



# **King's Research Portal**

DOI: 10.32388/BGTD5K

Document Version Publisher's PDF, also known as Version of record

Link to publication record in King's Research Portal

Citation for published version (APA):

Mehra, N., Bhatia, A., Ayis, S., Kordowicz, M., Hack-Polay, D., Akilan, V., & Prasad, V. (2024). Reasons for diagnostic delays in Bipolar Disorder: Systematic review and narrative synthesis. *Qeios*. https://doi.org/10.32388/BGTD5K

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

#### **General rights**

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- •Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
   You may freely distribute the URL identifying the publication in the Research Portal

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Download date: 18. Jan. 2024

**Open Peer Review on Qeios** 



# Reasons for diagnostic delays in Bipolar Disorder: Systematic review and narrative synthesis

Nindiya Mehra<sup>1</sup>, Aishwarya Bhatia<sup>1</sup>, Salma Ayis<sup>1</sup>, Maria Kordowicz<sup>2</sup>, Dieu Hack-Polay<sup>2</sup>, Viknesh Akilan<sup>1</sup>, Vibhore Prasad<sup>1</sup>

- 1 King's College London
- 2 University of Lincoln

Funding: No specific funding was received for this work.

Potential competing interests: Dr Prasad reports salary support from the National Institute for Health Research (NIHR) academic clinical lecturer scheme during the conduct of the study.

#### Abstract

**Background:** Bipolar disorder is common, affecting 1% of people. The diagnosis of bipolar disorder is often delayed, which limits access to effective treatment and increases the burden of disease on individuals, families, and society.

**Aim:** This paper investigates the individual, social, and clinical factors that contribute to delays in diagnosis for people with bipolar disorder, including delays that occur before and after a person presents to a primary care clinician.

Design and setting: Systematic review and narrative synthesis.

**Method:** Four electronic databases - Embase, Medline, Psychlnfo, and Global Health - were systematically searched. This search yielded 3078 studies, 21 of which met the inclusion criteria. The data retrieved were analysed using Braun and Clarke's Thematic Analysis to report a summary of recent research on the delays in the diagnosis of bipolar disorder.

Results: Analysis of the data from the 21 studies identified five main themes as reasons for delays in diagnosis: (1)



misdiagnosis, (2) healthcare challenges, (3) mental health stigma, (4) the complex nature of bipolar disorder, and (5) individual factors.

**Conclusions:** The review demonstrates the importance of educating individuals, families, and clinicians on the symptomology of bipolar disorder to avoid misdiagnosis. Furthermore, changes in the accessibility and delivery of mental health services are essential to ensure that people with bipolar disorder are diagnosed and treated in a timely manner. In addition, mental health stigma among individuals, families, and clinicians must be addressed to reduce diagnostic delays.

Nindiya Mehra MPH<sup>1,a,\*</sup>, Aishwarya Bhatia MPH<sup>1</sup>, Dr Salma Ayis PhD<sup>1,b</sup>, Dr Maria Kordowicz PhD CPsychol<sup>2,c</sup>, Prof. Dieu Hack-Polay PhD<sup>3,d</sup>, Viknesh Akilan MPH<sup>1</sup>, and Dr Vibhore Prasad FRCGP PhD<sup>e</sup>

- <sup>1</sup> School of Life Course and Population Sciences, Faculty of Life Sciences & Medicine, King's College London
- <sup>2</sup> Community and Health Research Unit (CaHRU) at the University of Lincoln
- <sup>3</sup> Crandall University and University of Lincoln
- a ORCID iD: 0000-0001-7454-8528
- b Reader in Medical Statistics, ORCID iD:0000-0002-0449-869X
- <sup>c</sup> Associate Professor in Organisational Behaviour, ORCID iD:0000-0002-1405-9607
- <sup>d</sup> Professor in Organisational Studies, ORCID iD: 0000-0002-1038-5018
- <sup>e</sup> Clinical Associate Professor in Primary Care, ORCID iD:0000-0001-5470-276X

**Keywords:** Bipolar disorder; diagnosis; delay; primary health care; systematic review.

#### How this fits in:

- This is the first known systematic review to systematically describe reasons for delays in the diagnosis of bipolar disorder (BD). It found that there are personal, social, and clinical explanations for these delays.
- Social reasons include mental health stigma; personal reasons include demographic factors (e.g., age and socioeconomic status), help-seeking behaviours, and people's knowledge. Clinical reasons, such as the complexity of BD, the high rate of misdiagnosis, and challenges faced in accessing services.
- Future research should be focused on assessing the health care pathways for diagnosing BD in primary care.

