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

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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

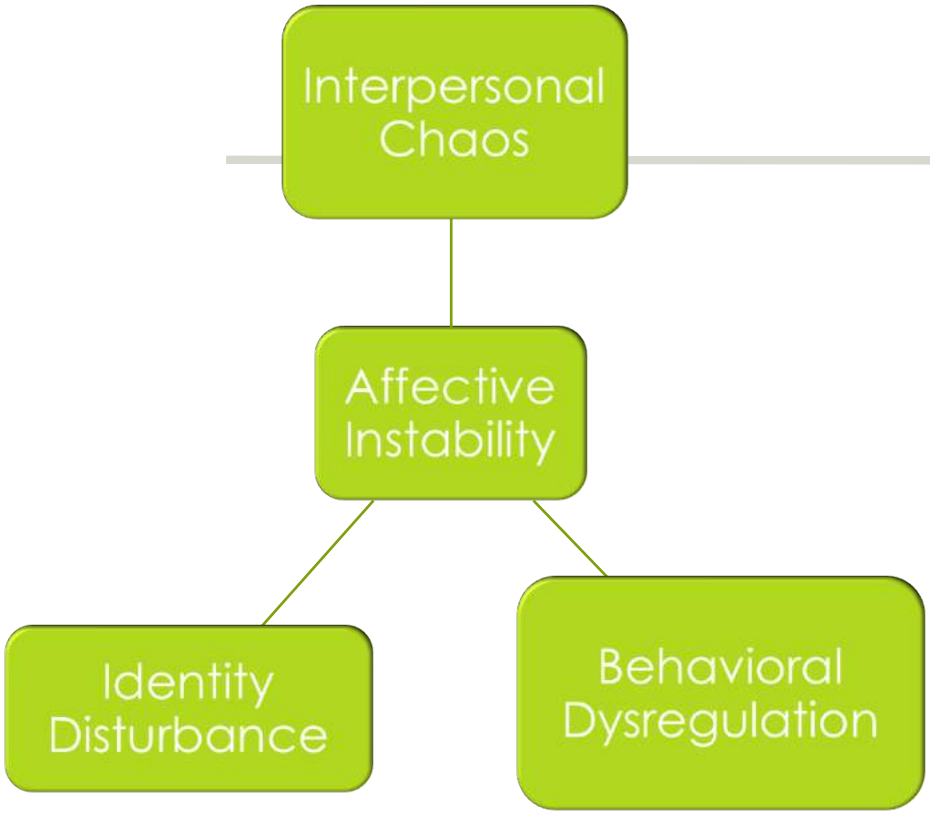
A context of high risk for children

Maternal BPD/ BPD symptoms

Children's psychopathology in the context of maternal 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

