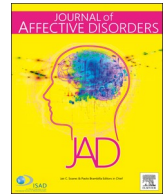




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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.



Correspondence

Learning from COVID-19 pandemic in northern Italy: Impact on mental health and clinical care



ARTICLE INFO

Keywords:

COVID-19
Mental health
Service organisation
Access to care
Resilience

On 11th March 2020, the World Health Organisation (WHO) declared Coronavirus (COVID-19) a pandemic. As of 16th May 2020, 188 countries/regions were hit with 4,570,370 infected cases and 308,317 deaths (Dong, 2020). Italy is the fifth most heavily hit country after the U.S. (1,445,867 infected), Russia (272,043), the United Kingdom (241,454) and Spain (230,698). Northern Italy has had the most impact with Lombardy having the highest prevalence of COVID-19 infections (84,119, 15,411 deaths) and Veneto having the fourth-highest prevalence (18,889, 1762 deaths) Covid-19, 2020 (Ministero Della Salute, 2020).

The first northern Italy case of COVID-19 was diagnosed on 20th February 2020 in Codogno (Lombardy) (Grasselli, 2020). In the following two days, a dozen towns in the local region effectively went into lockdown, and all schools in the local region were shut down. Two weeks after this, i.e. on 8th March 2020, the whole Lombardy region and some cities in Veneto went into lockdown, and on the following day (9th March 2020), severe social distancing measures including mass quarantine had been implemented nationally to further stop the spreading of COVID-19 (Remuzzi, 2019).

A similar yet less widespread epidemic coronavirus infection Severe Acute Respiratory Syndrome (SARS, 2003) had led to an overall cumulative incidence of psychiatric disorders of 58.9% in 30 months, rates of post-traumatic stress disorder (PTSD) of 44.1% in 4 years and increased suicides at 1 year in survivors according to the DSM-IV criteria (Mak et al., 2009). Since COVID-19 is more widespread than SARS, COVID-19's burden on mental health could be expected to be higher and could have an impact both on healthy individuals and those with mental disorders. These effects can be further deteriorated by the social distancing measures such as quarantine, which trigger negative psychological effects, including PTSD, confusion, and anger (Brooks, 2020). In northern Italy, regular monitoring of mental health for the general population and patients is under planning by employing screening tools (e.g. Patient Health Questionnaire 9 for depression, Generalised Anxiety Disorder 7 for anxiety disorders, the Primary Care PTSD Screen). For those scoring above the thresholds, remote psychiatric assessments may be conducted and low-intensity e-health interventions (e.g. Johnson & Johnson Official 7 Minute Workout [<https://7minuteworkout.njn.com>]), relaxation techniques training,

trauma-specific psychoeducation, sleep hygiene psychoeducation, problem-solving techniques may be offered. Those with pre-existing or incident mental disorders may be additionally offered specific treatments, in line with the national guidelines.

If under standard circumstances, patients with mental disorders have decreased life expectancy, increased rates of smoking and increased rates of respiratory infections (Firth, 2019), pandemics and social distancing can further deteriorate their physical health. Firstly, patients with Serious Mental Illness might need additional support to adhere to common hygiene prescriptions due to cognitive, depressive or negative symptoms, and efforts to discontinue or at least reduce smoking might be challenging in a clinical context where remote interventions via telepsychiatry are increasingly used. Secondly, patients generally have poor access to physical care and might suffer from disparities in receiving appropriate assessment and treatment in COVID-19 specialised services or in seeking general medical advice in the presence of high fever and intense cough. Thirdly, some patients with psychotic (manic) disorders (episodes) might lose track of the current situation and violate quarantine, while people with borderline personality disorders tend to take risks, display disinhibited behaviour or act out, leading to not adhering to the restrictions. The pandemic has probably triggered widespread increased rumination about the possibility of getting sick and the fear of catastrophic outcomes, in the forms of both obsessions or delusions, with outbreak-related facts incorporated into phobic or delusional thinking and increase of symptoms. Fourthly, social distancing and quarantine obviously impeded essential social rehabilitation, psychoeducational or group treatment, which represents an essential component of psychiatric care, in particular for negative symptoms and social withdrawal (Brooks, 2020). Patients with negative symptoms have poor salience towards social contacts and higher levels of sedentary behaviour; at the same time, these behaviours may prevent the spreading of COVID-19. These highly vulnerable patients should be closely monitored leveraging e-health and remote and digital treatments.

