Resolution of Childhood Maltreatment Trauma: Development of a Novel Narrative Coding Scheme and Intergenerational Implications

Hannah Swerbenski
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Study Aims

1. Evaluate Reliability and Validity of Novel Resolution Measure

2. Test Resolution as a Moderator of Associations between Neglect and Sensitive Parenting
Background
Intergenerational Transmission

**MALTREATMENT HISTORY**

- Lower parenting sensitivity \(\text{(Dixon et al., 2005; Pereira et al., 2014)}\)
- Higher intrusiveness \(\text{(Fuchs et al., 2015)}\)
- Insecure attachment \(\text{(Lyons-Ruth & Block, 1996; Stacks et al., 2014)}\)
Meta-Analytic Insights

MALTREATMENT HISTORY

OR = 2.99

r = -.13

• Maltreatment continuity (Assink et al., 2018)

• Maltreatment Hx & parenting (Savage et al., 2019)

*modest effect size
Heterogeneity Matters

Task: *explain* individual differences that may foster *intergenerational resilience*
“the degree of acceptance and forgiveness presently held by the mother [towards her caregiver] regarding the experiences and circumstances of her childhood upbringing.”
Resolution: Theoretical Background

• Determinants of Parenting Process Model (Belsky 1984)
• Psychodynamic Perspectives
  • Adult Attachment Interview: **Coherence**
    • Internally consistent and congruent account of childhood
  • Overlap of earned security and resolution
    • Earned secures may “remember with *perspective* and even with *forgiveness* parents who were cold, unloving, and rejecting” (Pearson et al., 1994)
    • But, may artificially dichotomize dimensional construct (Roisman 2002, 2014)
Resolution: Operationalization

- Letting go of anger
- Cessation of revenge
- Moving on in life

↓ Anxiety  ↓ Depression
↓ PTSD     ↑ Self-Esteem

(Noll 2003, 2004)
Resolution Coding Sample

“I don’t have to agree with [my mother’s] choices, I don’t have to support it, but at least listen to it and try to understand at least where the other person’s coming from. So, in that respect I think I’m different than my mom and wanna continue to be that way. She’s learned over the years though” – participant
1. Evaluate Reliability and Validity of Novel Resolution Measure

2. Test Resolution as a Moderator of Associations between Neglect and Sensitive Parenting
Why focus on neglect?

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>Developmental Timing</th>
<th>Lack of Research</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Most common subtype</td>
<td>• More prevalent during infancy</td>
<td>• “Neglect of neglect”</td>
</tr>
<tr>
<td>• Affects 15% of children</td>
<td>• Stressful period for parents</td>
<td>• Intergenerational effects not well studied</td>
</tr>
</tbody>
</table>
Methods
Participants & Design

• 210 mothers & their 13-month-old infants (52.9% female)

• Sample demographics
  • Maternal age ranged from 18-41 years (M = 26.9 years)
  • Low SES: $\text{M}_{\text{income}} = $10,330 when including public assistance
  • 72.2% of families had documented involvement with CPS

• Larger study design: RCT
  • T1: 13 months
  • T3: 26 months
  • $\rightarrow N = 132$

<table>
<thead>
<tr>
<th>Racial/Ethnic Demographics</th>
<th>Maternal Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>53.8%</td>
</tr>
<tr>
<td>White</td>
<td>25.5%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>9.6%</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
<td>5.8%</td>
</tr>
<tr>
<td>Native American</td>
<td>0.5%</td>
</tr>
<tr>
<td>Other</td>
<td>4.8%</td>
</tr>
<tr>
<td></td>
<td>Less than HS</td>
</tr>
<tr>
<td></td>
<td>HS or GED</td>
</tr>
<tr>
<td></td>
<td>Some college</td>
</tr>
<tr>
<td></td>
<td>Bachelor’s Degree</td>
</tr>
</tbody>
</table>
Balancing-Forgiving:

8. Neither my mother nor myself are perfect but somehow we made it through my childhood.

17. Even though I went through rough times with my mother during my childhood, somewhere along the line I managed to let go of the majority of those angry, hurt feelings.

