



EBC Statement: The Impact of COVID-19 on Brain Health

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As stressed in many scientific articles and in most of the health authority reports, the impact of Covid-19 on brain health during the last months has been a major and dramatic one with severe mental and neurological consequences.

Details of this impact are summarized in the following paragraphs.

1. The stress associated with the uncertainty of the Covid-19 situation and social isolation that resulted from the restrictions have led to an exacerbation of symptoms for people with a mental health condition. The severity of anxious and depressive disorders have accordingly considerably increased as reported in many publications. It is generally admitted that the prevalence of depression and anxiety has grown by a twofold range or more during this period (1, 2, 3, 4).

2. During lockdown periods a significant number of patients stopped seeing their doctors by fear of being contaminated in waiting rooms or clinics, and sometimes even did not manage to have their prescriptions renewed. It must be kept in mind as well that many people (e.g. aged people) have not had access to e-consultation or e-therapy. Consequences have been hugely detrimental for patients suffering from neurological or mental conditions (4, 8, 9, 11, 12, 13).

3. Recent findings show that more than 2/3 of patients with COVID-19 had neurological manifestations (10, 14, 15). They can also develop a mental health condition within 90 days.

Moreover, according to current estimates, 10% of COVID-19 patients develop a condition known as 'long-haul COVID'. The condition has a wide range of neurological symptoms, including headache, pain, brain fog and memory issues, and has also been associated with increased levels of depression and anxiety symptoms (5).

4. More generally, there is evidence that the SARS-Cov-2 virus has a neurotropic impact on the brain. It is likely that the inflammatory process linked to SARS-Cov2 infection is the major factor playing in the neurotropic damage of the disease ((5, 6). A recent publication even shows evidence of a direct toxicity of the virus on neurons themselves (20).

5. Long-term neurological consequences need to be monitored since the virus might worsen the course of auto-immune neurological disorders and neurodegenerative disorders like Parkinson's disease and Alzheimer's disease (16).

6. The pandemic has resulted in a dramatic increase of the number of consultations for acute decompensation in psychiatric or neurological wards during post- lockdown periods (7). Currently psychiatric staffs are still overwhelmed with appointments requests due to post-stress conditions or acute processes linked to the lack of control of the primary condition. Health care workers are significantly more exposed to suffer from burn-out or PTSD (17, 18, 19). The societal and economic costs of such an increase are at their highest level.

7. Last but not least, from a strict research perspective, laboratories across Europe were stopped at the beginning of the year and are still struggling to get activities back up during the second wave. This is impacting scientists, clinical researchers and patients. These restrictive measures will potentially be long-term and have major consequences on Europe's competitiveness. That, combined with a compromised new framework programme will with no doubt considerably slow down the generation of new knowledge.

For all these reasons Covid-19 has to be considered as a brain disease, with increased mental and neurological disorders, and this perspective has to be taken into consideration when choosing the most appropriate and effective way to support research linked to the epidemic.

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