

Establishment of a psychological intervention mechanism for healthcare workers facing public health emergencies in the context of the COVID-19 outbreak

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Abstract

The novel coronavirus disease pandemic is an unprecedented challenge globally. Medical personnel have been playing a leading role by fighting at the forefront against the pandemic and are the backbone of the fight against the epidemic. These frontline medical workers are under enormous psychological pressure and are prone to overwork and stress, as well as depression depletion, anxiety, insomnia, frustration, or self-blame in the face of patient deaths. Active psychological crisis interventions for medical staff fighting the pandemic are important protect and promote to maintain their occupational health. Based on China's experience, this paper describes the importance of organizational leadership, emergency psychological crisis interventions in pandemics, and psychological intervention measures for medical staff. It cites useful explorations from different regions and makes suggestions for establishing a sound psychological intervention mechanism.

KEYWORDS

China, coronavirus, COVID-19, healthcare workers, psychological interventions, public health emergency

1 | INTRODUCTION

Since its outbreak in late December 2019 in Wuhan City, China, the novel coronavirus disease (COVID-19) has been spreading rapidly throughout the country. Wuhan is the largest city and the only sub-provincial city in central China, and Chinese experts have estimated a direct economic loss of more than RMB 200 billion in Wuhan due to the pandemic. The World Health Organization declared COVID-19 a public health emergency of international concern (PHE-IC) on January 30.¹ Since the outbreak of COVID-19, medical personnel in various countries have devoted themselves to the treatment of patients affected by the disease.² Frontline healthcare workers have direct and long-term contact with COVID-19 patients; therefore, they are at a high risk of contracting the disease.³ In addition, they may experience anxiety, fear, depression, and other negative emotions, and can even suffer from acute stress disorder (ASD), which might lead to a psychological imbalance and affects one's routine work and life.⁴ A previous study showed that 36.3% of medical staff in Chinese general hospitals are in a state of depression.⁵ At the initial stage of a pandemic, the government tends to focus more on the mental health of patients while neglecting healthcare workers.^{6,7} Moreover, previous research has reported that during public health emergencies, medical staff are more prone to severe psychological distress that can be long-lasting. Therefore, this article takes the COVID-19 pandemic as an opportunity to actively understand and propose psychological interventions for healthcare workers during public health emergencies, providing a basis for the establishment of psychological intervention programs in the future.

2 | PSYCHOLOGICAL INTERVENTION MEASURES FOR HEALTHCARE WORKERS

First, healthcare workers were treated as the key population group to receive psychological crisis interventions under professional guidance. On 27 January 2020, the Working Mechanism for Joint Prevention and Control of COVID-19 issued the *Notice on Guiding Principles for Emergency Psychological Crisis Management for Novel Coronavirus Infections (Fei Yan Ji Zhi Fa [2020] No. 8)*,⁸ which outlined the guidelines for emergency psychological crisis interventions and included frontline medical staff as the "priority population." The guidelines provide that leading groups or the headquarters of teams responsible for the joint prevention and control of the epidemic at all levels should coordinate and organize an expert team, psychological rescue medical teams, psychological assistance hotlines, and social forces to participate in psychological interventions such as health promotion, psychological counselling, and psychological treatment. The expert team is responsible for studying and making decisions in light of the pandemic and the psychological situation of medical staff, providing professional training and supervision for staff who conduct psychological crisis interventions, and improving mental health publicity and education. The psychological rescue medical team assesses the mental health of medical staff and adopts targeted intervention methods. Members of psychological rescue medical teams include mainly psychiatrists, with preference given to those with experience in psychological crisis interventions. A psychological assistance hotline has been set up under the number "12,320," which is a government public welfare hotline set up by the Ministry of Health, provincial health platforms, existing psychological crisis intervention hotlines, and various online means of communication to provide 24/7 online services. The psychological assistance hotline team is mainly composed of mental health workers who have received training in managing psychological hotlines, and volunteers with experience in psychological crisis intervention in public emergencies. Social forces are widely mobilized to provide social support according to the needs and practical difficulties of medical staff. For example, the China Red Cross Foundation provided a grant of RMB 100,000 to each frontline medical personnel infected as a result of fighting the pandemic, and RMB 1 million per family to the families of 28 frontline medical personnel who died on duty.