# Introduction

Bipolar disorder (BD) is a common illness, affecting 1% of people. It is a lifelong mental illness characterised by recurrent

<sup>\*</sup>Corresponding author: Nindiya Mehra, email: nindiya101@hotmail.co.uk.



episodes of depression and (hypo)mania.<sup>[1]</sup> Approximately 60% of people with BD present with symptoms before the age of 21, which disrupts normal development and psychosocial functioning, increasing their risk of suicide, substance misuse disorder, and behavioural difficulties.<sup>[2][3]</sup>

If BD is left untreated, it can have a negative impact on an individual's well-being – leading to impaired social, occupational, and cognitive functioning, decreased quality of life, danger to self and others, and increased mortality. [4] Delayed diagnosis can impact the recurrence of mood disturbances, which can worsen an individual's psychological well-being. [5] The misdiagnosis of BD can lead to improper treatment, worsened symptoms, and an increased risk of hospitalisation. [6] In addition, delayed treatment leads to an increase in health care costs due to higher rates of hospitalisation and increased suicide attempts. [7][8] However, when the right treatment is offered, it can help individuals minimise the burden of the illness and function better in society. [9]

To date, there has been limited research addressing the reasons for delays in the diagnosis of people with BD. To our knowledge, no systematic review has been conducted to systematically report reasons for these delays. In this study, we aimed to report the reasons for the delays in the diagnosis of BD and to explore these delays before and after a person presents to primary care, as well as the individual, social, and clinical factors associated with these delays.

## Methods

MEDLINE Complete was searched from 1964 to June 2022; Embase Excerpta Medica was searched from 1972 to June 2022; PsycINFO was searched from 1967 to June 2022; and Global Health was searched from 1973 to June 2022. Database searches were conducted by the primary and secondary reviewers on 9th June 2022. Authors searched their own personal libraries. The review protocol was registered with PROSPERO (CRD42022313495).<sup>[10]</sup>

#### Inclusion and Exclusion Criteria

Inclusion criteria consisted of qualitative and quantitative studies including participants with BD and those who had experienced a delay in their diagnosis. Table 1 details the full list of the inclusion and exclusion criteria.



#### Inclusion criteria

Studies were considered for the review if they met the following criteria:

- Peer reviewed published studies from journals
- Studies of all dates
- Studies of all languages
- Humans of all ages
- No geographical restrictions
- Quantitative methodologies reporting original data such as: randomised controlled trial, non-randomised controlled trial, cohort, case-control, crosssectional, case-series and chart review studies
- Qualitative methodologies reporting original data such as: in-depth interviews, focus groups, one-to-one interviews, ethnographic research, case studies and record keeping
- Participants who have a diagnosis of BD
- Participants who have experienced a delay in their diagnosis of BD

#### Exclusion criteria

Studies were excluded if they met the following criteria:

- Studies that do not focus on BD
- Letters to journals, editorials, or opinion pieces
- Not reporting original empirical data
- Unpublished / grey literature
- Duplicate studies that report data on a similar study population
- Studies not written in English

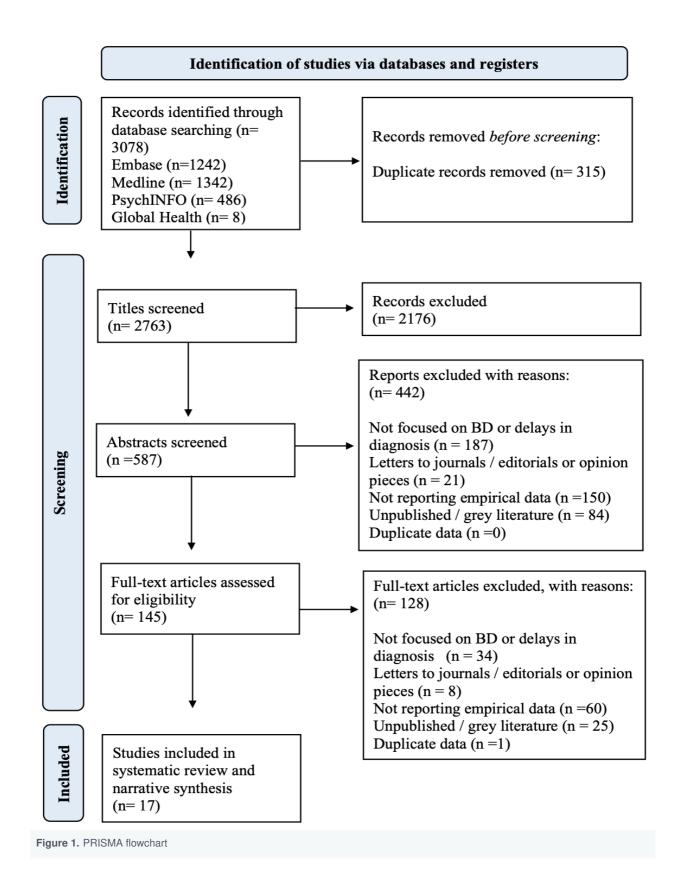
Table 1. Inclusion and exclusion criteria

