



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.



# The impact of COVID-19 on individuals living with serious mental illness

Kareem Hamada, Xiaoduo Fan \*

UMass Memorial Health Care/University of Massachusetts Medical School, Worcester, MA 01605, United States of America



## ARTICLE INFO

### Article history:

Received 20 April 2020

Received in revised form 23 May 2020

Accepted 25 May 2020

Available online 27 May 2020

### Keywords:

COVID-19

Pandemic

Serious mental illness

Social distancing

## 1. Introduction

On March 11th, 2020, the World Health Organization (WHO) characterized COVID-19, caused by the novel coronavirus SARS-CoV-2, a global pandemic. As the number of COVID-19 cases increase exponentially in the U.S., there has been much effort on minimizing the spread of the disease via the implementation of social distancing practices, which can be stressful for everyone including individuals with serious mental illness (SMI) such as schizophrenia, bipolar disorder and major depression.

## 2. Challenges & exacerbation of symptoms

The COVID-19 pandemic can be a catalyst for the new onset of psychosis (Brown et al., 2020) or exacerbation of symptoms in individuals with SMI. The current strategy of social distancing may lead to poor psychiatric outcomes such as social isolation and loneliness, which are common experiences in individuals with SMI (Linz and Sturm, 2013). Loneliness has long been associated with lower quality of life, depression, paranoid thinking, and suicide ideation (Michalska da Rocha

et al., 2018). Moderate associations between psychotic symptoms and loneliness have also been identified (Michalska da Rocha et al., 2018). Social distancing can make individuals with SMI experience significant emotional distress, and relapse of psychotic symptoms, resulting in increased risk of rehospitalization in this population.

Obsessive-Compulsive Disorder (OCD) and Obsessive-Compulsive Symptoms (OCS), are highly comorbid in the SMI population, especially in those living with schizophrenia and bipolar disorder with the rates ranging from 10% to 52% (Bottas et al., 2005; Sharma and Reddy, 2019). The fear of contracting SARS-CoV-2 may contribute to an increase in obsessive thoughts, which can lead to more debilitating functional impairment in daily life often associated with SMI. In a study on the relationship between OCS, anxiety, and swine flu fears, researchers evaluated the impact of pandemics on anxiety and the fear of contamination; the findings suggest that individuals exposed to information regarding the Swine Flu outbreak experienced substantially higher rates of anxiety, and those who had pre-existing psychiatric symptoms experienced an exacerbation of symptoms (Brand et al., 2013). The COVID-19 pandemic may have similar impact on individuals with SMI.

The “infodemic”, an overwhelming amount of information regarding COVID-19, can exacerbate delusions, hallucinations, and disorganized thinking commonly experienced by individuals with SMI. Studies have demonstrated that as the society becomes more centered around technology, reports of paranoid delusions increase (Mason et al., 2014). For example, a patient meeting with their psychiatrist virtually may believe that the coronavirus is being transmitted through the phone or computer screen. Extended periods of social isolation may also exacerbate hallucinations experienced by individuals with SMI (El Haj et al., 2016). Furthermore, disorganized thinking in individuals with SMI can put them at high risk of contracting or transmitting COVID-19 as these individuals may not be able to fully understand the gravity of the pandemic situation, social distancing practice, and other measures in place to reduce the spread of COVID-19. Individuals with disorganized thinking are also at high risk of experiencing fears of contamination or stress-induced anxiety, and likely misinterpret the physiological response of anxiety to respiratory symptoms that might be associated with COVID-19 (Gelenberg, 2000).

Co-occurring substance use in individuals with SMI is common (Hartz et al., 2014; Sheidow et al., 2012). According to the National Survey on Drug Use conducted by the Substance Abuse and Mental Health Services Administration, 49.4% of adults with SMI used illicit drugs compared to 15.7% of the general population (SAMHSA, 2019). To cope with the stress and the exacerbation of psychiatric

\* Corresponding author at: Biotech One, Suite 100, 365 Plantation Street, Worcester, MA 01605, United States of America.

E-mail address: [xiaoduo.fan@umassmed.edu](mailto:xiaoduo.fan@umassmed.edu) (X. Fan).

symptoms during the COVID-19 pandemic, individuals with SMI may self-medicate by engaging substance use, which put them at a high risk of hospitalization and suicide (Cohen et al., 1990; Pettersen et al., 2013).