The health of medical doctors and any other healthcare professionals in the frontline has been strongly hit during the COVID-19 pandemic in Italy, with 23,925 infected (11.1% of all infections in Italy), and 79 dead (Istituto Superiore di Sanità, 2020; Remuzzi, 2019).

<https://doi.org/10.1016/j.jad.2020.06.028>

Received 18 April 2020; Received in revised form 1 June 2020; Accepted 23 June 2020

Available online 02 July 2020

0165-0327/ © 2020 Elsevier B.V. All rights reserved.

In the last 10 years, there has been an important spending review by the Italian government that cut resources for the national health system, which greatly limited the hiring of new medical doctors replacing those retiring and, in parallel, reduced hospital beds including the so-much-needed now intensive and sub-intensive care units. Furthermore, there has been a shrinkage in the number of students admitted to medical schools, resulting in less young doctors nationwide. In addition to the infection risk, heroic working hours and nightshifts in overwhelmed healthcare systems, mental exhaustion, the torment of difficult triage decisions and the anxiety of infecting their families (in particular elderly parents or young children) might have worsened the clinicians' mental health. We have also noticed that psychiatrists are more frequently asked to provide support to other medical doctors and nurses who are as fragile as the patients they take care of. They may be unable to cope with the recurrent mental pain of losing patients, colleagues, friends and relatives. The deteriorating mental health of clinicians impairs their ability to provide medical care. Moreover, many COVID-19 patients dying alone in homes or in hospitals far from their close relatives who are in quarantine has triggered a new mourning and bereavement crisis. In Padua, Milan and Pavia University Hospital, specific facilitated settings held by psychiatrists have been created to help health workers and the patients' relatives to cope with their traumatization and stress, also using telepsychiatry. Mental health screening for healthcare workers should be implemented well ahead of the caseload peaks. Preventive resilience training has shown to be implementable in large hospital settings and is also effective and well-received by workers (Aiello et al., 2011). Such programmes are likely to be needed during the pandemic, and for at least one year after it ends.

The COVID-19 pandemic is also directly impacting psychiatric care. In Lombardy, some psychiatric units were resized because of staffing shortage (falling ill) or the need of using beds for COVID-19 patients, whereas others have dedicated full inpatients units or units only to psychiatric COVID-19 patients. Regular outpatient and residential activities are still recommended both in Lombardy's and Veneto's health system and are fully operative. However semi-residential clinics, as well as psychiatric diurnal centres and day hospitals, have been limited, if not closed, in Veneto. This might play a role in the delayed detrimental effects on suspending psychiatric care and treatments of those subjects prone to relapse, detecting acute psychopathological episodes in time and maintaining surveillance on the psychosocial situations of patients. However, several patients are cancelling their scheduled appointments, due to partly reasonable concerns of infection, which might result in poor compliance to treatment. Treatment adherence must be continuously solicited, and long-acting injectable formulations might be particularly valuable. Phone calls and e-communications with patients are going to be delivered when in-person visits are not feasible, with a specific educational focus on the early signs of disease relapse, the need for treatment adherence and coping with social isolation and emotional distress.

In conclusion, although COVID-19's most severe complication is interstitial pneumonia, it can have profound direct and indirect detrimental effects on the mental health of the general population, vulnerable psychiatric groups and health-care professionals, including the psychiatrists. In addition, the physical health of patients affected with mental disorders may be further compromised. Finally, this pandemic is disrupting the already stretched provision of psychiatric care. Some empirical approaches to mitigate these issues—leveraging the Northern Italian experience—are discussed above, with the hope to alert and assist other countries towards such an ongoing battle.

Declaration of Competing Interest

Authors declare no conflict of interest.