#### Search Strategy

The search strategy was developed using key terms that were built around the three main concepts: BD, delays, and diagnosis. The formation of the search terms was influenced by previous search strategies used by a systematic review that focused on BD and provided guidance on which key terms would provide relevant information for the review. [11] The database searches for Embase can be found in Supplementary Table S1. Following the search, eligible studies were



transferred to EndNote (version 20.3) and de-duplicated. These libraries were then reviewed for relevant studies and information. The PRISMA flow diagram for studies selected is illustrated in Figure 1.



Study Selection and Data Extraction



The titles and abstract of each study were analysed by a master's student for inclusion (NM), and a second master's student (VA) reviewed 5% of the titles and abstracts of the studies. Following this, both reviewers reviewed the full text of the remaining studies. It was decided that disagreements about which studies met the inclusion criteria should be resolved by consensus or, if necessary, with the assistance of a third author (VP). In addition, a forward and backward citation search was performed using Connected Papers.<sup>[12]</sup>

#### Quality appraisal

The full-text articles of the selected quantitative studies were assessed using the National Institute of Health (NIH) assessment tools. The two assessment tools used were: The Quality Assessment of Case Series Studies and The Quality Assessment of Cohort and Cross-sectional Observational Studies.<sup>[13]</sup> Whereas the selected qualitative studies were assessed using the Critical Appraisal Skills Programme Tool.<sup>[14]</sup> Due to the scarcity of the studies discussed in this review, it was concluded that studies would not be excluded based on their quality assessment. Although from the assessment, none of the studies were identified as being low in quality.

#### Data synthesis

The data was synthesised to report the similarities and differences between studies, the observation of relationships within the data, and the strength of the findings. A thematic methodology was used to become familiar with the data extracted from the studies and to search, review, and define themes that report on the reasons for delays in the diagnosis of BD.<sup>[15]</sup> Due to the methodological and clinical diversity (e.g., heterogeneity in the participants) of the included studies, meta-analysis was not possible.

#### Results

Database searches retrieved 3078 studies. Following de-duplication and title and abstract screening, 145 studies were assessed in full text for eligibility. Four additional studies were identified in the co-authors' library, and no new studies were observed in the forward and backward citation searches, leading to a final total of 21 included publications (Figure 1).

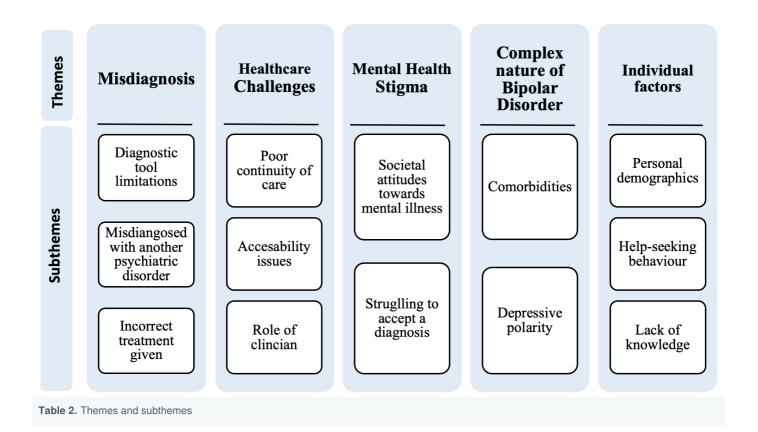
#### Characteristics of included studies