25. Even with all our past difficulties, I realize my mother did the best for me that she could.

31. My mother and I are more accepting of each other’s differences than we have been in the past.

44. If my mother was not fair to me as a child I realize now it was because she was dealing with her own problems.

54. For all our past problems my mother and I can still enjoy a good laugh together.

60. When I think back to my early childhood experiences I discover things about myself and my parents that I’ve never consider before.
## Aim 2

### Measures

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Construct(s)</th>
<th>Measure(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderator</td>
<td>Resolution</td>
<td>Infant and Intergenerational Relationships Coding System for the Parent Development Interview</td>
</tr>
<tr>
<td>Independent Variable</td>
<td>Neglect</td>
<td>Childhood Trauma Questionnaire</td>
</tr>
<tr>
<td>Dependent Variable</td>
<td>Maternal Sensitivity</td>
<td>Maternal Behavior Q-Set</td>
</tr>
<tr>
<td>Covariates</td>
<td>Maternal Age</td>
<td>Demographic Questionnaire</td>
</tr>
<tr>
<td></td>
<td>Verbal Ability</td>
<td>WAIS-III</td>
</tr>
</tbody>
</table>

- **WAIS-III**: Wechsler Adult Intelligence Scale-Third Edition
- **Parent Development Interview**: A structured interview used to assess various dimensions of parent-child interactions.
Results
Maternal Trauma Resolution: Reliability

• A random subsample (n = 44, 21.4%) of Parent Development Interviews were coded by the first author and two trained research assistants.

• Resulting interrater reliability was excellent (ICC = .937).
Resolution: **Generalizability**

- There were *no significant differences* in resolution scores by:
  - Race, $F(3, 194) = .635, p = .593$
  - Ethnicity (Latinx vs non-Latinx), $t(196) = .080, p = .936$
  - or by Marital Status, $F(2, 195) = 1.453, p = .236$

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Resolution</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Maternal Age</td>
<td>.084</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>3. Total Income</td>
<td>.010</td>
<td>.087</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4. Public Assistance</td>
<td>-.044</td>
<td>.135</td>
<td>.222**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Highest Education Level</td>
<td>.120</td>
<td>.190**</td>
<td>.134</td>
<td>-.148*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Occupational Prestige Score</td>
<td>.080</td>
<td>-.062</td>
<td>.334**</td>
<td>-.280**</td>
<td>.287**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Vocabulary (WAIS-III)</td>
<td>.178*</td>
<td>-.017</td>
<td>.038</td>
<td>-.124</td>
<td>.427**</td>
<td>.134</td>
<td></td>
</tr>
<tr>
<td>8. Comprehension (WAIS-III)</td>
<td>.220**</td>
<td>-.086</td>
<td>.025</td>
<td>-.080</td>
<td>.432**</td>
<td>.137</td>
<td>.673**</td>
</tr>
</tbody>
</table>

*Table 1. Bivariate correlations are presented above. Total Income and Amount Public Assistance Received are presented in thousands of dollars USD. * $p < .05$, ** $p < .01$*
Maltreating mothers (M = 5.75, SD = 2.43) had significantly lower resolution scores than non-maltreating mothers (M = 6.78, SD = 2.18), $t(176) = 2.576, p = .011$
Resolution: Convergent Validity

Maternal childhood maltreatment trauma resolution scores and Balancing-Forgiving subscale scores were not correlated

\( r = .126, p = .108 \)

Partial correlations controlling for verbal ability were also weak

\( r = .108, p = .183 \)
What does lack of convergence mean?

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Criteria met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>✓</td>
</tr>
<tr>
<td>Generalizability</td>
<td>✓</td>
</tr>
<tr>
<td>Criterion Validity</td>
<td>✓</td>
</tr>
<tr>
<td>Convergent Validity</td>
<td>✗</td>
</tr>
<tr>
<td>Concurrent Validity</td>
<td>?</td>
</tr>
<tr>
<td>Predictive Validity</td>
<td>?</td>
</tr>
</tbody>
</table>
Concurrent Validity: Parenting Stress

