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## Correspondence


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**Author for correspondence:**

Frédéric Dutheil,  
E-mail: [fdutheil@chu-clermontferrand.fr](mailto:fdutheil@chu-clermontferrand.fr)

## PTSD as the second tsunami of the SARS-Cov-2 pandemic

Frédéric Dutheil<sup>1</sup>, Laurie Mondillon<sup>2</sup> and Valentin Navel<sup>3</sup> 

<sup>1</sup>Preventive and Occupational Medicine, Université Clermont Auvergne, CNRS, LaPSCo, Physiological and Psychosocial Stress, CHU Clermont-Ferrand, University Hospital of Clermont-Ferrand, Witty Fit, F-63000 Clermont-Ferrand, France; <sup>2</sup>Physiological and Psychosocial Stress, Université Clermont Auvergne, CNRS, LaPSCo, F-63000 Clermont-Ferrand, France and <sup>3</sup>Ophthalmology, Université Clermont Auvergne, CNRS, INSERM, GReD, Translational Approach to Epithelial Injury and Repair, CHU Clermont-Ferrand, University Hospital of Clermont-Ferrand, F-63000 Clermont-Ferrand, France

**Comment on:** ‘Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China.’

**Abstract**

Since the first cases, the coronavirus disease (COVID-19) rapidly spread around the world, with hundred–thousand cases and thousands of deaths. Post-traumatic stress disorder (PTSD) is a common consequence of major disasters. Exceptional epidemic situations also promoted PTSD in the past. Considering that humanity is undergoing the most severe pandemic since Spanish Influenza, the actual pandemic of COVID-19 is very likely to promote PTSD. Moreover, COVID-19 was renamed severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2). With a poor understanding of viruses and spreading mechanisms, the evocation of SARS is generating a great anxiety contributing to promote PTSD. Quarantine of infected patients evolved to quarantine of ‘infected’ towns or popular districts, and then of entire countries. In the families of cases, the brutal death of family members involved a spread of fear and a loss of certainty, promoting PTSD. In the context of disaster medicine with a lack of human and technical resources, healthcare workers could also develop acute stress disorders, potentially degenerating into chronic PTSD. Globally, WHO estimates 30–50% of the population affected by a disaster suffered from diverse psychological distress. PTSD individuals are more at-risk of suicidal ideation, suicide attempt, and deaths by suicide – considering that healthcare workers are already at-risk occupations. We draw attention towards PTSD as a secondary effect of the SARS-Cov-2 pandemic, both for general population, patients, and healthcare workers. Healthcare policies need to take into account preventive strategy of PTSD, and the related risk of suicide, in forthcoming months.

Since 8 December 2019 and the onset of the first cases of coronavirus disease (COVID-19) in China, the disease rapidly spread around the world, with hundred–thousand cases and thousands of deaths (Dutheil, Navel, & Clinchamps, 2020). Post-traumatic stress disorder (PTSD) is a severe mental health condition caused by a terrifying event outside the normal range of usual human experience (Belrose, Duffaud, Dutheil, Trichereau, & Trousselard, 2018). Exceptional epidemic situations also promoted PTSD in the past (Cénat et al., 2020; Xu et al., 2011). Considering that humanity is undergoing the most severe pandemic since Spanish Influenza (Morens, Daszak, & Taubenberger, 2020), the actual pandemic of COVID-19 is very likely to also promote PTSD. Moreover, COVID-19 was renamed severe acute respiratory syndrome coronavirus 2 (SARS-Cov-2) on the basis of a phylogenetic analysis of related coronaviruses (Jiang et al., 2020). The SARS in 2003 was very traumatizing for populations, with a poor understanding of viruses and spreading mechanisms (Koralek, Brown, & Runnerstrom, 2015; Wendlandt et al., 2018). The evocation of SARS is thus generating a great anxiety and biased responses to threat, which can both promote PTSD (Bo et al., 2020; Mekawi et al., 2020). Despite a vaccine that was quickly found for SARS 2003, the prevalence of long-term PTSD was high (one-fourth) among hospitalized SARS survivors (Mak, Chu, Pan, Yiu, & Chan, 2009). The handling of the SARS-Cov-2 crisis evolved through different stages, that can all participate to future PTSD. First, cases were quarantined in hospitals to avoid spreading. Patients were surrounded by healthcare workers in hazmat suits recalling some disaster movies about pandemics. As media lay a great emphasis on the SARS-Cov-2 mortality, the fear of dying adds to the terror initially felt. Then, worldwide authorities started by promulgating quarantine status of ‘infected’ towns or popular districts. Finally, because of the continuous worldwide spreading, authorities promulgated massive quarantine status of entire countries (Parmet & Sinha, 2020). In Europe, as in most developed countries, this black-out period has not happened since the dark moments of the World War II. In similar extreme

