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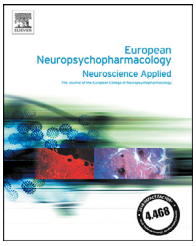
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CONSENSUS STATEMENT

Stress resilience during the coronavirus pandemic



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Abstract
The epidemic of the 2019 novel coronavirus SARS-CoV-2, causing the coronavirus disease 2019 (COVID-19) is a global public health emergency with multifaceted severe consequences for people's lives and their mental health. In this article, as members of the European College of Neuropsychopharmacology (ECNP) Resilience, we will discuss the urgent need for a focus on resilience during the current coronavirus pandemic. Resilience is pivotal to cope with stress and vital to stay in balance. We will discuss the importance of resilience at the individual and societal level, but also the implication for patients with a psychiatric condition and health care workers. We not only advocate for an increased focus on mental health during the coronavirus pandemic but also highlight the urgent need of augmenting our focus on resilience and on strategies to enhance it.
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The epidemic of the 2019 novel coronavirus SARS-CoV-2, causing the coronavirus disease 2019 (COVID-19), first expanded within the Wuhan region in China and quickly spread to Europe and to the rest of the world (Zhou et al., 2020). The outbreak of COVID-19 is a global public health emergency with multifaceted severe consequences for people's lives and their mental health. In this article, as members of the European College of Neuropsychopharmacology (ECNP) Resilience, we will discuss the urgent need for a focus on resilience during the current coronavirus pandemic. Resilience is pivotal to cope with stress and vital to stay in balance. We will discuss the importance of resilience at the individual and societal level, but also the implication for patients with a psychiatric condition and health care workers.

1. Resilience in the general population

News about the coronavirus pandemic is alarming, with an overwhelming number of new cases and fatalities every day. Governments mandated hard measures of social distancing, quarantine and lockdowns, and businesses shut down, highlight the impact and inevitable long-term negative economic and health effects. In addition, although precise estimates of the financial damage determined by COVID-19 in Europe are yet inaccurate, preliminary analyses show that the drop in the continental GDP will be substantial (Fernandes, 2020). Undoubtedly, these are stressful times, particularly since the stressor is new, the absence of warning precluded preparation and pre-adaptation, no antidotes or vaccinations being currently available, and unknown long-term health and society-related implications of the virus. It is unknown how the pandemic will affect our future lifestyle and when and if we can resume our regular lives. This pervasive uncertainty makes it difficult to plan for the future and thus generates additional psychosocial stress.

The horizons of our daily lives, our ability to travel and interact freely have suddenly been limited. Anxiety and distress are normal responses to such extreme circumstances. Our stress systems have evolved to respond in highly adaptive ways, thereby enabling humans to deal with these challenges (de Kloet et al., 2005). While many of us are unsettled and concerned by the coronavirus pandemic, we all strive to adapt to this new reality. Nevertheless, not everybody can successfully deal with stress and adapt easily to new circumstances. The current pandemic will affect some more than others. Factors influencing this include living conditions, poverty, poor access to healthcare, illiteracy, uncertainty about the future (i.e. risk of unemployment), genetic background, previous life experiences and social support (Southwick and Charney, 2012). Thus, the impact of the current pandemic on incidence and severity of stress-related disorders will be highly heterogeneous. Scientists and clinicians working in the field of stress resilience have the opportunity to develop a research agenda for examining stress resilience in the general population and in patient cohorts across cultures during this modern global crisis. In addition, they also have the obligation to share what is already known about stress resilience and what evidence-based recommendations for boosting mental resilience can help to successfully deal with the coronavirus pandemic (Holmes et al., 2020).

2. Stress as a normal response to the coronavirus pandemic

It should be emphasized that distress and anxiety are normal reactions to a situation as threatening and unpredictable as the coronavirus pandemic. Possible stress-related reactions in response to the coronavirus pandemic may include changes in concentration, irritability, anxiety, insomnia, reduced productivity, and interpersonal conflicts. This may be

true for the general population, but particularly apply to more directly affected groups (e.g. health care personnel). In addition to the threat by the virus *per se*, there is no doubt that quarantine measures, which are in place in many countries, also have negative psychological effects, thereby further increasing the aforementioned stress-related symptoms. The severity of these symptoms will at least partially depend on quarantine duration and extent, feelings of loneliness, the fear of being infected, (in)adequate information, and stigma (Brooks et al., 2020).