<table>
<thead>
<tr>
<th></th>
<th>B (SE)</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Model 1 (Parenting Stress)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Model 1 Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Age</td>
<td>-0.991 (.506)</td>
<td>-0.147</td>
<td>-1.956</td>
<td>.052†</td>
<td>.020</td>
</tr>
<tr>
<td>Maternal Education</td>
<td>-3.732 (3.711)</td>
<td>-0.083</td>
<td>-1.006</td>
<td>.316</td>
<td>.005</td>
</tr>
<tr>
<td>Vocabulary (WAIS-III)</td>
<td>-1.162 (1.493)</td>
<td>-0.078</td>
<td>-0.778</td>
<td>.437</td>
<td>.003</td>
</tr>
<tr>
<td>Verbal Comprehension (WAIS-III)</td>
<td>-0.935 (1.405)</td>
<td>-0.067</td>
<td>-0.665</td>
<td>.507</td>
<td>.002</td>
</tr>
<tr>
<td><strong>Balancing-Forgiving (PAAS)</strong></td>
<td>.000 (.001)</td>
<td>-0.017</td>
<td>-0.181</td>
<td>.857</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Resolution</td>
<td>-2.565 (1.266)</td>
<td>-0.150</td>
<td>-2.026</td>
<td>.044*</td>
<td>.021</td>
</tr>
</tbody>
</table>

- Balancing-Forgiving explained less than 1% of variance in parenting stress ($sr^2 < .001$, $p = .857$).
- In contrast, resolution scores uniquely explained 2.1% of the variance in parenting stress ($sr^2 = .039$, $p = .007$), such that higher resolution was associated with lower parenting stress ($B = -2.565$, $β = -.150$).
Concurrent Validity: Parenting Competence

<table>
<thead>
<tr>
<th>Model 2 (Parenting Competence)</th>
<th>B (SE)</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 2 Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal Age</td>
<td>.076 (.079)</td>
<td>.073</td>
<td>.968</td>
<td>.334</td>
<td>.005</td>
</tr>
<tr>
<td>Maternal Education</td>
<td>.991 (.579)</td>
<td>.141</td>
<td>1.713</td>
<td>.088†</td>
<td>.028</td>
</tr>
<tr>
<td>Vocabulary (WAIS-III)</td>
<td>-.403 (.233)</td>
<td>-.174</td>
<td>-1.732</td>
<td>.085†</td>
<td>.031</td>
</tr>
<tr>
<td>Verbal Comprehension (WAIS-III)</td>
<td>.167 (.219)</td>
<td>.078</td>
<td>.762</td>
<td>.447</td>
<td>.003</td>
</tr>
<tr>
<td>Balancing-Forgiving (PAAS)</td>
<td>.000 (.000)</td>
<td>.061</td>
<td>.827</td>
<td>.409</td>
<td>.002</td>
</tr>
<tr>
<td>Resolution</td>
<td>.542 (.197)</td>
<td>.204</td>
<td>2.744</td>
<td>.007**</td>
<td>.039</td>
</tr>
</tbody>
</table>

- **Balancing-Forgiving** scores explained less than 1% of variance in parenting competence ($sr^2 = .004$, $p = .409$).
- In contrast, **resolution** scores uniquely explained **3.9% of the variance in parenting competence** ($sr^2 = .039$, $p = .007$), such that higher resolution was associated with higher parenting competence ($B = .542$, $\beta = .204$).
Predictive Validity: Maternal Depression

<table>
<thead>
<tr>
<th>Model 3 (Depression)</th>
<th>B (SE)</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal age</td>
<td>.131 (.214)</td>
<td>.068</td>
<td>.616</td>
<td>.540</td>
<td>.004</td>
</tr>
<tr>
<td>Maternal Education</td>
<td>-.040 (1.46)</td>
<td>-.004</td>
<td>-.027</td>
<td>.978</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Vocabulary (WAIS-III)</td>
<td>-.287 (.524)</td>
<td>-.079</td>
<td>-.548</td>
<td>.585</td>
<td>.003</td>
</tr>
<tr>
<td>Verbal Comprehension (WAIS-III)</td>
<td>.293 (.507)</td>
<td>.086</td>
<td>.578</td>
<td>.565</td>
<td>.004</td>
</tr>
<tr>
<td>Balancing-Forgiving (PAAS)</td>
<td><strong>.566 (1.843)</strong></td>
<td><strong>.033</strong></td>
<td><strong>.307</strong></td>
<td><strong>.760</strong></td>
<td><strong>.001</strong></td>
</tr>
<tr>
<td>Resolution</td>
<td><strong>-1.417 (.483)</strong></td>
<td><strong>-335</strong></td>
<td><strong>-2.934</strong></td>
<td><strong>.004</strong></td>
<td><strong>.099</strong></td>
</tr>
</tbody>
</table>

