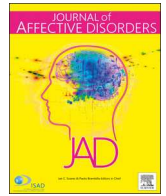




Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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

## La casa de papel: A pandemic in a pandemic



## ARTICLE INFO

## Keywords:

COVID-19

Mental health

Literature screening

The rapid spread of the coronavirus disease 2019 (COVID-19) pandemic called for a rapid response from the scientific community, sparking an unprecedented wave of research and publications (*The Economist*, 2020). Journals fast tracked peer review, and publishers waived publication fees and provided free access to articles' content. The preprint model has been pushed forward carrying both pro and con arguments (Khamisi, 2020). To date, more than 10,000 COVID-19 papers have been indexed in PubMed, with an average more than 100 new papers indexed every day.

To support our hospital teams and regional health authorities, we have coordinated the "COVID-19 Literature Task Force" which has, on a daily basis, systematically retrieved and critically assessed all PubMed indexed papers on "COVID-19 and mental health".

Four hundred and fifteen papers on "COVID-19 and mental health" were identified from 20th January to 17th May, with on average nearly four new papers indexed on PubMed every day. About one fifth of COVID-19 mental health papers were published in China (22.9%) and in the US (21.3%) respectively, followed by India (7.7%), the UK (7.7%), and Italy (5.3%). Unsurprisingly, the largest amount of papers (78.1%) were opinion papers; 3% were reviews. Only one fifth (18.8%) were original studies, of which the majority (85.8%) cross-sectional.

The impact of COVID-19 on mental health was mostly investigated in the general population (26%), and to a lesser extent in vulnerable groups including healthcare workers (14%), psychiatric patients (7.2%), children and adolescents (3.9%), and older subjects (2.9%). Similarly, the impact of lockdown restrictions on mental health was mainly evaluated in the general population (5.5%), compared to psychiatric patients and older individuals (0.2%, respectively). Thirty-four studies (8.2%) investigated COVID-19 impact on social, addiction and psychiatric services, and 6.6% of selected papers examined the potential role of telepsychiatry in promoting continuity of care at the community-level. Thirty studies (7.2%) focused on suitable psychological interventions for the general population in order to help with loneliness, hopelessness, and death anxiety exacerbated during health emergencies, along with the effects of associated social distancing measures.

In March 2020, in the first weeks of the pandemic in the UK, an expert panel convened by the UK Academy of Medical Sciences and a mental health research charity (MQ: Transforming Mental Health)

explored the psychological, social, and neuroscientific effects of COVID-19 and set out immediate priorities and longer-term strategies for mental health science research (Holmes et al., 2020).

The immediate priority is the collection of high-quality data on the mental health and psychological effects of the COVID-19 pandemic across the whole population and specific vulnerable groups (including subjects with pre-existing mental or physical health issues, children and adolescents, older persons, and socially excluded groups) (Odone et al., 2020). Another priority is to assess the effects of COVID-19 on brain function, neurocognition, and mental health in all clinical stages of infection and illness.

There is an urgent need to improve and develop psychological interventions for healthcare staff and the general population, and promote continuity of care for psychiatric patients at the community-level through online psychotherapies and other telemental health services as well.

Longer-term strategies that are needed include attention to the range of psychiatric consequences that may depend on the COVID-19 pandemic, the associated national quarantines, and the worldwide economic decline that occurred, respectively. Importantly, there is an association between increasing unemployment rates, more depressive morbidity and higher suicide rates (Kawohl and Nordt, 2020). Such effects of economic crisis in the past, as in 2008, or 1990s, may be exacerbated in the coming years if the COVID-19 pandemic is not controlled completely. For instance, if national quarantines are eased in the coming months, but then COVID-19 rates begin to rise, any temporary economic recovery may be erased by a later repeated partial or complete national quarantine. If such recrudescence of infection occurs in the fall of 2020 and/or winter/spring of 2021, economic harms may return a year from now, along with higher rates of unemployment, and consequent worsened psychiatric morbidity in the general population (McKee and Stuckler, 2020).

The psychiatric harms of COVID-19 among healthcare workers, such as post-traumatic stress disorder, may be difficult to manage if there will be repeated infection spikes and repeated periods of morbidity and mortality in the general population. Such repeated traumas will make it difficult, for healthcare workers, to manage and recover from past traumatic experiences during the pandemic.

In short, at the peak of the COVID-19 pandemic rise in the last few

<https://doi.org/10.1016/j.jad.2020.07.134>

Received 29 May 2020; Received in revised form 28 July 2020; Accepted 31 July 2020

Available online 06 August 2020

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

months, the medical need was for emergency and intensive care unit services, especially for respiratory care. In the coming months at least, and hopefully not years, the medical need will be for psychiatric services, not only for those who suffered from COVID-19 infection, and not only for those who are at risk for infection, but also for those who have cared for the sick and dying, and those who will be called on to continually provide such care and consolation.

In conclusion, high-quality original data on the mental health and psychological effects of the COVID-19 pandemic is urgently needed (Serafini et al., 2020). The focus of medical attention in the COVID-19 pandemic should expand from the essential search for a vaccine and testing of anti-viral treatments to the equally essential need to help patients, the general population, and healthcare workers to take care of their own psychological well-being.

## Fundings

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

## CRedit authorship contribution statement

**A. Amerio:** Formal analysis, Writing - original draft. **A. Odone:** Formal analysis, Writing - original draft. **A. Aguglia:** Writing - original draft. **V. Gianfredi:** Formal analysis. **L. Bellini:** Formal analysis. **D. Bucci:** Formal analysis. **G. Gaetti:** Formal analysis. **M. Capraro:** Formal analysis. **S. Salvati:** Formal analysis. **G. Serafini:** Writing - review & editing. **C. Signorelli:** Writing - review & editing. **M. Amore:** Writing - review & editing. **S.N. Ghaemi:** Writing - review & editing.

