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## Mood Disorders and Trauma – What are the Associations?

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## Objectives

- To characterize the relationship between childhood trauma/abuse, and mood dysregulation, and between childhood trauma/abuse and pediatric bipolar disorder (BD).
- To describe the clinical correlates and demographics of children with trauma/abuse and comorbid mood disorders in a community mental health setting.
- To explore associations between the diagnosis of BD in youth with histories of trauma and
  - a family history of BD
  - the presence of specific symptom clusters
  - the presence of pretrauma mood symptoms.

## Background

- Mood dysregulation in traumatized children may be misdiagnosed as bipolar disorder (BD) and conversely, the diagnosis of BD overlooked.
- Such distinctions may be especially important among individuals with BD given the disproportionately high prevalence of childhood trauma histories (reported in about half of adult patients with BD, across several studies) coupled with frequent prepubertal onset of affective symptoms (1-4), significantly younger age at bipolar illness onset, as well as higher severity level of symptoms (3).
- Findings indicate that prepubertal and early adolescent BD I as well as adult BD I share the same diathesis, with seven to eight times greater familiarity in child versus adult BD-I (5), suggesting that a family history of BD in first degree relatives is more common in children with BD.
- Not all traumatized children develop PTSD, and the consequences of trauma may vary.

- DSM-5 proposed new mood disorder Disruptive Mood Dysregulation Disorder (6, 7):
  - a direct result of the controversy surrounding the diagnosis of early onset BD.
  - emphasizes the importance of studying mood dysregulation that is comorbid with trauma/abuse.

- Such distinctions have important implications in terms of treatment approaches, biological markers and social/demographic factors.

- We expect that traumatized children who meet full criteria BD are more likely than children with MD NOS to have:
  - family history of BD
  - mood symptoms predating trauma
  - specific neurovegetative symptom clusters.



## Methods

- We are assessing youths ages 8-18 who present with mood symptoms and past trauma divided into two groups:
  - Trauma Mood Disorder NOS (T+MD)
  - Trauma+Unmodified DSM-IV-TR BD (T+BD).
- Differences in clinical variables between groups are analyzed using t-tests for continuous and chi-square tests for categorical variables ( $\alpha = 0.05$ ).
- Youth are evaluated using the following psychiatric rating scales:
  - Structured Clinical Interview for DSM Disorders, Childhood Disorders Form (KID-SCID) mood module to establish the diagnosis of BD
  - Brief Psychiatric Rating Scale for Children (BPRS-C)
  - Young Mania Rating Scale (YMRS)
  - Children’s Depression Rating Scale-Revised (CDRS-R)
  - Childhood Trauma Questionnaire (CTQ)
  - PTSD CheckList –Civilian Version (PCL-C)
  - Attention Deficit Hyperactivity Disorder IV (ADHD-IV) Rating Scale
  - Substance Abuse (SA) screen: CRAFFT
- Other information obtained includes:
  - Demographic characteristics and socioeconomic status
  - Number of medications and types
  - Percent of with a lifelong history of psychiatric hospitalization/out of home placement
  - Family history of psychiatric illness and substance use disorders



## Results

**\*Demographic data:**  
 Note: test statistic is p-value of Chi-square test for categorical data or t-test for continuous data (corrected for unequal variance)

