What do we know about how children develop when they have a parent with BPD?

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University of Oregon
Presentation for NEA-BPD on March 4, 2018
A little bit about me.....

- Assistant professor at the University of Oregon
- Licensed psychologist
- Interested in children whose parents have mental health issues; emotion regulation, dialectical behavior therapy
Borderline Personality Disorder

- Prevalence of BPD is estimated to be between 1-6% of the population. And yet individuals with BPD comprise:
  - 20% of all patients on psychiatric inpatient units
  - 40% of mothers referred to CPS have BPD symptoms

- A single symptom of BPD can cause considerable impairment for the individual
A context of high risk for children

Maternal BPD/ BPD symptoms
Recent systematic review identified 11 studies that have examined childhood and adolescent psychopathology outcomes in the context of maternal BPD/BPD symptoms.

- Children had higher rates of internalizing and externalizing problems.
- Even compared to children of mothers diagnosed with other disorders.
Traditional Clinical Formulations of BPD Symptoms

- Interpersonal Chaos
  - Affective Instability
    - Identity Disturbance
    - Behavioral Dysregulation

More Modern Formulations

- Difficulties with...
  - Executive functioning
  - Theory of mind
  - Emotion regulation
Some definitions...

- **Executive functioning**: our ability to plan, organize, and pay attention in order to achieve a goal

- **Theory of Mind**: our ability to know or infer what other people may think, feel, or desire

- **Emotion Regulation**: our ability to change our emotions or emotional expressions in a given context
Difficulties predict later mental health symptoms in children.
A recent study we completed...

- I) Examined the relation between preschoolers' executive functioning and maternal BPD symptoms.
- II) Examined the relation between preschooler’s theory of mind and maternal BPD symptoms.
- III) Examined the relation between preschooler’s emotion regulation and maternal emotion dysregulation.
Participants

- 68 mother-child dyads

- All children were 3 or 4
- Predominately low income sample
- 63% of children were white

BPD Symptoms

- 0-1: 27%
- 2-4: 24%
- 5-9: 49%
Maternal Measures

- Borderline personality disorder symptoms
  - Personality Assessment Inventory-Borderline Subscale
  - 30% mothers scored +1SD mean
  - 15% mothers scored above the clinical cut-off

- Emotion Dysregulation
  - Difficulties in Emotion Regulation Scales

- Depression symptoms
  - Center for Epidemiological Studies-Depression
  - $M=15.5$ (16 is cut-off for those at risk for clinical depression)
Child measures: Executive functioning

- Cognitive Inhibitory Control (Day/Night)
- Behavioral Inhibitory Control (Bear/Dragon)
- Attention Shifting & Focusing (Card Sort)
- Delay Ability (Delay of gratification)
Child Measures: Theory of Mind

- Location False belief
- Content False Belief
- Affect Perspective Taking
- Emotion Knowledge
Child Measures: Emotion Regulation

- **Locked Box Task**
  - Preschoolers asked to work alone for 2 minutes to retrieve a toy using an incorrect set of keys
Results

- Before we review results, are there any guesses to which areas may be compromised in children whose mothers have elevated BPD symptoms?
Aim I results

- Examine the relation between preschoolers' executive functioning and maternal BPD symptoms.
- Magnitude of direct associations ($r$)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Maternal BPD with...</td>
<td>-.31*</td>
<td>-.09</td>
<td>-.35**</td>
<td>-.23</td>
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### Aim I results continued

<table>
<thead>
<tr>
<th>Executive Functioning</th>
<th>Cognitive Inhibitory Control</th>
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<th>Delay Ability</th>
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<tr>
<td></td>
<td>$\beta$</td>
<td>95% CI</td>
<td>$\beta$</td>
<td>95% CI for B</td>
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<tr>
<td>Income</td>
<td>.13</td>
<td>-.13 - .38</td>
<td>.12</td>
<td>-.09 - .32</td>
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<tr>
<td>Age</td>
<td>.03</td>
<td>-.24 - .25</td>
<td>.44**</td>
<td>.24 - .64</td>
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<tr>
<td>Cognitive Ability</td>
<td>.33*</td>
<td>.04 - .62</td>
<td>.20</td>
<td>-.04 - .43</td>
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<tr>
<td>Maternal Depression Symptoms</td>
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<td>-.15 - .47</td>
<td>.16</td>
<td>-.08 - .40</td>
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<td>-.37 - .27</td>
<td><strong>-.27</strong></td>
<td>-.52 - -.02</td>
</tr>
<tr>
<td>$R^2$</td>
<td>.15</td>
<td>.47**</td>
<td>.50**</td>
<td>.12</td>
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</table>
Examine the relation between preschooler’s theory of mind and maternal BPD symptoms.

