

Mood Disorders and Rapid Screening: A Brief Review

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Abstract

Objective: The purpose of this manuscript is for readers to understand the differences between bipolar and unipolar mood disorders. Readers will be able to apply evidence-based screening tools to differentiate in the diagnosis of bipolar versus unipolar depressive disorders. The goal is to increase diagnostic accuracy of mood disorders with the opportunity to provide treatment that will lead to improved patient outcomes.

Method: Review of literature discovered 13 articles that were pertinent with three major themes. One theme showed up to 62% of bipolar disorder cases were missed or undiagnosed upon the first evaluation, second theme showed 7% to 70% of individuals were misdiagnosed with adverse outcomes and third theme discovered the importance of specialty psychiatric training, education and the use of evidence-based screening tools combined with clinical judgement improved the accuracy of the correct mood disorder diagnosis.

Findings: In mood disorders, if left untreated or misdiagnosis occurs, the risk of suicide is higher (29.2%) in bipolar affective disorder, versus unipolar major depressive disorder (17.3%).

Implications for clinical practice: Recommendation for the use of evidence-based screening tools are clinical best practices for screening and diagnosing bipolar affective disorders with a statistical significance of 95%. Misdiagnosis is common up to 70% and the implications of timely rapid assessments allow for prompt interventions that has shown to halt and/or prevent mental health conditions to worsen, reducing risk of emergency situations.

Introduction

Bipolar affective disorder (BD) is a serious mental illness that is associated with increased morbidity, mortality, and decreased quality of life¹. Bipolar disorder was originally named “manic-depressive disorder” because of the primary symptoms appearing during manic and depressive episodes². Mania is defined as an elevated or expansive mood with excessive energy that drives risky behaviors with mood fluctuations and lack of sleep². The depressive phase in BD is defined as the lack of energy or anergia, amotivation, hypersomnia, and sad depressive mood, at times difficult to distinguish from unipolar depression^{2,3}. Unipolar depression is also known as Major Depressive Disorder (MDD). MDD is defined as more than 5 symptoms of depression over a two-week span that includes sad or depressed mood, loss of interest or anhedonia, insomnia or hypersomnia, and psychomotor agitation or retardation². Bipolar-II disorder is also known as bipolar depression, which encompasses depressive to hypomanic phases in which individuals do not meet the full criteria for a manic episode². Bipolar-II disorder symptoms present closest to MDD which can be a difficulty in the diagnostic assessment therefore using an evidence-based screening tool is

the most effective intervention for early diagnosis for the clinician and the patient⁵. The differences between unipolar MDD and bipolar depressive episodes are the severity and intensity of depressive symptoms^{2,4}. In bipolar 1 disorder depressive episodes include a variety of symptoms including mood swings, irritability, hypomania to mania^{2,4}. Bipolar-II disorder is met when there are depressive to hypomanic episodes, with no full criteria for a past or current manic episode².

When patients first present to primary care or psychiatry, a comprehensive psychiatric evaluation is conducted, a diagnosis is formulated and decided according to DSM-5-TR criterion^{2,6,7}. Careful evaluation is conducted subjectively and objectively with the identification of mental health clinical signs, symptoms including historical data. Family history and genetic linkage to bipolar disorder is a strong predictor of inheritable DNA variants that include 85% linkage in sequencing studies²⁰.

Caution should be considered related to a potential misdiagnosis associated with the evaluation and accurate diagnosis of bipolar mood disorders. The rationale for this is because BD and MDD may first appear similar upon an initial depressive disorder presentation. Practitioners should use evidence-based screening and diagnostic tools in the journey to diagnose accurately between the differences of BD and MDD^{8,9,10}.

It is estimated that bipolar disorder populations are responsible for at least 14% in the United States (US), and 25% globally of completed suicides annually². BD is the most underdiagnosed mental health disorder, commonly misdiagnosed as much as MDD³. According to research, clients with bipolar disorder are treated for at least 5 to 10 years under the diagnosis of MDD until the person experiences a first manic break or presents with a suicide attempt before an accurate BD diagnosis is made. Differentiating between the two mood disorders is important because medication choices may be quite different in bipolar versus MDD. Timely interventions such as rapid assessment facilitate early identification of potential behavioral issues which allows healthcare clinicians to intervene early to prevent worsening symptoms or emergent situations.