Second, the scope of concern for psychological conditions was expanded, and the mental health of family members of healthcare workers was safeguarded. On 7 February 2020, the Working Mechanism for Joint Prevention and Control of COVID-19 under the State Council of the People's Republic of China issued the *Notice on Making the Best Effort to Safeguard the Frontline Medical Workers and Their Families (Fei Yan Ji Zhi Fa [2020] No. 23)*.⁹ The notice requires the establishment of a support system to protect frontline healthcare workers and their family members in aspects

concerning their livelihood, psychological, humanistic as well as, safety. Regarding livelihood protection, one should strive to understand the needs and difficulties of medical staff and their families and ensure the provision of basic necessities for them. Regarding psychological protection, frontline medical staff and their families are given priority in psychological interventions and positive spiritual care through alternative forms of interventions. Regarding humanistic protection, communication channels have been established for frontline medical staff and their families so that they can encourage and support each other and enhance their confidence and courage to overcome virus-related anxieties. In terms of safety, frontline medical staff and their families have been provided with protective gear such as masks, and necessary assistance has been provided to those who have transport difficulties. For example, Fuzhou has mobilized youth volunteers to help the families of frontline medical staff with difficulties, contacted commercial distribution companies to prioritize the needs of medical staff's families in terms of livelihood distribution, and provided 50 masks in batches to each family.

Third, the working environment of medical staff was improved, and care was taken of their physical health and mental wellbeing. Medical staff are required to report their temperature and symptoms daily through an online platform and undergo regular health tests to assess their physical health. They complete self-assessment scales such as the Self-Assessment Questionnaire for Mental Health (SRQ-20), Self-Assessment Scale for Anxiety (SAS), and Self-Assessment Scale for Depression (SDS) through the online reporting platform to assess their mental health. On 16 February 2020, the National Health Commission and other government departments jointly issued the *Notice on Improving the Working Conditions of Frontline Healthcare Workers and Concerning Measures for Medical Workers' Physical Health and Mental Well-Being (Guo Ban Fa [2020] No. 4)*.¹⁰ The document proposes seven measures. First, it aims to improve the working and resting conditions of medical staff, provide good logistical services for medical staff, and ensure that they get adequate sleep and food. Second, it strives to maintain the physical and mental health of medical staff, strengthen psychological crisis intervention and psychological counselling, and reduce the psychological pressure on them. Third, it aims to implement the treatment of medical staff and provide temporary work allowances for frontline medical staff and pandemic prevention workers. Medical and health institutions with heavy prevention and control tasks and at high risk levels were given an increase in the total lump-sum performance pay that was not included in the base. A green channel was opened for medical staff to be recognized for work-related injuries. Fourth, it aims to raise the standard of health prevention and pandemic allowance and introduce an increase in the standard of health prevention and pandemic allowance and issue it in full and in a timely manner. Fifth, it states that policymakers must strengthen humanistic care for medical personnel and mobilize social forces to organize condolences for front-line medical personnel. Sixth, it aims to create a safer practice environment, strictly implement safety precautions, and improve accountability mechanisms. Last, it strives to promote a professional spirit to work well by commending advanced work and rewarding and boosting confidence for the prevention and control of the pandemic. During the pandemic, some local governments requested the acquisition of qualified hotels near hospitals to provide a comfortable living and resting environment for frontline medical staff, as well as the necessary conditions for isolation from their families. To address the commuting problems of frontline medical staff in designated hospitals, special bus services were introduced. Further, measures such as a reasonable balance between working and resting hours for medical and nursing staff, flexible shift arrangements, staggered peak hour plans to reduce the risk of cross-infection, and appropriately extended rest and paid leave periods were also introduced.

Fourth, legal protection was strengthened to ensure personal safety and eliminate the psychological concerns of healthcare workers regarding social interactions. On 7 February 2020, the National Health Commission, the Supreme People's Court, and agencies and departments jointly issued the *Notice on Guaranteeing Healthcare Workers' Safety and Maintaining Normal Medical Service Order During COVID-19 Outbreak (Guo Wei Yi Han [2020] No. 43)*,¹¹ mandating the improvement of accountability mechanisms. The document announced the following:

- Acts that violate the personal safety of medical personnel and disrupt the normal medical order should be resolutely investigated and punished in accordance with the law to maintain the normal order of medical services.

