

## Background

Mood dysregulation in traumatized children may be misdiagnosed as bipolar disorder (BD) and conversely, the diagnosis of BD overlooked.

Our aim is to characterize the relationship between trauma and mood dysregulation and pediatric BD by describing the clinical correlates and demographics of children with trauma/abuse and comorbid mood disorders in a community mental health setting.

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.

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

## Methods

We are assessing youths (ages 8-18 years) who present with mood symptoms and past trauma divided into two groups:

- Trauma+Unmodified DSM-IV-TR BD (T+BD)
- Trauma+Mood Disorder, NOS (T+MD)

Youth are evaluated using the following psychiatric rating scales:

1. Structured Clinical Interview for DSM Disorders, Childhood Disorders Form (KID-SCID) mood module to establish the diagnosis of BD
2. Brief Psychiatric Rating Scale for Children (BPRS-C)
3. Young Mania Rating Scale (YMRS)
4. Children's Depression Rating Scale-Revised (CDRS-R)
5. Childhood Trauma Questionnaire (CTQ)
6. PTSD Checklist –Civilian Version (PCL-C)
7. Attention Deficit Hyperactivity Disorder IV (ADHD-IV) Rating Scale
8. Substance Abuse (SA) screen: CRAFFT



Other information obtained includes:

- Demographic characteristics and socioeconomic status
- Number of medications and types
- Lifelong history of psychiatric hospitalization/out of home placement
- Family history of psychiatric illness and substance use disorders.

Differences in clinical variables between groups are analyzed using t-tests for continuous and chi-square tests for categorical variables ( $\alpha = 0.05$ ).

## Results

**TABLE 1: 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)	10	10	.
Gender (number of Females)	4	4	1.0
Ethnicity (% Caucasian)	100	78	0.07
Age at time of Interview (mean (SD))	13.2 (2.5)	12.5 (3.1)	0.6
Number of Siblings (mean (SD))	2.2 (1.5)	1.8 (1.4)	0.6

**TABLE 2: Types of trauma experienced and the number of incidents by group**

Type of Trauma	BP	MD-NOS
Witnessed violence	8	7
Sexual assault or abuse	7	5
Physical abuse	8	10
Total Number of Incidents	23	22

**TABLE 3: 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 ...	Count	BP n = 10		MD-NOS n = 10		Chi-Square test for the count P-value	T-test for the number of relatives P-value	
		Mean	SD	Mean	SD			
ADD/ADHD	7	1.7	± 1.4	8	1.1	± 0.9	0.60	0.27
Anxiety Disorders	7	1.6	± 1.7	4	0.4	± 0.5	0.17	0.05
Bipolar Disorder	8	2	± 1.6	7	0.8	± 0.6	0.60	0.04
Depression	7	2.3	± 2.0	7	1.1	± 1.2	1	0.12
PDD or Autism	2	0.3	± 0.7	3	0.3	± 0.5	0.60	1
Psychosis	4	0.4	± 0.5	1	0.1	± 0.3	0.11	0.13
Social Phobia	4	0.4	± 0.5	1	0.1	± 0.3	0.11	0.13
Schizophrenia	6	0.7	± 0.7	1	0.1	± 0.3	0.01	0.02
Substance Abuse	7	2.5	± 2.3	9	1.7	± 1.1	0.25	0.33
Trouble with the Law	6	1	± 1.2	7	1.2	± 1.5	0.64	0.74
Total Number	.	12.9	± 9.1	.	6.9	± 4.0	.	0.07

Similar:

- Age at onset of trauma ( $2.6 \pm 1.8$  versus  $3.3 \pm 1.9$  years;  $p=0.4$ )
- Types of trauma
- Number of incidents
- Age at onset of mood symptoms (T+BD  $7 \pm 2.5$  versus T+MD  $7.8 \pm 1.8$   $p=0.4$ )
- PTSD and ADHD symptoms
- Number of psychotropic medications (BD  $3.6 \pm 2.9$  MD  $2.7 \pm 2.1$   $p=0.4$ )

T+BD higher scores:

- CTQ sexual abuse subscale ( $p=0.04$ )
- BPRS mania subscale ( $p=0.02$ )
- KSCID major depressive episodes ( $p=0.04$ )
- KSCID manic episodes ( $p=0.03$ )
- Ideation to self-harm ( $p=0.08$ )

T+BD higher rates of family history findings:

- Any Axis I disorder ( $p=0.07$ )
- Anxiety disorders ( $p=0.05$ )
- BD ( $p=0.04$ )
- Schizophrenia ( $p=0.02$ )

## Conclusion

Results suggest differences in clinical presentation of mood symptoms and higher rates of BD and schizophrenia in the T+BD families.

Taken together, these preliminary results suggest potential biological and genetic vulnerabilities which may predispose children to develop specific mood disorders under certain circumstances; the ability to identify these children early on could change their prognostic trajectory.

## References

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