

# Mental Health Issues and Psychological Crisis Interventions During the COVID-19 Pandemic and Earthquakes in Croatia

Vjekoslav Peitl<sup>1,2</sup>, Vedrana Golubić Zatezalo<sup>1</sup>, Dalibor Karlović<sup>1,2</sup>

<sup>1</sup>Department of Psychiatry, University Hospital Centre Sestre milosrdnice, Vinogradska cesta 29, Zagreb, Croatia, <sup>2</sup>Catholic University of Croatia, Ilica 242, Zagreb, Croatia

**Abstract** - The newly discovered coronavirus, now called SARS-CoV-2, was first detected in Wuhan, China as a cause of severe acute respiratory syndrome, disease called COVID-19. From the beginning of 2020 it rapidly spread, affecting the whole world, but with a major impact in Europe and North America. At the moment of writing, there are more than 2 million confirmed cases with more than 125.000 confirmed deaths related to COVID-19 globally. In Croatia, there are currently 1.741 confirmed cases with 34 deaths related to the virus. The COVID-19 rapid spread and magnitude of pandemic unleashed panic among people which warrants public health officials to also address the epidemic of fear. Research on the psychological reactions to previous epidemics and pandemics suggests that various psychological factors may play a role in coronaphobia. Novelty and uncertainty what the unknown brings is likely the cause of COVID-19 fear. With the sharp increase in number of affected persons by pandemic, both infected or suspected cases in isolation, fear and anxiety grew in general population, which warranted a significant increase in need for psychiatric support for both patients and medical staff. After initial stabilization of the situation and a prompt response to increased needs for mental support, during this time of pandemic, self-isolations and imposed social distancing, the strongest earthquake this city has experienced in the last 140 years hit Croatian capital Zagreb. During these trying times, maintaining good mental health of both medical personnel as well as the general population is crucial for both health and mental damage control. In Croatia, crisis interventions aimed for those most exposed to mental impact of pandemic and natural disasters is limited.

**Key words:** mental health, crisis intervention, COVID-19, pandemics, earthquakes

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e-mail: [alcoholism.kbcm@gmail.com](mailto:alcoholism.kbcm@gmail.com) • [www.http://apr.kbcm.hr](http://apr.kbcm.hr)

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Correspondence to:

Vjekoslav Peitl, MD, PhD, Department of Psychiatry, University Hospital Centre Sestre milosrdnice, Vinogradska c. 29, 10 000 Zagreb, Croatia

E-mail: [vjekoslav.peitl@gmail.com](mailto:vjekoslav.peitl@gmail.com)

The newly discovered coronavirus, now called SARS-CoV-2, was first detected in Wuhan, China on December 31, 2019 as a cause of severe acute respiratory syndrome, disease called COVID-19 [1]. This virus belongs to the same group of viruses that caused both SARS in 2002 and MERS in 2012. Since SARS-CoV-2 is a zoonotic RNA virus, it has

a high mutagenic potential, which in the future may lead to easier transmission among humans and could become more virulent [2]. Rapid spread of COVID-19 was facilitated by high population density and mobility in Wuhan region. Soon cases have occurred in patients who had not travelled to Wuhan, indicative of person-to-person transmission. The World Health Organization (WHO) on March 11<sup>th</sup> officially declared COVID-19 a global pandemic. Currently there are more than 2 million confirmed cases globally with more than 125.000 confirmed deaths related to COVID-19 [3]. In Croatia, there are currently 1.741 confirmed cases with 34 deaths related to the virus [4].

The COVID-19 rapid spread and magnitude of pandemic unleashed panic among people with episodes of racism against people of Asian descent and violence to those that are breaking social distancing measures. This warrants public health officials to also address the epidemic of fear [5]. Novel coronavirus has repeatedly been described as a killer virus among social media, which has reinforced the sense of danger and uncertainty among both health care workers and public. With parallels to early SARS outbreak in 2002, we may draw conclusions on its magnitude of influence on mental health. Health workers who were quarantined during SARS epidemic, those who worked in high-risk clinical settings or had family or friends infected with SARS, had significantly more post-traumatic stress symptoms than those who had no such experiences. Those working in SARS units and hospitals also reported depression, anxiety, fear, and frustration. Among patients a wide variety of psychiatric morbidities were reported, including depression, anxiety, panic attacks, psychotic symptoms, delirium and suicidality. Today those

infected with novel coronavirus may experience fear of the consequences of infection while symptoms of the infection, such as fever or hypoxia, or adverse effects of treatment, could lead to worsening of anxiety and mental distress. Those infected may report anxiety and guilt about the effects of contagion, quarantine, and stigma on their families and friends [6]. Novelty and uncertainty what the unknown brings is likely the cause of COVID-19 fear. Research on the psychological reactions to previous epidemics and pandemics suggests that various psychological factors may play a role in coronaphobia. These include individual differences such as the level of intolerance of uncertainty, self-perceived vulnerability to the disease, and proneness to anxiety [7]. To the best of our knowledge, only one investigation sought to assess psychological impact and psychiatric symptoms during the pandemic [8]. Wang and associates conducted an online survey, which included over 1200 respondents from 194 cities in China with more than half of the respondents rating the psychological impact as moderate-to-severe, and slightly less than one-third reporting moderate-to-severe anxiety [8].

