

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.

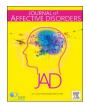
Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted 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.

FISEVIER

Contents lists available at ScienceDirect

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad



Correspondence

Expected effects of COVID-19 outbreak on depression incidence in Italy



Although numbers are high, it is reasonable to expect that the immediate increase in anxiety and depression observed in the short-term

as a result of fear of COVID-19 and quarantine would resolve in the

majority of subjects after adjustment takes place. However, other fac-

tors will most likely lead to more sustained and likely severe effects on

people who passed away. In Italy at the end of June more than 34.000

deaths due to COVID-19 have been counted. A number around 100.000

close relatives mourning the grief may therefore be estimated. Beyond

the normal sorrow and pain for the death of a close relative, the 7% of

them will experience persistent and complicated grief (Shear et al.,

2013), which will last more than twelve months and will present with a

clinical picture akin to a major depression episode or post-traumatic

stress disorder. Furthermore, the need to prevent illness transmission

has denied the relatives the possibility to say goodbye to their loved

ones. This poignant experience might provoke a sense of guilt towards

The second phase is characterized by grief and bereavement for the

To the Editor

The COVID-19 outbreak is increasing the incidence of anxiety and depressive symptoms in the general population. Since its start in Europe in late February, we are stepping through different phases, some of which will arise in the next several months. In the early phase we had to tackle the fear that the disease would spread, infecting and eventually causing the death of our beloved ones and ourselves. Containment measures were rapidly put in place, with quarantine and lockdown being prompted in many countries. The fear of COVID-19, and the change in habits brought about by these measures had a serious impact on the mental health of many people, increasing anxiety and depressive symptoms, as several studies found out and highlighted. Actually, many people faced COVID-19 in their families, witnessing the disease in spouses, parents, and other close relatives. Many of them left homes to reach hospitals, and, sadly, many did not come back home. Consequently, many people struggled with grief and bereavement of close relatives. Thirdly, the closure of factories, offices, shops, restaurants and bars, leisure and sport facilities, left many people at home without a job. The net result is a worldwide economic crisis that is expected to get worse in the following months, leading to a painful reduction of gross domestic product and unemployment. All these factors, both independently and pooled together, will inevitably bring to an increase in stress-related and depressive disorders, which will vary according to many variables and has yet to be quantified.

At present, the short-term impact on mental health and well-being of COVID-19 outbreak has been studied in population surveys worldwide.

The Chinese population was first investigated. In a first study conducted on around 7000 subjects, generalized anxiety and depression were reported in 35% and 20% of the interviewed population (Huang and Zhao, 2020). In a second survey on 1593 subjects dwelling in two separate provinces, the authors retrieved a double incidence in anxiety and depressive symptoms in those subject to quarantine measures (Lei et al., 2020). These findings were confirmed in a recent report in which people subject to quarantine had a three to six-fold risk of depression compared to those not quarantined (Tang et al., 2020).

In Europe, a UK study reported that 36% of respondents during social isolation had moderate-to-severe anxiety or depressive symptoms (Smith et al., 2020). Furthermore, a Danish study compared self-reported well-being in early April 2020 to the results of a 2016 survey, finding significantly more people with depressive symptoms in the most recent period (Sønderskov et al., 2020).

In Italy, similarly to what occurs elsewhere, a survey conducted on 2766 participants reported high anxiety symptoms in the 19% and high depressive symptoms in the 32% of interviewed subjects (Mazza et al., 2020). These numbers are strikingly higher compared to the 6% of Italians reporting depressive symptoms in a 2015–2018 survey (Gigantesco, 2018).

the dead, possibly increasing the risk of complicated grief.

Lastly, the effects of the financial crisis will likely lead to the most relevant and detrimental effects. In Italy current estimates forecast that COVID-19 will cause a loss of 10% of gross domestic product, which will translate into impoverishment and unemployment. These factors will surely increase the burden of depression. Data from the National Health Observatory of Italian Regions show that depression indeed affects the poor to a greater extent. In Italy, the 40% with an income less than 15.000 €/year will develop depression twice as much as those with

(ISTAT 2018). Depression risk is therefore triple in the unemployed. In Italy the unemployment rate is around 10% (ISTAT 2020), yet some estimates project it to 17% by mid 2020, reverting gradually to previous figures during 2021 (Saxena and Stehn, 2020). A 7% increase in unemployment rate would translate into 1.800.000 unemployed people three times at-risk for depression. The increased unemployment generated by the COVID-19 financial crisis might then turn into an increase of 130.000 depression cases in Italy.

an income above 20.000€/year (Osservatorio Nazionale sulla Salute nelle Regioni Italiane 2019). Moreover, the risk of depression is steeply

increased by unemployment: the 10,8% of 35-64 year-old unemployed

people report depressive symptoms versus the 3,5% of occupied peers

Healthcare policy makers should be aware that, being direct costs of depression (i.e. the costs of medical care from NHS and the private sector) around 2.600 ϵ /year in Italy, the described scenario could inflate the health costs around 340 million ϵ per year.

