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## Correspondence



## Interviews to better understand the burden of mental health disease among COVID-19 survivors: Things to consider

The coronavirus disease 2019 (COVID-19) pandemic has fundamentally transformed the lives of millions across the globe, particularly those who survived COVID-19 infection (Helmy, 2020). Evidence from previous outbreaks of similar respiratory viruses, including Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), demonstrates the presence of acute and chronic psychological sequelae of infection. Survivors have developed a series of psychiatric conditions, such as post-traumatic stress disorder (PTSD), depression, panic disorder, and obsessive-compulsive disorder (OCD) (Tang, 2020; Park, 2020). Given the severity and extent of COVID-19 infection, survivors of the current pandemic are likely to suffer from many, if not more, of the same psychological consequences. Most published research has focused on the mental health of healthcare workers or patients currently hospitalized with COVID-19. Understanding the prevalence and severity of mental health disorders among COVID-19 survivors is essential to developing measures to alleviate their suffering and facilitate return to social function. However, there is little published literature on mental disorders among COVID-19 survivors. A single Italian study Mazza, 2020 found a significant proportion of COVID-19 survivors self-reported psychiatric illness at one month post-hospitalization, including 28% with PTSD, 31% with depression, 42% with anxiety, 20% with OCD, and 40% with insomnia.

Before interviewing COVID-19 survivors to better understand mental health disorders among this population, several issues should be considered:

### 1) How should interviews be conducted?

Face-to-face interviews are ideal but impractical. Interviews at home may disclose survivors' previous COVID-19 infection and incur subsequent discrimination and marginalization from neighbors. In-hospital interviews require survivors to return to the hospital, which can be inconvenient and force survivors to relive traumatic experiences from their hospitalization. Conducting interviews by phone may be a better way to protect survivors' privacy while avoiding psychological distress. Survivors should be interviewed in a private space where they feel comfortable and relaxed.

### 2) Who should conduct interviews?

Psychologists or psychiatrists have the formal training and expertise needed to diagnose and triage COVID-19 survivors with mental health disorders. However, mobilizing enough mental health professionals to interview a large sample of survivors may be difficult. Recruiting researchers from the public health sector may allow for larger-scale interview efforts after standardized training. Prior to interviews,

survivors should be informed of forthcoming interview attempts by their attending doctors. We recently interviewed COVID-19 survivors in five Chinese cities and found survivors who were informed by their attending doctors of an upcoming study in advance were more likely to complete the interview compared to survivors who were not informed (52.3% vs 77.3%).

### 3) What should be included in interviews?

Thematic scales should be the focus of the interview. Questionnaires should be kept as concise as possible to not overly burden survivors. Our recent experience demonstrated an interview which can be completed within 30 min was generally acceptable.

Because survivors may have been traumatized by experiences during their infection and hospitalization, interviewers should adopt principles of trauma-informed care and develop a safe, supportive, and empowering space during the interview. Survivors should feel they are psychologically safe and cared for during interviews. Interviews should not be conducted in a mechanical manner and regular check-ins are needed to ensure the interviewee is not emotionally overwhelmed.

Appropriate and targeted mental health care will be an indispensable part of the recovery process for some COVID-19 survivors. A better understanding of how mental health disorders affect COVID-19 survivors is needed to triage patients and develop guidelines on mental health care. Survivors with psychological sequelae from their infection or hospitalization should be referred to counseling and psychiatric care to reduce the burden of mental health disease and facilitate return to society.

### Author statement

#### Authors' contributions

Huachun Zou conceived the idea. Bingyi Wang prepared the manuscript with Huachun Zou, Leiwen Fu, Niu Ju, and Xin Xiao critically reviewing the manuscript.

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#### Declarations of Competing Interest

None.

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#### References

- Helmy, Y.A., et al., 2020. The COVID-19 pandemic: a comprehensive review of taxonomy, genetics, epidemiology, diagnosis, treatment, and control. *J. Clin. Med.* 9, 1225.
- Tang, W., et al., 2020. Prevalence and correlates of PTSD and depressive symptoms one month after the outbreak of the COVID-19 epidemic in a sample of home-quarantined Chinese university students. *J. Affect. Disord.* 274, 1–7.
- Park, H.Y., et al., 2020. Posttraumatic stress disorder and depression of survivors 12 months after the outbreak of Middle East respiratory syndrome in South Korea. *BMC Public Health* 20, 1–9.
- Mazza, M.G., et al., 2020. Anxiety and depression in COVID-19 survivors: role of inflammatory and clinical predictors. *Brain Behav. Immun.* 1–7 <https://doi.org/10.1016/j.bbi.2020.07.037>.
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