Contributors

The three authors equally designed, wrote, reviewed and approved the final version of the letter.

Role of Funding Source

The present work had no direct funding.

Acknowledgement

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at [doi:10.1016/j.jad.2020.06.028](https://doi.org/10.1016/j.jad.2020.06.028).

References

- Aiello, A, Khayeri, MY, Raja, S, Peladeau, N, Romano, D, Leszcz, M, Maunder, RG, Rose, M, Adam, MA, Pain, C, Moore, A, Savage, D, Schulman, RB, 2011. Resilience training for hospital workers in anticipation of an influenza pandemic. *J. Contin. Educ. Health. Prof.* 31 (1), 15–20. <https://doi.org/10.1002/chp.20096>. Winter.
- Brooks, SK, Webster, RK, Smith, LE, et al., 2020. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet* 395 (10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8).
- Covid-19: i casi in Italia alle ore 18 del 15 Maggio. <http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioContenutiNuovoCoronavirus.jsp?lingua=italiano&id=5351&area=nuovoCoronavirus&menu=vuoto>. Accessed May 16th, 2020.
- Dong, E, Du, H, Gardner, L, 2020. An interactive web-based dashboard to track COVID-19 in real time. *Situation reports. The Lancet Infectious Diseases*. [https://doi.org/10.1016/S1473-3099\(20\)30120-1](https://doi.org/10.1016/S1473-3099(20)30120-1). Published online February, 19.
- Firth, J, Siddiqi, N, Koyanagi, A, et al., 2019. The Lancet Psychiatry commission: a blueprint for protecting physical health in people with mental illness. *Lancet Psychiatry* 6 (8), 675–712. [https://doi.org/10.1016/S2215-0366\(19\)30132-4](https://doi.org/10.1016/S2215-0366(19)30132-4).
- Grasselli, G, Pesenti, A, Cecconi, M, 2020. Critical care utilization for the COVID-19 outbreak in Lombardy, Italy: early experience and forecast during and emergency response. *JAMA*. <https://doi.org/10.1001/jama.2020.4031>. Mar 13.
- Istituto Superiore di Sanità. Epidemia COVID-19. Aggiornamento Nazionale. https://www.epicentro.iss.it/coronavirus/bollettino/Bollettino-sorveglianza-integrata-COVID-19_7-maggio-2020.pdf. Accessed May 16th, 2020.
- Mak, IWC, Chu, CM, Pan, PC, Yiu, MGC, Chan, VL, 2009. Long-term psychiatric morbidities among SARS survivors. *Gen. Hosp. Psychiatry* 31 (4), 318–326. <https://doi.org/10.1016/j.genhosppsych.2009.03.001>.
- Remuzzi, A, Remuzzi, G., 2019. Health Policy COVID-19 and Italy: what next? *Lancet*. [https://doi.org/10.1016/S0140-6736\(20\)30627-9](https://doi.org/10.1016/S0140-6736(20)30627-9).

Paolo Fusar-Poli^{a,b,c,*}, Paolo Brambilla^{d,e}, Marco Solmi^{a,b,f}

^a Early Psychosis: Interventions and Clinical-detection (EPIC) Lab, Department of Psychosis Studies, Institute of Psychiatry, Psychology & Neuroscience, King's College London, London, United Kingdom

^b OASIS Service, South London and Maudsley National Health Service (NHS) Foundation Trust, London, United Kingdom

^c Department of Brain and Behavioral Sciences, University of Pavia, Pavia, Italy

^d Department of Pathophysiology and Transplantation, University of Milan, Milan, Italy

^e Department of Neurosciences and Mental Health, Fondazione IRCCS Ca' Granda Ospedale Maggiore Policlinico, Milan, Italy

^f Neuroscience Department, University of Padua, Padua, Italy
E-mail address: paolo.fusar-poli@kl.ac.uk (P. Fusar-Poli).

* Corresponding author at: Early Psychosis: Interventions & Clinical-detection (EPIC) Lab, Department of Psychosis Studies, Institute of Psychiatry, Psychology and Neuroscience, King's College London, London SE5 8AF, United Kingdom.