

## **Exposed to Extreme Psychological Stress during the Corona Crisis; Qualitative Metasynthesis of Chinese Research on the Psychological Burden of Medical Treatment Personnel**

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### **Empirical Study**

#### **Abstract**

The Covid-19 virus crisis is related to virology, medicine, politics, economy, lockdown, the constitution, masks, the future, and short-time work. But what about the mental health of the medical practitioners on the frontline? Experiences and research in China provide not only an insight into the almost superhuman medical performance, but also the most extreme mental stress and strain of these same practitioners. Some of the key conclusions derived from these studies may be of interest to practitioners in other countries.

**Keywords:** Corona crisis; Mental stress; stress management; anxiety; Depression; China

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## **Introduction**

The outbreak of the Covid-19 virus crisis began in December 2019 in Wuhan in the Chinese province of Hubei. Within a very short time, this epidemic has developed into a worldwide pandemic. The treatment and care personnel working in this field are exposed to extraordinarily high psychological stress. The experiences gained in China have been scientifically evaluated and published in renowned journals such as *The Lancet*, *Journal of Health Psychology*, or *Psychotherapy and Psychosomatics*.

According to the experts, these publications should help us better understand the unique situation on the front line and to learn from the experiences gained, wherever in the world one is confronted with the Covid-19 virus crisis. Here are some of the experiences gained in the Covid-19 virus hotspot, Wuhan, and other regions of China as well as recommendations derived from them:

### **What were the psychological challenges?**

As if from nowhere, the medical practitioners were confronted with completely new dangerous circumstances. There was very little experience on which they could rely, such as from the SARS epidemic (2002/2003). There was uncertainty related to the medical requirements as to how to react to the infection in the first place. This uncertainty led to a deeply traumatic experience for frontline personnel. On the one hand, they were working almost around the clock. On the other hand, they were separated from family and friends, and placed in social quarantine, so to speak. Added to this was the stress caused by the infection of the treatment personnel and deaths among overworked doctors and nurses. Everything flooded in on the treatment staff, as if from nowhere; they were completely unprepared. They learned about the crisis in real time, made the best possible preparations for the circumstances directly, and immediately began treatment. There was no time to get used to the situation before going into social quarantine for many weeks, sometimes even months. Younger practitioners were particularly affected by the psychological stress (Liang, Chen, Zheng, & Liu, 2020). This has been confirmed by a psychological study in Germany, which reported that younger people especially suffered from the psychological effects of the crisis (I am referring here, among others, to the younger practitioners who are in social quarantine on the frontline) (Rudlin, 2020). Moreover, it is feared that these experiences will have long-term consequences for the practitioners (Kang et al., 2020).

There were 3 main reasons for this work overload, the teams worked on site without interruption, sometimes for 16-18 hours or even longer, over several weeks at a time. Most of them slept in the hospital and not at home. For example, in Wuhan/Hubei, there were about 42000 treatment personnel working with about 67801 clients/patients as of 18.2.2020. In addition, a very large number of people from the population were also providing support. Finally, according to various Chinese studies, the practitioners personally experienced this work overload and stress as traumatizing.

Quite quickly, towards the end of January 2020, guidelines for psychological crisis management were issued by official government agencies. These guidelines are mostly related to general psychological support in crisis groups. They also developed manuals for psychological crisis counselling, initiated research, and paid attention to practical, pragmatic professionalism, depending on the situation. These guidelines are related to the supporting of local practitioners and the population in general.

In China, this mental health support is faced by difficulties such as

- In 2015, there were about 27733 psychiatrists for a population of more than 1.4 billion people, only 57591 psychiatric nurses and about 5000 psychotherapists (Duan & Zhu, 2020). In 2020, evidently this number has increased. However, the increase in the number of experts until 2020 cannot hide the blatant shortage (In comparison, in Germany, more than 75,000 psychiatrists and psychotherapists work for a population of about 83 million) (DGPPN, 2019).
- Concepts of psychological crisis intervention were certainly already developed during the SARS crisis and the earthquake in Sichuan, but they have not yet been sufficiently incorporated into the further training of therapists and counselors, and thus, into their everyday practice. At that time there was neither the Internet nor social media.
- The structures of official coordination are not sufficiently developed or do not function according to concrete needs. There is no central organization/coordination/agreement and provision of necessary psychological crisis counselling by competent authorities and between the regions. In addition, there is a lack of qualified experts in many places for the local provision of competent and adequate psychological care (Duan & Zhu, 2020).
- Added to this is media coverage or staging of media reports, which in part stirred up fears and prejudices in general, especially against the Chinese in general and China as a state (Sollmann, 2020). One study has been devoted specifically to the potential impacts of misleading and biased media coverage on Chinese individuals' mental health (Wen, Aston, Liu, & Ying, 2020). This study considers the perceived racial discrimination stemming from coronavirus and the effects of such discrimination on individuals of Chinese heritage as a public health crisis (Wen et al., 2020).

