Developmental Timing of Polyvictimization: Continuity, Change, and Association with Adverse Outcomes in Adolescence

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Disclosure

I, Julian D. Ford, am a consultant to Advanced Trauma Solutions Professionals (ATSPro), Inc., Sole Licensee of the University of Connecticut for the TARGET© Treatment/Training Model
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Children who experience *polyvictimization* (i.e., exposure to multiple and varied types of traumatic stressors) are at high risk for psychopathology. While polyvictims generally have worse outcomes than those with fewer types of traumatic experiences, not all polyvictims experience significant, or similar, impairment suggesting that polyvictims are a heterogeneous group. This variation in outcomes among polyvictimized children, may be due to differences in how polyvictimization is operationalized and measured.
Exposure to Traumatic Stressors and PTSD are Prevalent and Associated with Internalizing/Externalizing in Childhood

- 61% of nationally representative sample of U.S. children exposed to victimization *in the past year* (Finkelhor et al., 2009)

- 62% of nationally representative sample of U.S. adolescents had lifetime histories of exposure to traumatic stressor(s), 5% had developed PTSD (McLaughlin et al., 2013)
Defining Polyvictimization

- Top 10\textsuperscript{th} Percentile Past Year or Lifetime (Finkelhor et al., 2005, 2009)

- Person-centered \textbf{Latent Class Analysis} (Ford et al., 2010, 2013; Grasso et al., 2016)
Polyvictimimized Children/Youth: Prevalence

➢ Nationally representative sample of 2,030 U.S. children, 10% were lifetime poly-victims: 9+ (age 3-6) to 15+ (age 15+) types (of 30 possible) of victimization lifetime (Finkelhor et al., 2009)

➢ Nationally representative sample of 3351 trauma-exposed U.S. adolescents, LCA found 8% poly-victims (6-11 types traumatic events including physical or sexual abuse ➔ at risk for PTSD, depression, and delinquency (Ford et al., 2010)
Figure 1. Latent classes of adolescents identified based on self-reported exposure to psychological trauma: witnessing someone: 1, shot; 2, cut or stabbed; 3, sexually assaulted; 4, mugged or robbed; 5, threatened with a weapon; 6, physically assaulted; Personal exposure to: 7, serious accident; 8, natural disaster; 9, serious injury; and 10, incident involving fear of death. Unwanted sexual activity involving: 11, perpetrator’s penile penetration; 12, digital or object penetration; 13, oral sex; or 14, molestation; 15, victim’s forced touching of perpetrator’s sexual organs; and 16, victim’s forced penetration of perpetrator. Personal exposure to: 17, attack with a weapon; 18, attack without a weapon; 19, threat with a weapon; 20, physical assault with object; 21, physical assault with fists; 22, spanking requiring medical care; 23, physical assault leaving marks; and 24, being physically burned (Ford et al., 2010)
Types of Behavioral Health Problems Associated with Traumatic Poly-victimization

- Reactive Aggression
- Delinquency
- Delinquent Peer Affiliations
- School Problems/Failure
- Impulsivity
- Oppositionality-Defiance
- Withdrawal/Isolation
- Addictions
- Non-suicidal Self-harm
- Reckless/Extreme Risk Taking
- Unresolved Grief
- Suicidality
- Depression
- Panic
- Obsessions/Compulsions
- Sexual Problems
- Eating Problems
- Sleep Problems
- Self-blame/hatred and Shame
- Hopelessness
The Toll that Post-Traumatic Survival Coping Takes on Poly-victimized Children’s Lives

- School absence, suspension, disengagement, retention, drop-out
- Delinquent affiliations, attitudes, acts (including gang membership)
- Sensation seeking and coping via substance use, other risky behavior
- Depression, shame, hopelessness, self-as-damaged, self-harm, suicide
- Volatile, enmeshed, victimizing and/or enabling/rescuing relationships
Prior Study (Grasso et al., 2016)

- *LCA with clinical sample of 3354 adolescents*
  - **PV Ages 0-5.9:** *Neglect, Impaired Caregiver, Physical and Emotional Abuse*
  - **PV Ages 6-12:** Impaired Caregiver, Physical and Emotional Abuse, *Domestic Violence*
  - **PV Ages 13-17.9:** *community/school violence, physical assault, emotional abuse*
Current Study’s Aim

To examine whether polyvictimization in early developmental age periods predicts polyvictimization in later periods and whether there are differences in severity of adolescent psychopathology based on variations in timing of polyvictimization in childhood and adolescence.
Study Sample
Clinically-referred adolescents from National Child Traumatic Stress Network Core Dataset (N = 3,754)
Ages 13-18 ($M=15.3$, $SD=1.4$)
62.5% female
36% White, 35% Latinx, 23% Black
Study Measures

• UCLA PTSD-RI
  ➢ 17 types of potential traumas
  ➢ 17 *DSM-IV* PTSD Symptoms

• Child Behavior Checklist
  ➢ Internalizing Problems
  ➢ Externalizing Problems
  ➢ Total Problem Severity
Statistical Analyses

Latent Transition Analysis (LTA):

Classes identified in Grasso et al.’s (2016) LCA were dichotomized as high (PV) or low (LE) exposure, resulting in 4 possible transitions between each adjacent developmental epoch: LE to LE, LE to PV; PV to PV; PV to LE.