To help adaptation to mental health effects related to the coronavirus pandemic, several pieces of advice are available from the rich resilience literature. Promoting social connectedness is of the utmost importance as loneliness and social isolation are what make this crisis different compared to several others. Moreover, planning routine day-to-day activities and promoting self-care (Kalisch et al., 2017). Also, increased attention should also be paid to the potential role of exercise and nutrition in promoting resilience (Foster et al., 2017). In addition to maintaining healthy behaviors, the WHO also advise taking regular media breaks (World Health Organization (WHO), 2020). One of the most reproducible findings in stress and resilience research is that the higher the controllability of a stress situation is, the better individuals cope with this situation. In the current crisis, it is therefore of absolute essence to help people to feel in control and to be able to exert control of the situation as much as possible. There are many individual and evidence-based measures one can take to reduce the risk of infection and minimize the spread of the disease, providing one example of how people engage in regaining control of their situation. Although these general strategies will work for a large part of the population, some individuals are more susceptible and exposed to stress than others. For example, more vulnerable groups include people with a psychiatric disorder, healthcare workers, and people with low socioeconomic status.

3. Resilience in people with a psychiatric condition

The stress emerging from the social disruptions and health-related threats in the coronavirus pandemic may be particularly challenging for individuals with psychiatric disorders. The general uncertainty, the individual health threat, as well as the quarantine measures may exacerbate pre-existing conditions such as depression, anxiety, and post-traumatic stress disorder. Moreover, the risk of disease transmission may intensify contamination fears in patients with obsessive-compulsive disorder and hypochondria, or individuals with a history of paranoid ideation. Even though quarantine measures protect against spreading the coronavirus, they entail isolation and loneliness which inflict major psychosocial stress and can possibly trigger or exacerbate mental illness (Vahia et al., 2020). In this regard, special attention should be paid to older people since they are the most vulnerable and more stringently kept isolated compared to the rest of the community. Feelings of loneliness in the elderly population may be worsened by the digital divide, i.e. the gap between generations who are familiar with information technology and those who are not. Inability to interact through smartphones and computers reduces the maintaining of social connection.

Furthermore, usual access to standard mental health care has been significantly disrupted in most countries, potentially decreasing adherence to pharmacological and psychological treatments. Even though long-term mental health consequences may emerge from this pandemic, little is known about whether the current situation will have a negative effect on people with an existing psychiatric disorder. As psychiatrists, in contact with outpatients with depression, anxiety disorders, and obsessive compulsive disorders, we have observed both short-term deterioration and improvement at the symptomatic level. Even though the reasons for this heterogeneity of short-term outcomes are unknown, patients may feel increased stigmatization with social avoidance or rejection as a result, but, on the other hand, also experience increased social cohesion and support from their friends and relatives.

For patients with mental disorders and their care providers, several sources of help for coping with the lifestyle restrictions and other effects of the coronavirus crisis are available, including those from the Royal College of Psychiatrists, the European Psychiatric Association, the American Psychiatric Association, and the Inter-agency Standing Committee document from the WHO).* For example, mental healthcare needs to be organized differently in response to the restrictions on travel and face-to-face contact imposed in response to the coronavirus threat. Multidisciplinary mental health teams should organize care and offer psychological support with flexibility and creativity, wherever possible. A telemedicine approach and various evidence-based internet-based interventions are available to allow effective provision at a distance.

4. Resilience in healthcare workers working in the pandemic

It should be recognized that many healthcare workers are on the front lines of the coronavirus outbreak. As recently reported, we should not lose sight of our colleagues working in emergency or intensive care settings who have to deal with a heavier and more stressful workload than usual (Chen et al., 2020). These colleagues are exposed to separation from family, unusual situations, increased exposure to the coronavirus, contagion fears, and feelings of failure in the face of poor prognoses and insufficient technical means to assist patients. For healthcare workers, it will be challenging to remain mentally healthy in these rapidly evolving situations, and reduce the risk of depression, anxiety, or burnout. Moreover, they are particularly at increased risk for 'moral injury' when dealing with the ethical challenges of the coronavirus pandemic, such as working in conditions with insufficient resources, situations of triage, inadequate palliative care and not being able to support relatives of terminal patients adequately (Greenberg et al., 2020). Several resources are available for healthcare workers and several strategies recommend, which include team support, stress monitoring, taking care of oneself, taking breaks regularly, and connecting with others. Data from China have shown that social and psychological interventions could

significantly enhance healthcare worker well-being during the COVID-19 outbreak (Chen et al., 2020).

5. The need for resilience at the societal level

It is important to realize that resilience does not only exist at the individual level, but also at the community level. In any societal ecosystem, there is a certain level of shared resilience needed to be able to overcome the stress of the coronavirus pandemic and recover to normal levels of functioning. This shared resilience is vital to face the current challenges together, not only at the national level, but also at the European and global level where all countries should play a crucial supporting role by coordinating cross-border collaborations. In contrast, nationalism and unilateralism will likely increase the vulnerability of a society to the current coronavirus and its stress-related impact.