Evidence-Based Methods for Assessment

In 1999, the Patient Health Questionnaire-Nine (PHQ-9) was developed by Dr. Robert Spitzer, Dr. Williams, and Dr. Kroenke to aid in the early diagnosis of MDD including the severity of symptoms⁶. The PHQ-9 screening tool uses a valid and reliable questionnaire method that is cost-effective, sensitive, and specific in the screening and monitoring of depressive episodes^{11,6,11}. The PHQ-9 has a sensitivity and specificity of 74% and 91% respectively, while the Mood Disorder Questionnaire (MDQ) has a sensitivity 70% and

specificity of 90%¹². The MDQ is sensitive and specific to identifying mania or manic episodes¹². The newest *Rapid Mood Screener* (RMS) tool is preferred by healthcare practitioners at 81% versus 19% over using the MDQ tool because of the impact for rapid diagnosis of bipolar 1 disorder⁷. The RMS has less questions that are more succinct relatable to manic symptoms⁷. In addition, the RMS is validated and differentiates between bipolar 1 and MDD while the MDQ does not⁷.

Utilizing the Patient Health Questionnaire-9 has been implemented in primary care practices (82%) and hospitals, although the MDQ (32%) has taken time to find its place in clinical practice^{5,12}. The MDQ should be implemented in primary care practices because it can identify manic symptoms with the sensitivity and specificity of 70% and 90% respectively^{11,12}. The MDQ consists of 13 questions, that will flesh out a previous manic episode¹³. Evidence-Based Practices (EBP) related to the treatment and management of BD indicate increasing and implementing the use of these excellent screening tools. It was recently recommended to use a rapid screening tool which will enhance clinical diagnostic evaluation to accurately and quicker identification and diagnosis of BD⁷.

According to Dr. Thase, and colleagues (2023), "clinicians preferred using the new RMS tool" in which the research showed an 84% sensitivity and specificity⁷. It was discovered the effectiveness inclusive of the brevity in screening and diagnosing BD had a statistical significance of 95%⁷. The RMS tool is emerging as one of the best evidence-based clinical tool used in clinical practice to screen and diagnose bipolar 1 disorder therefore there may be a paradigm shift in diagnostic screening tools. This transformative change for healthcare clinicians were the ability to screen more patients quicker, and not just for MDD, but concurrently screen for bipolar 1 disorder in which 45% more patients that were discovered to have bipolar 1 disorder^{7,8}.

Clinical Implications

Effective screening for bipolar disorders improve accurate diagnosis, patient outcomes and the patient's therapeutic alliance with their clinician. According to the American Foundation for Suicide prevention, suicide is the 11th leading cause of death, estimated at 132 suicides daily in the United States (2021)¹⁸. Stigma has been a long standing issue in diagnosing this complex mood disorder. Strategies include first looking at the mood component symptoms, timeframe, then symptoms of mania, hypomania and depression with a more rapid effective approach to diagnosing this disorder is possible.

Considering the complexity of BD if left untreated, symptoms include psychosis and impulsivity which may lead to suicidal or homicidal ideations^{2,19}. Impulsive

behaviors and aggressive behavioral dysfunction may be seen with the BD populations which increases lethality and comorbid substance use disorders, including suicide attempts²⁰. According to research, the risk of suicide is higher (29.2%) in BD, versus unipolar MDD (17.3%)²¹.

The Review of Literature

A literature review was conducted using databases PubMed, MEDLINE, CINAHL Databases, APA PsycInfo, Psychology & Behavioral Sciences Collection, APA PsycTests, and the Cochrane Library. Key words used were *bipolar disorder, validity of MDQ and PHQ-9, and misdiagnosis and under-diagnosis of BD*. Initially 105 articles were retrieved, then after excluding duplicates down to 69 articles. Further exclusion of 39 more articles that did not meet criteria as they did not address the subject, yielded a total of 30 articles. After a full-text review of the 30 articles, the yield was 13 articles that were included. A total of 13 articles included the keywords and fleshed highly effective tools that assessed for mania in bipolar 1 disorder; depressive mood disorder including the severity and intensity of symptoms.

One major theme of these articles showed 41% to 62% of BD cases were missed, or undiagnosed on first visits. Interestingly, the collaborative care model was discovered in the literature review that revealed an effective model in psychiatric care model that integrated psychiatry services into primary care practice with the finding of improved accurate diagnosis, treatment and advantages for the patient and clinicians in attaining an accurate diagnosis. The second theme discovered in the literature review established acknowledgement of a high rate of misdiagnosis with a wide range from 7% to 70% indicating misdiagnosis is highly correlated with adverse outcomes. Finally, the third theme discovered that specialty psychiatric training, education and the increased use of EBP screening tools combined with clinical judgment improved the accuracy of the correct mood disorder diagnosis.

