Individual, Institutional, and Community Sources of School Violence: A Meta-Analysis

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Project Overview

1. Organize the existing empirical knowledge base regarding school violence

2. Identify the key individual-, school-, and community-level factors that should be targeted for change and/or intervention to reduce school violence

• In progress, Funded FY 2015
• January 2016 to June 2018
Statement of the Problem

- School violence is of great concern to scholars, policymakers, and the public

- There are currently many pressures to enact policies that enhance school safety

- Creating effective, evidence-based policies would first require knowing what the sources (or “root causes”) of school violence are—but we do not yet know as much as we should
Statement of the Problem

• The lack of knowledge of the causes of violence in school is not due to a lack of studies on the subject

• Lack of effort to organize the knowledge that has been produced

• After decades of empirical research, it is important that we firmly determine what this literature shows are the important individual, institutional, and community-level sources of violence at school
The Importance of Meta-Analysis

• Allows for the calculation of precise estimates of the “effect size” of certain relationships

• Useful for organizing knowledge on a particular subject

• Can also provide firm evidence about how the effect size of a certain relationship varies within a body of literature
Project Purpose

• Determine the key individual-, school-, and community-level factors that are associated with aggression or violence at school

• Identify these sources for both perpetration and victimization
Sample of Studies

• All quantitative studies on aggression, violence, and victimization occurring within K-12 schools were eligible for inclusion (published up to Jan 2016)

• Electronic searches through Google Scholar and 120 different peer-reviewed journals in education, psychology, sociology, social work, health, criminology, and youth development

• Searched using various combinations of the following key phrases:
  • school, violence, victim*, bully*, aggress*, peer, intimidation, assault, attack, harm, weapon, gun, abuse, fight, offending, crime
Sample of Studies

- Identified **3,874** studies that met initial screening criteria
  - Based on title, abstract, and general topic
  - Erred on the side of inclusion

- As of November 1\textsuperscript{st}, 2017:
  - Reviewed **2,228** of these studies (65%)
  - Many excluded for not measuring aggression/violence in school
  - Coded **508** studies thus far
  - Final sample projected ~700 studies
Coding of Studies

• Developed a detailed coding scheme for each study
  • Include both bivariate and multivariate effect sizes
  • Include multiple effect sizes per study
  • Converted all effect sizes to common metric ($r$)

• Effect sizes coded according to 58 different characteristics
  • Sample size, composition, and origin
  • Model specification and research design
  • Type of dependent variable and measurement
  • Covariates in multivariate models
Coding of Studies

• Outcomes:
  • **Victimization (55.5%)**
    • Bullying
    • Threats
    • Assault
    • Assault with weapon
    • Shot/stabbed
    • Sexual harassment
    • Sexual assault
    • Exposure to violence
    • Personal theft
  • **Perpetration (45.5%)**
    • Bullying
    • Threats
    • Assault
    • Assault with weapon
    • Shot/stabbed
    • Sexual harassment
    • Sexual assault
    • Weapon carrying
    • Personal theft
Coding of Studies

• Individual-level predictors:
  • Age
  • Sex
  • Race/ethnicity
  • Socioeconomic status
  • IQ
  • Self-control
  • Antisocial attitudes
  • Antisocial behavior
  • Substance use
  • Victimization
  • Childhood abuse
  • Deviant peer association
  • Risk avoidance
  • Weapon carrying

• Unstructured socializing
• Extracurricular activities
• Bonds to school
• Bonds to parents
• School performance
• Social competence
• Popularity
• Social exclusion
• Disability (learning or physical)
• Sexual orientation
• Gender identity
• Immigrant status
Coding of Studies

• School-level predictors:
  • Negative school climate
  • Urban school
  • School size
  • School disorder
  • Violent school context
  • School resource officer(s)
  • School security guards
  • Metal detectors
  • Security cameras

• Community-level predictors:
  – Economic deprivation
  – Collective efficacy
  – Community disorder
  – Community crime rate
Plan for Analysis

• The 508 studies we’ve coded thus far contribute 6,441 effect sizes, and draw from 464 independent data sets
  • 3,578 effect sizes for victimization
  • 2,863 effect sizes for perpetration

• Effect sizes, nested within studies, nested within data sets

• Multilevel modeling to estimate mean effect sizes
  • “Variance-known” hierarchical linear models (Raudenbush & Bryk, 2002)