- To improve and perfect the security system, focus should be given on supervising and guiding medical and health institutions that undertake pandemic prevention and control to strengthen their security.
- Emergency security teams should be formed to strengthen security in community health services, hospital fever clinics, isolation wards, and other key treatment areas with heavy foot traffic.
- All kinds of conflicts and disputes between doctors and patients should be proactively investigated and resolved, all kinds of safety hazards eliminated in a timely manner, the safety of medical staff and medical institutions ensured, and a good working environment maintained.

3 | LIMITATIONS OF CURRENT PSYCHOLOGICAL INTERVENTIONS

Because of the similarity in the tasks and working hours of medical staff in various countries, we believe that the psychological intervention measures adopted in China, such as online professional psychological guidance, the provision of support for family members, special buses for commuting to work, and enhanced personal safety, can be generalized and adopted by all countries. However, there are still some limitations in China's psychological intervention measures.

First, the organizational system for psychological crisis intervention in China is not yet robust. There is still a lack of relevant institutions and personnel in the government and healthcare administrative departments, and psychological crisis intervention is mostly adhoc and lacking in norms, technical standards, and implementation specifications. Second, the current psychological crisis intervention work focuses on intervention amid the event and is still inadequate in the preventive and holistic aspects of the intervention. It only addresses the psychological pressure currently encountered by healthcare workers, and the current form of pre-incident intervention is relatively simple, neglecting the importance of continuous follow-up treatment and later intervention.

4 | SUGGESTIONS FOR IMPROVING THE PSYCHOLOGICAL INTERVENTION MECHANISM FOR HEALTHCARE WORKERS

First, it is important to establish a sound organizational system and technical standards for psychological crisis intervention. This may be done by coordinating the resources of psychological associations, hospitals, universities, psychology institutes, grassroots community social workers, and civil society organizations and by organizing, managing, and implementing grid management from the top to the grassroots level in an orderly manner. Mental health assessments should be conducted based on the specific behavioural performance of medical staff, and different types of psychological crisis interventions should be conducted in response to the results of such assessments; further, standards and implementation criteria for different types of psychological crisis interventions should be established to carry out psychological crisis interventions in a scientific and standardized manner.

Second, a pre-incident intervention mechanism must be established. When selecting medical staff, relevant mental health assessments must be conducted, including with regard to psychological coping styles and psychological defence mechanisms. For selected medical staff, training in psychological self-help rescue and diversion intervention expertise should be provided. It has been shown that additional prior training related to psychological crisis intervention can improve the emergency responses, collaborative communication skills, mental resilience, and psychological stability of medical staff.

Finally, regular mental health assessments of medical staff, such as clinical screening for depression and anxiety, should be conducted following public health emergencies. Under such a situation, medical staff are faced with challenges such as large tasks, chronic overload, high risk of infection, and work competency, and may develop post-traumatic stress disorder. Targeted psychological interventions for key populations, regular continuing psychological education, and specialist therapies such as relaxation training, cognitive behavioural therapy, and group training are

therefore needed to alleviate the psychological crisis experienced by staff with mental illnesses.^{12,13} In addition, medication can be used as an adjunct to treatment.

5 | CONCLUSION

Mental well-being not only has profound effects on the physical health status of citizens but also is the cornerstone of social stability.¹⁴ Medical personnel are regarded as the “protectors of human health”; therefore, healthcare workers' physical and mental exhaustion would inevitably impact patient safety and medical service quality.¹⁵ The establishment of a psychological intervention mechanism is an important way to promptly deal with a crisis. In the future, further investigation on improving the psychological intervention mechanism for medical staff during public health emergencies should be conducted globally.

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AUTHOR CONTRIBUTIONS

Xiaoyan Zhang contributed to the conception of the study and helped perform the data analyses with constructive discussions. Fenghua Sun, Yuxuan Wang and Zhiyan Zhu and contributed significantly to the analysis and manuscript preparation, while performing the data analyses and writing the manuscript.

ETHICS STATEMENT

No human subjects were used as a case study in this Commentary, hence, no ethical statement was obtained.

DATA AVAILABILITY STATEMENT

Data sharing not applicable—no new data generated.

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