Types of child victimization and associations with clinically-significant levels of anxiety, depression, and aggression

Lynette M. Renner, PhD, MSW (University of Minnesota)
Laura M. Schwab Reese, MA, PhD (Purdue University)
Shamra Boel-Studt, PhD, MSW (Florida State University)
Elizabeth C. Coppola, MA (Purdue University)
Background

- Children are among the most victimized segment of the population in the United States (Center for Disease Control, 2006; Finkelhor 2011).

![Percent of Children Exposed to Violence](chart)

- Witness violence: 42.6%
- Physical Assault: 39.5%
- Property Crime: 28.5%
- Maltreatment: 20.6%
Purpose of Study

• We expand upon existing research by examining the prevalence of different types of victimization and the extent to which each type increased the odds of experiencing clinically-significant levels of anxiety, depression, and aggression.

• Although extant research supports victimization is associated with increased levels of anxiety, depression, and aggression in adolescents, the clinical severity of these symptoms and whether different types of victimization are associated with severe symptoms is less clear.
  • Bounded by co-occurrence ( multicollinearity)
Data Source

- Developmental Victimization Survey (DVS; Turner & Finkelhor, 2007)
- The DVS was designed to assess different types of victimization that occurred within the past year among a nationally representative sample of children aged 2-17 living in the U.S.
- From the total sample of 2,030 children aged 2-17, we selected participants who were in early-later adolescence (ages 10-17).
## Population Descriptives

<table>
<thead>
<tr>
<th></th>
<th>Weighted Mean/Percent</th>
<th>95% Confidence Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean)</td>
<td>13.60</td>
<td>13.43</td>
</tr>
<tr>
<td>Female</td>
<td>50.34</td>
<td>47.28</td>
</tr>
<tr>
<td>Male</td>
<td>49.56</td>
<td>46.50</td>
</tr>
<tr>
<td>White</td>
<td>74.97</td>
<td>71.27</td>
</tr>
<tr>
<td>Black</td>
<td>17.24</td>
<td>13.81</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10.19</td>
<td>7.02</td>
</tr>
<tr>
<td>Asian</td>
<td>3.18</td>
<td>1.72</td>
</tr>
<tr>
<td>Mixed Race/Other</td>
<td>3.72</td>
<td>2.29</td>
</tr>
</tbody>
</table>
# Measures: Victimization

## Juvenile Victimization Questionnaire (JVQ; Hamby et al., 2005)

<table>
<thead>
<tr>
<th>Category</th>
<th>Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Maltreatment</td>
<td>Physical abuse, Emotional abuse, Neglect</td>
</tr>
<tr>
<td>Sibling/Peer Aggression</td>
<td>Sibling Aggression, Bullying, Emotional Bullying</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>Sexual assault</td>
</tr>
<tr>
<td>Witnessing Family Violence</td>
<td>Parent IPV, Parent Assault of Sibling</td>
</tr>
</tbody>
</table>
Measures: Outcomes

• Aggression, anxiety and depression were measured using the Trauma Symptom Checklist for Children (TSCC; Briere, 1996).

• Each item was rated on a four-point scale ranging from 0 = ‘not at all’ to 3 = ‘very often.’

• For all analyses, anxiety, depression, and aggression were dichotomized with a t-score greater than 0.7 categorized as clinically significant.
Data Analysis

• Weighted univariate analyses to determine the estimated prevalence of each type of victimization.

• Weighted logistic regression models, controlling for child sex, child race/ethnicity, parent education, and household socioeconomic status, to estimate the association between each type of victimization and clinically-significant anxiety, depression, and aggression separately.

• SAS 9.4
Data Analysis

- Relative weight analyses (Tonidandel & LeBreton, 2010, 2011) to determine the unique contribution of each form of victimization to the relationship between victimization and the three outcomes.
  - Partitions proportion of variance in outcomes accounted for by each orthogonalized predictor in a model
  - R 3.5.0 relative weights analysis package by Tondanel and LeBreton
## Results: Prevalence of Victimization