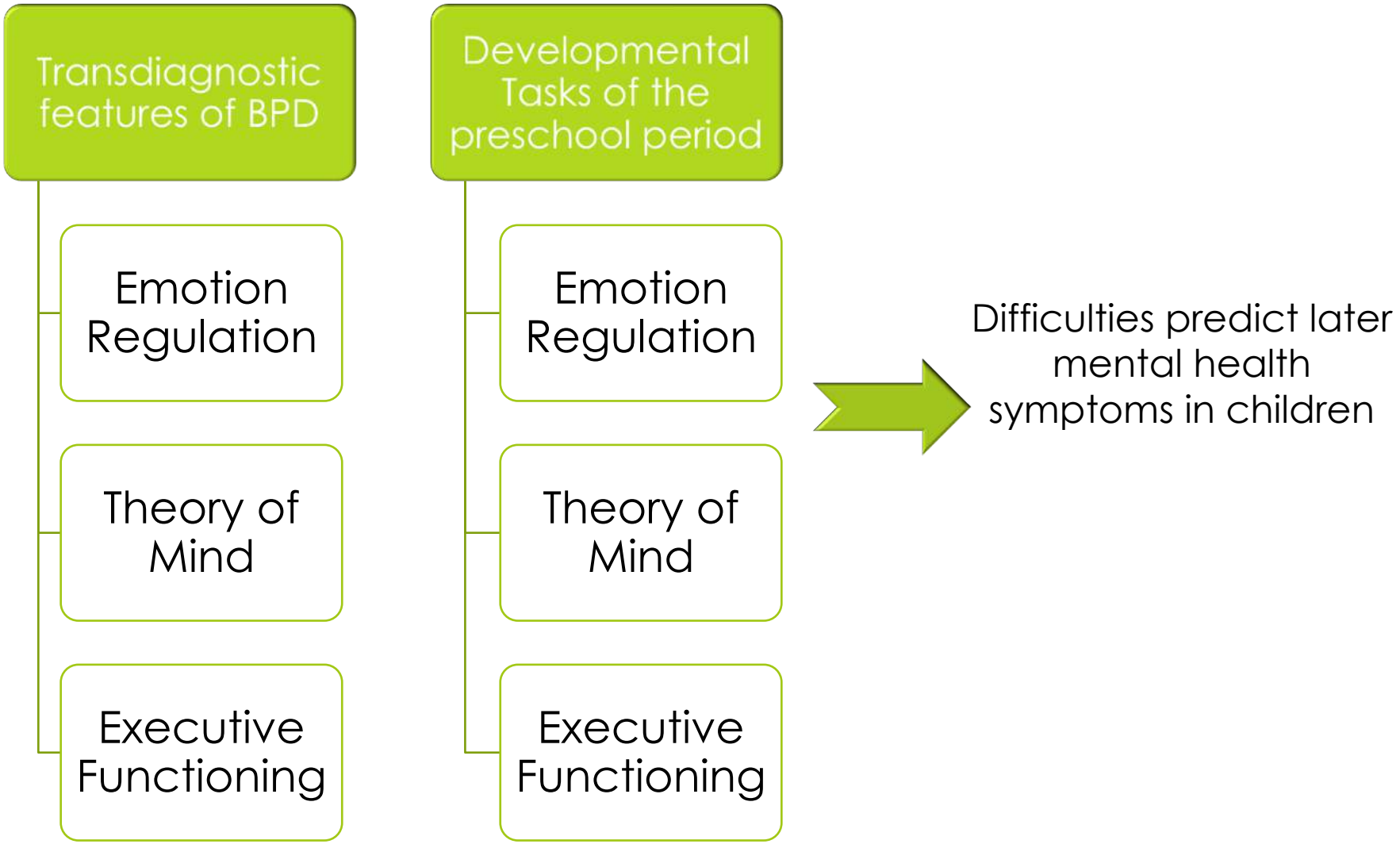


More Modern formulations

- 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

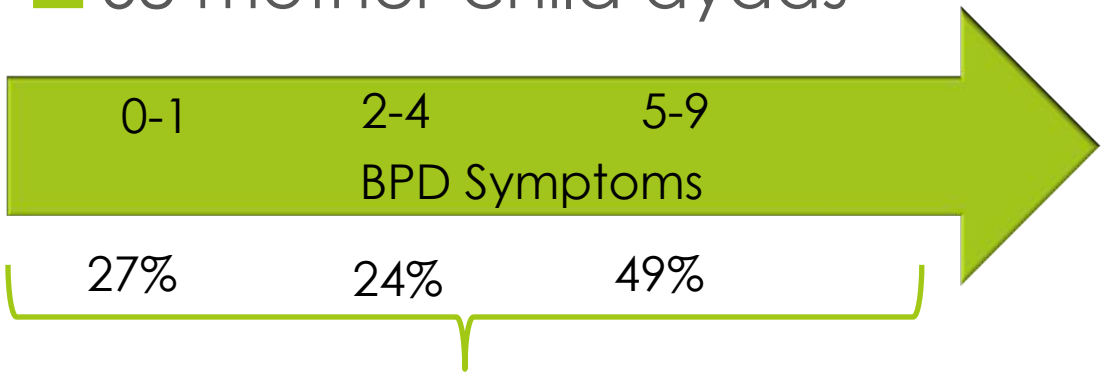

Transdiagnostic features of BPD
Emotion Regulation
Theory of Mind
Executive Functioning
Developmental Tasks of the preschool period
Emotion Regulation
Theory of Mind
Executive Functioning
Difficulties predict later mental health symptoms in children