In the course of my professional activities in China (currently only online), I observed the enormous commitment in this field in China as early as mid-January 2020. On 24.1.2020, I was asked, as well as other colleagues, to create a concept for psychological crisis consulting, which was then communicated via social media and official consulting institutions. Due to my work in China in the field of psychotherapy, I was from the very beginning prompted, differentiated, and informed by experts/colleagues working in relevant positions. Through my own online activities (lectures, supervision, etc.), I also gained insight into the daily working situation, and thus, I was faced with questions related to handling such a crisis, which had not yet been raised by my colleagues. This insight, on the one hand, confirmed what was reported in investigations, and on the other hand, gave me a more comprehensive understanding of the situation. This is important, for example, in order to be able to compare possible differences between on-site treatment at the frontline, general psychological crisis counseling, and online counseling; moreover, to find differences between what is officially reported and what is really done on the frontline.

In China, there are countless psychological counseling initiatives, online platforms, webinars, etc. For example, since the beginning of February, the Chinese Academy of Social Sciences has offered a special counseling service for foreign students. Since January, there has also been an active exchange of experiences, for example, between the German-Chinese Academy of Psychotherapy (DCAP) and their Chinese colleagues. Such cooperation has been kept quiet, and the resulting valuable experiences are therefore only available to a small circle of practitioners in Germany

“in secret”. In China, health practitioners have had many valuable and corona-specific experiences since the beginning of the corona crisis. Sharing these experiences could be in the interest of the health care systems in other countries, since they provide scientific knowledge about the psychological and emotional burden on practitioners. It seems, however, that these are either communicated publicly to a very limited extent, at least in Germany, or are only available to the small circle of practitioners who have direct contact with practitioners in China.

The results of 72 online surveys in China on the psychological impact on practitioners were already available by 8.2.2020, and 29 books on Covid-19 virus had been published at that time 11 of which dealt specifically with its psychological effects (Liu et al., 2020).

### **What were the significant effects on health practitioners?**

The results of some of these studies are summarized in the following points:

- In a survey on more than 1500 participants in Guangzhou Nanfang Hospital (the target group included practitioners) reported stress related symptoms, depression, anxiety, and insomnia in 73.4%, 50.7%, 44.7%, and 36.1% of participants, respectively (Lai et al., 2020).
  - A study in Beijing in early April on more than 700 participants reported that treatment personnel show the highest number of stress symptoms and fear of illness from the virus compared to non-treatment personnel (Cuifh, 2020). They also showed a higher prevalence of hyperarousal (hyperexcitability of the autonomic nervous system), trauma symptoms, and insomnia. In addition, they felt hopeless, powerless, and anxious about returning to their homes and their old life routines. What is astonishing, however, and this has been reported in various studies, is that it is precisely the treatment personnel on the ground, working on the frontline, who have made little or no use of psychological support. There is some speculation that these practitioners simply wanted to have peace and quiet rather than psychological support. Ultimately, however, as I have been told, this phenomenon has not yet been sufficiently clarified. One possible reason could be that many psychological experts in China are not sufficiently familiar with the distinction between (objective) stress and (emotional) strain, which is very important especially in stressful situations. At this point, objective stress is understood in terms of aspects such as above-average working hours, and risk of possible infection. Emotional strain is understood to mean the way in which each individual emotionally and psychologically processes what has a stressful effect on him or her. I guess that there could also be some specific cultural pattern of reaction, typical to Chinese people, which makes it difficult to ask for help, and personal and emotional support (Sollmann, 2018).
- Other studies have reported psychologically detrimental effects (especially among the population) on both divorce behavior and (self-) understanding with regard to love, intimacy, and relationship.
  - A study of the Beijing Union Medical Hospital in Beijing (PUMCH) confirms that more than 50% of nursing personnel showed great concern in response to negative information during the crisis (only 6.7% of doctors) (Cao et al., 2020). The same study points out that, as is the case in other studies, the researchers did not specifically refer to possible patterns of stress reactions or the danger of burnout.