Besides first hit China, another country with one of the highest burdens of the disease is Spain, with more than 181.000 cases and over 19.000 deaths as of April 16<sup>th</sup>. Many reports from Spain suggest that health-care workers are stretched to the point of exhaustion due to existing staff shortages, exacerbated by insufficient initial measures such as cancelling holidays or bringing retired nurses and doctors back into the health service. Also quarantining a growing number of health workers exposed to the infection only deepened the problem. The new decree permits hiring graduates without specialization,

final year medical and nursing students, and extending contracts of medical residents [9]. Even worse situation is currently in Italy, the highest COVID-19 affected European country, with over 165.000 confirmed cases of infection and over 21.500 deaths at the time of writing. We have to mention here that Croatia shares a sea border with Italy, which reflects a high probability of an Italian scenario in Croatia. As far as Republic of Croatia is concerned, relatively recently (1991-1995) we have experienced the major humanitarian crisis in the form of Croatian War of Independence, which laid down the foundations for rapid medical intervention and healthcare personnel mobilization, which we are currently utilizing. Nevertheless, Croatia in recent history did not experience a severe epidemic, and especially not a pandemic of this scale. Thus, with most of the data on the disease coming from Asia and Italy, the government in Croatia made efforts to adapt healthcare, both physical and mental, based on such information. Recognizing the damaging potential of the psychological crisis, and similarly to other affected countries, we aimed to develop psychiatric crisis interventions while reducing a risk for transmission of the disease to the medical professionals [10]. The primary premise of psychological care during this outbreak is to incorporate psychological crisis intervention into the overall deployment of epidemic prevention and control. Those interventions are designed to provide prompt assistance in alleviating psychological impact of the pandemic. Croatia responded with a new national number (113) which is available 24 hours a day to the general population and allows citizens to obtain new information on the COVID-19 and related healthcare updates, helping alleviate the anxiety of those who need help in these times. In

addition, Andrija Štampar Teaching Institute of Public Health has made available additional hotlines for providing psychological assistance to persons in self-isolation or quarantine. Ugljan Psychiatric Hospital also opened a telephone psychological counselling centre to provide psychological assistance to people needing support regarding the current coronavirus pandemic. Psychologists and psychiatrists in the University Hospital Centre Sestre milosrdnice in Zagreb (one of the largest hospitals in Croatia with more than 4000 employees and 1200 hospital beds) organized psychological crisis interventions on site and telephone/internet consultations. In order to optimize the use of limited resources and staff those interventions are aimed primarily at medical staff (front-line and their relief), patients with symptoms of coronavirus infection, close contacts, suspected patients and patients with fever. That would roughly correspond to the first two levels described by Jiang and associates [10]. UHC Sestre milosrdnice also issued and distributed a number of information leaflets, brochures and posters for health care professionals regarding mental health issues, how to recognize them and general recommendations for managing of these issues during the time of this pandemic. Before this crisis, usual consultation-liaison routine comprised of phone consultations with other physicians and psychiatric examination and expert opinions in other Departments. However, with the sharp increase in number of affected persons by pandemic, both infected or suspected cases in isolation, fear and anxiety grew in general population, which warranted a significant increase in need for psychiatric support for both patients and medical staff. After initial stabilization of the situation and a prompt response to increased needs for mental support,

during this time of pandemic, self-isolations and imposed social distancing, the strongest earthquake this city has experienced in the last 140 years hit Croatian capital Zagreb. Powerful earthquake, measuring 5.5 on Richter scale hit in the morning hours of March 22<sup>nd</sup>, injuring dozens of people, killing at least one, and inflicting significant structural damage to the town centre, leaving many people homeless or in damaged homes with temperatures outside dropping below zero. All this caused a widespread panic making people leave their homes in hundreds of thousands, effectively breaching quarantine and isolation measures and gravely compromising imposed social distancing. After the large impact, tremors and over 60 lesser earthquakes ensued. Uncertainty, fear and anxiety all led to an overwhelming need for psychiatric and psychological help with current strategies

being tested and personnel overstretched. During these trying times, maintaining good mental health of both medical personnel as well as the general population is crucial for both health and mental damage control. In Croatia, crisis interventions aimed for those most exposed to mental impact of pandemic and natural disasters is limited. It is safe to say that with the spread of COVID-19 we will require further measures of providing psychiatric and psychological support, such as remote consultation networks in safe settings.