In conclusion, COVID-19 is taking and will be taking in the near future a heavy toll on mental health. Providing appropriate resources to face the short, medium and long-term effects of COVID-19 on mental health should be urgently implemented in the political agenda.

Author contributions

Prof. Mencacci and Dr. Salvi equally contributed in drafting the present communication.

Declaration of Competing Interest

The authors declare no conflict of interest for the present article.

Acknowledgements

None.

Role of funding

None.

References

- Gigantesco, A., 2018. La sorveglianza PASSI. I dati per l'Italia: depressione. https://www.
- Huang, Y., Zhao, N., 2020. Generalized anxiety disorder, depressive symptoms and sleep quality during COVID-19 outbreak in China: a web-based cross-sectional survey. Psychiatry Res 288, 112954. https://doi.org/10.1016/j.psychres.2020.112954. ISTAT, 2018. La salute mentale nelle varie fasi della vita. https://www.istat.it/it/
- ISTAT, 2020. Tasso di disoccupazione in Italia. http://dati.istat.it/Index.aspx? DataSetCode = DCCV_TAXDISOCCU1.

- Lei, L., Huang, X., Zhang, S., Yang, J., Yang, L., Xu, M., 2020. Comparison of Prevalence and Associated Factors of Anxiety and Depression Among People Affected by versus People Unaffected by Quarantine During the COVID-19 Epidemic in Southwestern China. Med. Sci. Monit. 26, e924609. https://doi.org/10.12659/MSM.924609.
- Mazza, C., Ricci, E., Biondi, S., Colasanti, M., Ferracuti, S., Napoli, C., Roma, P., 2020. A Nationwide Survey of Psychological Distress among Italian People during the COVID-19 Pandemic: immediate Psychological Responses and Associated Factors. Int. J. Environ. Res. Public Health. 17 (9), 3165. https://doi.org/10.3390/ijerph17093165.
- Osservatorio Nazionale sulla Salute nelle Regioni Italiane, 2019. https://www.osservatoriosullasalute.it/wp-content/uploads/2019/10/Tiziana-CS-Focus-Disagiomentale-Osservasalute_ott-2019-DEF.pdf.
- Saxena, K., Stehn, J., 2020. A North-South Divide in Job Losses. European Economics Analyst, Goldman Sachs.
- Shear, M.K., Ghesquiere, A., Glickman, K., 2013. Bereavement and complicated grief. Curr. Psychiatry Rep. 15 (11), 406. https://doi.org/10.1007/s11920-013-0406-z.
- Smith, L., Jacob, L., Yakkundi, A., McDermott, D., Armstrong, N.C., Barnett, Y., López-Sánchez, G.F., Martin, S., Butler, L., Tully, M.A., 2020. Correlates of symptoms of anxiety and depression and mental wellbeing associated with COVID-19: a cross-sectional study of UK-based respondents. Psychiatry Res 291, 113138. https://doi.org/10.1016/j.psychres.2020.113138.
- Sønderskov, K.M., Dinesen, P.T., Santini, Z.I., Østergaard, S.D., 2020. The depressive state of Denmark during the COVID-19 pandemic. Acta Neuropsychiatr. 1–3. https://doi. org/10.1017/neu.2020.15.
- Tang, F., Liang, J., Zhang, H., Kelifa, M.M., He, Q., Wang, P., 2020. COVID-19 related depression and anxiety among quarantined respondents. Psychol. Health 1–15. https://doi.org/10.1080/08870446.2020.1782410.

Claudio Mencacci^{a,b}, Virginio Salvi^{b,*}

^a President, Italian Society of Neuropsychopharmacology

^b ASST Fatebenefratelli Sacco, Milan, Italy
E-mail address: virginiosalvi@gmail.com (V. Salvi).

^{*} Corresponding author: Virginio Salvi, MD, PhD, Department of Neuroscience, ASST Fatebenefratelli Sacco, P.zza Principessa Clotilde 3, 20121 Milano, Italy. Tel. + 390263634500.