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distressing situations, some individuals discontinued social bearings and traditional values, to seek in wrongful acts, asocial behavior or civil disobedience, aggravating the sense of insecurity. Furthermore, in the families of cases, the brutal death of family members involved a spread of fear, panic, anger and a loss of certainty (Wang et al., 2020), which can contribute to PTSD. Moreover, healthcare workers could also develop acute stress disorders, potentially degenerating into chronic PTSD. In a context of disaster medicine with a lack of human and technical resources, emergency teams had to separate SARS-Cov-2 cases from others, and contagious from non-contagious (Wong et al., 2020). In routine clinical practice, life-and-death emergencies are already a major stressor for medical doctors (Dutheil et al., 2012, 2013). In the context of the SARS-Cov-2 pandemic, choosing which patients may benefit from assisted ventilation – and thus live or die – is an additional major factor of stress. In countries where the death is a social non-common fact, filtering the patients is a shocking and violent picture for the entire society. Globally, WHO estimates 30–50% of the population affected by a disaster suffered from diverse psychological distress, experiencing injury or death of family members (Brooks, Amlôt, Rubin, & Greenberg, 2020). PTSD symptoms involve chronic severe anxiety with re-experiencing the traumatic event, flashbacks, nightmares, increased arousal, and reduced social life. PTSD individuals are more at-risk of suicidal ideation, suicide attempt, and deaths by suicide, in huge proportions (2–5 times) (Thibodeau, Welch, Sareen, & Asmundson, 2013) – considering that healthcare workers are already at-risk occupations (Dutheil et al., 2019). This is particularly preoccupying considering that people suffering from PTSD are prone to not seek care, because of barriers such as lack of information and cost of mental health care, being afraid of stigmatization, or beliefs that symptoms may decrease with time (Fuhr et al., 2019). We draw attention toward PTSD as a secondary effect of the SARS-Cov-2 pandemic, both for the general population, patients, and healthcare workers. Healthcare policies need to take into account preventive strategy of PTSD, and the related risk of suicide, in forthcoming months.