The included publications consisted of 21 original studies, using qualitative (n=3), quantitative (n=17), and mixed method designs (n=1). The research was conducted in the United States (n=4), the United Kingdom (n=2), Canada (n=1), Australia (n=3), Hungary (n=1), Sweden (n=1), Spain (n=1), Singapore (n=1), Vietnam (n=1), South Korea (n=1), Brazil (n=1), Germany (n=1), Japan (n=1), Morocco (n=1), and Chile (n=1). Studies were published between 2004 and 2022. Supplementary Table S2 summarises the included publications.



#### Common themes identified

In this review, there were patterns in the findings throughout the included studies that may explain the causes for delays in the diagnosis of BD, which have been translated into themes. The topics have been divided into five primary themes, each of which has been further subdivided into subthemes. Supplementary Table S3 illustrates the generation of initial codes, and Table 2 presents the identified themes.



#### Misdiagnosis

There were 18 papers that suggested that the misdiagnosis of BD occurred due to diagnostic tool limitations, patients being misdiagnosed with another psychiatric disorder, and patients receiving an incorrect treatment. [16][17][18][19][20][21][22][23][24][25][26][27][28][29][30][31][32][33] The studies convey how the DSM-5 criteria has inherent restrictions, which require the existence of manic and hypomanic episodes – leading to a misdiagnosis of major depressive disorder (MDD) for individuals only presenting with depressive symptoms. [17][19][20] It is reported that the most common misdiagnoses given were schizoaffective disorder, ADHD, unipolar depression, and/or psychosis. [24][26][30] Furthermore, the administration of drugs that may potentially induce mania can lead to misdiagnosis and further delays. [22][24][25]

# Healthcare challenges

It was highlighted by 11 of the studies that BD patients may face challenges in accessing mental health treatments. In



addition, they are not being seen by competent mental health clinicians and are having poor continuity of care. [16][17][18][34][25][26][27][28][29][31][33] It was reported that troubles in finding a suitable clinician resulted in long waiting times to be seen and in being provided with limited treatments. [27][28] Moreover, it was conveyed how patients felt that clinicians were unable to make a specific diagnosis or lacked the skills to treat their condition and did not take their concerns seriously. [26][27] Along with the inability to establish stable long-term care relationships due to the constant rotation of psychiatrists in the public system. [30]

#### Mental health stigma

Across eight studies, it was suggested that societal attitudes towards mental illness and the inability of individuals to accept their diagnosis led to diagnostic delays. [20][21][29][30][31][35][33][36] Stigma was shown to act as a barrier for individuals to seek help from mental health services; patients expressed that the fear associated with mental health stigma discouraged them from seeking a diagnosis. [20][21] Moreover, patients would struggle to accept their diagnosis as their symptoms were different from the stereotypical ideas about what BD is.33

#### Complex nature of BD

Among 12 studies, it was explained that the presence of comorbidities and patients having a depressive polarity increased diagnostic delays. [16][17][19][37][20][23][24][25][26][30][35][33] The greatest delays were seen in individuals with high rates of comorbidities due to BD symptoms overlapping with psychiatric disorders such as ADHD, anxiety, substance use disorders, and primary psychotic disorders. [17][37][24][25][26] Moreover, patients presenting with first depressive episodes, with no history or prominent symptoms of mania or hypomania, were more likely to be misdiagnosed with MDD. [20]

## Individual factors

Across 14 of the studies, personal demographics, patients' help-seeking behaviours, and lack of knowledge were shown to contribute to greater diagnostic delays. [17][34][19][37][21][22][24][25][26][27][28][29][31][32] The studies demonstrated that socioeconomic status was linked with delays in seeking help as patients would be faced with healthcare costs. [34] Moreover, participants were reluctant to seek help for manic or hypomanic symptoms as they did not perceive them as abnormal. [28] And a lack of understanding of BD in patients, the community, and healthcare practitioners was shown to heighten these delays. [34][27]

#### Discussion

#### Summary

The literature addressing the reasons for delays in the diagnosis of BD has highlighted that individual, social, and clinical factors contribute to this delay. Available data indicate that BD is often misdiagnosed as other psychiatric disorders due to the complexity of the condition. In addition, patients are faced with barriers to accessing care due to healthcare



challenges; patients may also delay seeking help due to mental health stigma and individual factors. The limited evidence offers a variety of reasons for these delays that are all intertwined.

