Participants

- 118 mother-infant dyads
  - 46.6% females, 53.4% males
- Diverse sample: 69.5% Caucasian, 11.9% Hispanic/Latino, 11.9% African American, 5.1% identified as other ethnicities
- Income-to-needs mean was 2.22 (SD = 1.74) and 23.7% of the sample was at or below the poverty line
- Mothers ranged in age from 17 to 42 years (M = 27.84, SD = 6.36) and averaged 14.63 years of education (SD = 2.78)

Introduction

- Language development is influenced by genetic predisposition and contextual factors.
- Child characteristics, such as positive affect (PA), may contribute to language acquisition, though results have been mixed.
  - More PA at 7 months predicted better receptive language at 10 months.
  - Infant PA at 10 months predicted expressive, but not receptive, language outcomes at 14 months.
- Maternal characteristics, including patterns of child-focused interaction, also influence language development.
- There is evidence that child and parent characteristics interact to predict language outcomes.
- However, the majority of work to date has focused on difficult temperament and negative parenting characteristics as risk factors for language outcomes.
- The current study investigated the interaction between infant PA and positive maternal interactions at 10 months of age as it relates to receptive and expressive language development at 14 months.

Hypothesis

- We anticipated that infants who display more positive affect will have better receptive and expressive language skills at 14 months when they also have a mother who displays more positive parenting during a free play task.

Measures & Procedure

- Demographic questionnaires and a structured clinical interview were completed when infants were 4 months old.
- Cumulative Risk was calculated based on each family’s resources (income-to-needs less than or equal to 1) and maternal characteristics (less than high school education, under 21 years old, single parent, and past or current depressive episode).
- When infants were 10 months old, mothers completed the Positive Affect scale of the IBQ-R which includes the following sub-dimensions: Activity Level, High Intensity Pleasure, Perceptual Sensitivity, Smiling & Laughter, Vocal Reactivity, and Approach.
- A 5-minute free play interaction was coded using the Parent-Child Early Relational Assessment.
- Parental variables comprising the Positive Affective Involvement and Verbalization (PAIV) scale were used (ICC = 0.74).
- At 14 months of age, the third edition of the Bayley Scales of Infant and Toddler Development was administered to measure receptive and expressive language.

Results

Table 1: Hierarchical regression analyses predicting language from infant PA and maternal PAIV

<table>
<thead>
<tr>
<th>Model</th>
<th>Expressive Language</th>
<th>Receptive Language</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (SE B)</td>
<td></td>
</tr>
<tr>
<td>Model 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative Risk</td>
<td>.72 (.21)</td>
<td>.07</td>
</tr>
<tr>
<td>Infant Gender</td>
<td>- .35 (.14)</td>
<td>- .11</td>
</tr>
<tr>
<td>Infant PA</td>
<td>.17 (.13)</td>
<td>- .22 (.13)</td>
</tr>
<tr>
<td>Parent PAIV</td>
<td>- .22 (.12)</td>
<td>.07</td>
</tr>
</tbody>
</table>

Results, cont.

- Females had significantly higher receptive language skills.
- Cumulative risk was significantly associated with maternal PAIV and receptive language.
- Infants with high PA had significantly better expressive and receptive language when mothers also had high PAIV.
- Receptive language outcomes were lower for infants who had lower PA and mothers with high PAIV.

Discussion

- There seems to be an interactive effect on early language outcomes when higher levels of infant PA are combined with higher levels of positive maternal interactions.
- Results are consistent with a goodness of fit model, such that when infant characteristics match those of their mothers, language development is enhanced.
- When infants had lower PA and mothers displayed higher PAIV, receptive but not expressive language outcomes were lower. Thus, receptive language development may be more negatively impacted by this combination of characteristics.
- This study highlights the importance of early positive parent-infant interactions for the enhancement of language development.
- Future studies should continue to examine positive infant and parent affect and behavior to more fully understand how combinations of these characteristics impact early language acquisition.
- Interventions may be designed to increase the goodness of fit between infant temperament and maternal responses.
- Future work could also expand this study by considering additional characteristics of parent-child interactive behaviors, such as infant attention and maternal language used during interactions.

References