# Disaster Medicine and Public Health Preparedness

## www.cambridge.org/dmp

### Letter to the Editor

Cite this article: Lusida MAP, Salamah S, Jonatan M, et al. The impact of facilitated quarantine on mental health status of nonsevere COVID-19 patients. Disaster Med Public Health Prep. doi: https://doi.org/10.1017/dmp.2021.344.

#### **Keywords:**

COVID-19; depression; anxiety; stress; quarantine

#### Corresponding author:

Firas Farisi Alkaff, Email: firasfarisialkaff@fk.unair.ac.id

# The Impact of Facilitated Quarantine on Mental Health Status of Non-Severe COVID-19 Patients

Michael Austin Pradipta Lusida<sup>1,2</sup>, Sovia Salamah<sup>3</sup>, Michael Jonatan<sup>1,4</sup>, Adila Taufik Syamlan<sup>3</sup>, I Ketut Mega Purnayasa Bandem<sup>1</sup>, Annisa Aprilia Rahmania<sup>1</sup>, Muhammad Ikhtiar Zaki Al-Razzak<sup>1</sup>, Ngurah Arie Kapindra Dharma<sup>1</sup>, Erwin Astha Triyono<sup>1,2</sup>, Ni Kadek Ratnadewi<sup>1</sup> and Firas Farisi Alkaff<sup>5</sup> ©

<sup>1</sup>Indrapura Military Emergency Field Hospital, Surabaya, Indonesia; <sup>2</sup>Department of Internal Medicine, Faculty of Medicine, Universitas Airlangga - Dr. Soetomo General Academic Hospital, Surabaya, Indonesia; <sup>3</sup>Department of Public Health and Preventive Medicine, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia; <sup>4</sup>Department of Cardiology and Vascular Medicine, Faculty of Medicine, Universitas Airlangga - Dr. Soetomo General Academic Hospital, Surabaya, Indonesia and <sup>5</sup>Division of Pharmacology and Therapy, Department of Anatomy, Histology, and Pharmacology, Faculty of Medicine, Universitas Airlangga, Surabaya, Indonesia

It has been shown that quarantine is important to reduce the incidence and mortality during COVID-19 pandemic.<sup>1</sup> However, quarantine has consequences towards mental health. From previous outbreaks, several negative psychological effects such as post-traumatic stress symptoms, confusion, and anger were observed.<sup>2</sup> In Indonesia, several successful suicide cases of COVID-19 patients in quarantine facilities have been reported, and being quarantined in quarantine facilities has been suggested to be the main cause. Nevertheless, no study has confirmed whether being quarantined in quarantine facilities in fact, worsens the mental health status of COVID-19 patients.

We did a prospective observational study involving confirmed non-severe (asymptomatic and mild) COVID-19 patients who were quarantined at Indrapura Emergency Field Hospital, the largest quarantine facility in East Java province, a province with the highest mortality rate for COVID-19 in Indonesia.<sup>3</sup> All patients over 18 years who started their quarantine in this quarantine facility between November 1 and 14, 2020 were included. The respondents were asked to fill in the questionnaire 2 times: (1) prior to their admission (pre-quarantine), and (2) prior to their dismissal from the quarantine facility (post-quarantine).

Mental health status was evaluated using validated Indonesian version of Depression, Anxiety, and Stress scale (DASS-21).<sup>4</sup> A detailed explanation of DASS-21 has been described elsewhere.<sup>5</sup> Collected data were analyzed using IBM SPSS Statistic for Windows version 25.0 (IBM Corp., Armonk, NY) This study was approved by the relevant Institutional Reviewer Board (201/EC/KEPK/FKUA/2020). All respondents gave written informed consent prior to their inclusion.

From the 232 patients that started their quarantine during the study period, 206 respondents were included in the analysis (Supplementary Table 1). Pre-quarantine, there were 8 (3.9%) respondents with depression, 30 (14.6%) with anxiety, and 16 (7.8%) with stress. Post-quarantine, there were 11 (5.3%) respondents with depression, 20 (9.7%) with anxiety, and 17 (8.3%) with stress. The prevalence of depression, anxiety, and stress between pre- and post-quarantine was not significantly different (all P > 0.05) (Supplementary Table 2). Compared to prequarantine, anxiety and stress subscales scores and total DASS-21 scores post-quarantine were significantly lower (all P < 0.001) (Supplementary Table 3).

To our knowledge, we are the first to prospectively evaluate the mental health status of COVID-19 patients pre- and post-quarantine. Contrary to popular opinion, we found that being quarantined in quarantine facilities did not worsen the mental health status of asymptomatic and mild COVID-19 patients. Therefore, in the event of suicide death of asymptomatic and mild COVID-19 patients in quarantine facilities, being quarantined is less-likely to be the main cause of suicide. However, future study still needs to be done to evaluate the impact of facilitated quarantine in COVID-19 patients with more severe conditions.

**Supplementary material.** To view supplementary material for this article, please visit https://doi.org/10.1017/dmp.2021.344

Author contributions. Authors Lusida and Salamah contributed equally and are both first authors in this work.

© The Author(s), 2021. Published by Cambridge University Press on behalf of Society for Disaster Medicine and Public Health, Inc.



2 MAP Lusida *et al.* 

#### References

- Nussbaumer-Streit B, Mayr V, Dobrescu AI, et al. Quarantine alone or in combination with other public health measures to control COVID of postquarantine. Cochrane Database of Systematic Reviews. 2020;(9). doi: 10.1002/14651858.CD013574.pub2
- Brooks SK, Webster RK, Smith LE, et al. The psychological impact of quarantine and how to reduce it: rapid review of the evidence. *Lancet*. 2020; 395(10227):912-20. doi: 10.1016/S0140-6736(20)30460-8.
- Indonesian COVID-19 operational Taskforce. Peta Sebaran. 2020. Accessed December 6, 2921. https://covid19.go.id/peta-sebaran
- 4. **El-Matury HJ, Lestari FA**, Besral. Depression, anxiety and stress among undergraduate students in Jakarta: examining scores of the depression anxiety and stress scale according to origin and residency. *Indian J Public Health Res Dev.* 2018;9(2):290-5.
- Lovibond SH, Lovibond PF. Manual for the depression anxiety stress scales.
  2nd ed. Sydney, Australia: Psychology Foundation; 1995.