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



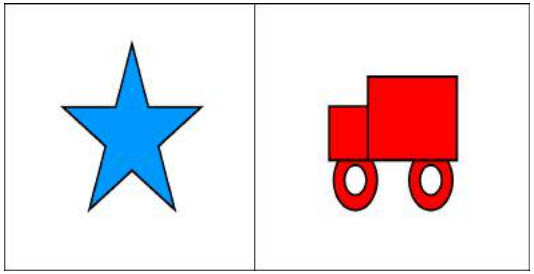
- All children were 3 or 4
- Predominately low income sample
- 63% of children were white

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*)

Maternal BPD with…	Cog. Inh Control	Beh. Inh. Control	Attn. Shifting & Focusing	Delay Ability
	-.31*	-.09	-.35**	-.23

Aim I results continued

Executive Functioning	Cognitive Inhibitory Control		Behavioral Inhibitory control		Attention Shifting and Focusing		Delay Ability	
	β	95% CI	β	95% CI for B	β	95% CI	β	95% CI
Income	.13	-.13 - .38	.12	-.09 - .32	.12	-.07 - .31	.16	-.10 - .41
Age	.03	-.24 - .25	.44**	.24 - .64	.20	-.01 - .40	.13	-.14 - .40
Cognitive Ability	.33*	.04 - .62	.20	-.04 - .43	45**	.25 - .66	-.01	-.30 - .28
Maternal Depression Symptoms	.16	-.15 - .47	.16	-.08 - .40	.01	-.22 - .24	.12	-.19 - .43
Maternal Borderline Personality Disorder Symptoms	-.05	-.37 - .27	-.27*	-.52 - -.02	-.18	-.41 - .06	-.27[t]	-.58 - .04
R^2	.15		.47**		.50**		.12	

All DV's entered simultaneously

Aim II results

- Examine the relation between preschooler's theory of mind and maternal BPD symptoms.
- Magnitude of direct associations (*r*)

Maternal BPD with…	Location False belief	Content False Belief	Affect Perspective Taking	Emotion Knowledge
	-.12	.11	-.32**	-.11

Aim II results continued

Theory of Mind	Location False Belief		Content False Belief		Affect Perspective Taking		Emotion Knowledge	
Income	.22*	.01 - .44	.16	-.04 - .36	.11	-.11 - .32	.00	-.24 - .24
Age	.17	-.07 - .40	.40**	.19 - .60	.43**	.22 - .64	.23	-.01 - .48
Cognitive Ability	.46**	.23 - .69	.34**	.12 - .60	.11	-.13 - .36	.35**	.09 - .60
Maternal Depression Symptoms	.03	-.23 - .30	.17	-.07 - .41	.02	-.24 - .29	.07	-.21 - .36
Maternal Borderline Personality Disorder Symptoms	.10	-.18 - .37	-.06	-.31 - .19	-.23[t]	-.50 - .04	-.09	-.38 - .21
R^2	.45**		.38**		.28**		.36**	

All DV's entered simultaneously

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

Predictors	Emotions			
	Happiness	Sadness	Anger	Anxiety
R^2	.049	.164	.168	.093
Total Family Income	.070	.146	-.347*	.218
Maternal Emotion Dysregulation	.191	.365*	-.173	-.046
Supportive Responses	-.113	-.219	.242	.215
Non-Supportive Responses	-.175	-.219	.248	.070

	Actions					
	Defiance	Problem Solve	Distract	Self-Soothe	Play Activity	Talk
R^2	.169	.146	.098	.146	.194	.046
Total Family Income	-.190	-.006	.164	-.079	-.026	-.049
Maternal Emotion Dysregulation	-.172	-.290*	.123	.331*	.397**	.163
Supportive Responses	.193	.012	-.199	-.091	.337*	.063
Non-Supportive Responses	.449**	-.178	.052	-.095	.077	.104

	Emotion-Action Sequences							
	Anxiety-PS	Anger-PS	Sad-PS	Happy-PS	Happy-Talk	Sad-Talk	Anxiety-Talk	Sad-Distract
R^2	.204	.004	.081	.157	.033	.254	.478	.221
Total Family Income	.487	-.001	.022	.124	-.051	-.156	-.627	.301
Maternal Emotion Dysregulation	.096	-.042	-.020	-.031	.112	-.450*	-.138	.368
Supportive Responses	-.195	.060	.311	-.078	.160	-.550**	.435	-.228
Non-Supportive Responses	-.238	.049	.109	-.379	.100	.124	.352	-.214

*= 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

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- Questions?