Individual and Sibling Characteristics: Parental Differential Treatment and Adolescent Externalizing Behaviors

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Parental Differential Treatment (PDT)

- PDT ➔ Externalizing behaviors
- **Characteristics of the Individual**
  - Self-esteem
- **Characteristics of the Family**
  - Sibling age difference
  - Sibling relationship quality
Present Study

*Examined separately by sibling relationship quality groups

- Parental Differential Treatment
- Sibling Age Difference
- H1
- H2
- H3
- H4
- Self-Esteem
- Externalizing Behavior
- Early Externalizing Behaviors
Methods

- US-based Nonshared Environment in Adolescent Development study (NEAD; (Neiderhiser, Reiss, & Hetherington, 2007)

- 720 Families
  - predominantly White (94%)
  - Monozygotic twins (MZ, N = 93 pairs), dizygotic twins (DZ, N = 99 pairs), and full siblings in non-divorced families (FI, N = 95 pairs); and full siblings (FS, N = 182 pairs), half-siblings (HS, N = 109 pairs), and stepsiblings (US, N = 130 pairs)
  - Median family income: $25,000-$35,000
Sibling Inventory of Differential Experiences; Daniels & Plomin, 1985  \( \alpha = .67 \) to .86, across subscales for older sibling and .71 to .81, across subscales for younger siblings.
Global Self-Worth subscale of the Harter Perceived Competence Scale; Harter, 1982; \(\alpha = 79\) to .72 for older and young siblings respectively.
<table>
<thead>
<tr>
<th></th>
<th>Low Negativity</th>
<th>High Negativity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Low Positivity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Affect</td>
<td>$N_{\text{older}} = 219$</td>
<td>$N_{\text{older}} = 205$</td>
</tr>
<tr>
<td></td>
<td>$N_{\text{younger}} = 220$</td>
<td>$N_{\text{younger}} = 212$</td>
</tr>
<tr>
<td><strong>High Positivity</strong></td>
<td><strong>Primarily Positive</strong></td>
<td><strong>High Affect</strong></td>
</tr>
<tr>
<td></td>
<td>$N_{\text{older}} = 203$</td>
<td>$N_{\text{older}} = 42$</td>
</tr>
<tr>
<td></td>
<td>$N_{\text{younger}} = 196$</td>
<td>$N_{\text{younger}} = 40$</td>
</tr>
</tbody>
</table>

*Sibling Inventory of Behavior;* Hetherington & Clingempeel, 1992; $\alpha = .85$;  
*Network of Relationship Inventory;* Hetherington & Clingempeel, 1992; $\alpha = .72$
Sibling Age Difference

Histogram of Sibling Age Difference

0 age difference includes twins and 16 genetically unrelated pairs
Multi-method multi-rater composite $\alpha = .85$

Behavior Events Inventory (Hetherington & Clingempeel, 1992; $\alpha = .60-.61$ child; .37-.42 parent;
Behavior Problems Index (Zill, 1985 ; $\alpha = .72-.78$);
Observational coding for disruptive or disrespectful behavior (ICC = .86);
Analytic Strategy

- Multiple Regression using R(lavaan)
- Multiple group framework (sibling relationship quality group: primarily positive, primarily negative, low affect)
- Conducted separately for older and younger siblings, and maternal and paternal PDT
Results: Younger Siblings
Results: Older Siblings, Maternal PDT

- No significant main effects
- Significant three-way interaction (Maternal PDT, self-esteem, sibling age difference)
  - Partially supporting hypothesis 4
  - Johnson-Neyman regions of significance
Results: Older Siblings, Maternal PDT

Older siblings closer in age to their co-siblings with lower self-esteem showed the strongest links between maternal PDT and externalizing behavior.

Older siblings further in age from their co-sibling and high self-esteem showed equally strong links between maternal PDT and externalizing behavior.
Results: Older Siblings, Maternal PDT

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Results: Older Siblings, Paternal PDT

- No significant main effects
- Significant two-way interactions supporting H2 & 3
  - Age-difference and paternal PDT
  - Age-difference and self-esteem
  - Paternal PDT and self-esteem
Older siblings who were at least 1.16 years older than their younger sibling acted out then experiencing more paternal PDT.
Results: Older Siblings, Paternal PDT

Older siblings who were at least 1 year older than their younger sibling with high self-esteem showed more externalizing behaviors.
Results: Older Siblings, Paternal PDT

Older siblings with **very low self-esteem benefitted** from perceived paternal PDT. Older siblings with **high self-esteem acted out** when experiencing more paternal PDT.
Identification of potential moderators is important for understanding which adolescents are most at risk for PDT-related externalizing behaviors, and thus could help inform sibling interventions seeking to reduce externalizing behavior by indicating that they should target siblings most at risk.
Acknowledgements

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Thank You

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### Adolescent Characteristics

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<tr>
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<th>Time 1</th>
<th>Time 2</th>
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<tbody>
<tr>
<td>Mean age for older sibling</td>
<td>13.5 (2.0)</td>
<td>16.2 (2.1)</td>
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<tr>
<td>Mean age for younger sibling</td>
<td>12.1 (1.3)</td>
<td>14.7 (1.9)</td>
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<tr>
<td>Mean age difference</td>
<td>1.61 (1.29)</td>
<td>1.47 (1.34)</td>
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<tr>
<td>% male sibling pairs</td>
<td>51.6%</td>
<td>50.6%</td>
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### Parent Characteristics

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<thead>
<tr>
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<th>Time 1</th>
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<tr>
<td>Mean age for Mother</td>
<td>38.1 (5.2)</td>
<td>40.5 (4.8)</td>
</tr>
<tr>
<td>Mean age for Father</td>
<td>41.0 (6.5)</td>
<td>43.0 (6.1)</td>
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<tr>
<td>Mean years education: Mother</td>
<td>13.8 (2.3)</td>
<td>13.9 (2.4)</td>
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<tr>
<td>Mean years education: Father</td>
<td>13.9 (2.7)</td>
<td>14.0 (2.6)</td>
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<tr>
<td>Median family income</td>
<td>$25,000-$35,000</td>
<td>$25,000-$35,000</td>
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<tr>
<td></td>
<td>Age</td>
<td>Gender</td>
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<td>Maternal PDT</td>
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<td>Age Difference</td>
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<td>W2 Externalizing</td>
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*Significance levels: *p < 0.05
Characteristics of the Individual and Family

- Characteristics of the Individual
  - Self-esteem

- Characteristics of the Family
  - Sibling age difference
  - Sibling relationship quality