#### Strengths and limitations

To the authors' knowledge, this is the first systematic review of the reasons for delays in diagnosis for people with BD. The manual search of the databases and the reference lists of the included studies provided confidence in the conclusion that all relevant research was collected. Furthermore, the use of a second reviewer during the screening process guaranteed that the research inclusion criteria were being applied consistently. Additionally, there was international coverage of previous research as studies from all geographical locations were reviewed. Contrastingly, the use of only four databases and the exclusion of grey literature may have resulted in publication bias and missing relevant information. Lastly, due to the methodological diversity of studies, a meta-analysis was not suited; therefore, conclusions are formed from qualitative evidence which may lack generalisability and not be as reproducible.

#### Comparison with existing literature

The review highlights that unipolar depression is the most common misdiagnosis for BD patients, which is supported by observations from the National Depressive and Manic Depression Association Survey, which reports 60% of people with BD received a misdiagnosis of unipolar depression. The review explains that this occurs due to symptom overlaps, which is similarly reported in a study where individuals who were misdiagnosed with unipolar depression had a higher frequency of depressive episodes and a higher incidence of comorbidities. Additionally, the review stipulates that the complexity of BD causes a low index of suspicion among clinicians. Likewise, research reports that most people with BD experience a depressive first episode that lasts longer than manic or hypomanic episodes, leading to the disorder being misclassified as MDD. Furthermore, the review provides insight on mental health stigma from family, friends, and physicians, as well as how internalised stigma can discourage an individual from seeking a diagnosis. Similarly, evidence indicates that stigmatising attitudes against people with mental illnesses are frequent among primary care clinicians, and that this can act as a barrier to patients receiving adequate treatment. Lastly, this review suggests that diagnostic delays may be caused by a lack of awareness and education concerning BD in the population and among clinicians, leading to symptoms going unrecognised in assessments. [40]

#### Implications for research and practice

There are many advances that need to be made for future research, public health and policy, and clinical practice. These advances may help to reduce diagnostic delays and improve health outcomes in the community. Future research needs to focus on prospective studies to enable the follow-up of BD patients in the long term to understand the process of diagnosing and receiving a diagnosis. It also needs to address the perceptions of clinicians, which may be related to the misdiagnosis and diagnostic delays of BD, and to highlight learning needs in clinical practice. More studies need to be conducted with a diverse sample of individuals and consider ethnicity and socio-economic status. Furthermore, public



health policy needs to target awareness-raising and training in schools and communities on the signs and symptoms of BD. This paper highlights the need for pivoting resources towards tackling diagnostic delays in BD on a systemic level. Lastly, clinicians need to be mindful that patients will generally report depressive symptoms and not hypomanic or manic ones. The findings of this study indicate the utility of detailed history taking on the indicators of BD and assessing all patients with depression for previous manic or hypomanic episodes, as well as gathering collateral information from caregivers. Moreover, continuity of care when seeing BD patients ought to be upheld, and information is accurately relayed about patients who are being referred from primary care to secondary care.

# Acknowledgements

Dr Prasad reports salary support from the National Institute for Health Research (NIHR) academic clinical lecturer scheme during the conduct of the study.

#### References

- 1. ^Marwaha S, Sal N, Bebbington P. Chapter 9: Bipolar disorder. Mental health and wellbeing in England: Adult Psychiatric Morbidity Survey. 2014.
- 2. ^Duffy A. The early course of bipolar disorder in youth at familial risk. Journal of the Canadian Academy of Child and Adolescent Psychiatry. 2009 Aug;18(3):200.
- 3. Birmaher B. Bipolar disorder in children and adolescents. Child and adolescent mental health. 2013 Sep;18(3):140-8.
- 4. Post RM. The impact of bipolar depression. Journal of Clinical Psychiatry. 2005 Jan 1;66(5):5.
- 5. a, bBowden CL. A different depression: clinical distinctions between bipolar and unipolar depression. Journal of affective disorders. 2005 Feb 1;84(2-3):117-25.
- 6. a, b Hirschfeld RM, Lewis L, Vornik LA. Perceptions and impact of bipolar disorder: how far have we really come?