### 3. What healthcare providers should consider while treating patients “from a distance”

As the healthcare system converts to virtual platforms during the pandemic, healthcare providers should help their patients embrace and get used to telehealth or mobile health technology (Torous and Keshavan, 2020). Maintaining regular contact with patients can be vital in providing a sense of social connection and preventing symptom relapse and possible hospitalization. It is also important to address some practical and logistic challenges to ensure continued care, for example, collaboration with pharmacies and labs for those patients on clozapine and requiring regular monitoring of absolute neutrophil count (Leung et al., 2020), making arrangement for those patients on long-acting injectable antipsychotic medications to receive such treatment (Gannon et al., 2020), making sure that patients have enough medications in case they need to self-isolate or avoid leaving home. Mental health providers are now tasked with a challenge in decision making and weighing the risks and benefits of different intervention options. Lessening acute interventions, permitting individuals with SMI to stay home should be considered as appropriate and possible (Geller and Daou, 2020).

### 4. Community support and intervention for individuals with SMI

Important community-based resources utilized by individuals with SMI for psychosocial support, such as community health centers, day programs, and clubhouses, are closed during the COVID-19 pandemic. Now more than ever, we should develop novel care delivery methods to support individuals with SMI. Many community clubhouses and community health centers are notifying their members that they are available virtually for support at this time. Instead of face-to-face support and in-person activities, these community resources have shifted to operating virtual models. This transition has included: preparation of weekly care packages of food to members in need, helping members who have been recently unemployed find jobs, connecting members with their healthcare providers to continue treatment and psychotherapy, and hosting virtual social groups so members feel less isolated. Staff of community support centers have also made efforts by doing outreach calls to members, checking on members' well-being. Community support collaborations have also led to providing internet and phone access for members who tend to be more socially isolated in an effort to help them adjust and feel included from a distance. In addition, financial support has been provided for members recently unemployed to pay rent as homelessness in this population is common (Sylvestre et al., 2018). Community intervention in times of crisis plays a key role in providing a sense of hope, encouragement, and resilience in such a vulnerable and often overlooked population.

Some important online resources to support individuals with SMI have been established since the COVID-19 outbreak. For example, in an effort to combat the increase in substance use expected during the pandemic, SAMHSA has recommended virtual recovery resources such as online recovery programs, peer support, prevention hotlines, and tips on how local recovery centers can their own online programs (SAMHSA, 2020). The COVID-19 information and resource guide, released by the National Alliance on Mental illness, provides support to and addresses challenges faced by individuals with mental illness and their families (NAMI, 2020).

Individuals with SMI are one of the most vulnerable and least privileged groups of people in our society. It is critically important that healthcare professionals coordinate care with the family and

community resources to provide the best possible support for this patient population during the COVID-19 pandemic.

### Role of the funding source

None.

### Contributors

Both Kareem Hamada and Xiaoduo Fan contributed to the development and writing of this paper.

### Declaration of competing interest

XF has received research support or honoraria from Alkermes, Neurocrine, Avanir, Al-lergen, Otsuka, Lundbeck, Boehringer Ingelheim, and Janssen. Other authors report no competing interests.

### Acknowledgement

None.