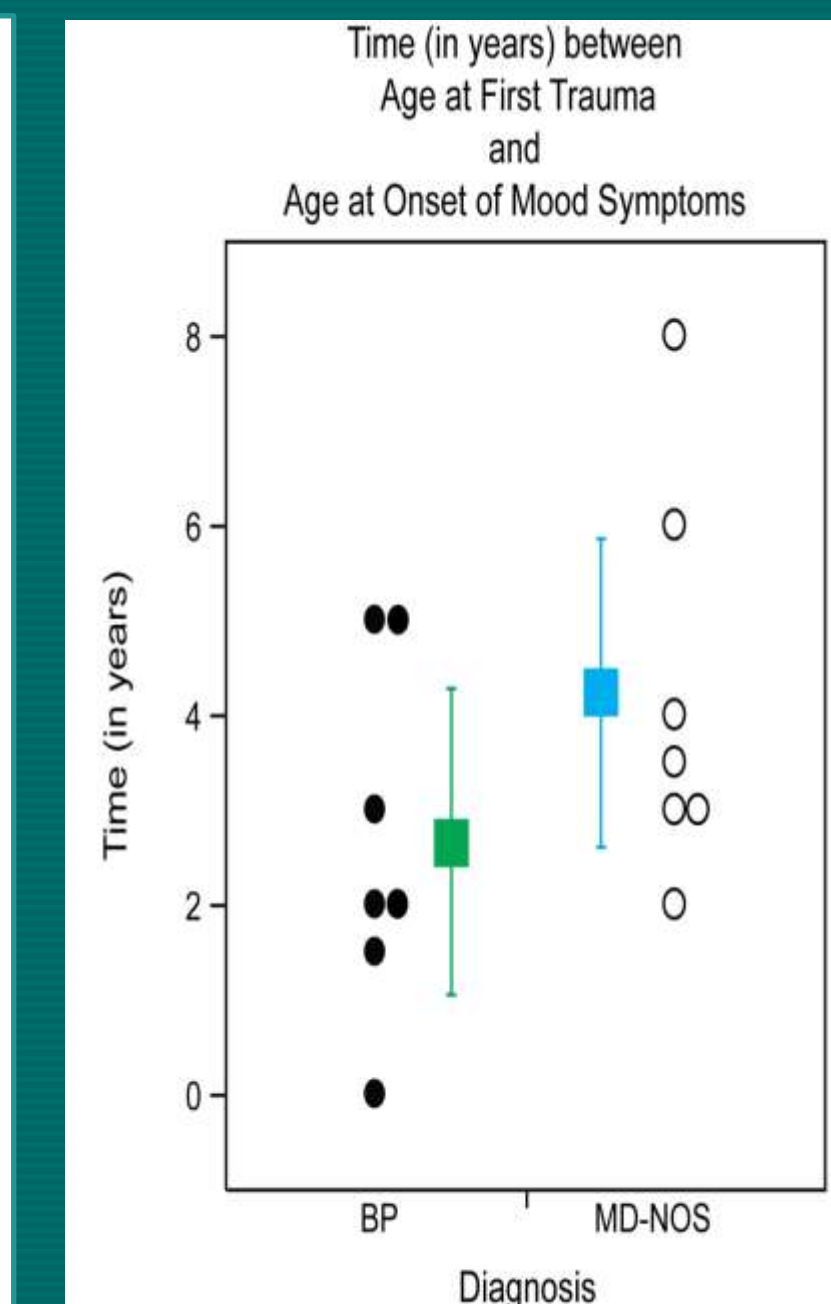
	BP	MD-NOS	Statistic*
Group size (N)	8	7	.
Gender (number of Females)	3	3	0.8
Ethnicity (% Caucasian)	100	67	0.05
Age at time of Interview (mean (SD))	13.5 (2.7)	12.7 (3.3)	0.6
Number of Siblings (mean (SD))	2.0 (1.6)	1.8 (1.6)	0.9

Types of trauma experienced and the number of incidents by group.

Type of Trauma	BP	MD-NOS
Witnessed violence	7	5
Sexual assault or abuse	5	3
Physical abuse	7	7
Total Number of Incidents	19	15

**Table of family history:** the number of first-degree relatives with significant history. The count indicates the number of subjects who have at least one first-degree relative with a positive history; the mean indicates the average number of relatives each subject cited as having a positive history.

History of ...	BP			MD-NOS			T-test for the number of	Chi-Square test for at least one relative
	Mean	±	SD	Mean	±	SD		
ADD/ADHD	1.9	±	1.5	1	±	1	0.21	0.88
Anxiety Disorders	1.6	±	1.9	0.4	±	0.5	0.14	0.45
Bipolar Disorder	2	±	1.9	0.6	±	0.5	0.07	0.46
Depression	2.5	±	2.2	1.3	±	1.4	0.23	0.71
PDD or Autism	0.3	±	0.7	0	±	NaN	0.37	0.25
Psychosis	0.4	±	0.5	0.1	±	0.4	0.35	0.30
Social Phobia	0.4	±	0.5	0	±	NaN	0.08	0.04
Schizophrenia	0.8	±	0.7	0.1	±	0.4	0.06	0.05
Substance Abuse	2.5	±	2.2	1.6	±	1.3	0.35	0.60
Trouble with the Law	1.1	±	1.2	1.3	±	1.8	0.84	0.83
Total Number	13.4	±	9.7	6.4	±	4.7	0.11	



- Clinical presentations:
  - Mood Symptoms:
    - BD>MD in BPRS total score ( $p=0.06$ ), BPRS Mania subscale ( $p=0.05$ ), YMRS total score ( $p=0.06$ )
    - BD>MD in total number of mood episodes identified with KID-SCID:
      - MDE ( $p=0.04$ )
      - Mania (without high outlying value) ( $p = 0.07$ )
  - Substance use:
    - No difference as assessed using CRAFFT
  - PTSD and trauma recollection:
    - No differences in PTSD symptoms as assessed by PCL-C
    - BD>MD abuse identified with CTQ
      - Sexual abuse (without high outlying value) ( $p = 0.05$ )
      - Physical neglect ( $p=0.07$ )
  - Medications:
    - BD>MD 1.33 fewer medications ( $t=11.9$ ,  $p=0.17$ )

## Conclusions

- Further data collection is ongoing to achieve our targeted sample size in order to identify clinical correlates in mood dysregulated, traumatized youth.
- This will promote future research aimed at identifying biomarkers and preventive interventions.

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