Implications for Clinical Practice

The implications of timely rapid assessments allow for prompt interventions that has shown to halt and/or prevent mental health conditions to worsen, reducing risk of emergency situations. Efficient streamline EBP implementation of screening tools that are valid and reliable increases diagnostic accuracy, resource optimization and patient comfort reducing potential patient distress while minimizing the time a patient spends undergoing assessment and evaluation. A comprehensive assessment with EBP screening tools provides a clinical foundation for accurate diagnosis and timely interventions.

The risks of untreated bipolar disorder, such as symptoms of psychosis or suicidal ideation, rapid assessment is imperative. The RMS is available online for

the health practitioner to use in clinical practice (<https://www.rapidmoodscreener.com/rms>). There are six-questions to ask the patient; 1) if there has been six different periods of two-weeks when they felt deeply depressed, 2) if they had problems with depression before age 18, 3) have they stopped or changed their antidepressant because they made them irritable or hyper, 4) if they had one week of racing thoughts, more talkative than normal, 5) if they had at least one-week during they were excessively outgoing, unusually energetic or unusually happy, and 6) if they had at least one week in which they needed less sleep than usual (<https://www.rapidmoodscreener.com/rms>). The RMS is not considered a diagnostic tool alone, the practitioner should have personal training, education and use clinical judgment to determine if bipolar disorder is the accurate mood disorder diagnosis per the DSM-5-TR².

Summary

Understanding the research about evidence-based screening tools used for accurate diagnosis is key to rapidly identifying between unipolar depression and bipolar disorders. Assisting individuals who struggle with mood disorders in their life-long journey with medication management, psychotherapy, psychoeducation and social support improves patient outcomes. In summary, the research identified clients with bipolar disorder are treated for at least 5 to 10 years under the diagnosis of MDD until the person experiences a first manic break or presents with a suicide attempt before an accurate BD diagnosis was made². BD is highly correlated with increased morbidity, mortality, and decreased quality of life. Since there is a high rate of misdiagnosis (unipolar depression versus bipolar disorder) it is recommended practitioners use validated clinical questionnaires as a cost-effective intervention, as the research establishes the use will decrease misdiagnosis and improve patient outcomes. The bottom line, the use of the PHQ-9 should be combined with the RMS or the MDQ questionnaire according to the practitioner's preference, with the goal to diagnose the specific mood disorder rapidly and accurately. Differentiating between the two mood disorders is important because medication choices may be quite different. Early diagnosis for individuals with bipolar disorders will remove barriers to expedient mental health care services. In summary, rapid screening and accurate diagnosis will lead to enhanced daily functioning, family or social functioning and ultimately improve the quality of life.

References

1. Abrams A. Diagnosing and treating bipolar affective disorders. Am Psychol Assoc. 2022 Jan/Feb. Available from: <https://www.apa.org/monitor/2022/01/ce-bipolar-affective>
2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Text revision. Washington, DC: American Psychiatric Association; 2022.