<table>
<thead>
<tr>
<th>Weighted estimates of victimization prevalence, by type</th>
<th>Weighted Percentage Estimate (95%CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Maltreatment</strong></td>
<td></td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>5.8% (3.9-7.8)</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>12.1% (9.7-14.5)</td>
</tr>
<tr>
<td>Neglect</td>
<td>1.3% (0.3-2.2)</td>
</tr>
<tr>
<td><strong>Peer/Sibling Aggression</strong></td>
<td></td>
</tr>
<tr>
<td>Sibling Aggression</td>
<td>41.3% (37.5-45.1)</td>
</tr>
<tr>
<td>Bullying</td>
<td>17.2% (14.5-20.0)</td>
</tr>
<tr>
<td>Emotional Bullying</td>
<td>24.8% (21.5-28.1)</td>
</tr>
<tr>
<td><strong>Sexual Assault</strong></td>
<td></td>
</tr>
<tr>
<td>Any Sexual Assault</td>
<td>2.6% (1.5-3.8)</td>
</tr>
<tr>
<td><strong>Witnessing Family Violence</strong></td>
<td></td>
</tr>
<tr>
<td>Parent IPV</td>
<td>2.6% (1.5-3.8)</td>
</tr>
<tr>
<td>Parent Assault of Sibling</td>
<td>1.3% (0.3-2.3)</td>
</tr>
</tbody>
</table>
## Results: Regression

### Associations of victimization with anxiety, depression, and aggression

<table>
<thead>
<tr>
<th></th>
<th>Anxiety(^a) Odds Ratio (95%CI)(^b)</th>
<th>Depression(^a) Odds Ratio (95%CI)(^b)</th>
<th>Aggression(^a) Odds Ratio (95%CI)(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Maltreatment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>2.86 (1.35-6.03)</td>
<td>3.24 (1.56-6.76)</td>
<td>4.16 (2.12-8.15)</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>3.34 (2.04-5.48)</td>
<td>4.89 (3.02-7.91)</td>
<td>4.28 (2.63-6.96)</td>
</tr>
<tr>
<td>Neglect</td>
<td>0.46 (0.10-2.29)</td>
<td>0.92 (0.21-4.7)</td>
<td>1.59 (0.42-6.05)</td>
</tr>
<tr>
<td><strong>Peer/Sibling Aggression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling Aggression</td>
<td>2.57 (1.74-3.81)</td>
<td>3.04 (2.02-4.56)</td>
<td>2.29 (1.55-3.38)</td>
</tr>
<tr>
<td>Bullying</td>
<td>4.20 (2.75-6.43)</td>
<td>3.11 (1.96-4.94)</td>
<td>2.64 (1.71-4.08)</td>
</tr>
<tr>
<td>Emotional Bullying</td>
<td>4.57 (3.02-6.91)</td>
<td>4.54 (2.95-6.97)</td>
<td>2.56 (1.69-3.88)</td>
</tr>
<tr>
<td><strong>Sexual Assault</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Sexual Assault</td>
<td>1.59 (0.41-6.26)</td>
<td>1.35 (0.33-5.52)</td>
<td>0.79 (0.19-3.26)</td>
</tr>
<tr>
<td><strong>Witnessing Family Violence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent IPV</td>
<td>1.23 (0.48-3.19)</td>
<td>1.42 (0.56-3.61)</td>
<td>2.82 (1.22-6.49)</td>
</tr>
<tr>
<td>Parent Assault of Sibling</td>
<td>4.47 (1.08-18.48)</td>
<td>2.16 (0.40-11.73)</td>
<td>4.56 (1.17-17.86)</td>
</tr>
</tbody>
</table>

\(^a\)Odds of a clinically significant presentation (T-scores > 70); \(^b\)Estimates adjusted for child sex, child race, household socioeconomic status, and parent education
### Results: Relative Importance

