

The importance of mental health of medical staff to the prevention and control of COVID-19 epidemic

X.-Y. Wang^{1,2}, Y. Liu³, Y.-K. Qin³

¹National Guizhou Joint Engineering Laboratory for Cell Engineering and Biomedicine Technique, Center for Tissue Engineering and Stem Cell Research, Guizhou Province Key Laboratory of Regenerative Medicine, Guizhou Medical University, Guiyang, China

²Department of Immunology, School of Basic Medicine, Guizhou Medical University, China

³Department of Gynaecology and Obstetrics, Affiliated Hospital of Guizhou Medical University, Guiyang, China

ABSTRACT:

— COVID-19 wreaked havoc and people's health was greatly threatened. The front-line medical staff do their best to battle with epidemic and encounter great psychological pressure. It is imperative to pay attention to their mental health and analyze the causes of their psychological stress. Moreover, effective measures should be taken for psychological protection and guidance. In this paper, we summarize the psychological pressure of the front-line medical staff and its causes, as well as the measures taken in China. These measures provide an important reference for other countries to further do a good job in epidemic prevention and control and strive to eradicate the pandemic as soon as possible.

— **Keywords:** COVID-19, Epidemic, Front-line medical staff, Psychological stress.

At present, SARS-Cov-2 has spread all over the world, and Corona Virus Disease (COVID-19) has posed a great threat to people all over the world and made an immeasurable impact on the global economy. With the epidemic going rival, COVID-19 has become a public health emergency of international concern ¹. As of April 14, 2020, there were more than 1.9 million laboratory-confirmed cases and 120 thousand deaths from COVID-19 in the world (WHO). Most affected countries have declared a state of emergency, such as the United States, Italy, Spain, Germany and France. In fact, China is the first country that took preventive and controlling measures. Affected by the epidemic, Chinese government invoked "close Wuhan city" where the pandemic was serious on January 23, 2020, such as: closed road traffic, suspended industries, prohibited personnel flow and exchanges ². Since then, other provinces and cities in China have successively launched a first-level response according to the development of the epidemic, including traffic control, community control and so on. By quickly setting up Huoshenshan and Leishenshan hospitals for treatment of confirmed COVID-19 patients and gathering medical staff from other provinces, the government

provided targeted support to the areas suffering heavy epidemic in Hubei Province. With the government setting up "square cabin" hospitals for COVID-19 mild patients and implementing the preventive and controlling measures across this country, the epidemic was gradually brought under control, and then the provincial medical teams withdrew. On April 8, Wuhan, the city with the worst epidemic, announced the unlock, and various industries began to resume work and production. As of April 14, 2020, there are a total of 82295 accumulative confirmed cases in China mainland, including 3342 deaths and 113 severe cases. At present, the COVID-19 epidemic in China is basically under control. Although a small number of confirmed cases have been added, most of them are imported from abroad. As long as government intervention is strengthened, the epidemic can be prevented and controlled.

However, the front-line medical staff has a series of adverse psychological problems due to stress, such as fear, anxiety, depression and so on. Using the convenient sampling method, Yuan et al³ investigated 309 medical staffs with a self-designed general demographic data questionnaire, sudden public health event psy-

chological questionnaire and simple coping style questionnaire. The results showed that during the epidemic of COVID-19, the risk of adverse emotional problems among medical staff was higher³. What's more, Cai et al⁴ conducted a cross-sectional survey of 54 military medical staff who worked in the front line of Huoshenshan Hospital to fight against COVID-19 for 2 to 4 weeks, using the Athens insomnia scale. It was found that the quality of sleep amongst health staff involved in the fight against COVID-19 is poor⁴. In addition, according to Wang et al⁵, the front-line medical staff is relatively in low spirits, such as strong somatization, anxiety, phobia and emotion.

The causes of psychological stress of medical staff in the first-line of epidemic prevention and control mainly include few aspects. Firstly, some nursing staff are young and lack of work experience, and the epidemic occurred suddenly, the front-line nurses were not fully prepared psychologically. Secondly, the epidemic is developing rapidly, and front-line nurses will also worry that they, their families and colleagues will be infected with COVID-19. Thirdly, those staffs were not only arduous but also intensive. They are in close contact with COVID-19 patients every day, so there is a high risk of infection. Moreover, some severe COVID-19 patients die because of aggravation of the condition, ineffective rescue and inadequate treatment, which will have a psychological impact on them. Fourthly, because the COVID-19 epidemic is developing rapidly, it affects a wide range and has a large number of infections, with no effective treatment. The daily information about the epidemic is overwhelming, and some of the information is unreliable, which will cause great panic to the people, and healthcare workers will also be affected to a greater or lesser extent. At last, because the situation is urgent, there is not much time to popularize knowledge about psychological adjustment to medical staff and get counseling on time when they are in psychological trouble.

Accordingly, it is necessary to pay attention to the psychological problems of medical staff, because this directly related to the treatment of patients and the efficiency of epidemic prevention and control. The national government, health committees and hospitals at all levels have attached great importance to this event. Moreover, effective policies and feasible measures should be taken to protect the mental health of medical staff, for instance carrying out pre-job psychological training, strengthening safety protection, reasonably arranging rest, real-time psychological monitoring, ensuring transparent information and emotional expression, taking the initiative to seek help when necessary and seeking professional psychological guidance etc. In addition, all sectors of society have also made positive contribu-

tions to the mental health of medical staff during the prevention and control of the epidemic: the news media increased coverage of medical personnel to publicize their positive contribution to the prevention and control of the epidemic, Wuhan volunteers to pick up medical staff to and from work, and A-level tourist scenic spots to implement a free policy for medical personnel after the epidemic.

CONCLUSIONS

In conclusion, during the period of epidemic prevention and control, we not only need of a series of measures issued by the management department to protect the mental health of medical staff, but we also need of all sectors of society to provide care for medical staff, so as to provide reference for the prevention and control of COVID-19 epidemic in other countries. It is hoped that other countries will attach importance to the mental health of medical personnel and strive to eradicate the epidemic as soon as possible.

CONFLICT OF INTERESTS:

The authors declare no conflict of interest.

REFERENCES

1. World Health Organization. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). (2020-1-30). [https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-\(2005\)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-\(2019-ncov\)](https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-(2005)-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-(2019-ncov))
2. Notice of pneumonia Prevention and Control headquarters of novel coronavirus infection in Hubei Province. Wuhan Municipal people's Government, 2020. http://www.wuhan.gov.cn/hbgovinfo/zwgk_8265/tzgg/202001/t20200124_304142.html
3. Yuan H, Luo L, Wu JY, Hu D, Lei K, Huang JY. Analysis on the Psychological State of Medical staff during COVID-19 epidemic and suggestions on how to deal with it. *Medical Journal of Wuhan University* 2020; published online April 7. (Chinese). DOI: 10.14188/j.1671-8852.2020.0229 <http://kns.cnki.net/kcms/detail/42.1677.R.20200403.1326.002.html>
4. Cai J, Qiao AH, Bo YH, Xu ZM. Sleep status and influencing factors of Huoshenshan Hospital's first-line anti-epidemic medical staff. *Hosp Admin J Chin PLA* 2020; 27: 204-207.
5. Wang J, Chen YQ, Zhou Z, Jiang AN, Guo JH, Chen ZH, Wan QR. The influence of COVID-19 epidemic situation on the psychological status of front-line medical staff in Wuhan. *Medical Journal of Wuhan University* 2020; published online March 5. (Chinese). DOI: 10.14188/j.1671-8852.2020.0098 <http://kns.cnki.net/kcms/detail/42.1677.r.20200303.2159.001.html>