Introduction and Hypotheses

- Elevated negative emotionality (NE) during infancy has been associated with internalizing and externalizing behaviors in childhood.1-2
- Recent work has also noted the role of fine-grained aspects of NE on the development of behavioral problems.3
- Elevated frustration has been associated with an increased risk of developing externalizing, but not internalizing problems.4-6
- Elevated fear, on the other hand, has been associated with decreased risk of externalizing problems, although this evidence is mixed.6
- Despite supporting evidence, no studies have considered the possibility that elevated fear may act as a buffer against developing externalizing problems, even in the context of high frustration.
- The goal of the present study is to examine the additive and interactive effects of infant frustration and fear on externalizing problems during toddlerhood.
- Based on prior research, the following hypotheses were tentatively made:
  - Infant frustration will be positively related to toddler externalizing problems.
  - Infant fear will be negatively related to toddler externalizing problems.
  - Infant fear will moderate the association between infant frustration and toddler externalizing problems.
  - Parenting behaviors (maternal negative affect and behavior, maternal intrusiveness and insensitivity; maternal involvement and verbalization) were coded using The Parent-Child Early Relational Assessment.6

Methods

- 120 mother-infant dyads participated (64 female infants; 30.3% of participants identified an ethnic minority; mother’s age ranged from 17 to 43 (M=27.83; SD=6.32); 23.6% of mothers reported living at or below the poverty line).
- At 12 months postpartum, mothers completed The Infant Behavior Questionnaire, which measures fine-grained aspects of NE on the development of behavioral problems.1
- 18 months postpartum, mothers completed the Child Behavior Checklist-2, which contains an externalizing behavior scale.
- Regression, used to test hypotheses, controlled for:
  - Infant sex
  - Family cumulative risk (a risk index wherein each family receives 1 point for each risk factor they meet criteria for, including being a teenager mother, having an income-to-needs ratio below the poverty line, maternal education less than high school, mother meeting criteria for current or past major depressive episode, and single mother status)
  - Parenting behaviors (maternal negative affect and behavior, maternal intrusiveness and insensitivity; maternal involvement and verbalization) were coded using The Parent-Child Early Relational Assessment.6

Results

- Infant frustration, but not fear, was associated with toddler externalizing problems (β = .31; p < .05).
- The frustration by fear interaction was not significant; high infant fear was associated with increased externalizing problems, regardless of fear levels.

Table 1: Hierarchical Multiple Regression Analyses of Infant Temperament and Toddler Externalizing Problems

<table>
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<tr>
<th>Predictor</th>
<th>Infant Sex Step 2</th>
<th>Infant Sex Step 3</th>
<th>Maternal Involvement and Verbalization Step 3</th>
<th>Maternal Negative Affect and Behavior Step 3</th>
<th>Maternal Intrusiveness and Insensitve Step 3</th>
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<tbody>
<tr>
<td>Baby sex</td>
<td>-0.03</td>
<td>-0.10</td>
<td>-0.01</td>
<td>-0.07</td>
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<td>Cumulative Risk</td>
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<td>Maternal Involvement and Verbalization</td>
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<td>Maternal Negative Affect and Behavior</td>
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<td>Maternal Intrusiveness and Insensitve</td>
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<td>Infant Frustration</td>
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<td>Infant Fear</td>
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<td>Infant Frustration X Fear</td>
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</table>

Note: All values are based on regression analyses conducted after multiple regression, used to test hypotheses, controlled for:

- Infant sex
- Family cumulative risk (a risk index wherein each family receives 1 point for each risk factor they meet criteria for, including being a teenager mother, having an income-to-needs ratio below the poverty line, maternal education less than high school, mother meeting criteria for current or past major depressive episode, and single mother status)
- Parenting behaviors (maternal negative affect and behavior, maternal intrusiveness and insensitivity; maternal involvement and verbalization) were coded using The Parent-Child Early Relational Assessment.6

Conclusion

- The current study expands on research examining NE and fine-grained aspects of NE and subsequent child behavioral problems.
- Infant frustration, but not infant fear, was associated with heightened toddler externalizing problems, suggesting that although high frustration may increase risk for externalizing problems, fear does not appear to act as a protective factor in the present study.
- The nonsignificant interaction suggests that a temperament profile characterized by high fear, despite frustration levels, does not decrease the risk for externalizing problems, findings inconsistent with some other studies.5
- Future studies should replicate the present study using varied samples, given that another study that noted fear as a buffer against developing externalizing problems was conducted in a high risk sample.2,4
- Although findings on fearfulness remain mixed, this study bolsters confidence that frustration is an important factor in the development of externalizing behaviors, and may remain so despite fear levels.
- Clinical implications of this study include prevention efforts (e.g., parent management training) for children with elevated frustration and interventions targeting frustration for children demonstrating clinical levels of externalizing-related difficulties and elevated frustration.

References