

The impact of post-traumatic stress disorder on pharmacological intervention outcomes for adults with bipolar disorder: A systematic review.

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Introduction

There is often co-occurrence of post-traumatic stress disorder (PTSD) in bipolar disorder. People with comorbid bipolar disorder and PTSD may experience different pharmacological treatment outcomes and quality of life to those with bipolar disorder alone. Despite this, no one has systematically explored pharmacological interventions and associated treatment outcomes for this comorbidity.

Methods

A systematic search (MEDLINE Complete, Embase, PsycINFO, and the Cochrane Central Register of Controlled Trials (CENTRAL)) has been completed. The review identifies randomised and non-randomised studies of pharmacological interventions for adults with bipolar disorder and comorbid PTSD. The Newcastle-Ottawa Scale and the Cochrane risk of bias tool was used for assessing the quality of the studies.

Results

Figure 1 displays the PRISMA flowchart diagram identifying the inclusion and exclusion criteria for article selection. Two articles survived analysis and results of these articles are displayed in Table 1 and Table 2.

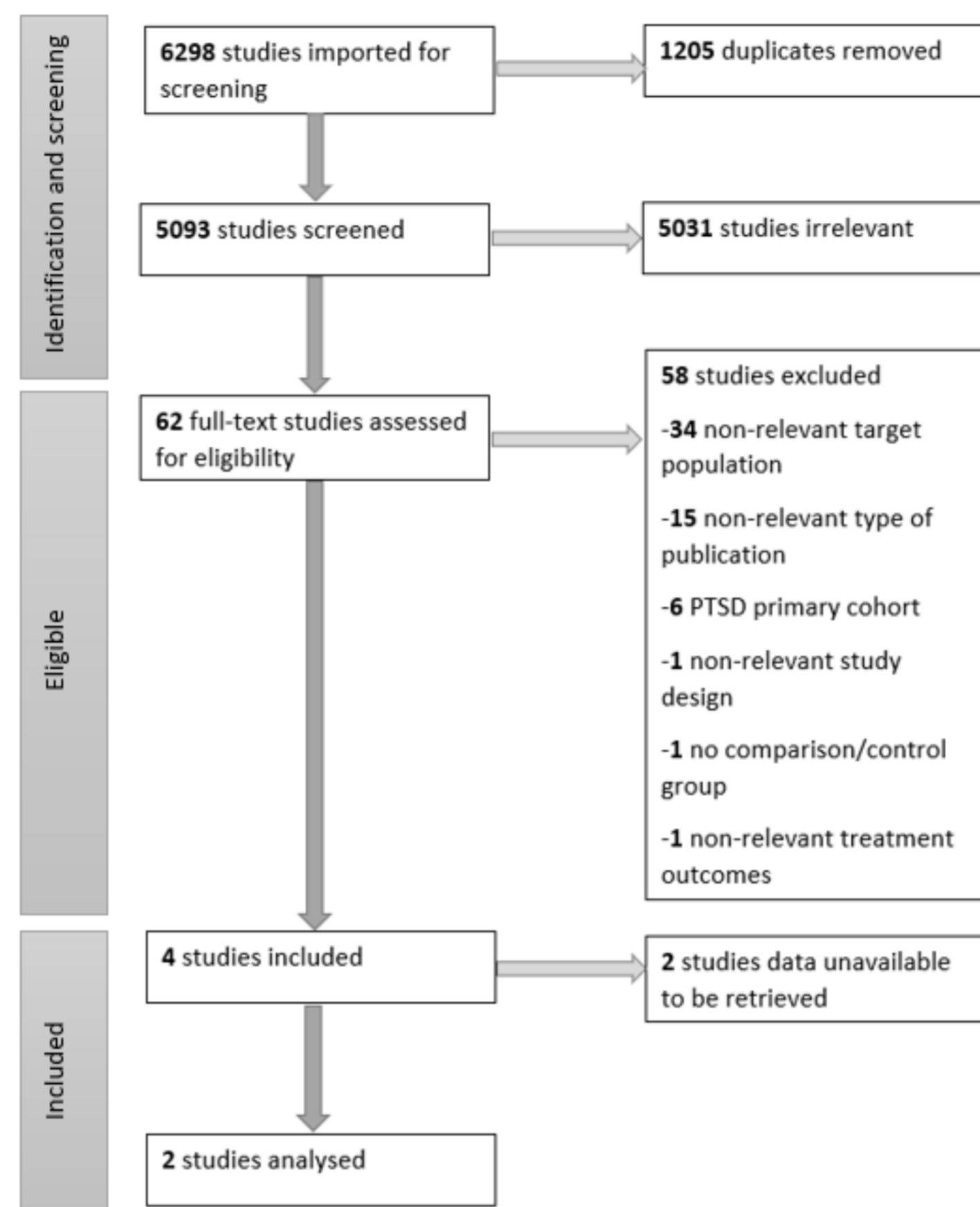


Figure 1. PRISMA flowchart diagram. The figure represents the selection criteria for studies that were initially identified and then screened for eligibility and included in the systematic review.



Lithium response rate	
Bipolar disorder alone n, %	n = 49/76, 64.5%
Bipolar disorder + PTSD n, %	n = 6/16, 37.5%
Fishers's exact test p value	p = 0.05

The study by Caldieraro et al, (2017) shows comparison scores using the Bipolar Inventory of Symptoms Scale (BISS). Results report more severe symptoms in the BD+PTSD group compared to those with BD alone. Table 1 displays mean differences in all BISS baseline scores, differences in mean scores at follow up and quetiapine treatment follow up, but not in lithium treatment follow up. Furthermore, there is no difference reported in change scores over time. The cohort study by Cakir et al, (2016) examined lithium response rates and found higher response rates in bipolar disorder alone compared to bipolar disorder and PTSD as seen in Table 2.

