Temperament, peer rejection, and nurturing parenting in childhood anxiety: A moderated mediation model

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Disclosures

• No disclosures
Temperament and child anxiety

• Link between fearful temperament and childhood anxiety
  – Behavioral Inhibition (Degnan & Fox, 2007; Degnan, Almas, & Fox, 2010)
  – Children displaying BI are at increased risk for anxiety and internalizing disorders

• Mechanisms through which inhibited children develop anxiety disorders
  – Peer Victimization
  – Parenting
Peer victimization

• Peer victimization is common in inhibited children
  – More likely withdrawn
  – Less socially competent than peers
  – Easy targets for bullies

• Excluded children are at risk for development of anxiety disorders

• Few previous studies
Parenting

• Negative parenting behaviors influence anxiety development in inhibited children
  – Control, rejection, modeling

• Supportive strategies may protect children from developing anxiety
  – Acceptance, warmth, nurturance
  – Endorsing social exploration and activity

• Nurturing parenting may decrease effects of peer victimization
Hypothesized model

• Hypotheses:
  – 1). Peer victimization would mediate the relation between temperament and anxiety
  – 2). Parental nurturance would moderate the relation between temperament and anxiety
  – 3). Nurturance would moderate the mediating effect of peer victimization
METHOD AND RESULTS
Sample

• 124 parent-child dyads
• Parents
  – 26 to 65 years old ($M = 40.0$)
  – 91% female
  – 88.7% married
  – 72.1% family income above $50,000
• Children
  – 7 to 12 years old ($M = 8.7$)
  – 93.5% Caucasian
  – 56.5% male
Measures

• Child anxiety: Beck Anxiety Inventory for Youth ($\alpha = .86$)
• Temperament: Temperament in Middle Childhood Questionnaire ($\alpha = .76$)
• Peer victimization: Peer Relations Questionnaire ($\alpha = .84$)
• Nurturing parenting: Parenting Dimensions Inventory – Short Form ($\alpha = .73$)
## Correlations and descriptives

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Child Anxiety (BAI-Y)</td>
<td>-</td>
<td>.31**</td>
<td>.43**</td>
<td>-.15</td>
</tr>
<tr>
<td>2. Fearful Temperament (TMCQ)</td>
<td>-</td>
<td>-</td>
<td>.19*</td>
<td>-.15</td>
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<tr>
<td>3. Peer Victimization (PRQ)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-.16</td>
</tr>
<tr>
<td>4. Nurturing Parenting (PDI-S)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Mean</td>
<td>12.56</td>
<td>2.46</td>
<td>2.56</td>
<td>31.40</td>
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<tr>
<td>SD</td>
<td>7.46</td>
<td>.67</td>
<td>.42</td>
<td>3.60</td>
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<tr>
<td>Range</td>
<td>1 – 35</td>
<td>1 – 3.89</td>
<td>2.24 – 4.36</td>
<td>21 – 36</td>
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</table>

* p < .05, ** p < .001
## Mediating effect of peer victimization

<table>
<thead>
<tr>
<th>Effect</th>
<th>Path</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
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<tbody>
<tr>
<td>a</td>
<td>Temperament</td>
<td>Peer victimization</td>
<td>.19</td>
<td>2.10</td>
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<tr>
<td>b</td>
<td>Peer victimization</td>
<td>Child anxiety</td>
<td>.40</td>
<td>4.82</td>
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<tr>
<td>c</td>
<td>Total effect</td>
<td>Temperament</td>
<td>.31</td>
<td>3.41</td>
</tr>
<tr>
<td>c'</td>
<td>Direct effect</td>
<td>Temperament</td>
<td>.23</td>
<td>2.78</td>
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<tr>
<td>a*b</td>
<td>Indirect effect</td>
<td>Peer victimization</td>
<td>Child anxiety</td>
<td>.08</td>
</tr>
</tbody>
</table>

*Note.* Direct effect (c’) controls for effect of peer victimization. Indirect effect (a*b) controls for effect of temperament.

- Indirect effect produces 95% bias-corrected bootstrap confidence interval: [0.018 to 1.80]
Moderating effect of nurturing parenting

• Ordinary least squares (OLS) regression model predicting child anxiety from fearful temperament, nurturing parenting, and their product
  – $\beta = 0.58, t (123) = .78, p = .435$

• OLS regression model predicting child anxiety from peer victimization, nurturing parenting, and their product, including fearful temperament as a covariate.
  – $\beta = -0.85, t (123) = -2.02, p = .046$

• Simple slopes analysis
Moderated mediation model

- Fearful temperament → Peer victimization (β = 0.19*)
- Peer victimization → Nurturing parenting (β = -0.85*)
- Fearful temperament → Child anxiety (β = 0.23*)
- Nurturing parenting → Child anxiety (β = 0.43**)
Conditional indirect and direct effects

Nurturing parenting represents the mean centered variable.
CONCLUSIONS
Hypotheses

1). Peer victimization partially mediated the relation between temperament and anxiety

2). Nurturing parenting did not moderate the relation between temperament and anxiety

3). Nurturing parenting did moderate the indirect effect of peer victimization on child anxiety
Limitations

• Cross-sectional data
• Sample characteristics
• Parent and child self-report measures
• Concordance between parenting and child behavior problems
Peer victimization

• Peer victimization may be one mechanism through which inhibited children develop anxiety
  – Inhibited children may be at risk of peer victimization
  – Significant sources of variance remain
Parenting

• High levels of nurturing parenting may not be protective for inhibited children
  – Consistent with previous research (Kiff, Lengua, Zalewiski, 2011; Sentse et al., 2009)

• Nurturing parenting may maintain symptoms of anxiety in inhibited children
  – Family Accommodation

• Benefit in specific context, rather than broadly applied
Parenting in victimized children

• Nurturing parenting may reduce distress associated with peer victimization
  – Buffer impact of peer rejection
  – Allow reengagement with social environment

• Parent behaviors and peer relations interdependent
  – Unique relations when examined simultaneously