

Psychological and psychiatric consequences of the COVID-19 pandemic

Commentary on [Wiebers & Feigin](#) on *Covid Crisis*

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Abstract: Although far from reaching a clear conclusion, some evidence increasingly highlights the possible connections among climate change, environmental pollution and the current COVID-19 pandemic, as well as their intertwined detrimental effects on both physical and mental health. Such a catastrophic event calls for a novel awareness of the interdependence of all biotic and nonbiotic factors in our environment and planet.

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Climate change, air pollution, and virus-triggered outbreaks such as the current COVID-19 pandemic are all naturally occurring, catastrophic events involving the whole world. They have different timescales, but similar economic and health consequences for individuals and society (Steffen et al., 2015). All these variables appear to be intertwined and increase substantially the risk of physical and mental disorders. It has long been known that meteorological changes and air pollution can induce psychopathological phenomena, such as meteoropathy, a term currently used to label any pathological dimension related to weather conditions (Balsamo et al., 1992). It is difficult to establish the specific cause-effect relationships of these phenomena with mental health as they result from the interactions of two complex systems: the environment, with everything populating it, and human beings (Cianconi et al, 2020). The psychological and psychiatric consequences of the interactions between climate change, pollution and the COVID-19 pandemic may span from mild negative emotional responses to full-blown psychiatric conditions, specifically, anxiety and depression, stress- and trauma-related disorders, and substance abuse (Marazziti et al., 2020a).

The COVID-19 pandemic uncovers all the fragility and weakness of our ecosystem and our inability to protect ourselves from climate change, bio-pollutants and their consequences. It also highlights that “every catastrophe has its own origin” (Nyerat, 2008). We must reflect on this to prevent similar extreme phenomena with detrimental effects on our brain functioning and mental health (Marazziti, 2020).

Public behavioral change is also needed in response to climate change and pollution through reliable and correct information and effective “green” policy (Lennon 2015). As Wiebers & Feigin (2020) state in their target article, “Rather than simply attempting to react to crises like COVID-19 after death and destruction are already upon us, we need to address the fundamental underlying causes and act now to prevent the numerous disasters that are literally waiting to happen.”

The psychological and psychiatric consequences of the COVID-19 pandemic are stark indicators of our misconceptions and indifference about the links between our behaviors, our health, and the health of our planet; otherwise the sudden emergence of stochastic effects may lead to irreversible disasters. Neuroscience is increasingly emphasizing the reciprocal influences between the environment, the brain and the whole body; we can now talk of a “diffuse mind” (Marazziti et al., 2020b). We have to move toward a deeper understanding of these relationships, not only for our survival, but also for the maintenance of that balance amongst humans, nonhuman animals and the environment that is at the basis of all life on earth. The promotion of ecological awareness worldwide will require appropriate countermeasures to at least reduce, if not to revert, climate change, air pollution, and the intensive and destructive human activities that increase the eventual spillover of viruses, such as the SARS-COV2, from animals to humans.

Theodosius Dobzhansky, the distinguished evolutionary biologist, writes that it was connectedness rather than physical strength that made possible the evolutionary success of mammals: “the fittest may also be the gentlest, as survival often requires mutual help and cooperation” (Dobzhansky, 1962). The COVID-19 pandemic should remind us that as human beings we are embedded in, nurtured by, and part of nature, as defined the ancient Greek notion of nature, φύσις (*physis*). This is what must be carefully preserved (Treves et al. 2019). We must exercise our empathy, altruism and innate moral skills, essential for our survival and development (Marazziti 2020; Porges, 2020), not only toward other members of our own species, but toward all living and nonliving elements of our planet.

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