 S.D. - Very High Gun Assault Rate

Parks/Nonresidential

Source: Gun assault data provided by the St. Louis Metropolitan Police Department. Resource deprivation is an index consisting of the following Census demographic characteristics: percent black, percent living below poverty, percent vacant housing units, percent receiving welfare, percent female headed households with children under 10.
Relative Risk and Clustering of Gun Assaults Across St. Louis Census Tracts, 2003-2005

Legend
Excess Risk of Gun Assaults (using 1990 Population)
Values and Interpretation:
- 0.0 - 0.25 = Risk Much Less Than Expected (N=23)
- 0.251 - 0.50 = Less Than Expected Risk (N=17)
- 0.501 - 1.00 = Less Than Expected to Expected (1.00) Risk (N=22)
- 1.01 - 2.00 = Greater Than Expected Risk (N=24)
- 2.01 - 4.00 = Greater Than Expected Risk (N=24)
- > 4.00 = Risk Much Greater Than Expected (N=1)
Non-Residential Census Tracts

LISA w/ EB Smoothing Clustering Results:
Significant Clusters:
- No Significant Clustering
- High Gun Assault Tracts Surrounded by High
- Low Gun Assault Tracts Surrounded by Low
- Low Gun Assault Tracts Surrounded by High
- Non-Residential Census Tracts

Moran's I w/ EB Rate= .50***

Source: Data Supplied by St. Louis Metropolitan PD (2003-2005)
The Spatial Correlation Between Gun Assaults in a Given Neighborhood and the Average Rate of Gang Members Residing in Surrounding Neighborhoods

Legend
Bivariate LISA Results:

Values and Interpretation-
- Non-significant
- High Gun Assault Surrounded by High Gang
- Low Gun Assault Surrounded by Low Gang
- Low Gun Assault Surrounded by High Gang
- High Gun Assault Surrounded by Low Gang
- Non-Residential Tracts

Source: Gang data supplied by REJIS' Gang Tracking System. Gun Assaults provided by St. Louis Metropolitan Police Dept.
Patterns of Juvenile Gun Acquisition and Use

Evidence from Offender Interviews
Have you acquired a gun within the previous year?

- Juveniles: 75%
- Adults: 51%

Percent
Have you fired this gun in the last year?

* Percentages were calculated based on respondents who reported acquiring a gun within the previous year.
Most important consideration in deciding to carry a gun?

- **Penalties for Carrying**: 45% for Juveniles and 45% for Adults.
- **Armed Person on Street**: 55% for both Juveniles and Adults.

*Percentages were calculated based on respondents who reported acquiring a gun within the previous year.*
## Determinants of Gun Use – Gun Owners Only

<table>
<thead>
<tr>
<th></th>
<th>Juveniles (n=202)</th>
<th>Adults (n=409)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>s.e.</td>
</tr>
<tr>
<td>Gang membership</td>
<td>1.42***</td>
<td>.37</td>
</tr>
<tr>
<td>Personal offense</td>
<td>-.20</td>
<td>.33</td>
</tr>
<tr>
<td><strong>Perceptual Measures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased gun use</td>
<td>.49</td>
<td>.32</td>
</tr>
<tr>
<td>Crime gun prevalence</td>
<td>-.20</td>
<td>.32</td>
</tr>
<tr>
<td>Access to guns</td>
<td>.00</td>
<td>.40</td>
</tr>
<tr>
<td>Fear of the street</td>
<td>-.10</td>
<td>.31</td>
</tr>
<tr>
<td>Increased risk of arrest</td>
<td>.13</td>
<td>.31</td>
</tr>
</tbody>
</table>
Key Findings

- Gun assault is the most clustered violent crime in St. Louis.
- Gang membership is also significantly clustered in certain neighborhoods in the city.
- A focus on gangs will pay dividends for reducing gun assaults.
- The gun assault problem is affected most by concentrations of gang membership and disadvantage.
- Where you live and who you live by determines neighborhood levels of gun assault.
  - “Know thy neighbor.”
Future Directions – Policy Implications

- Maintain a focus on neighborhoods with large concentrations of violent crime and gang members
  - Wells Goodfellow Parole-Police Partnership
    - Probation Notification Meetings
  - Gang CPR Program
  - Targeted Prosecution
- Early Intervention
  - Weed and Seed
  - GREAT Program
  - Fundamental issues of poverty, disadvantage