



# Duration of Untreated/Undiagnosed Illness and Clinical Characteristics and Outcomes in Bipolar Disorder: A Systematic Review and Meta-analysis



Kamyar Keramatian, MD, MSc, FRCPC<sup>1</sup>; Jairo Vinícius Pinto, MD, PhD<sup>2</sup>; Trisha Chakrabarty MD, FRCPC<sup>1</sup> & Lakshmi N Yatham, MBBS, FRCPC<sup>1</sup>

<sup>1</sup>Department of Psychiatry, University of British Columbia, Vancouver, BC, Canada.

<sup>2</sup>University Hospital, Federal University of Santa Catarina, Florianópolis, SC, Brazil

## Introduction

- Several studies have shown a long interval between the onset of bipolar disorder symptoms and accurate diagnosis/appropriate treatment<sup>1,2</sup>.
- The objective of this systematic review and meta-analysis was to explore the relationship between delayed diagnosis/treatment initiation and clinical characteristics and outcomes in bipolar disorder.

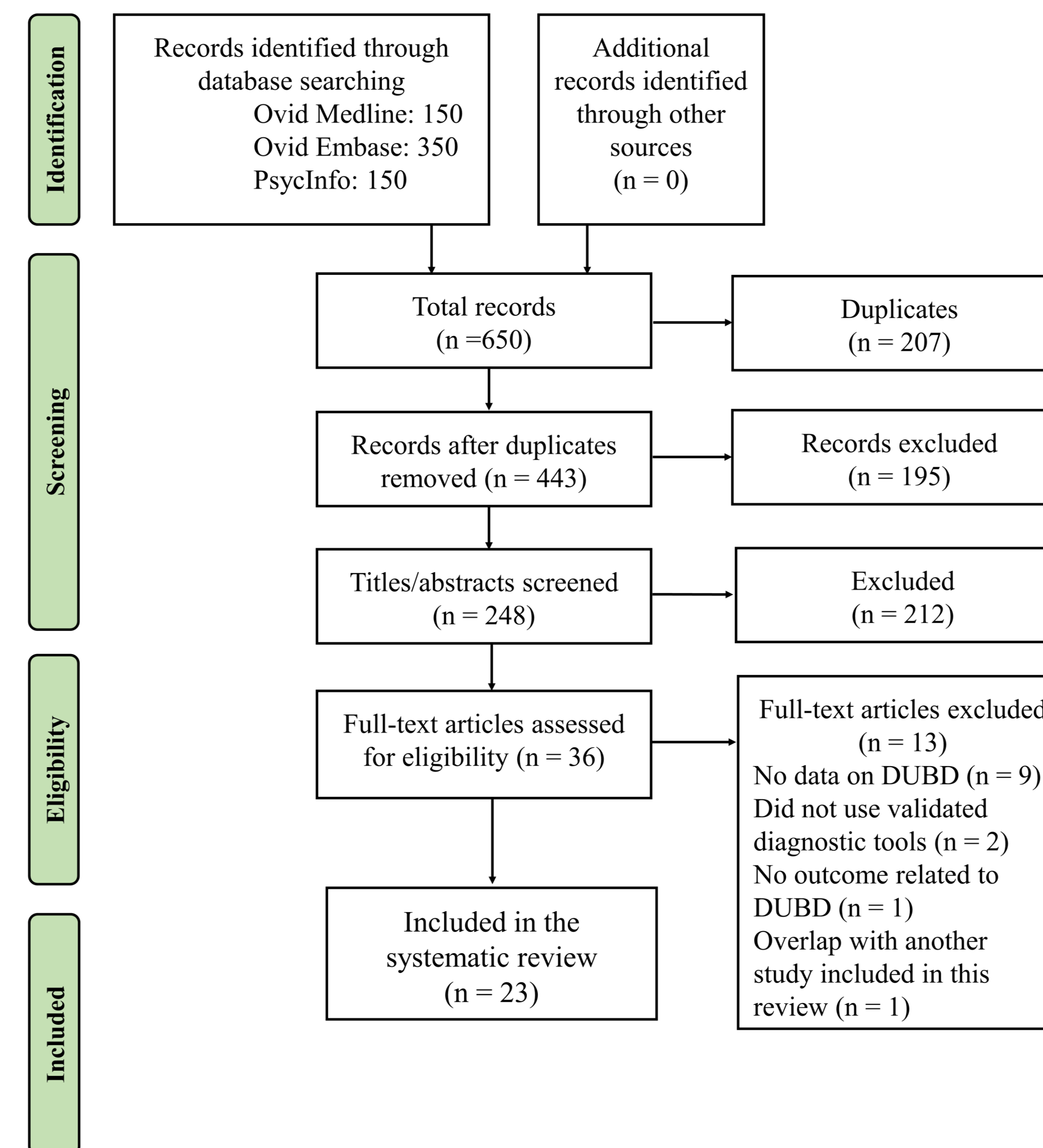
## Methods

- Following the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) guidelines, we conducted a systematic search of the literature to identify retrospective and prospective studies reporting on the relationship between duration of undiagnosed/untreated bipolar disorder (DUBD) and various clinical characteristics and outcomes.
- Meta-analyses were performed using random-effects models with restricted maximum-likelihood estimator to synthesize the effect size (Hedge's g).

## Results

- A total of 443 unique titles were identified, and 23 studies were included in the final review.
- Having a family history of bipolar disorder ( $g = 0.17$ , 95% CI: 0.07 to 0.28), depression as the polarity of the first episode ( $g = 0.37$ , 95% CI: 0.27 to 0.48) and early onset of mood symptoms ( $g = 0.84$ , 95% CI: 0.40 to 1.28) as well as a history of lifetime suicide attempts ( $g = 0.26$ , 95% CI: 0.11 to 0.42), anxiety disorders ( $g = 0.21$ , 95% CI: 0.08 to 0.35) and alcohol use disorders ( $g = 0.21$ , 95% CI: 0.02 to 0.40) were significantly associated with longer DUBD.
- Conversely, bipolar I disorder ( $g = -0.35$ , 95% CI: -0.43 to -0.27) and lifetime psychotic symptoms ( $g = -0.29$ , 95% CI: -0.44 to -0.14) were associated with shorter DUBD.

## PRISMA Flow Diagram



## Conclusion

- Findings from this study suggest that delays in the diagnosis and treatment are associated with negative outcomes such as lifetime suicide attempts and greater psychiatric comorbidity in patients with bipolar disorder.
- These findings highlight the importance of implementing early identification and early intervention strategies aimed at reducing morbidity and risks associated with untreated bipolar disorder.

## Reference / Bibliography

1. Fritz K, Russell AMT, Allwang C, Kuiper S, Lampe L, Malhi GS. Is a delay in the diagnosis of bipolar disorder inevitable? *Bipolar Disord.* 2017 Aug;19(5):396-400.
2. Keramatian K, Pinto JV, Schaffer A, Sharma V, Beaulieu S, Parikh SV, Yatham LN. Clinical and demographic factors associated with delayed diagnosis of bipolar disorder: Data from Health Outcomes and Patient Evaluations in Bipolar Disorder (HOPE-BD) study. *J Affect Disord.* 2022 Jan 1;296:506-513.

## Forest Plot: Meta-analysis of duration of undiagnosed/untreated bipolar disorder in relation to a history of suicide attempts

