

## Article

## Stigma, Sociodemographic Factors, and Clinical Factors Associated with Psychological Distress among COVID-19 Survivors during the Convalescence Period: A Multi-Centre Study in Malaysia



Nur Iwana Abdul Taib<sup>1</sup>, Nik Ruzyanei Nik Jaafar<sup>2,\*</sup>, Nazirah Azman<sup>2</sup>, Azlin Baharudin<sup>2</sup>, Mohammad Farris Iman Leong Bin Abdullah<sup>3</sup>, Nurul Ain Mohamad Kamal<sup>2</sup>, Azlin Baharudin<sup>2</sup>, Muhammad Najib Bin Abdullah<sup>4</sup>, Suresh Kumar Chidambaram<sup>5</sup>, Alif Adlan<sup>5</sup>, Loong Hui Tan<sup>4</sup>, Satya Tamilselvam<sup>4</sup>, Mohd Shahrir Mohamed Said<sup>6</sup>, Anuar Abd Samad<sup>7</sup> and Siti Nordiana Binti Dollah<sup>8</sup>

- <sup>1</sup> Department of Psychiatry, Faculty of Medicine and Health Sciences, University Malaysia Sarawak, Kota Samarahan 94300, Malaysia
- <sup>2</sup> Department of Psychiatry, Faculty of Medicine, University Kebangsaan Malaysia, Kuala Lumpur 56000, Malaysia
- <sup>3</sup> Department of Community Health, Advanced Medical and Dental Institute, Universiti Sains Malaysia, Kepala Batas 13200, Malaysia
- <sup>4</sup> Department of Psychiatry & Mental Health, Hospital Sungai Buloh, Ministry of Health Malaysia, Sungai Buloh 47000, Malaysia
- <sup>5</sup> Department of Medicine, Hospital Sungai Buloh, Ministry of Health Malaysia, Sungai Buloh 47000, Malaysia
- Department of Medicine, Faculty of Medicine, University Kebangsaan Malaysia, Kuala Lumpur 56000, Malaysia
- Health Technology Assessment Section, Medical Development Division, Ministry of Health Malaysia, Putrajaya 62590, Malaysia
- <sup>3</sup> Department of Psychiatry, Hospital Angkatan Tentera Tuanku Mizan, Kuala Lumpur 53300, Malaysia
- Correspondence: ruzyanei@ppukm.ukm.edu.my

Abstract: High rates of psychological distress among COVID-19 survivors and stigmatisation have been reported in both early and late convalescence. This study aimed to compare the severity of psychological distress and to determine the associations among sociodemographic and clinical characteristics, stigma, and psychological distress among COVID-19 survivors across two different cohorts at two different time points. Data were collected cross-sectionally in two groups at one month and six months post-hospitalisation among COVID-19 patient from three hospitals in Malaysia. This study assessed psychological distress and the level of stigma using the Kessler Screening Scale for Psychological Distress (K6) and the Explanatory Model Interview Catalogue (EMIC) stigma scale, respectively. At one month after discharge, significantly lower psychological distress was found among retirees (B = -2.207, 95% confidence interval [95% CI] = -4.139 to -0.068, p = 0.034), those who received up to primary education (B = -2.474, 95% CI = -4.500 to -0.521, p = 0.014), and those who had an income of more than RM 10,000 per month (B = -1.576, 95% CI = -2.714 to -0.505, p = 0.006). Moreover, those with a history of psychiatric illness [one month: (B = 6.363, 95% CI = 2.599 to 9.676, p = 0.002), six months: (B = 2.887, CI = 0.469–6.437, p = 0.038)] and sought counselling services [one month: (*B* = 1.737, 95% CI = 0.385 to 3.117, *p* = 0.016), six months: (*B* = 1.480, CI = 0.173–2.618, p = 0.032) had a significantly higher severity of psychological distress at one month and six months after discharge from the hospital. The perceived stigma of being infected with COVID-19 contributed to greater severity of psychological distress. (B = 0.197, CI = 0.089–0.300, p = 0.002). Different factors may affect psychological distress at different periods of convalescence after a COVID-19 infection. A persistent stigma contributed to psychological distress later in the convalescence period.

