

# **Posttraumatic stress symptoms and attitude toward crisis mental health services among clinically stable patients with COVID-19 in China**

Hai-Xin Bo<sup>1#</sup>,  
Wen Li<sup>2,3,#</sup>,  
Yuan Yang<sup>2,3,4#</sup>,  
Yu Wang<sup>1#</sup>,  
Qinge Zhang<sup>5#</sup>,  
Teris Cheung<sup>6</sup>,  
Xinjuan Wu<sup>1\*</sup>  
Yu-Tao Xiang<sup>2,3\*</sup>

1. Department of Nursing, Peking Union Medical College Hospital, Beijing, China;
2. Unit of Psychiatry, Institute of Translational Medicine, Faculty of Health Sciences, University of Macau, Macao SAR, China;
3. Center for Cognition and Brain Sciences, University of Macau, Macao SAR, China;
4. Department of Psychiatry, Southern Medical University Nanfang Hospital & Guangdong-Hong Kong-Macao Greater Bay Area Center for Brain Science and Brain-Inspired Intelligence, Guangdong, China;
5. The National Clinical Research Center for Mental Disorders & Beijing Key Laboratory of Mental Disorders, Beijing Anding Hospital & the Advanced Innovation Center for Human Brain Protection, Capital Medical University, Beijing, China;
6. School of Nursing, Hong Kong Polytechnic University, Hong Kong SAR, China

# These authors contributed equally to this work.

\* Address correspondence to Dr. Yu-Tao Xiang, 3/F, Building E12, Faculty of Health Sciences, University of Macau, Avenida da Universidade, Taipa, Macau SAR, China. Fax: +853-2288-2314; Phone: +853-8822-4223; E-mail: [xyutly@gmail.com](mailto:xyutly@gmail.com); or Prof. Xinjuan Wu, Department of Nursing, Peking Union Medical College Hospital, Beijing, China; E-mail: wuxinjuan@sina.com

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## **Disclosure/Conflicts of Interest**

None.

The novel coronavirus disease (COVID-19) epidemic, which is believed to be originated from Wuhan, China at the end of 2019, has been rapidly transmitted globally. With the increasing number of infected cases and deaths, many patients experienced both physical sufferings and great psychological distress. In China, a range of guidelines and expert consensus have been developed by health authorities and academic associations. Crisis mental health interventions, such as online education and counseling services, have been widely adopted nationwide.(Liu et al., 2020)

According to the treatment guidelines in China, COVID-19 patients need to be treated in isolated infectious hospitals. Due to social isolation, perceived danger, uncertainty, physical discomfort, medication side effects, fear of virus transmission to others, and overwhelming negative news portrayal in mass media coverage, patients with COVID-19 may experience loneliness, anger, anxiety, depression, and insomnia, and posttraumatic stress symptoms,(Wu, Chan, & Ma, 2005; Xiang et al., 2020) which could negatively affect individuals' social and occupational functioning, and quality of life.(Monson, Caron, McCloskey, & Brunet, 2017; North et al., 2002) To date, no studies on the pattern of posttraumatic stress symptoms among COVID-19 patients have been reported. Therefore, we conducted an online survey to examine the pattern of posttraumatic stress symptoms in clinically stable COVID-19 patients. We also explored patients' attitude toward crisis mental health services during the COVID-19 outbreak.

Online assessment was incorporated as part of the crisis psychological interventions. Patients were invited to participate in this online assessment prior to their discharge from five quarantine facilities ('Fang Cang' hospitals) in Wuhan, Hubei province in March 2020. '*Fang Cang*' hospitals refer to temporary quarantine hospital facilities converted from gymnasiums, exhibition centers and sports centers for clinically stable patients with COVID-19 in Wuhan, China . To be eligible, participants should be adult patients diagnosed as COVID-19 verified by patients' medical records, and clinically stable, as screened by patients' case

medical officers. Participants were asked about their attitudes toward COVID-19-related online crisis mental health services, such as psycho-educational resources, and mental health counseling, using a standardized question: '*Do you think if the psycho-educational resources and mental health counseling provision during the COVID-19 outbreak is helpful?*' (yes/no). The 17-item self-reported PTSD Checklist (PCL-C) (Weathers, Litz, Herman, Huska, & Keane, 1993) was used to assess the severity of the posttraumatic stress symptoms. A total PCL-C score of  $\geq 50$  was considered 'having significant posttraumatic stress symptoms'. (X.-Y. Yang, Yang, Liu, & Yang, 2007)

A total of 730 COVID-19 patients were recruited in this study, of whom, 714 met the inclusion criteria. The mean age of the participants  $50.2 \pm 12.9$  years, men accounted for 49.1% of the sample, and 25.8% lived alone prior to admission. The prevalence of significant posttraumatic stress symptoms was 96.2% (95%CI: 94.8%-97.6%). Half of participants (49.8%) considered psycho-educational services helpful.

To the best of our knowledge, this was the first study to examine the prevalence of posttraumatic stress symptoms in COVID-19 patients. It is noteworthy that most COVID-19 patients suffered from significant posttraumatic stress symptoms prior to discharge, and these symptoms may lead to negative outcomes, such as lower quality of life and impaired working performance. Following the outbreak of severe acute respiratory syndrome (SARS) in 2003, the prevalence of posttraumatic stress disorder (PTSD) in SARS survivors was 9.79% in their early recovery phase (Fang, Zhe, & Shuran, 2004) and 25.6% at 30-months post-SARS assessment.(Mak, Chu, Pan, Yiu, & Chan, 2009) Our findings were significantly higher than that of Fang's and Mak's. The remarkable differences between these studies could be attributed to different clinical diagnosis and illness phrases (i.e., clinically stable COVID-19 inpatients vs. SARS survivors) and different measurements (clinical diagnosis of PTSD established by professionals vs. self-reported instrument on posttraumatic stress symptoms).

The rapid transmission rates of COVID-19 alongside with demeaning news coverage in widely used communication programs (e.g., WeChat and Weibo), and social discrimination towards COVID-19 patients may result in higher prevalence of self-perceived posttraumatic stress symptoms in this study.

Of particular note was that only half of the patients hold positive attitudes towards crisis mental health services. During the COVID-19 outbreak, most crisis mental health services for infected patients are delivered online. Many COVID-19 patients were older adults with limited time, and restricted access to internet and smartphones due to poor health status during hospitalization.(Y. Yang et al., 2020) Compared with on-site psychological interventions, online self-guided psycho-educational resources could be less effective, especially for those with reading difficulties and physical discomfort brought by COVID-19 and treatment side effects.

In conclusion, this study found that most clinically stable COVID-19 patients suffered from significant posttraumatic stress symptoms prior to discharge. Considering the negative detrimental impact of significant posttraumatic stress symptoms, appropriate crisis psychological interventions and long-term follow up assessments should be urgently initiated for COVID-19 survivors.

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