Introduction

- Poor effortful control (EC) and increased impulsivity are linked with elevated risk for psychopathology across the lifespan.
- EC is defined as the ability to suppress a dominant response to perform a subdominant response.
- Impulsivity is defined as uninhibited action or acting without foresight.
- Early contextual factors and infant temperament attributes contribute to the emergence of EC and impulsivity.
- The attentional system underlies EC development.
- Early life stress is linked to development of impulsivity.
- EC and impulsivity emerge in toddlers then become stable afterwards.
- Early identification of compromised EC and increased impulsivity could help identify risk factors for psychopathology later across the lifespan.
- Few studies have considered family factors and temperament attributes within the first year of life and its relation to EC and impulsivity.
- The goal of the present study is to investigate if and how contextual and temperament factors can predict EC and/or impulsivity.

Hypotheses

- Based on prior research, we made the following hypotheses:
  - Higher familial cumulative risk and home chaos, as well as more frequent and intense use of negative parenting behaviors will be linked to lower EC and higher impulsivity.
  - After controlling for familial context, better regulation and lower negative affect will be associated with lower impulsivity and better EC.
  - Higher infant positive affectivity will predict higher toddler impulsivity.

Participants

- 150 mother-infant dyads (80 boys) and their mothers.
- Mothers’ mean age = 26.6 years.
- 23% of the families below poverty line.
- 63% White, 11% Latino, 10% African American, 15% Other.

Results

- No contextual factors predicted either EC or impulsivity in toddlerhood.
- Infant positive affectivity predicted toddler impulsivity (p < 0.01).
- The overall model accounted for 22% of the variance in toddler impulsivity.
- Attention regulation significantly predicted toddler EC (p < 0.01).
- The overall model accounted for 34% of the variance in toddler EC.
- All other contextual and temperament factors were non-significant.

Table 1
Hierarchical Regression Analyses Predicting 18 Month Impulsivity

<table>
<thead>
<tr>
<th>Predictors</th>
<th>ΔR²</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Gender</td>
<td>.05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative Risk</td>
<td>-.105</td>
<td>-.140</td>
<td>-.204*</td>
<td></td>
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<tr>
<td>12 Month Negative Parenting</td>
<td>-.02</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>12 Month Positive Affect</td>
<td>-.039*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant Positive Affect</td>
<td>-.078</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| *p<.10, **p<.05, ***p<.01

Table 2
Hierarchical Regression Analyses Predicting 18 Month Effortful Control

<table>
<thead>
<tr>
<th>Predictors</th>
<th>ΔR²</th>
<th>Step 1</th>
<th>Step 2</th>
<th>Step 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant Gender</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cumulative Risk</td>
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<td>-.016</td>
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<tr>
<td>12 Month Negative Parenting</td>
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<tr>
<td>12 Month Positive Affect</td>
<td>-.074</td>
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<tr>
<td>Infant Positive Affect</td>
<td>-.058***</td>
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<td></td>
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</tr>
</tbody>
</table>
| *p<.10, **p<.05, ***p<.01

Conclusions

- It may be possible that early in life temperament attributes provide the most important clues about subsequent temperament-based risk factors (e.g., low EC and high impulsivity), an interpretation that is consistent with conclusions reached by other investigators.
- Future research suggests links between positive affect and impulsivity are mediated by dopamine levels. Higher levels of dopamine increase distractibility and decreased perseverance, which could manifest in toddlerhood as impulsivity behavior.
- These conclusions suggest that parent training programs should incorporate interventions aimed to modify infant temperament to help develop toddler EC and diminish toddler impulsivity.

Future Directions

- Future studies should study toddler EC and impulsivity at an older age, possibly 32 months, to see if the influence of contextual factors changes.
- Future studies should include contextual factors, such as parenting stress, household density, and parenting self-efficacy.
- Future studies should consider interactions of contextual factors and temperament.

References


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