Keywords: COVID-19 survivors; psychological distress; perceived stigma; post-hospitalisation



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## 1. Introduction

Malaysia reported their first COVID-19 case in January 2020, which was transmitted from international travelers. In March 2020, a more massive outbreak occurred from an annual mass religious assembly in Kuala Lumpur, and the public was advised to practise social distancing. The Government of Malaysia implemented the first lockdown via a Movement Control Order (MCO) nationwide following a drastic increment in COVID-19 cases beginning on 18 March 2020. In Malaysia, moderate to very high levels of psychological distress as a result of the COVID-19 pandemic were similarly reported [1]. Anxiety, particularly, was reported to be severe among university students, Malaysian women who were Malays and pregnant suffered from a loss of income during the pandemic [2–4]. Another study in a neighbouring country, Myanmar, reported more psychological distress among those who were self-employed and older than 45 years old [5].

Multiple studies have shown that the rate of psychological distress among COVID-19 survivors in early convalescence was high, and a high level of post-traumatic stress was seen especially among those who were symptomatic [6,7]. A systematic review and metaanalysis found that a high prevalence of depression, anxiety, insomnia, and PTSD was documented among COVID-19 survivor regardless of gender, group, or region [8]. These psychological complications were precipitated by a lack of control among infected people, job losses, wage losses, and uncertainty about the future [9]. Both female gender and the persistence of symptoms were risk factors in developing psychological distress among COVID-19 survivors 9 months after discharge [10]. Moreover, a study among COVID-19 survivors in the Philippines found that the prevalence of anxiety and depression 8 weeks after discharge were significantly reduced [11]. However, the available evidence regarding long-term psychological distress among COVID-19 survivors is still insufficient.

It has been shown that people who were impacted financially due to COVID-19 and drank alcohol in the past four weeks were more likely to have higher levels of psychological distress [1]. A systematic review showed that, among health care workers during the pandemic, factors such as a younger age, the female gender, and a low monthly household income were associated with psychological distress [12]. Similarly, some sociodemographic factors were found to be associated with psychological distress after being infected with COVID-19, such as age, gender, employment status, and perceived stigma [13].

Stigmatisation is not uncommon during disease outbreaks. The stigma during the COVID-19 pandemic was mainly associated with those who were infected with it, those at risk of being infected, such as healthcare workers, and those from a particular race and groups that were linked to the initial spread of the illness [14]. The fear of a disease with an unknown cause may lead to stigmatisation. Among the Malaysian public, a study found that higher levels of psychological distress were associated with higher levels of fear of COVID-19 [1]. A local study among healthcare workers found that higher cautious attitudes towards COVID-19 significantly predicted higher anxiety scores [15]. This was further explored in another study which revealed that the "fear of COVID-19" and "stress of COVID-19" were associated with psychological distress among health care workers [12]. Multiple studies also concluded that the fear associated with the pandemic, containment measures, high numbers of people infected, and deaths were associated with high prevalence rates of psychological distress across populations [16–18]. The lack of knowledge regarding COVID-19, as it was a relatively new disease, may have had a large contribution in the development of the stigma during the pandemic. Fear of the infection among the public led to negative feelings, such as anxiety, anger, resentment, hostility, and disgust. This led to social rejection and the discrimination of people who were being labelled. Similar occurrences of stigma were reported in different countries around the world during the pandemic [19,20]. However, the data were still limited in exploring the association between stigma and psychological distress among COVID-19 survivors.

Studies have shown that more severe symptoms of anxiety and stress were reported among those with chronic diseases and a history of medical and/or psychiatric illnesses [21–23]. This may be due to postponement, inaccessibility to medical services