## Declaration of Competing Interest

Dr. Amerio, Prof. Odone, Dr. Aguglia, Dr. Gianfredi, Dr. Bellini, Dr. Bucci, Dr. Gaetti, Dr. Capraro, Dr. Salvati, Prof. Serafini, Prof. Signorelli, and Prof. Amore report no conflicts of interest. Prof. Ghaemi is employed by Novartis Institutes for Biomedical Research, and holds equity in Novartis.

## Acknowledgments

This work was developed within the framework of the DINOGMI Department of Excellence of MIUR 2018–2022 (Law 232/2016).

## References

- Holmes, E.A., O'Connor, R.C., Perry, V.H., Tracey, I., Wessely, S., Arseneault, L., Ballard, C., Christensen, E., Cohen Silver, R., Everall, I., Ford, T., John, A., Kabir, T., King, K., Madan, I., Michie, S., Przybylski, A.K., Shafraan, R., Sweeney, A., Worthman, C.M., Yardley, L., Cowan, K., Cope, C., Hotopf, M., Bullmore, E., 2020. Multidisciplinary research priorities for the COVID-19 pandemic: a call for action for mental health science. *Lancet Psychiatry* 7 (6), 547–560.
- Kawohl, W., Nordt, C., 2020. COVID-19, unemployment, and suicide. *Lancet Psychiatry* 7 (5), 389–390.
- Khamis, R., 2020. Coronavirus in context: scite.ai tracks positive and negative citations for COVID-19 literature. *Nature* [Epub ahead of print].
- Mckee, M., Stuckler, D., 2020. If the world fails to protect the economy, COVID-19 will damage health not just now but also in the future. *Nat. Med.* 26 (5), 640–642.
- Odone, A., Lugo, A., Amerio, A., Borroni, E., Bosetti, C., Carreras, G., Cavalieri D'Oro, L., Colombo, P., Fanucchi, T., Ghislandi, S., Gorini, G., Iacoviello, L., Pacifici, R., Serafini, G., Signorelli, C., Stival, C., Stuckler, D., Tersalvi, C.A., Gallus, S., 2020. COVID-19 lockdown impact on lifestyle habits of Italian adults. *Acta Biomed.* 91 (9–S), 87–89.
- Serafini, G., Parmigiani, B., Amerio, A., Aguglia, A., Sher, L., Amore, M., 2020. The psychological impact of COVID-19 on the mental health in the general population. *QJM* [Epub ahead of print].
- The Economist. High-speed science. Available: <https://www.economist.com/leaders/2020/05/09/speeding-up-science-during-the-pandemic> [Accessed: 17.05.2020].
- A. Amerio<sup>a,b,c,\*</sup>, A. Odone<sup>d,e</sup>, A. Aguglia<sup>a,b</sup>, V. Gianfredi<sup>d</sup>, L. Bellini<sup>d</sup>, D. Bucci<sup>d</sup>, G. Gaetti<sup>d</sup>, M. Capraro<sup>d</sup>, S. Salvati<sup>d</sup>, G. Serafini<sup>a,b</sup>, C. Signorelli<sup>d</sup>, M. Amore<sup>a,b</sup>, S.N. Ghaemi<sup>c,f</sup>
- <sup>a</sup> Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGMI), Section of Psychiatry, University of Genoa, RCCS San Martino, L.go R. Benzi 10, 16132 Genoa, Italy
- <sup>b</sup> IRCCS Ospedale Policlinico San Martino, Genoa, Italy
- <sup>c</sup> Department of Psychiatry, Tufts University, Boston, MA, USA
- <sup>d</sup> School of Medicine, Vita-Salute San Raffaele University, Milan, Italy
- <sup>e</sup> Clinical Epidemiology and HTA, IRCCS San Raffaele Scientific Institute, Milan, Italy
- <sup>f</sup> Department of Psychiatry, Harvard Medical School, Boston, MA, USA
- E-mail addresses: [andrea.amerio@unige.it](mailto:andrea.amerio@unige.it) (A. Amerio), [odone.anna@hsr.it](mailto:odone.anna@hsr.it) (A. Odone), [andrea.aguglia@unige.it](mailto:andrea.aguglia@unige.it) (A. Aguglia), [gianfredi.vincenza@hsr.it](mailto:gianfredi.vincenza@hsr.it) (V. Gianfredi), [bellini.lorenzo@hsr.it](mailto:bellini.lorenzo@hsr.it) (L. Bellini), [bucci.daria@hsr.it](mailto:bucci.daria@hsr.it) (D. Bucci), [gaetti.giovanni@hsr.it](mailto:gaetti.giovanni@hsr.it) (G. Gaetti), [capraro.michele@hsr.it](mailto:capraro.michele@hsr.it) (M. Capraro), [salvati.stefano@hsr.it](mailto:salvati.stefano@hsr.it) (S. Salvati), [gianluca.serafini@unige.it](mailto:gianluca.serafini@unige.it) (G. Serafini), [carlo.signorelli@hsr.it](mailto:carlo.signorelli@hsr.it) (C. Signorelli), [mario.amore@unige.it](mailto:mario.amore@unige.it) (M. Amore), [nassir.ghaemi@tufts.edu](mailto:nassir.ghaemi@tufts.edu) (S.N. Ghaemi).

\* Corresponding author at: Department of Neuroscience, Rehabilitation, Ophthalmology, Genetics, Maternal and Child Health (DINOGMI), Section of Psychiatry, University of Genoa, RCCS San Martino, L.go R. Benzi 10, 16132 Genoa, Italy.