- **Balancing-Forgiving** explained less than 1% of variance in depression ($sr² < .01, p = .760$).
- In contrast, **resolution** scores uniquely explained **9.9% of the variance in maternal depression** ($sr² = .099, p = .004$), such that higher resolution was associated with lower depression symptoms ($B = -1.42, \beta = -.335$).
Predictive Validity: Maternal Anxiety

<table>
<thead>
<tr>
<th>Model 4 (Anxiety)</th>
<th>B (SE)</th>
<th>β</th>
<th>t</th>
<th>p</th>
<th>sr²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 4 Step 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maternal age</td>
<td>-.033 (.244)</td>
<td>-.015</td>
<td>-.134</td>
<td>.894</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Maternal Education</td>
<td>.526 (.167)</td>
<td>.040</td>
<td>.315</td>
<td>.754</td>
<td>.001</td>
</tr>
<tr>
<td>Vocabulary (WAIS-III)</td>
<td>-.374 (.600)</td>
<td>-.089</td>
<td>-.624</td>
<td>.535</td>
<td>.004</td>
</tr>
<tr>
<td>Verbal Comprehension (WAIS-III)</td>
<td>.508 (.580)</td>
<td>.128</td>
<td>.876</td>
<td>.384</td>
<td>.008</td>
</tr>
<tr>
<td>Balancing-Forgiving (PAAS)</td>
<td>.194 (.109)</td>
<td>.010</td>
<td>.092</td>
<td>.927</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Resolution</td>
<td>-1.845 (.552)</td>
<td>-.375</td>
<td>-3.340</td>
<td>.001*</td>
<td>.124</td>
</tr>
</tbody>
</table>

- **Balancing-Forgiving** explained less than 1% of variance in anxiety (sr² <.001, p = .927).
- In contrast, **resolution** was a robust predictor of maternal anxiety, **accounting for 12.4% of the variance in maternal anxiety symptoms** (sr² =.124, p = .001). These effects were again **protective**, such that higher resolution predicted lower maternal anxiety (B = -1.85, β = -.375).
## Aim 1 Results Summary

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Criteria met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>✔️</td>
</tr>
<tr>
<td>Generalizability</td>
<td>✔️</td>
</tr>
<tr>
<td>Criterion Validity</td>
<td>✔️</td>
</tr>
<tr>
<td>Convergent Validity</td>
<td>✗</td>
</tr>
<tr>
<td>Concurrent Validity</td>
<td>✔️</td>
</tr>
<tr>
<td>Predictive Validity</td>
<td>✔️</td>
</tr>
</tbody>
</table>
Aim 1 Results Interpretation

Low convergence $\rightarrow$ Balancing-Forgiving and Resolution scores do not measure the same thing

- **We argue:** Balancing-Forgiving scores may not adequately assess this construct
- **Support:**
  - Low internal consistency of Balancing-Forgiving subscale (our sample: $\alpha = .57$; Other samples $\alpha = .57-.70$) & poor utilization
  - Self-report measures vulnerable to poor insight, avoidance/suppression, or demand characteristics
  - Interview measure yields more nuanced information
  - Anecdotal: many mothers in this sample initially provided positive, surface-level descriptions, but either were unable to elaborate or even later undermined these initial positive descriptions
Results Part 2 (Aim 2)

Test Resolution as a Moderator of Associations between Neglect and Sensitive Parenting

- **2a** • Cross-sectional, maltreating mothers only
- **2b** • Cross-sectional, non-maltreating mothers only
- **2c** • Longitudinal, maltreating and non-maltreating mothers
Cross-sectional, maltreating mothers only (n = 137)

Mean-Centered Total Neglect (CTQ)

Mean-Centered Maternal Resolution (IIRCS)

Neglect X Resolution Interaction Term

Verbal ability (WAIS-III)

Maternal Age

T1 Observed Maternal Sensitivity (MBQ)

\[ B = -0.078, SE = 0.048, \beta = -0.178, p = 0.101 \]

\[ B = 0.044, SE = 0.013, \beta = 0.298, p < 0.001 \]

\[ B = 0.035, SE = 0.011, \beta = 0.264, p = 0.010 \]

\[ B = 0.021, SE = 0.011, \beta = 0.149, p = 0.063 \]

\[ B = 0.001, SE = 0.005, \beta = 0.026, p = 0.746 \]

\[ B = 0.044, SE = 0.013, \beta = 0.298, p < 0.001 \]
Model 8 (Maltreating Mothers): Neglect x Resolution on T1 Maternal Sensitivity