<table>
<thead>
<tr>
<th>Event Type</th>
<th>Anxiety&lt;sup&gt;a&lt;/sup&gt; % Contribution</th>
<th>Depression&lt;sup&gt;a&lt;/sup&gt; % Contribution</th>
<th>Aggression&lt;sup&gt;a&lt;/sup&gt; % Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Child Maltreatment</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Abuse</td>
<td>3.2%</td>
<td>3.3%</td>
<td>11.0%</td>
</tr>
<tr>
<td>Emotional Abuse</td>
<td>10.7%</td>
<td>24.9%</td>
<td>37.8%</td>
</tr>
<tr>
<td><strong>Peer/Sibling Aggression</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sibling Aggression</td>
<td>20.4%</td>
<td>14.0%</td>
<td>20.7%</td>
</tr>
<tr>
<td>Bullying</td>
<td>20.3%</td>
<td>6.0%</td>
<td>6.4%</td>
</tr>
<tr>
<td>Emotional Bullying</td>
<td>41.0%</td>
<td>47.5%</td>
<td>15.9%</td>
</tr>
<tr>
<td><strong>Sexual Assault</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any Sexual Assault</td>
<td>3.6%</td>
<td>2.7%</td>
<td>2.3%</td>
</tr>
<tr>
<td><strong>Witnessing Family Violence</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental IPV</td>
<td>0.7%</td>
<td>1.5%</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

<sup>a</sup>Modeled as presence or absence of clinically significant presentation (T-scores > 70)

*Note: Due to small cell sizes, parental assault of a sibling and neglect prevented inclusion from these analyses*
Strengths and Limitations

• Strengths
  • Nationally representative sample
  • Variety of victimization measures
  • Relative weights adjusts for multicollinearity between exposures

• Limitations
  • Limited range of outcomes
  • Cross-sectional design
  • Limitations with relative weight analysis with clustered survey data
  • Did not tease out severity
Implications

• While preliminary, this novel approach provides information on how specific victimization exposures are uniquely associated with overall explained variance in anxiety, depression, and aggression.

• This approach has the potential to identify the consequences of experiencing specific types of victimization on anxiety, depression, and aggression during adolescence.

• These preliminary findings suggest that certain forms of victimization may contribute to a larger percentage of explained variance in anxiety, depression, and aggression.
  • Emotional bullying accounted for a larger amount of variance explained in anxiety and depression
Conclusions

• As we move this research forward, we may be able to better understand which exposures are uniquely associated with specific adverse child outcomes.

• We may also be able to identify priorities for public health interventions by focusing on exposures that have a relatively large impact on adverse outcomes.
  • May also identify which exposures impact multiple adverse outcomes
Thank you!

Questions?

• Project lead:
  • Lynette Renner, PhD
  • renn0042@umn.edu
<table>
<thead>
<tr>
<th>Measures</th>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Maltreatment</td>
<td>Physical abuse</td>
<td>Not including spanking on your bottom, in the last year, did a grown-up in your life hit, beat, kick, or physically hurt you in any way?</td>
</tr>
<tr>
<td></td>
<td>Emotional abuse</td>
<td>In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn’t want you?</td>
</tr>
<tr>
<td></td>
<td>Neglect</td>
<td>When someone is neglected, it means that the grown-ups in their life didn’t take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, did you get neglected?</td>
</tr>
<tr>
<td>Sibling/Peer Aggression</td>
<td>Sibling Aggression</td>
<td>In the last year, did any kid, even a brother or sister, hit you? Somewhere like: at home, at school, out playing, in a store, or anywhere else?</td>
</tr>
<tr>
<td></td>
<td>Bullying</td>
<td>In the last year, did any kids, even a brother or sister, pick on you by chasing you or grabbing you or by making you do something you didn’t want to do?</td>
</tr>
<tr>
<td></td>
<td>Emotional Bullying</td>
<td>In the last year, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn’t want you around?</td>
</tr>
<tr>
<td>Sexual Assault</td>
<td>Sexual assault</td>
<td>In the last year, did a grown-up you know touch your private parts when they shouldn’t have or make you touch their private parts? Or did a grown-up you know force you to have sex?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In the last year, did a grown-up you did not know touch your private parts when they shouldn’t have, make you touch their private parts or force you to have sex?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Now think about kids your age, like from school, a boy friend or girl friend, or even a brother or sister. In the last year, did another child or teen make you do sexual things?</td>
</tr>
<tr>
<td>Witnessing Family Violence</td>
<td>Parent IPV</td>
<td>In the last year, did you SEE a parent get pushed, slapped, hit, punched, or beat up by another parent, or their boyfriend or girlfriend?</td>
</tr>
<tr>
<td></td>
<td>Parent Assault of Sibling</td>
<td>In the last year, did you SEE a parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom?</td>
</tr>
</tbody>
</table>