### References

- Bottas, A., Cooke, R.G., Richter, M.A., 2005. Comorbidity and pathophysiology of obsessive-compulsive disorder in schizophrenia: is there evidence for a schizo-obsessive subtype of schizophrenia? *Journal of Psychiatry and Neuroscience: JPN* 30 (3), 187–193.
- Brand, J., McKay, D., Wheaton, M.G., Abramowitz, J.S., 2013. The relationship between obsessive compulsive beliefs and symptoms, anxiety and disgust sensitivity, and Swine Flu fears. *Journal of Obsessive-Compulsive and Related Disorders* 2 (2), 200–206. <https://doi.org/10.1016/j.jocrd.2013.01.007>.
- Brown, E., Gray, R., Lo Monaco, S., et al., 2020. The potential impact of COVID-19 on psychosis: a rapid review of contemporary epidemic and pandemic research. published online ahead of print, 2020 May 6. *Schizophr. Res.* <https://doi.org/10.1016/j.schres.2020.05.005> S0920-9964 (20)30257-7.
- Cohen, L.J., Test, M.A., Brown, R.L., 1990. Suicide and schizophrenia: data from a prospective community treatment study. *Am. J. Psychiatry* 147 (5), 602–607. <https://doi.org/10.1176/ajp.147.5.602>.
- El Haj, M., Jardri, R., Larøi, F., Antoine, P., 2016. Hallucinations, loneliness, and social isolation in Alzheimer's disease. *Cognitive Neuropsychiatry* 21 (1), 1–13. <https://doi.org/10.1080/13546805.2015.1121139>.
- Gannon, J.M., Conlogue, J., Sherwood, R., et al., 2020. Long acting injectable antipsychotic medications: ensuring care continuity during the COVID-19 pandemic restrictions. published online ahead of print, 2020 May 7. *Schizophr. Res.* <https://doi.org/10.1016/j.schres.2020.05.001> S0920-9964(20)30253-X.
- Gelenberg, A.J., 2000. Psychiatric and somatic markers of anxiety: identification and pharmacologic treatment. *Primary Care Companion to the Journal of Clinical Psychiatry* 2 (2), 49–54. <https://doi.org/10.4088/pcc.v02n0204>.
- Geller, J.L., Daou, M.A.Z., 2020. Patients with SMI in the age of COVID-19: what psychiatrists need to know. *Psychiatric News* <https://doi.org/10.1176/appi.pn.2020.4b39>.
- Hartz, S.M., Pato, C.N., Medeiros, H., Cavazos-Rehg, P., Sobell, J.L., Knowles, J.A., Bierut, L.J., Pato, M.T., Genomic Psychiatry Cohort Consortium, 2014. Comorbidity of severe psychotic disorders with measures of substance use. *JAMA Psychiatry* 71 (3), 248–254. <https://doi.org/10.1001/jamapsychiatry.2013.3726>.
- Leung, J.G., Wittenberger, T.S., Schak, K.M., 2020. Clozapine treated patients and COVID-19: ensuring continued care through collaboration. published online ahead of print, 2020 May 14. *Schizophr. Res.* <https://doi.org/10.1016/j.schres.2020.05.030> (10.1016/j.schres.2020.05.030).
- Lin, S.J., Sturm, B.A., 2013. The phenomenon of social isolation in the severely mentally ill. *Perspectives in Psychiatric Care* 49 (4), 243–254. <https://doi.org/10.1111/ppc.12010>.
- Mason, O.J., Stevenson, C., Freedman, F., 2014. Ever-present threats from information technology: the cyber-paranoia and fear scale. *Front. Psychol.* 5, 1298. <https://doi.org/10.3389/fpsyg.2014.01298>.
- Michalska da Rocha, B., Rhodes, S., Vasilopoulou, E., Hutton, P., 2018. Loneliness in psychosis: a meta-analytical review. *Schizophr. Bull.* 44 (1), 114–125. <https://doi.org/10.1093/schbul/sbx036>.
- NAMI, 2020. NAMI COVID-19 Information and Resources, April 2020. <https://www.nami.org/covid-19-guide/>. Accessed date: 16 April 2020.
- Pettersen, H., Ruud, T., Ravndal, E., Landheim, A., 2013. Walking the fine line: self-reported reasons for substance use in persons with severe mental illness. *Int. J. Qual. Stud. Health Well Being* 8, 21968. <https://doi.org/10.3402/qhw.v8i0.21968>.
- SAMHSA, 2019. Key Substance Use and Mental Health Indicators in the United States: Results from the 2018 National Survey on Drug Use and Health (HHS Publication No. PEP19-5068, NSDUH Series H-54). Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD Retrieved from. <https://www.samhsa.gov/data/>, Accessed date: 18 April 2020.
- SAMHSA, 2020. Your recovery is important: virtual recovery resources. <https://www.samhsa.gov/sites/default/files/virtual-recovery-resources/>, Accessed date: 18 April 2020.

- Sharma, L.P., Reddy, Y.C.J., 2019. Obsessive-compulsive disorder comorbid with schizophrenia and bipolar disorder. *Indian J. Psychiatry* 61 (Suppl. 1), S140–S148. [https://doi.org/10.4103/psychiatry.IndianJPsychiatry\\_527\\_18](https://doi.org/10.4103/psychiatry.IndianJPsychiatry_527_18).
- Sheidow, A.J., McCart, M., Zajac, K., Davis, M., 2012. Prevalence and impact of substance use among emerging adults with serious mental health conditions. *Psychiatric Rehabilitation Journal* 35 (3), 235–243. <https://doi.org/10.2975/35.3.2012.235.243>.
- Sylvestre, J., Notten, G., Kerman, N., Polillo, A., Czechowki, K., 2018. Poverty and serious mental illness: toward action on a seemingly intractable problem. *Am. J. Community Psychol.* 61 (1–2), 153–165. <https://doi.org/10.1002/ajcp.12211>.
- Torous, J., Keshavan, M., 2020. COVID-19, mobile health and serious mental illness [published online ahead of print, 2020 Apr 16]. *Schizophr. Res.* <https://doi.org/10.1016/j.schres.2020.04.013> S0920-9964(20)30220-6.