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### Conflicts of interest

None to declare.

### References

1. Wu JT, Leung K, Leung GM. Nowcasting and forecasting the potential domestic and international spread of the 2019-nCoV outbreak originating in Wuhan, China: a modelling study. *Lancet*. 2020;395:P689-97.
2. Wang C, Horby PW, Hayden FG, Gao GF. A novel coronavirus outbreak of global health concern. *Lancet*. 2020;395:470-3.
3. World Health Organization. Novel coronavirus(2019-ncov): situation reports [Internet]. 2020 [cited April 16, 2020]. Available from: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/>
4. Croatian Institute of Public Health. Coronavirus – newest data regarding coronavirus outbreak [Internet]. 2020 [cited April 16, 2020]. Available from: <https://www.hzjz.hr/priopcenja-mediji/koronavirus-najnoviji-podatci/>
5. Malta M, Rimoin AW, Strathdee SA. The coronavirus 2019-nCoV epidemic: Is hindsight 20/20?. *EClinicalMedicine*. 2020;20:100289.
6. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry*. 2020;7:228-9.
7. Asmundson GJG, Taylor S. Coronaphobia: Fear and the 2019-nCoV outbreak. *J Anxiety Disord*. 2020;70:102196.
8. Wang C, Pan R, Wan X, Tan Y, Xu L, Ho CS, et al. Immediate Psychological Responses and Associated Factors during the Initial Stage of the 2019 Coronavirus Disease (COVID-19) Epidemic among the General Population in China. *Int J Environ Res Public Health*. 2020;17:1729.
9. Legido-Quigley H, Mateos-García JT, Regulez Campos V, Gea-Sánchez M, Muntaner C, McKee M. The resilience of the Spanish health system against the COVID-19 pandemic. *Lancet Public*

- Health. 2020 (Published online). DOI: [https://doi.org/10.1016/S2468-2667\(20\)30060-8](https://doi.org/10.1016/S2468-2667(20)30060-8).
10. Jiang X, Deng L, Zhu Y, Ji H, Tao L, Liu L, et al. Psychological crisis intervention during the

outbreak period of new coronavirus pneumonia from experience in Shanghai. *Psychiatry Res.* 2020;286:112903.

## Mentalno zdravlje i psihološke krizne intervencije tijekom COVID-19 pandemije i potresa u Hrvatskoj

**Sažetak** - Novootkriveni koronavirus, koji se naziva SARS-CoV-2, prvi je put otkriven u Wuhanu u Kini, kao uzrok teškog akutnog respiratornog sindroma, odnosno bolesti zvane COVID-19. Od početka 2020. godine epidemija se brzo širila, u kratkom roku zahvaćajući praktički cijeli svijet, no s najvećim utjecajem u Europi i Sjevernoj Americi. U ovom trenutku postoji više od 2 milijuna potvrđenih slučajeva s više od 125 000 smrti povezanih s COVID-19. U Hrvatskoj je trenutno 1 741 potvrđeni slučaj zaraze i 34 smrtna slučaja povezana s virusom. Brzo širenje i obujam pandemije COVID-19 izazvalo je paniku među populacijom, što nalaže stručnjacima iz područja psihijatrije i javnog zdravstva bavljenje epidemijom straha. Istraživanja psiholoških reakcija na prethodne epidemije i pandemije sugeriraju da različiti psihološki čimbenici mogu igrati ulogu u koronafobiji. Novost i neizvjesnost povezana s nepoznatim su vjerojatno uzroci straha povezanih s COVID-19. S naglim porastom broja oboljelih, porastom straha i tjeskobe u općoj populaciji, došlo je do značajnog povećanja potražnje i potrebe za psihijatrijskom podrškom, kako za pacijente, tako i za samo medicinsko osoblje. Nakon početne stabilizacije stanja, dogodio se najjači potres koji je Zagreb doživio u posljednjih 140 godina. U ovim izazovnim okolnostima je održavanje dobrog psihičkog zdravlja, kako medicinskog osoblja, tako i opće populacije, presudno za održavanje zdravlja i prevenciju psihičkih poremećaja. U Hrvatskoj je iskustvo kriznih intervencija namijenjenih onima koji su najviše izloženi psihičkom utjecaju pandemije i prirodnih katastrofa ograničeno.

**Ključne riječi:** mentalno zdravlje, krizne intervencije, COVID-19, pandemija, potres