- Great importance is ascribed to digital media and social media. For example, an artificial intelligence (AI) tool (Tree Holes Rescue) was used to evaluate social media messages in order to assess the possible risk of suicide. The tool was used via WeChat. The AI tool analyses messages and informs the sender of the messages in case of a threat (WeChat can be compared to WhatsApp) (Liu et al., 2020).
- Even if there was good acute treatment in the clinic, it was not possible to provide the absolutely necessary psychological care and follow-up treatment for the patients (including stress management). The practitioners were not trained for this. This put them under additional stress, as they were directly confronted, helpless or even powerless, with the psychological effects of the corona crisis in such cases. In addition, there was often a lack of structure and cooperation with the authorities to ensure reliable aftercare.
- At RenMin Hospital in Wuhan, four different functional groups for psychological crisis counselling were identified. Each of these groups needs a different approach. The groups are the psychological communication team (responsible for the internal organization of communication and communication to the outside world), the psychological-technical support team (responsible for the development and provision of specific methods, regulations, technology, and supervision), the psychological-medical team (medical-psychological staff consisting for example of psychiatrists and psychologists responsible for specific on-site psychological treatment), and the telephone hotline team (consisting of volunteers with specific training, e.g., telephone counseling) (Xiang et al., 2020).
- In almost all studies, the loss of a careful, (pro-)active preparation for a possible (epidemic) crisis in society is criticized. Such a preparation is increasingly demanded for the future.
- A merger of numerous Chinese hospitals is not only calling for psychological crisis counseling, but also for psychological screening carried out at short intervals in order to be able to recognize possible overload at work (stress, anxiety, depression, etc.) at an early stage or to take countermeasures.

### Summary and outlook: What is the lesson learnt?

The results of the studies speak for themselves. They can serve the international exchange of experience (Kang et al., 2020). This exchange of experience has already taken place in Iran, for example, the study by Fardin (2020) emphasizes the need to learn from these psychological experiences for future similar crises. The experiences of health practitioners over the past months in the Covid-19 hotspot in China should be transferred (modified) to the circumstances of the local practitioners in Germany and other countries. The following considerations are necessary:

- Learning from the experiences of the Chinese health practitioners can lead to a substantial improvement of the psychological status of practitioners in Germany and/or other countries (improvement and strengthening of the psychological burden of the practitioners). Psychological disaster assistance and counseling has become an important part of the disaster relief system, playing a crucial role in restoring and maintaining emotional stability and security, and reducing trauma-related stress (Wang, Zhao, Feng, Liu, Yao, & Shi, 2020).

Psychological disaster assistance and counseling includes

- Improved training in psychological crisis consulting
- Coordination of structural offers: Integration of pre-operative and post-operative

- care and acute treatment
- Coordination of O&O offers (online and offline offers)
- (Integration of) quantitative research and qualitative studies or differentiation of research items: Instead of focusing primarily on psychopathological items/concepts such as depression, anxiety, stress, etc., criteria for everyday experience should be integrated such as loneliness, homesickness, powerlessness, aggressive behavior, etc. On the one hand, this would make it easier to depict everyday experience. On the other hand, the results of the examination would not pathologies people or classify them in pathological categories.
- Promotion of the development and integration of AI
- Differentiation of the stress load by objective external stress factors and emotional and psychological strain. Thereby, one does justice in particular to the experience of individuals. This should also include the development of research designs that can also be differentiated according to individual stress profiles. These are typical patterns of experience and behavior that are "automatically" activated in the sense of individual survival patterns under stress in crises. The more such a subdivision and allocation of the results succeeds, the more purposeful stress management can be (Sollmann, 1999). A specific consideration of the situation under criteria of possible burnout is absolutely necessary (Cao et al., 2020).
- It is important to conduct quantitative and qualitative research in this regard. Items, according to the study by Wang et al. (2020), which cannot be measured quantitatively, can be qualitatively touched and clarified, e.g., through supervision.
  - The specific psychological strain is given far too little consideration in the media coverage of the Covid-19 virus crisis (improvement of the social perception of practitioners).
  - Finally, the international exchange of experience between China and Germany and/or other countries can be clearly and concretely improved by taking into account the experiences of practitioners in China and transferring them to the situation in Germany (improvement of the intergovernmental exchange).

## **Conflict of Interests**

Authors have no conflict of interests.

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