Discussion and conclusion

This systematic review found people with comorbid PTSD and bipolar disorder had more severe symptoms following treatment with lithium and quetiapine when compared to those with bipolar disorder alone. However, only two articles were available for review, therefore a meta-analysis could not be conducted and limits the conclusions that can be drawn. The paucity of studies highlights the importance of further studies.

Systematic review of the available evidence found people with comorbid PTSD had more severe symptoms following treatment with lithium and quetiapine than those with bipolar disorder alone.

Bipolar Symptoms Severity Scores (BISS)		Baseline	Follow up week 24	Baseline change scores to week 24
Mean BISS scores				
n, mean (SD)	Bipolar disorder alone	n=267, 55.65 (17.72)	n=242, 26.49 (18.23)	n=242, 28.9 (20.68)
	Bipolar disorder + PTSD	n=36, 67.08 (12.22)	n=33, 33.96 (19.15)	n=33, 33.36 (19.70)
p value		p = < 0.01*	p = < 0.02*	p = < 0.23
Lithium treatment group				
n, Mean (SD)	Bipolar disorder alone	n=128, 55.53 (16.63)	n=117, 27.88 (17.92)	n=117, 27.9 (19.81)
	Bipolar disorder + PTSD	n=18, 63.88 (12.65)	n=17, 32.29 (17.65)	n=17, 31.35 (21.21)
p value		p = < 0.04*	p = < 0.34	p = < 0.50
Quetiapine treatment group				
n, Mean (SD)	Bipolar disorder alone	n=139, 55.76 (18.73)	n=125, 25.18 (18.49)	n=125, 29.9 (21.49)
	Bipolar disorder + PTSD	n=18, 70.27 (11.22)	n=16, 35.75 (21.06)	n=16, 35.50 (18.42)
p value		p = < 0.01*	p = < 0.03*	p = < 0.32

References

- Caldieraro MA, Dufour S, Sylvia LG, Gao K, Ketter TA, Bobo WV, Walsh S, Janos J, Tohen M, Reilly-Harrington NA, McElroy SL. Treatment outcomes of acute bipolar depressive episode with psychosis. *Depression and anxiety*. 2018 May;35(5):402-10.
- Cakir S, Tasdelen Durak R, Ozyildirim I, Ince E, Sar V. Childhood trauma and treatment outcome in bipolar disorder. *Journal of Trauma & Dissociation*. 2016 Aug 7;17(4):397-409.

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