



Stay home while going out – Possible impacts of earthquake co-occurring with COVID-19 pandemic on mental health and vice versa



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In an ongoing COVID-19 pandemic setting, there is an interplay between two disastrous events – one related to the infectious agent and other related to previously unprecedented response strategies. Their ability to reinforce one another is unknown, as well are the relative shares in long-term effects.

Mental health here seems of crucial importance, as the current SARS-CoV-2 pandemic is characterized by psychological reactions arising from feelings of uncertainty alongside limited availability and possibility for “healthy” coping. Restrictive public health measures have severe unintended psychological and social consequences, characterized by deprivation of fundamental right and freedoms and restrictions on work, mobility and social support (Brooks et al., 2020; Galea, et al., 2020). It has been widely reported that such a setting has deleterious effects on mental health in persons (in)directly in contact with the infectious agent; persons that are vulnerable to biological and psychological stressors; frontline professionals and members of general public (Brooks et al., 2020; Fiorillo and Gorwood, 2020; Li et al., 2020; Montemurro, 2020; Wang et al., 2020). The pandemic may exacerbate existing mental health disorders (that are highly prevalent) and contribute to “new” stress-related mental health disruptions and disorders even in previously unaffected (“healthy”) populations. This is followed by limited availability and access to mental health services creating a significant gap between needs and possibilities (Galea, et al., 2020; Pfefferbaum and North, 2020).

The evolving pandemic is followed by a widespread feeling of uncertainty concerning infectious agents’ origins, nature and course of the disease it causes. Even though most of the population is not directly affected, possibility of infection and unprecedented levels of media coverage and exposure amplify the effects on mental health, further deepening the feelings of uncertainty and the state of overwhelming stress (Galea, et al., 2020; Usher et al., 2020). It is extremely difficult to disentangle the true source and relative impact of distinctive, but interrelated “stressors”, as those related to threatening agent, inadequately prepared health care systems, and those related to response procedures and strategies (Usher et al., 2020). Social/physical distancing and isolation is severely undermining most fundamental intrinsic coping and adaptive strategies.

The city of Zagreb, capital of the Republic of Croatia, was afflicted

by another, traditional disaster while being in the middle of pandemic with restrictive public health measures, such as restriction on transport and travel, working and educational activities, alongside recommended measures of physical distancing and (self)isolation. Devastating earthquakes, 5.5 and 5.0 on Richter scale hit the capital, the pandemic “hotspot”, in early morning hours (6:24 and 7:04 AM) on March 22nd, 2020.

So, a relatively “new” form of mass traumatic event was accompanied by relatively “traditional” one, urging a need to consider its cumulative effects especially on mental health.

The pandemic narrative was interrupted by earthquake, a visible and imminent threat, especially as this was, for most citizens, the first such experience in their lives. Most natural and protective responses to such a disaster, such as seeking comfort from the closest ones and/or escape to available “safe spots”, were forestalled as they could potentiate infectious disease transmission. This conversion of adaptive strategies to maladaptive ones was even more pronounced as the agent causing pandemic is invisible, and in Croatia till that time had not produced significant consequences. So, alongside a deep feeling of uncertainty came a similarly distressful and deep feeling of insecurity.

On the other hand, one could hypothesize that such additional, “traditional” disasters may have had positive psychological and social effects on “unconventional” ones – the pandemic. For example, certain materialization and shared experience of threat in the form of earthquakes made citizens more aware of invisible one and allowed more constructive meaning making processes (Brooks et al., 2020; Fiorillo and Gorwood, 2020). Additionally, materialization of threat may have provoked the feeling of shared identity allowing shared beliefs and purpose to emerge.

During pandemics, the number of people whose mental health is affected tends to be greater than the number of people affected by the infection. This is certainly going to be more pronounced in a context where peritraumatic phase of the COVID-19 was reinforced by another deeply traumatic experience. Even if most people prove to be resilient in the long-term, and a significant minority expresses mental health disruptions, this could mean an enormous mental health burden, further impeding recovery process. Disastrous events have various effects on individuals, as some may be more susceptible to its adverse effects,

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while others may be more resistant or resilient. These effects are not only driven by different states and/or traits of individuals, but also by their pre-disaster as well as post-disaster context (Druss, 2020; Duan and Zhu, 2020; Pfefferbaum and North, 2020). Hopefully, widespread activation and digital transformation of mental health resources and systems will be able to provide much needed care (Druss, 2020; Duan and Zhu, 2020; Fiorillo and Gorwood, 2020).

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Authors contribution

MC provided initial idea and drafted initial version of the manuscript. MC, AK and PB edited, reviewed, and prepared the manuscript for submission. All the authors contributed to and approved final version of the manuscript.

Conflict of interest

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.bbi.2020.04.054>.

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