


COVID-19: Implications for bipolar disorder clinical care and research

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Abstract

The COVID-19 pandemic has posed significant challenges to health care globally, and individuals with bipolar disorder are likely disproportionately affected. Based on review of literature and collective clinical experience, we discuss that without special intervention, individuals with bipolar disorder will experience poorer physical and mental health outcomes due to interplay of patient, provider and societal factors. Some risk factors associated with bipolar disorder, including irregular social rhythms, risk-taking behaviours, substantial medical comorbidities, and prevalent substance use, may be compounded by lockdowns, social isolation and decrease in preventive and maintenance care. We further discuss implications for clinical research of bipolar disorders during the pandemic. Finally, we propose mitigation strategies on working with individuals with bipolar disorder in a clinical and research context, focusing on digital medicine strategies to improve quality of and accessibility to service.

Keywords

Bipolar disorder, pandemics, coronavirus infections

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Introduction

The coronavirus disease 2019 (COVID-19) pandemic is growing rapidly worldwide and is on course to affect the largest number of people globally since the 1918–1919 influenza pandemic ('Spanish flu').^{1,2} In addition to the direct morbidity and mortality of COVID-19, there is increasing concern regarding the pandemic's social and psychological sequelae.³

Evidence-based literature on previous pandemics, for example, the 2003 Severe Acute Respiratory Syndrome (SARS) pandemic, suggest their impact on individuals' mental health.^{4–7} Pervasive depression, anxiety and post-traumatic stress disorder (PTSD) were found among survivors of SARS upon their recovery from their acute illness.⁶ In a longitudinal cohort study based in Hong Kong, depressive and PTSD symptoms were found to persist at 30-month follow-up.⁷

Since the outbreak of COVID-19, researchers and clinicians from the first endemic countries, including China and Italy, raised concerns that individuals with preexisting mental disorders may be the most vulnerable to psychiatric consequences among a pandemic.^{8,9} Identified at-risk patient populations include those with major depression, anxiety disorders, and schizophrenia.^{9,10} Bipolar disorder (BD) is a

severe and persistent mental disorder that affects approximately 2% of the population worldwide.¹¹ Preliminary survey findings from Australia reported that patients with mood disorders, particularly BD, experience higher levels of depression and general distress during the COVID-19 pandemic.¹² Given the substantial psychological and physical health burden associated with BD, we believe that COVID-19 poses both general and specific challenges to patients with BD, and to the clinicians and health systems providing care for them.

We hypothesize that without targeted interventions, patients with BD are more likely to be infected and to experience poorer physical outcomes compared with the general population. We also expect that the social and economic consequences of COVID-19 will adversely affect individuals with BD and extend to wider society. In this narrative review

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and commentary, we combine our collective clinical experience with evidence from a selective survey of relevant literature, including commentaries, reviews, cohort studies and cross-sectional studies on bipolar disorder and COVID-19 through literature database search. We aim to raise awareness of the interplay of patient, provider and social factors that increase the risk of adverse outcomes for individuals with BD in the context of COVID-19. We also identify and propose potential mitigation strategies. Finally, we consider current and future implications of the COVID-19 pandemic for researchers studying BD.

Methods

In this scoping review, PubMed/MEDLINE was searched from inception to 7 April 2020 and updated on 10 November 2020 using the following search terms:

1. (bipolar* OR BD OR manic dep*)

AND

2. (covid* OR corona* OR pandem*)

Following the search, one author (S.X.) reviewed all the titles and abstracts to identify relevant articles. Two authors (S.X. and M.I.H.) decided which of these articles to include. They preferentially selected high-level evidence from meta-analyses or prospective cohort studies of adults with BD. Reference lists of included articles were also screened to identify other relevant studies, including seminal reviews and commentaries.