**Conflict of interest.** The authors of this work declare no conflict of interest.

## References

- Belrose, C., Duffaud, A. M., Dutheil, F., Trichereau, J., & Trousselard, M. (2018). Challenges associated with the civilian reintegration of soldiers with chronic PTSD: A new approach integrating psychological resources and values in action reappropriation. *Frontiers in Psychiatry, 9*, 737.
- Bo, H.-X., Li, W., Yang, Y., Wang, Y., Zhang, Q., Cheung, T., ... Xiang, Y.-T. (2020). Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China. *Psychological Medicine, 1*–7.
- Brooks, S., Amlôt, R., Rubin, G. J., & Greenberg, N. (2020). Psychological resilience and post-traumatic growth in disaster-exposed organisations: Overview of the literature. *BMJ Military Health, 166*, 52–56.
- Cénat, J. M., Mukunzi, J. N., Noorishad, P.-G., Rousseau, C., Derivois, D., & Bukaka, J. (2020). A systematic review of mental health programs among populations affected by the Ebola virus disease. *Journal of Psychosomatic Research, 131*, 109966.
- Dutheil, F., Aubert, C., Pereira, B., Dambrun, M., Moustafa, F., Mermillod, M., ... Navel, V. (2019). Suicide among physicians and health-care workers: A systematic review and meta-analysis. *PLoS One, 14*, e0226361.
- Dutheil, F., Boudet, G., Perrier, C., Lac, G., Ouchchane, L., Chamoux, A., ... Schmidt, J. (2012). JOBSTRESS Study: Comparison of heart rate variability in emergency physicians working a 24-hour shift or a 14-hour night shift – a randomized trial. *International Journal of Cardiology, 158*, 322–325.
- Dutheil, F., Navel, V., & Clinchamps, M. (2020). The indirect benefit on respiratory health from the world's effort to reduce transmission of SARS - CoV-2. *Chest*.
- Dutheil, F., Trousselard, M., Perrier, C., Lac, G., Chamoux, A., Duclos, M., ... Schmidt, J. (2013). Urinary interleukin-8 is a biomarker of stress in emergency physicians, especially with advancing age – the JOBSTRESS\* randomized trial. *PLoS One, 8*, e71658.
- Fuhr, D. C., Acarturk, C., McGrath, M., Ilkkursun, Z., Sondorp, E., Sijbrandij, M., ... Roberts, B. (2019). Treatment gap and mental health service use among Syrian refugees in Sultanbeyli, Istanbul: A cross-sectional survey. *Epidemiology and Psychiatric Sciences, 29*, e70.
- Jiang, S., Shi, Z., Shu, Y., Song, J., Gao, G. F., Tan, W., & Guo, D. (2020). A distinct name is needed for the new coronavirus. *The Lancet, 395*, 949.
- Koralek, T., Brown, B., & Runnerstrom, M. G. (2015). Assessing the level of knowledge, attitudes, and beliefs about Ebola virus disease among college students. *American Journal of Infection Control, 43*, 1143–1145.
- Mak, I. W. C., Chu, C. M., Pan, P. C., Yiu, M. G. C., & Chan, V. L. (2009). Long-term psychiatric morbidities among SARS survivors. *General Hospital Psychiatry, 31*, 318–326.
- Mekawi, Y., Murphy, L., Munoz, A., Briscione, M., Tone, E. B., Norrholm, S. D., ... Powers, A. (2020). The role of negative affect in the association between attention bias to threat and posttraumatic stress: An eye-tracking study. *Psychiatry Research, 284*, 112674.
- Morens, D. M., Daszak, P., & Taubenberger, J. K. (2020). Escaping Pandora's box – another novel coronavirus. *New England Journal of Medicine, 382* (14), 1293–1295.
- Parmet, W. E., & Sinha, M. S. (2020). Covid-19 – the law and limits of quarantine. *New England Journal of Medicine, 382*(15), e28.
- Thibodeau, M. A., Welch, P. G., Sareen, J., & Asmundson, G. J. G. (2013). Anxiety disorders are independently associated with suicide ideation and attempts: Propensity score matching in two epidemiological samples: Anxiety disorders and suicide. *Depression and Anxiety, 30*, 947–954.
- Wang, C., Pan, R., Wan, X., Tan, Y., Xu, L., Ho, C. S., & Ho, R. C. (2020). Immediate psychological responses and associated factors during the initial stage of the 2019 coronavirus disease (COVID-19) epidemic among the general population in China. *International Journal of Environmental Research and Public Health, 17*, 1729.
- Wendlandt, R., Cowling, B. J., Chen, Y., Havers, F., Shifflett, P., Song, Y., ... Thompson, M. (2018). Knowledge, attitudes and practices related to the influenza virus and vaccine among older adults in Eastern China. *Vaccine, 36*, 2673–2682.
- Wong, J., Goh, Q. Y., Tan, Z., Lie, S. A., Tay, Y. C., Ng, S. Y., & Soh, C. R. (2020). Preparing for a COVID-19 pandemic: A review of operating room outbreak response measures in a large tertiary hospital in Singapore. *Canadian Journal of Anesthesia/Journal canadien d'anesthésie*.
- Xu, J., Zheng, Y., Wang, M., Zhao, J., Zhan, Q., Fu, M., ... Cheng, Y. (2011). Predictors of symptoms of posttraumatic stress in Chinese university students during the 2009 H1N1 influenza pandemic. *Medical Science Monitor: International Medical Journal of Experimental and Clinical Research, 17*, PH60–PH64.