- Magnitude of direct associations ($r$)

<table>
<thead>
<tr>
<th>Maternal BPD with...</th>
<th>Location False belief</th>
<th>Content False Belief</th>
<th>Affect Perspective Taking</th>
<th>Emotion Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
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<td>.11</td>
<td>-.32**</td>
<td>-.11</td>
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## Aim II results continued

### Theory of Mind

<table>
<thead>
<tr>
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<th>Location False Belief</th>
<th>Content False Belief</th>
<th>Affect Perspective Taking</th>
<th>Emotion Knowledge</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Income</strong></td>
<td>.22*</td>
<td>.16</td>
<td>-.04 - .36</td>
<td>-.11 - .32</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>.17</td>
<td>.40**</td>
<td>.19 - .60</td>
<td>.43**</td>
</tr>
<tr>
<td><strong>Cognitive Ability</strong></td>
<td>.46**</td>
<td>.34**</td>
<td>.12 - .60</td>
<td>.11</td>
</tr>
<tr>
<td><strong>Maternal Depression Symptoms</strong></td>
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<td>-.23 - .30</td>
<td>.17</td>
<td>-.07 - .41</td>
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<tr>
<td><strong>Maternal Borderline Personality Disorder Symptoms</strong></td>
<td>.10</td>
<td>-.18 - .37</td>
<td>-.06</td>
<td>-.31 - .19</td>
</tr>
</tbody>
</table>

All DV’s entered simultaneously

| $R^2$                  | .45**                 | .38**                | .28**                    | .36**            |
Table 1. Standardized regression coefficients (β) and proportion of variance explained at the final (full) model step: associations of maternal emotion dysregulation and observed child ER

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Emotions</th>
<th></th>
<th></th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Happiness</td>
<td>Sadness</td>
<td>Anger</td>
<td>Anxiety</td>
<td></td>
<td></td>
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<tr>
<td><strong>Total Family Income</strong></td>
<td>.049</td>
<td>.164</td>
<td>.168</td>
<td>.093</td>
<td></td>
<td></td>
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<tr>
<td><strong>Maternal Emotion Dysregulation</strong></td>
<td>.191</td>
<td><strong>.365</strong></td>
<td>-.173</td>
<td>-.046</td>
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<tr>
<td><strong>Supportive Responses</strong></td>
<td>-.113</td>
<td>-.219</td>
<td>.242</td>
<td>.215</td>
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<td></td>
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<tr>
<td><strong>Non-Supportive Responses</strong></td>
<td>-.175</td>
<td>-.219</td>
<td>.248</td>
<td>.070</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Actions**

<table>
<thead>
<tr>
<th></th>
<th>Defiance</th>
<th>Problem Solve</th>
<th>Distract</th>
<th>Self-Soothe</th>
<th>Play Activity</th>
<th>Talk</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Family Income</strong></td>
<td>-.190</td>
<td>-.006</td>
<td>.164</td>
<td>-.079</td>
<td>-.026</td>
<td>-.049</td>
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<tr>
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<td><strong>-.290</strong></td>
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<td><strong>.331</strong></td>
<td><strong>.397</strong></td>
<td>.163</td>
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<tr>
<td><strong>Supportive Responses</strong></td>
<td>.193</td>
<td><strong>.012</strong></td>
<td>-.199</td>
<td>-.091</td>
<td><strong>.337</strong></td>
<td>.063</td>
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<tr>
<td><strong>Non-Supportive Responses</strong></td>
<td>.449**</td>
<td>-.178</td>
<td>.052</td>
<td>-.095</td>
<td>.077</td>
<td>.104</td>
</tr>
</tbody>
</table>

**Emotion-Action Sequences**

<table>
<thead>
<tr>
<th></th>
<th>Anxiety-PS</th>
<th>Anger-PS</th>
<th>Sad-PS</th>
<th>Happy-PS</th>
<th>Happy-Talk</th>
<th>Sad-Talk</th>
<th>Anxiety-Talk</th>
<th>Sad-Distract</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Family Income</strong></td>
<td>.204</td>
<td>.004</td>
<td>.081</td>
<td>.157</td>
<td>.033</td>
<td>.254</td>
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<tr>
<td><strong>Maternal Emotion Dysregulation</strong></td>
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<td>.022</td>
<td>.124</td>
<td>-.051</td>
<td>-.156</td>
<td>-.627</td>
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<tr>
<td><strong>Supportive Responses</strong></td>
<td>.096</td>
<td>-.042</td>
<td>-.020</td>
<td>-.031</td>
<td>.112</td>
<td><strong>-.450</strong></td>
<td>-.138</td>
<td>.368</td>
</tr>
<tr>
<td><strong>Non-Supportive Responses</strong></td>
<td>-.195</td>
<td>.060</td>
<td>.311</td>
<td>-.078</td>
<td>.160</td>
<td>-.550**</td>
<td>.435</td>
<td>-.228</td>
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</table>

* = p<.05, ** = p<.01
Abbreviation: PS = Problem Solve
Discussion of overall findings

- There were not widespread deficits in children’s EF and ToM as related to maternal BPD symptoms.

- Rather, the domains of EF and ToM that were significantly related to maternal BPD symptoms appeared to be localized and resembled actual BPD symptoms.
  - Behavioral control problems (Impulsivity)
  - Affect perspective taking (Interpersonal ups-and-downs; affective instability)
Comparing findings to other contexts of risk

- The magnitude of correspondence between maternal BPD symptoms and children’s EF and ToM was similar to other contexts of risk:
  - Poverty
  - Foster care/maltreated samples

- Further supports the idea that having a mother with elevated BPD symptoms is a significant risk factor for various aspects of psychosocial development
Limitations and Future Directions

- Cross-sectional design
  - Future work should focus on growth patterns in children as related to emerging psychopathology

- Modest sample size
  - Larger and more diverse samples needed

- Treatment development efforts are needed to help these dyads
Acknowledgements

- 2013 Victoria S. Levin Grant for Early Career Success in Young Children’s Mental Health Research
- University of Oregon

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Questions?