Patient factors

Physical health

There are many reasons to believe that individuals with BD are more susceptible to contracting COVID-19 and experiencing a more severe course of illness. This is because individuals with BD have poorer physical health compared with the general population: they experience premature mortality;¹³ they are less likely to prioritize their physical health;¹⁴ and they commonly suffer from a variety of chronic health conditions, including obesity,^{15,16} diabetes¹⁶ and cardiovascular disease.^{16,17} The primary contributor to premature mortality in BD is cardiovascular disease, and individuals with BD have up to a fivefold higher risk of cardiovascular disease compared with healthy controls.¹⁷ Individuals with BD also have higher mortality rates from infectious and respiratory causes compared with the general population with standard mortality ratios (SMRs) of 3.4 and 3.1, respectively.¹³ Available data regarding COVID-19 show that age and the presence of preexisting physical disease (in particular, hypertension, diabetes and cardiovascular disease) are

the strongest risk factors for experiencing poor outcomes of COVID-19 infection.^{18–20} For critically ill patients with COVID-19 pneumonia, age and comorbid chronic conditions remain major predictors of mortality.²¹

Psychiatric/Psychological comorbidities

Anxiety is a common comorbidity among individuals with BD, half of whom may develop an anxiety disorder in their lifetime.²² Anxious temperament, which is known to be associated with BD, is identified as a significant risk factor for moderate-to-severe psychological distress during the COVID-19 pandemic in Italy.^{23,24} Anxious and irritable behaviour may predispose the individuals with BD to interpersonal conflicts and domestic violence.²⁵ Moreover, high anxiety level is associated with low mood in BD.²⁶ In other words, individuals with BD, even during euthymia, who might be experiencing anxiety, will also experience low mood – albeit through a different but synergistic mechanism.

Furthermore, in the recent U.S. National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III), the lifetime prevalence of substance use disorder was 2.3 higher among individuals with BD after adjusting for other psychiatric comorbidities.²⁷ Social distancing may lead individuals with BD to use recreational substances to cope with isolation, and this may exacerbate impulsivity and impair decision-making.

Social behaviours

Public health measures are being promoted to decrease the risk of COVID-19 transmission, for example, hand washing and social distancing.²⁸ However, BD itself may interfere with the implementation of these measures. Individuals with BD experiencing a manic or hypomanic episode typically exhibit impulsivity, disinhibition and impaired judgement.²⁹ They are more likely to engage in risk-taking behaviours that would contravene personal hygiene and social distancing protocols.

Social cues (‘zeitgebers’) such as meals, exercises, and entertainment play an important role in preserving biological rhythms and maintaining mental wellness in individuals with BD.³⁰ Widespread confinement (‘lockdowns’), closure of schools and universities, restaurants and gyms, and travel restrictions are contributing to major disruptions in social rhythms. Individuals with BD will struggle setting up a routine, with negative consequences for their sleep and energy regulation.

Confinement during a pandemic has also been associated with low mood and depression, which may affect individuals with BD disproportionately.³ Individuals with BD who already have a small social network may find this restricted further. Existing evidence suggests that a reduced social network in BD is associated with greater impairment in functioning and longer duration of time to recovery.³¹

Provider factors

BD is considered one of the most difficult psychiatric disorders to manage; it often requires close monitoring of symptoms and medications.²⁵ To curtail COVID-19 transmission, many mental health providers are being asked to defer ‘non-essential’ services and to offer more urgent services through telephone or virtual platforms. For example, assertive community treatment (ACT) teams have reduced the number of home/shelter visits they offer. The most underserved and vulnerable individuals with BD may be without a phone or stable Internet connection. These people will be facing greater barriers to accessing care, potentially contributing further to symptom exacerbation, risk of relapse and increased risk of suicide.³² Challenges facing individuals with BD will be compounded by difficulties in visiting pharmacies, attending community laboratories for therapeutic drug monitoring required for medications like lithium or divalproex, and in receiving maintenance electroconvulsive therapy (ECT) due to imposed self-isolation guidelines.

In the initial phase of the pandemic, many psychiatric outpatient clinics and emergency departments have experienced a marked reduction in routine and emergency visits.³³ Apprehension about potential COVID-19 exposure to individuals with BD and their families is likely contributing to delays in seeking care. It is possible that this decrease in preventive and maintenance care will result in symptom exacerbations, relapses and suicidality, with a rebound in demand for acute psychiatric care and hospitalization.

