Trauma and comorbid post-traumatic stress disorder in people with bipolar disorder participating in the Heinz C. Prechter Longitudinal Study.

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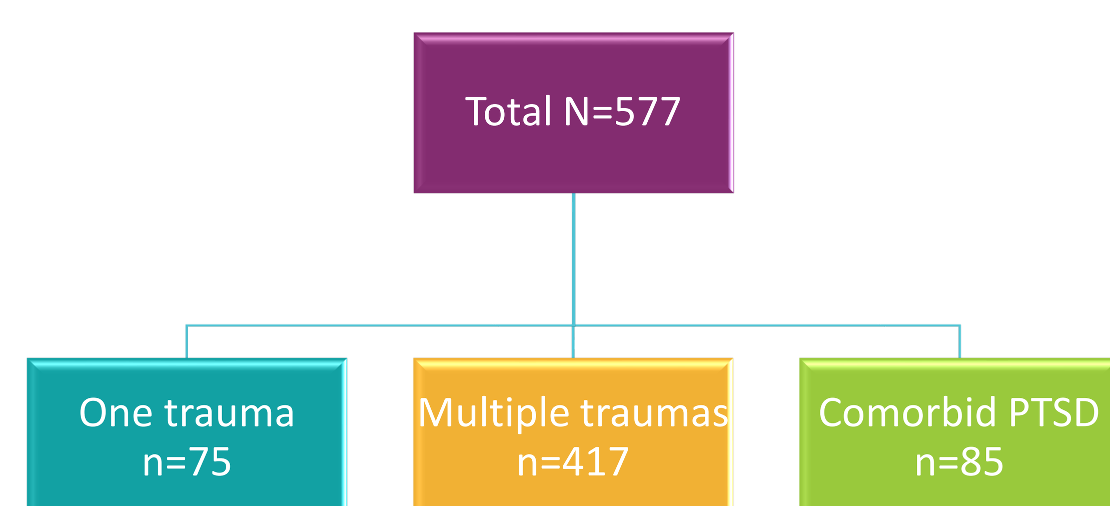
Introduction

It is estimated that up to 50% of people with bipolar disorder also have comorbid post-traumatic stress disorder (PTSD). However, little is known about the presentation and treatment of people with this comorbidity.

Methods

Data from 577 individuals diagnosed with bipolar disorder participating in the Heinz C. Prechter Longitudinal Study of Bipolar Disorder (PLS-BD) were explored at baseline, year two and year four. Three trauma groups were created according to participants' responses to the Life Events Checklist and the Diagnostic Interview for Genetic Studies: (i) one trauma (n = 75), (ii) multiple traumas (n = 417), and comorbid PTSD (n = 85), see figure 1. Measures of depression, mania, sleep, number of hospitalisations and suicide attempts, and medication use were analysed using regression modelling to determine differences between the three trauma groups.

Figure 1: Flowchart of trauma groups



Results

There was a significant increase in depression, mania, and sleep scores and a higher number of hospitalisations in participants with comorbid PTSD compared to those experiencing one trauma. A significant increase was also seen in mania and depression scores in participants experiencing multiple traumas compared to those who reported one trauma. There was no difference in medication use between those who experienced one trauma when compared to those diagnosed with PTSD. However, participants who experienced multiple traumas were significantly less likely to use lithium compared to those who experienced one trauma. (See Table 2)

Table 1: Scale measures and time point collection

Scale	Measures	Baseline	Year 2	Year 4
Hamilton Depression Rating Scale (HAMD)	Depression	x	x	x
Young Mania Rating Scale (YMRS)	Mania	x	x	x
Epworth sleep scale (ESS)	Sleep	x	x	x
Medication data	Medications	x	x	x
Longitudinal Interval Follow-up Evaluation (LIFE)	No. of depression episodes		x	x
	No. of hypomania episodes		x	x
	No. of mania episodes		x	x
	No. of hospitalizations		x	x
	No. of suicide attempts		x	x

Table 2: Significant regression models

Outcome	1 Trauma vs Multiple Trauma*		1 Trauma vs comorbid PTSD*	
Symptom scores	Mean Difference β (95% CI)	p-value	Mean Difference β (95% CI)	p-value
HAMD[a]	1.95 (0.32, 3.57)	**0.018***	4.38 (2.31, 6.46)	**0.000***
YMRS[a]	0.94 (0.01, 1.88)	**0.049***	1.70 (0.49, 2.91)	**0.006***
ESS[a]	0.80 (-0.22, 1.82)	0.126	1.76 (0.35, 3.18)	**0.014***
Follow up outcomes	OR (95% CI)	p-value	OR (95% CI)	p-value
Hospitalizations[b]	1.79 (0.80, 4.01)	0.153	3.27 (1.26, 8.43)	**0.014***
Medication use	OR (95% CI)	p-value	OR (95% CI)	p-value
Lithium[a]	0.61 (0.37, 0.99)	**0.047***	0.58 (0.30, 1.11)	0.105

Pink text indicates significant values (p<0.05). *Models are adjusted for age, sex, marital status. [a]Models includes data from baseline, year 2 and year 4 collection. [b]Model includes data from follow up year 2 and year 4 collection. Note: *Abbreviations:* OR = Odds Ratio, CI = Confidence Interval, BD = Bipolar Disorder, PTSD = Post-Traumatic Stress Disorder; HAMD, Hamilton Depression Rating Scale; YMRS, Young Mania Rating Scale; ESS, Epworth Sleepiness Scale

Conclusion

The comorbidity of bipolar disorder and PTSD is associated with worse mania and depression symptoms scores and worse sleep scores compared to participants reporting one trauma.

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