LTA simultaneously estimates similar classes by age and the probabilities of moving between classes by developmental epoch.
Statistical Analyses

Latent Transition Analysis (LTA) (2):

The LTA uses class assignment in a multinomial logistic regression to determine the probability of each of the 8 transitions.

Two variables were added as predictors:

Gender

Number of Epochs of PV (0-3)
Statistical Analyses

Linear and Logistic Regressions:

A new variable was created based on the most probable class assignment in each of the developmental epochs:

- Persistent LE
- Persistent PV
- Early Life PV
- Recent PV

Outcomes were PTSD-RI and CBCL severity scores (Linear) or clinically significant scores (Logistic)
Results

**Age 0-5.9**
71% LE, 29% PV

**Age 6-12**
52% LE, 48% PV

**Age 13-17.9**
60% LE, 40% PV
## Transitional Probabilities

<table>
<thead>
<tr>
<th>Early Childhood: 0-5 yrs</th>
<th>Middle Childhood: 6-12 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Exposure</td>
</tr>
<tr>
<td></td>
<td>(47.1%)</td>
</tr>
<tr>
<td>High Exposure</td>
<td>86.5%</td>
</tr>
<tr>
<td>(28.7%)</td>
<td></td>
</tr>
<tr>
<td>Low Exposure</td>
<td>30.2%</td>
</tr>
<tr>
<td>(71.3%)</td>
<td></td>
</tr>
</tbody>
</table>
## Transitional Probabilities

<table>
<thead>
<tr>
<th>Middle Childhood: 6-12 yrs</th>
<th>Adolescence: 13-18 yrs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Exposure</td>
</tr>
<tr>
<td></td>
<td>(39.5%)</td>
</tr>
<tr>
<td>High Exposure</td>
<td>73.9%</td>
</tr>
<tr>
<td>(47.1%)</td>
<td></td>
</tr>
<tr>
<td>Low Exposure</td>
<td>11.7%</td>
</tr>
<tr>
<td>(52.9%)</td>
<td></td>
</tr>
</tbody>
</table>
Results

• Class membership generally consistent (69-88%) between epochs

• PV more consistent than LE from early to mid childhood

• LE more consistent than PV from mid childhood to adolescence

• Gender invariant except females 2x more likely to go from LE in mid childhood to PV in adolescence (15 vs. 7.5%)
### Linear Regression

<table>
<thead>
<tr>
<th></th>
<th>CBCL</th>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Externalizing</td>
<td>Internalizing</td>
</tr>
<tr>
<td><strong>(Effect, SD)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>-1.15 (0.43)**</td>
<td>-0.34 (0.45)</td>
<td>-0.95 (0.46)*</td>
<td>-7.56 (0.54)**</td>
</tr>
<tr>
<td>Number of Developmental Periods in High Exposure</td>
<td>1.59 (0.19)**</td>
<td>1.47 (0.21)**</td>
<td>1.67 (0.21)**</td>
<td>1.76 (0.25)**</td>
</tr>
</tbody>
</table>
## Linear Regression (LE = Reference Group)

<table>
<thead>
<tr>
<th>(Effect, SErr)</th>
<th>CBCL</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Externalizing</td>
<td>Internalizing</td>
<td>PTSD-RI</td>
</tr>
<tr>
<td>Male</td>
<td>-1.13 (0.49)*</td>
<td>-0.37 (0.52)</td>
<td>-1.04 (0.52)*</td>
<td>-7.91 (0.63)**</td>
</tr>
<tr>
<td>Early Life High Exposure¹</td>
<td>4.2 (0.64)**</td>
<td>4.29 (0.67)**</td>
<td>2.81 (0.68)**</td>
<td>-0.5 (0.85)</td>
</tr>
<tr>
<td>Recent High Exposure¹</td>
<td>1.24 (0.79)</td>
<td>1.57 (0.83)</td>
<td>1.8 (0.85)*</td>
<td>1.03 (0.91)</td>
</tr>
<tr>
<td>Persistent High Exposure¹</td>
<td>4.49 (0.68)**</td>
<td>4.27 (0.71)**</td>
<td>4.82 (0.72)**</td>
<td>5.71 (0.85)**</td>
</tr>
</tbody>
</table>
### Odds Ratios by Differential Timing of PV (Persistent LE = Reference Group)

<table>
<thead>
<tr>
<th></th>
<th>CBCL</th>
<th>PTSD-RI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Externalizing</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1.3*</td>
<td>[1.1, 1.6]</td>
</tr>
<tr>
<td>Early PV</td>
<td>2.1*</td>
<td>[1.6, 2.8]</td>
</tr>
<tr>
<td>Recent PV</td>
<td>1.3</td>
<td>[0.9, 1.8]</td>
</tr>
<tr>
<td>Persistent PV</td>
<td>2.3*</td>
<td>[1.7, 3]</td>
</tr>
</tbody>
</table>
Results

• Cumulative and Persistent PV $\leftrightarrow$ PTSD, Internalizing, Externalizing Sx Severity

• Early Life PV $\leftrightarrow$ Internalizing, Externalizing but *not* PTSD severity

• Recent PV $\leftrightarrow$ Internalizing severity but *not* Externalizing or PTSD symptoms
Conclusions

Adolescent PTSD may be related to cumulative victimization, not early life (vulnerability) or recent (proximity) exposure to victimization.

Adolescent externalizing problems may be particularly related to early life victimization.

Adolescent internalizing problems may be related to PV at any developmental epoch.