  Results of the national depressive and manic-depressive association 2000 survey of individuals with bipolar disorder.

  Journal of clinical psychiatry. 2003 Feb 1;64(2):161-74.
- 7. ^Li J, McCombs JS, Stimmel GL. Cost of treating bipolar disorder in the California Medicaid (Medi-Cal) program. Journal of Affective Disorders. 2002 Sep 1;71(1-3):131-9.
- 8. ^Cooke RG, Robb JC, Young LT, Joffe RT. Well-being and functioning in patients with bipolar disorder assessed using the MOS 20-ITEM short form (SF-20). Journal of affective disorders. 1996 Jul 8;39(2):93-7.
- 9. ^Anderson IM, Haddad PM, Scott J. Bipolar disorder. Bmj. 2012 Dec 27;345.
- 10. ^What are the reasons for delays in diagnosis for people with bipolar disorder: a systematic review and narrative [Internet]. 2022 [cited 2022 April 25]. Available from: synthesis.

  https://www.crd.york.ac.uk/prospero/display\_record.php?RecordID=313495
- 11. ^Clemente AS, Diniz BS, Nicolato R, Kapczinski FP, Soares JC, Firmo JO, Castro-Costa É. Bipolar disorder prevalence: a systematic review and meta-analysis of the literature. Brazilian Journal of Psychiatry. 2015 May 1;37:155-61.



- 12. Connected Papers [Internet]. 2022 [cited 2022 Aug 20]. Available from: https://www.connectedpapers.com/
- 13. ^National Institute of Health [Internet]. 2021 [cited 2022 Aug 20]. Available from: https://www.nhlbi.nih.gov/health-topics/study-quality-assessment-tools
- 14. ^Critical Appraisal Skills Programme [Internet]. 2018 [cited 2022 Aug 20]. Available from: https://casp-uk.net/wp-content/uploads/2018/01/CASP-Qualitative-Checklist-2018.pdf
- 15. Braun V, Clarke V. Using thematic analysis in psychology. Qualitative research in psychology. 2006 Jan 1;3(2):77-101.
- 16. a, b, cLublóy Á, Keresztúri JL, Németh A, Mihalicza P. Exploring factors of diagnostic delay for patients with bipolar disorder: a population-based cohort study. BMC psychiatry. 2020 Dec;20(1):1-7.
- 17. a, b, c, d, e, f Patel R, Shetty H, Jackson R, Broadbent M, Stewart R, Boydell J, McGuire P, Taylor M. Delays before diagnosis and initiation of treatment in patients presenting to mental health services with bipolar disorder. PloS one. 2015 May 20;10(5):e0126530.
- 18. a, b Saunders EF, Mukherjee D, Waschbusch DA, Liao D, Pearl AM, Aksu E, Bixler EO. Predictors of diagnostic delay:
  Assessment of psychiatric disorders in the clinic. Depression and anxiety. 2021 May;38(5):545-53.
- 19. <sup>a, b, c, d</sup> Fritz K, Russell AM, Allwang C, Kuiper S, Lampe L, Malhi GS. Is a delay in the diagnosis of bipolar disorder inevitable?. Bipolar disorders. 2017 Aug;19(5):396-400.
- 20. <sup>a, b, c, d, e, f</sup>Cha B, Kim JH, Ha TH, Chang JS, Ha K. Polarity of the first episode and time to diagnosis of bipolar I disorder. Psychiatry Investigation. 2009 Jun;6(2):96.
- 21. <sup>a, b, c, d</sup>Berk M, Dodd S, Callaly P, Berk L, Fitzgerald P, De Castella AR, Filia S, Filia K, Tahtalian S, Biffin F, Kelin K. History of illness prior to a diagnosis of bipolar disorder or schizoaffective disorder. Journal of affective disorders. 2007 Nov 1;103(1-3):181-6.
- 22. <sup>a, b, c</sup>Peh AL, Tay LK. Demographical profile and clinical features of patients with bipolar disorder in an outpatient setting in Singapore. Singapore medical journal. 2008 May 1;49(5):380.
- 23. a, bRosa AR, Andreazza AC, Kunz M, Gomes F, Santin A, Sanchez-Moreno J, Reinares M, Colom F, Vieta E, Kapczinski F. Predominant polarity in bipolar disorder: diagnostic implications. Journal of affective disorders. 2008 Apr 1;107(1-3):45-51.
- 24. a, b, c, d, e, f Marchand WR, Wirth L, Simon C. Delayed diagnosis of pediatric bipolar disorder in a community mental health setting. Journal of Psychiatric Practice®. 2006 Mar 1;12(2):128-33.
- 25. a, b, c, d, e, f Soutullo CA, Escamilla-Canales I, Wozniak J, Gamazo-Garrán P, Figueroa-Quintana A, Biederman J. Pediatric bipolar disorder in a Spanish sample: features before and at the time of diagnosis. Journal of Affective Disorders. 2009 Nov 1;118(1-3):39-47.
- 26. a, b, c, d, e, f, gStiles BM, Fish AF, Vandermause R, Malik A. Identifying the complexity of diagnosing bipolar disorder: a focused ethnography. Issues in mental health nursing. 2019 Jun 27.
- 27. a, b, c, d, e, f Highet NJ, McNair BG, Thompson M, Davenport TA, Hickie IB. Experience with treatment services for people with bipolar disorder. Medical Journal of Australia. 2004 Oct;181:S47-51.
- 28. a, b, c, d, e Johansson C, Werbart A. Am I Really Bipolar? Personal Accounts of the Experience of Being Diagnosed With Bipolar II Disorder. Frontiers in Psychology. 2020 Sep 30;11:482715.



