Introduction

• Some researchers have noted that the severity of maternal depressive symptoms influences negative infant temperament characteristics.\(^5\)\(^6\)
• Others have demonstrated that negative infant temperament characteristics influence maternal depression.\(^4\)\(^6\)
• Although prior research suggests a reciprocal relationship between maternal depression and infant temperament may exist, few studies have directly tested this possibility.
• Research has also largely focused on broadly-defined “difficult” temperament; little to no research has examined the association between maternal depression and infant sadness.
• The lack of research in this area is surprising given that: 1. Infant sadness has been linked to negative outcomes including internalizing and externalizing behavior problems.\(^7\)
  2. Frequent infant crying and distress (i.e., two behavioral markers of infant sadness) have been concurrently and longitudinally linked with maternal depression in infancy.\(^8\)
  3. Depressed mothers exhibit high levels of negative affect during interactions with their infants\(^9\) who are likely to observe and potentially mimic this behavior.\(^10\)

The Current Study

• To address the limitations of prior work, the current investigation uses a cross-lagged panel design to examine the reciprocal associations between maternal depressive symptoms and infant sadness.
• It was anticipated that a bidirectional relationship between maternal depressive symptoms and infant temperamental sadness would be identified in the first year of life.

Methods

• 84 mothers of healthy, typically-developing infants (50 females, 34 males) participated in the present study.
• Mothers had a mean age of 27.67 years (SD = 6.66) and had completed 14.53 years of education (SD = 2.78), on average. Mothers primarily self-identified as Caucasian (70.2%), Latino (13.1%), and African American (10.7%).
• The mean family income-to-needs ratio (INR) was 2.44 (SD = 1.92). 21.3% of families fell at or below the poverty line (i.e., INR ≤ 1.00).
• A cumulative risk index was calculated by assigning a family one point for each of the following criteria that were met: Maternal education less than high school completion, teen motherhood (≤ 19 years of age), single relationship status, household income falling at or below the poverty line, and the history or current experience of a Major Depressive Episode (MDE).
• When infants were approximately four months of age, mothers completed the Adult Temperament Questionnaire (ATQ)\(^11\) to indicate their level of temperamental sadness.
• When infants were 4, 6, 8, and 10 months of age, mothers reported on the severity of their depressive symptoms by completing the Beck Depression Inventory, Second Edition (BDI-II)\(^12\) and the Depression subscale of the Parenting Stress Index (PSI).\(^13\)
• A composite variable indicating the severity of maternal depressive symptoms at each time point was created by combining the standardized, and when necessary, square-root transformed scores from the BDI-II and the PSI.
• At the same time points, to assess infant sadness, mothers completed the Infant Behavior Questionnaire-Revised (IBQ-R).\(^14\)

Results

Figure 1. A final model depicting the relations between maternal depression and infant sadness in the first year postpartum.

Note. Standardized estimates are displayed for significant paths only. Covariates and error terms are not included in the figure for the purpose of clarity.

<table>
<thead>
<tr>
<th>Maternal Depression (4 Months)</th>
<th>Maternal Depression (6 Months)</th>
<th>Maternal Depression (8 Months)</th>
<th>Maternal Depression (10 Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Sadness (4 Months)</td>
<td>.71*</td>
<td>.76*</td>
<td>.45*</td>
</tr>
<tr>
<td>Infant Sadness (6 Months)</td>
<td>.35*</td>
<td>.36*</td>
<td>.22*</td>
</tr>
<tr>
<td>Infant Sadness (8 Months)</td>
<td>.57*</td>
<td>.41*</td>
<td>.45*</td>
</tr>
<tr>
<td>Infant Sadness (10 Months)</td>
<td>.20*</td>
<td>.29*</td>
<td>.21*</td>
</tr>
</tbody>
</table>

X² = 9.19, p = 0.42, CFI = 0.99, RMSEA = 0.07

Discussion

• Evidence of reciprocal associations between maternal depression and infant sadness was found after controlling for maternal sadness, infant sex, and cumulative risk.
• Results indicate that early in infancy, maternal depression influences infant sadness whereas later in infancy, infant sadness influences maternal depression.
• Findings highlight the importance of early identification and intervention with depressed mothers for preventing adverse maternal and infant outcomes.
• Results suggest that a temperament-based intervention\(^15\) focused on enhancing the goodness-of-fit between parent and infant (e.g., through altered interactions or environmental circumstances), may be useful for some families.
• Future research should continue to examine the relationship between maternal depression and specific infant temperament characteristics early in life. The use of objective measures (e.g., laboratory observations of infant sadness) in these investigations would be particularly informative.

References

• Northern Illinois University.
• Methods Panel Analysis

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