• Effect sizes \( r \) interpreted as standardized correlation coefficients
Results:
Mean Effect Sizes for Victimization
<table>
<thead>
<tr>
<th>Rank</th>
<th>Factor</th>
<th>Mean ESE</th>
<th>N ESEs</th>
<th>Rank</th>
<th>Factor</th>
<th>Mean ESE</th>
<th>N ESEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Other victimization</td>
<td>.419**</td>
<td>339</td>
<td>11</td>
<td>School performance</td>
<td>-.128**</td>
<td>155</td>
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<td>2</td>
<td>Violent school context</td>
<td>.297**</td>
<td>44</td>
<td>12</td>
<td>Substance use</td>
<td>.119**</td>
<td>22</td>
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<td>3</td>
<td>Social competence</td>
<td>-.285**</td>
<td>172</td>
<td>13</td>
<td>Antisocial attitudes</td>
<td>.109**</td>
<td>34</td>
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<tr>
<td>4</td>
<td>Antisocial behavior</td>
<td>.228**</td>
<td>330</td>
<td>14</td>
<td>Weapon carrying</td>
<td>.106*</td>
<td>15</td>
</tr>
<tr>
<td>5</td>
<td>Self-control</td>
<td>-.205**</td>
<td>15</td>
<td>15</td>
<td>Sexual orientation</td>
<td>.100**</td>
<td>31</td>
</tr>
<tr>
<td>6</td>
<td>Risk avoidance</td>
<td>.199**</td>
<td>22</td>
<td>16</td>
<td>Parent bonds</td>
<td>-.092**</td>
<td>65</td>
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<tr>
<td>7</td>
<td>Disability (any)</td>
<td>.186**</td>
<td>87</td>
<td>17</td>
<td>School disorder</td>
<td>.079**</td>
<td>28</td>
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<tr>
<td>8</td>
<td>Negative school climate</td>
<td>.173**</td>
<td>139</td>
<td>18</td>
<td>Extracurricular activities</td>
<td>-.067**</td>
<td>72</td>
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<tr>
<td>9</td>
<td>Social exclusion</td>
<td>.135*</td>
<td>30</td>
<td>19</td>
<td>Sex</td>
<td>.063**</td>
<td>900</td>
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<tr>
<td>10</td>
<td>School bonds</td>
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<td>141</td>
<td>20</td>
<td>Age</td>
<td>-.050**</td>
<td>261</td>
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</table>

*p < .05; **p < .01
Results:
Mean Effect Sizes for Perpetration
<table>
<thead>
<tr>
<th>Rank</th>
<th>Variable</th>
<th>Mean ESE</th>
<th>N ESEs</th>
<th>Rank</th>
<th>Variable</th>
<th>Mean ESE</th>
<th>N ESEs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Antisocial behavior</td>
<td>.449**</td>
<td>541</td>
<td>11</td>
<td>Sex (male)</td>
<td>.116**</td>
<td>555</td>
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<td>Deviant peers</td>
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<td>52</td>
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<td>School size</td>
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<tr>
<td>3</td>
<td>Victimization</td>
<td>.238**</td>
<td>139</td>
<td>13</td>
<td>Negative school climate</td>
<td>.086**</td>
<td>59</td>
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<tr>
<td>4</td>
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<td>.198**</td>
<td>170</td>
<td>14</td>
<td>School resource officers</td>
<td>.081*</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>Self-control</td>
<td>-.186**</td>
<td>71</td>
<td>15</td>
<td>Popularity</td>
<td>-.080*</td>
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<tr>
<td>6</td>
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<td>-.174**</td>
<td>151</td>
<td>16</td>
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<td>35</td>
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<tr>
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<td>Violent school context</td>
<td>.163**</td>
<td>30</td>
<td>17</td>
<td>Social exclusion</td>
<td>.066*</td>
<td>27</td>
</tr>
<tr>
<td>8</td>
<td>School performance</td>
<td>-.162**</td>
<td>64</td>
<td>18</td>
<td>SES</td>
<td>-.065*</td>
<td>121</td>
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<tr>
<td>9</td>
<td>Parent bonds</td>
<td>-.136**</td>
<td>106</td>
<td>19</td>
<td>Community deprivation</td>
<td>.041*</td>
<td>13</td>
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<tr>
<td>10</td>
<td>School bonds</td>
<td>-.135**</td>
<td>114</td>
<td>20</td>
<td>Race</td>
<td>.038*</td>
<td>116</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01
Preliminary Conclusions

• Similarities across outcomes
  • Engaging in antisocial/risky behaviors
  • Self-control

• Key differences across outcomes
  • Vulnerability (e.g., disability, social exclusion, sexual orientation)
  • Importance of school context (e.g., violent/negative school context)
Next Steps

• Continue to code studies

• Do moderator analyses by type of victimization and perpetration, and by the various characteristics that we coded

• Dissemination of findings
  • Comprehensive report
  • Webinars on UC and FSU websites
  • Policy brief: “principles of effective interventions for school violence”
  • Academic journal article(s)
Thank You!

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