3. Dome P, Rihmer Z, Gonda X. Suicide risk in bipolar disorder: A brief review. *Medicina*. 2019. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6723289/#:~:text=The%20estimated%20annual%20suicide%20rate,all%20suicide%20deaths%20%5B13%5D>.
4. Patient Health Questionnaire-9 (PHQ-9). Available from: <https://strokengine.ca/en/assessments/patient-health-questionnaire-phq-9/#:~:text=Versions-,The%20PHQ%2D9%20was%20developed%20by%20Drs.,person%20or%20over%20the%20telephone>.
5. Thase M, Stahl S, McIntyre R, Matthews-Hayes T, Rolin D, Patel M, et al. Screening for bipolar 1 disorder and the rapid mood screener: Results of a nationwide health care provider survey. *Prim Care Companion CNS Disord*. 2023;25(2). doi:10.4088/PCC.22m03322. PMID: 37115145. Available from: <https://pubmed.ncbi.nlm.nih.gov/37115145/>
6. Abhijeet S, Jaiswal SV, Sawant VA, Sinha D. Bipolarity and temperament in depression: Making the right diagnosis. *Ann Indian Psychiatry*. 2019;3(1):23-27. doi: 10.4103/aip.aip_40_18.
7. Altamura AC, Buoli M, Caldiroli A, Caron L, Cumerlato Melter C, Dobrea C, et al. Misdiagnosis, duration of untreated illness (DUI) and outcome in bipolar patients with psychotic symptoms: A naturalistic study. *J Affect Disord*. 2015;182:70-75. doi: 10.1016/j.jad.2015.04.024.
8. Bouchra O, Maria S, Abderazak O. Screening of the unrecognized bipolar disorders among outpatients with recurrent depressive disorder: A cross-sectional study in a psychiatric hospital in Morocco. *Pan Afr Med J*. 2017;27:247. doi: 10.11604/pamj.2017.27.247.8792.
9. Daveney J, Panagioti M, Waheed W, Esmail A. Unrecognized bipolar disorder in patients with depression managed in primary care: A systematic review and meta-analysis. *Gen Hosp Psychiatry*. 2019;58:71-76. doi: 10.1016/j.genhosppsy.2019.03.006.
10. Hoyle S, Elliott L, Comer L. Available screening tools for adults suffering from bipolar affective disorder in primary care: An integrative literature review. Wiley-Blackwell; 2015. Available from: <http://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=edsbl&AN=RN375661596&site=eds-live&scope=site&custid=s6281220>.
11. Phelps JR, James IJ. Psychiatric consultation in the collaborative care model: The "bipolar sieve" effect. *Med Hypotheses*. 2017;105:10-16. doi: 10.1016/j.mehy.2017.06.017.
12. Shen H, Zhang L, Xu C, Zhu J, Chen M, Fang Y. Analysis of misdiagnosis of bipolar disorder in an outpatient setting. *Shanghai Arch Psychiatry*. 2018;30(2):93-101. doi: 10.11919/j.issn.1002-0829.217080.
13. U.S. Department of Health and Human Services. Bipolar Disorder. National Institute of Mental Health. Available from: <https://www.nimh.nih.gov/health/topics/bipolar-disorder/index.shtml>.
14. Wang YY, Xu DD, Liu R, Yang Y, Grover S, Ungvari GS, et al. Comparison of the screening ability between the 32-item Hypomania Checklist (HCL-32) and the Mood Disorder Questionnaire (MDQ) for bipolar disorder: A meta-analysis and systematic review. *Psychiatry Res*. 2019;273:461-466. doi: 10.1016/j.psychres.2019.01.061.
15. Youngstrom EA, Egerton GA, Genzlinger J, Freeman LK, Rizvi SH, Van Meter A. Improving the global identification of bipolar affective disorders: Meta-analysis of the diagnostic accuracy of checklists. *Psychol Bull*. 2018;144(3):315-342. doi: 10.1037/bul0000137.
16. American Foundation for Suicide Prevention. Suicide statistics. 2021. Available from: <https://afsp.org/suicide-statistics/>.
17. Baldessarini R, Tondo L, Pinna M, Nunez N, Vasquez G. Suicidal risk factors in major affective disorders. *Br J Psychiatry*. 2019. Available from: <https://www.cambridge.org/core/journals/the-british-journal-of-psychiatry/article/suicidal-risk-factors-in-major-affective-disorders/368BA473E0A22C2AA9668497E0C2B913#>.
18. Pompili M, Innamorati M, Gonda X, Serafini G, Akiskal HS, Rihmer Z, et al. Suicide risk in depression and bipolar disorder: Do impulsiveness-aggressiveness and psychopharmacotherapy predict suicidal intent? *Psychiatr Danub*. 2008;20(4):465-471. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2515901/>.
19. Psychiatry Advisor. Risk factors linked to suicidal acts vary in bipolar disorder versus depression. 2019. Available from: <https://www.psychiatryadvisor.com/home/depression-advisor/risk-factors-linked-to-suicidal-acts-vary-in-bipolar-disorder-vs-depression/>.
20. Nurnberger JI. General genetics of bipolar disorder. In: Strakowski S, editor. *The Bipolar Brain: Integrating Neuroimaging and Genetics*. 2nd ed. Oxford: Oxford University Press; 2022. doi: 10.1093/med/9780197574522.003.0011.

Resources

1. Hirschfeld RM. The Mood Disorder Questionnaire: A Simple, Patient-Rated Screening Instrument for Bipolar Disorder. *Prim Care Companion J Clin Psychiatry*. 2002;4(1):9-11. doi: 10.4088/pcc.v04n0104. PMID: 15014728; PMCID: PMC314375. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC314375/>.
2. Patient Health Questionnaire-9 (PHQ-9). Available from: <https://strokengine.ca/en/assessments/patient-health-questionnaire-phq-9/#:~:text=Versions-,The%20PHQ%2D9%20was%20developed%20by%20Drs.,person%20or%20over%20the%20telephone>.
3. Rapid Mood Screener. 2022. Available from: <https://www.rapidmoodscreener.com/rms>.