- 29. <sup>a, b, c, d</sup> Bilderbeck AC, Saunders KE, Price J, Goodwin GM. Psychiatric assessment of mood instability: qualitative study of patient experience. The British Journal of Psychiatry. 2014 Mar;204(3):234-9.
- 30. <sup>a, b, c, d, e</sup>Meyer F, Meyer TD. The misdiagnosis of bipolar disorder as a psychotic disorder: some of its causes and their influence on therapy. Journal of affective disorders. 2009 Jan 1;112(1-3):174-83.
- 31. <sup>a, b, c, d</sup>Watanabe K, Harada E, Inoue T, Tanji Y, Kikuchi T. Perceptions and impact of bipolar disorder in Japan: results of an Internet survey. Neuropsychiatric Disease and Treatment. 2016;12:2981.
- 32. <sup>a, b</sup>Hirschfeld RM, Lewis L, Vornik LA. Perceptions and impact of bipolar disorder: how far have we really come?

  Results of the national depressive and manic-depressive association 2000 survey of individuals with bipolar disorder.

  Journal of clinical psychiatry. 2003 Feb 1;64(2):161-74.
- 33. <sup>a, b, c, d</sup>Retamal P. Diagnosis and treatment of bipolar disease:: experience and opinion of patients at the Hospital del Salvador, Santiago de Chile. Psychiatry Archives. 2007;70(3):213-24.
- 34. <sup>a, b, c, d</sup>Nguyen T, Tran T, Green S, Hsueh A, Tran T, Tran H, Fisher J. Delays to diagnosis among people with severe mental illness in rural Vietnam, a population-based cross-sectional survey. BMC psychiatry. 2019 Dec;19(1):1-1.
- 35. a, bNabih FO, Benali A, Adali I, Manoudi F, Asri F. Deceptive masks of bipolarity: study of 100 cases. Pan African Medical Journal. 2015;21(1).
- 36. <sup>a, b</sup>Shen H, Zhang L, Xu C, Zhu J, Chen M, Fang Y. Analysis of misdiagnosis of bipolar disorder in an outpatient setting. Shanghai archives of psychiatry. 2018 Apr 25;30(2):93.
- 37. <sup>a, b, c</sup>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. Journal of Affective Disorders. 2022 Jan 1;296:506-13.
- 38. <sup>^</sup>Joslyn C, Hawes DJ, Hunt C, Mitchell PB. Is age of onset associated with severity, prognosis, and clinical features in bipolar disorder? A meta-analytic review. Bipolar disorders. 2016 Aug;18(5):389-403.
- 39. ^Vistorte AO, Ribeiro WS, Jaen D, Jorge MR, Evans-Lacko S, Mari JD. Stigmatizing attitudes of primary care professionals towards people with mental disorders: A systematic review. The International Journal of Psychiatry in Medicine. 2018 Jul;53(4):317-38.
- 40. Leahy RL. Bipolar disorder: Causes, contexts, and treatments. Journal of clinical psychology. 2007 May;63(5):417-24.