Societal factors

Evidence suggests that suicide rates in BD are the highest among all mood disorders.³⁴ The early economic consequences of the pandemic include a rapid increase in unemployment and financial stress, two well-known risk factors for suicide attempts and suicide completions in BD.^{35,36} In the context of a recession precipitated by the pandemic and the lockdown required to control its spread, the unemployment rate is expected to continue to increase for many months to come. A high proportion of individuals with BD are young to middle-aged and already face difficulties in securing and maintaining employment;³⁷ the economic uncertainty in the face of the COVID-19 pandemic is likely to exacerbate these challenges.

Impact on clinical research

The COVID-19 pandemic is affecting medical research worldwide. Given the paramount concern for the safety of study participants, governing agencies such as the US Food and Drug Administration has asked investigators to limit study visits to those needed for participant safety or clinical care; they have suggested that other visits be conducted virtually and that safety assessments (e.g. laboratory tests) be arranged through local providers.³⁸ Some institutions have mandated the suspension of all ‘non-essential’ research

including many pivotal clinical trials.³⁹ This may lead to the disbanding of skilled research teams and disruption of hard-to-establish relationship between researchers and clinicians, that is, sources of referrals for clinical studies. Moreover, research funds will need to be diverted to support pandemic-related research proposals. This is likely to disproportionately affect BD research, which is already underfunded compared with research for physical conditions that are associated with a similar or lower degree of disability.⁴⁰

Discussion

COVID-19 has disrupted health systems worldwide. Experience from previous pandemics and emerging evidence from the current pandemic suggest the widespread psychiatric sequelae, particularly for those with preexisting mental disorders.^{7–9} In this review and commentary, we examine the individual, health care provider and societal factors that, when compounded, would likely negatively influence clinical picture of individuals with BD in the pandemic. Our suggestions are based on a selective narrative review and combined experience of providing direct clinical care for and conducting research on BD in tertiary psychiatric facilities in Toronto, Canada. However, we recognize that response to COVID-19 drastically differs across time and geographical locations, and that some factors we identified may not be generalized. As the pandemic continues to evolve, more data would allow future studies to evaluate the actual impact of COVID-19 on individuals with BD.

We have an opportunity to critically examine and adapt our current practices. In particular, this pandemic has highlighted the urgent need for scaling up digital psychiatry and online interventions.⁴¹ For example, Canada has implemented free online mental health and substance use support services, and similar efforts are seen internationally.^{42–44} We outline below, further recommendations for clinicians working in mental health and more specifically those providing care for individuals with BD:

1. Work with allied health professionals and support patients with BD to obtain affordable phone and Internet access.
2. Ensure that clinicians have access to virtual platforms and that they are appropriately trained to use them.
3. Develop and deliver digital psychoeducation and psychosocial interventions, including electronic cognitive behaviour therapy (eCBT) for management of mood episodes.
4. Apply the use of ‘chatbots’ for wellness, check-ins, and adverse effect monitoring, with concerning results flagged to clinicians.
5. Modify clinical and research protocols to include frequent remote contact by phone, email, or video conferencing platforms to keep patients and participants engaged and informed.

6. Shift to digital tools and assessment scales enabling clinical care and research studies to be conducted remotely through virtual visits.
7. Prepare for protocol deviations and display flexibility in close cooperation with research sponsors, institutional research boards, and data and safety management boards.

Conclusion

Telemedicine has seen an exponential uptake in the context of the pandemic. Appropriate training is essential for clinicians to deliver virtual care safely and securely, particularly for those caring for BD patients, who can often present in crisis and who may be more susceptible to the mental health impacts of the COVID-19 pandemic. While it is important to carefully evaluate digital platforms to ensure that the data obtained are secure, it is also important for providers and research funding agencies to recognize the benefits of using and assessing remote monitoring in BD in real-world settings. Implementing such steps may reduce the impact of the COVID-19 pandemic on patients with BD, but potentially also improve the quality and accessibility of clinical services for this vulnerable population in the long-term.

Declaration of conflicting interests

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