T1 Observed Maternal Sensitivity

Neglect Severity

-1 SD

Low Resolution

+1 SD

High Resolution
Mean-Centered Total Neglect (CTQ)

Mean-Centered Maternal Resolution (IIRCS)

Neglect X Resolution Interaction Term

Verbal ability (WAIS-III)

Maternal Age

T1 Observed Maternal Sensitivity (MBQ)

\[ B = -0.074, \ SE = 0.066, \beta = -0.217, p = 0.265 \]

\[ B = -0.012, \ SE = 0.022, \beta = -0.094, p = 0.574 \]

\[ B = 0.016, \ SE = 0.020, \beta = 0.176, p = 0.418 \]

\[ B = 0.032, \ SE = 0.015, \beta = 0.305, p = 0.035 \]

\[ B = 0.002, \ SE = 0.008, \beta = 0.033, p = 0.816 \]

Cross-sectional, *non*-maltreating mothers only (n = 52)
Longitudinal, all non-treatment groups (n = 132)

Mean-Centered Total Neglect (CTQ)

Mean-Centered Maternal Resolution (IIRCS)

Neglect X Resolution Interaction Term

Verbal ability (WAIS-III)

Maternal Age

T3 Observed Maternal Sensitivity (MBQ)

\[ B = -0.019, SE = 0.053, \beta = 0.40, p = 0.721 \]

\[ B = 0.035, SE = 0.019, \beta = 0.204, p = 0.059 \]

\[ B = 0.051, SE = 0.018, \beta = 0.287, p = 0.005 \]

\[ B = 0.040, SE = 0.014, \beta = 0.264, p = 0.005 \]

\[ B = -0.009, SE = 0.007, \beta = 0.129, p = 0.164 \]
Model 10: Neglect x Resolution on T3 Maternal Sensitivity

T3 Observed Maternal Sensitivity

Neglect Severity

Low Resolution
High Resolution
### Aim 2 Results Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>Significant moderation?</th>
<th>Pattern of Moderation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cross-Sectional Maltreating</td>
<td>Yes</td>
<td>Protective-Stabilizing</td>
</tr>
<tr>
<td>Cross-Sectional Non-Maltreating</td>
<td>No</td>
<td>N/A</td>
</tr>
<tr>
<td>Longitudinal (Maltreating and Non-Maltreating)</td>
<td>Yes</td>
<td>Protective=Enhancing</td>
</tr>
</tbody>
</table>

**Overall:** Maternal resolution of childhood maltreatment trauma is protective, especially for higher risk mothers.
Discussion, Implications, & Future Directions
Key Contributions of this Study

- Adds to methodological toolbox
- Evaluates protective effects of understudied process
- Theoretical and translational implications for families
Future Directions

• Replication studies
  • Broader SES range, non-distressed samples, other types of caregivers
  • Clarify protective stabilizing or enhancing
• Use in treatment studies as potential treatment mechanism
Acknowledgements

• Participating mothers and infants
• Mentorship and advising of Dr. Sturge-Apple and Dr. Sheree Toth
• PIs of Project HOPE (PI: Dr. Dante Cicchetti; Co-Is: Dr. Sheree Toth, & Dr. Fred Rogosch)
  • And the Funding Body of Project HOPE, NIMH
• Hard work of undergraduate RAs
  • Eleanore Barrera, Epiphany Adams, Grace Messina, Hannah Song, Jenny (Ye Eun) Park, Kaylee Damm, Klaudia Micek, Lauren Breitstone, Marc Bacharach, Mira Singer, Owyn Guinnip, Roxy Shimp, Sam Graves, Sarah Preuss, Shuyu Wei, Sydney Kirsch, T’Shai Robert, Thandolwethu Shabangu, Tysherra Ohikhuare, Yeshework Yigezu, & Yoomin Hwang
• Support of Sproull Fellowship, NRSA Fellowship, & Dr. Sturge-Apple’s Faculty Funds
References (A-K)


cost%20in%20Child%20Abuse


References (L-Z)


Questions?