Considering that there will probably be a recurrence of the coronavirus in most countries, an important question is what the impact will be of the eventual reoccurrence of the pandemic on mental health of people? Moreover, can the first outbreak inform us to be better equipped to handle the response to a second or even more subsequent outbreaks? As such, it is crucial to be aware of stress management at the societal level. Given that parts of the population with lower socio-economic status are likely more prone to stress-related negative outcomes, they may benefit from specific short-term and long-term resilience enhancing interventions at a societal level including guaranteeing access to online education and information, providing adequate access to economic and health infrastructure, stimulating communities to organize themselves, and taking initiatives locally (Lazzarino et al., 2014).

As a community, we can draw strength from the fact that we are all in the same general predicament and can take action to overcome this situation, thereby giving us a certain level of control. At the same time, governments, politicians, and decision makers should emphasize the fact that we are not exposed to an uncontrollable threat – neither with respect to health, nor from an economic point of view. A good example is the in comparison very successful approach taken by the South Korean government where the negative experiences from previous pandemics guided fast and effective actions, leading to a more effective control of the current pandemic. Governments should provide quick and accurate information that can be easily and reliably interpreted by all the individuals of the community, not only by experts. The communication process is thus critical to promote understanding of the potential risks and of the strategies to avoid them; this will increase perceived control and likely reduce the psychosocial stress imposed by the coronavirus outbreak. There are also immediate, direct, and powerful measures that can be taken to counteract the negative effects of the coronavirus pandemic for mental health. Ensuring clear and consistent communication from government bodies, scientific organizations and mental health providers, and providing funds for those individuals in the general population without work could all help. These measures are essential to actively deal with the crisis, increasing individual and community resilience and minimizing the negative impact on our society.

6. Resilience in times of the coronavirus pandemic: a way forward

Many questions remain about how resilient we can be in the face of the coronavirus pandemic. Even though there is no final answer, we anticipate that science will provide guidance in a time where valid scientific information is sorely needed (Holmes et al., 2020). Several initiatives have been initiated to gain more insight into the short and long-term psychosocial impact of the COVID-19 pandemic in the general population, patients with psychopathology and healthcare workers, including detailed questionnaires across Europe. We encourage consortia worldwide to combine their resources and strategic approach to obtain and share valid and meaningful data on high-risk factors and resilience mechanisms relating to mental health in this crisis. This will help guide our approaches to prevention as well as treatment for various groups. It will also be important to obtain data on the psychosocial impact in acute and recovered COVID-19 patients and their relatives on how to best mitigate the negative effects. Such studies will allow the identification of factors associated with resilience, according to living context, coping strategies, personal history and, if possible, biological features such as (epi)genetic background. This will provide a platform from which to develop community and personalized interventions to improve resilience and reduce the risk of psychopathology in the current and similar crises in the future stress challenges.

In conclusion, we not only advocate for an increased focus on mental health during the coronavirus pandemic, but we also highlight the urgent need of augmenting our focus on resilience and on strategies to enhance it as resilience is pivotal to cope with the stress imposed by the virus outbreak at the individual and societal level.

*https://www.psychiatry.org/psychiatrists/covid-19-coronavirus
https://www.europsy.net/covid-19-resource-centre/
https://www.rcpsych.ac.uk/about-us/responding-to-covid-19
https://www.who.int/docs/default-source/coronaviruse/mental-health-considerations.pdf

CRediT authorship contribution statement

Christiaan H. Vinkers: Conceptualization, Writing - original draft, Writing - review & editing. **Therese van Amelsvoort:** Conceptualization, Writing - review & editing. **Jonathan I. Bisson:** Conceptualization, Writing - review & editing. **Igor Branchi:** Conceptualization, Writing - review & editing. **John F. Cryan:** Conceptualization, Writing - review & editing. **Katharina Domschke:** Conceptualization, Writing - review & editing. **Oliver D. Howes:** Conceptualization, Writing - review & editing. **Mirko Manchia:** Conceptualization, Writing - review & editing. **Luisa Pinto:** Con-

ceptualization, Writing - review & editing. **Dominique de Quervain:** Conceptualization, Writing - review & editing. **Mathias V. Schmidt:** Conceptualization, Writing - review & editing. **Nic J.A. van der Wee:** Conceptualization, Writing - review & editing.

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Contributions

CV wrote the first draft. All authors provided critical input and revisions.

Conflict of interest

All authors declare no conflict of interest.

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