

Exploring Risk Factors of Psychological Distress among Chinese Medical Workforce

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Abstract: As the pioneer in responding COVID-19 pandemic in 2019, many problems were exposed in the health system, which was concealed and neglected before the pandemic, especially mental health wellness among health workers. This paper focused on the risk factor in the health work environment, to find the external reasons for health workers as this is the most obvious and examinable way to target the association. Different risk factors in the Chinese health workplace indicated one risk factor which influences health workers in one circumstance, could also exist in other contexts. In conclusion, there is not only one risk factor associated with mental health problems, but various factors work together to trigger the bad influence. The suggestion is to pay more attention to health workers' mental health wellness by monitoring their mental health status constantly, therefore, implement the intervention timely. Research and policy reviews are required for providing health workers with better circumstances, to support and sustain their mental health and well-being. Further studies are required in the Chinese rural context, as there are more challenging treatments that still require the intervention of medical professionals, and the risk factors present in remote areas may be different from those in urban medicine, so the reasons for affecting the mental health of medical staff may be different.

Keywords: health workers, medical workers, mental health, psychological distress, outbreak

1. Introduction

China was the first country which responded COVID-19 pandemic. However, because of the unexpected and rapid spread of viruses, the Chinese health system was overburdened by limited resources and workload. A bigger cause of concern is mental disorders among medical workers. According to the study of Zhou et al [1], it was alarming that the well-being of mental health among Chinese health workers was substandard. Recent research has identified indicators of anxiety, depression, psychological trauma, insomnia, and mental health distress as the main detrimental effects on the mental health wellness of health workers [2]. It is demonstrated by Li et al recent 's study [3], which included 65 researchers and 97,333 healthcare professionals from 21 countries, there was a discernible rise in the rate of anxiety, mild depression, and post-traumatic stress disorder (PTSD) in healthcare personnel during the period of the outbreak. According to data, the outbreak was accompanied by a greater proportion of somatization, insomnia, anxiety, sadness, and obsessive-compulsive symptoms [3]. The rates of depression and anxiety symptoms in the self-reported survey were also acute among the examined medical professionals [4]. However, even though a large scale

of research focused on psychological well-being among health workers, it is indispensable to pay more attention to what factors could specifically cause the higher risk of mental health problems. For instance, fear of the coronavirus acted as a mediator between anticipated risk and resiliency, which mediate mental health problems [5]. Furthermore, most studies adopted cross-sectional study which is less time-consuming and able to find out results rapidly.

Zhang et al suggested that a longitudinal method might be able to verify whether allostatic overload takes place (fatigue may follow a while), as well as whether psychiatric disorders, particularly posttraumatic stress disorder, might progress along with the outbreak [3]. Therefore, besides amplifying the risk factors that exist in the health workplace, specific groups also need to be discussed regarding the mental health outcome. Furthermore, it is necessary to stratify the risk factors and the main reason why these risk factors cause mental distress in health workers. Even though a recent study has targeted the potential hazard in the health workplace [5], the causalities have not been explained. Besides, most recent research focused on the eastern and first-line provinces in China, the western area may experience more stress due to a lack of human resources with heavy workloads, and mental health professions. In addition, even though healthcare workers perceived more occupational stress, they did not receive much support for their mental health and well-being. This article will embed the causality of risk factors and how they impacted health workers' mental health status. The three most plausible risk factors are addressed, which are overwhelmed workload, doctor-patient relationships, and the risk of exposure during a pandemic. Each content describes what are the possible reasons for bad psychological health, how the factors influence the status of mental health among medical personnel and why this causes a higher hazard to their mental health wellness.

2. Risk Factors in the Work Environment

To figure out what causes the vulnerability among Chinese health workers, it is noted that the work environment in the Chinese health system is always a fundamental context which impacts health worker's mental health because there are sources of stressors under this context which may cause the poor mental health level by the whole of medical workers. The stressors in the work environment need to be particularly notified, as they are existing as a blasting fuse on health workers' mental status. A study showed only 13.4% of 1679 surveys from Heilongjiang Province, China, were satisfied or very satisfied with their income, compared to above 50% who were dissatisfied or very dissatisfied with it [1]. It demonstrated health worker may appreciate their job and efforts more highly if they could earn more money. Unfavorable workplace conditions, such as inadequate pay and unequal prospects for professional advancement, have demotivated health providers, particularly those who have high aspirational demands. Nevertheless, it is also critical to target other risk factors to explain what an associate with health workers' poor psychological conditions under an unfriendly work environment is. Aside from the salary, which is closely related to the work, medical professionals are more likely than non-medical personnel to feel unsatisfied with their employment because of the heavy workload, increased risk of exposure, and patient complaints. Three different risk factors are noted in the Chinese health system which seem more correlated with the status of mental health among health workers, which are discussed below — overwhelming workload, doctor-patient relationship, and risk of exposure during the pandemic.

2.1. Overwhelmed Workload

In addition to the effects of a heavy workload, long hours, or prolonged night shifts, the medical sector is under pressure. There are limited resources in the medical workforce in China, and medical workers such as nurses and doctors, especially in higher-level hospitals [6], are facing a huge challenge of serious mental health problems. This may be due to a huge workload and a shortage of

human resources; many primary healthcare providers were forced to take on duties that were outside the scope of their employment [7]. This situation was exposed during the pandemic. Historically, Chinese health workers were occupied with a heavy workload after the reform of the Chinese health system in 2009. Basic primary healthcare has developed into a significant service component of the Chinese health system under the reform arrangements, the data demonstrate how these changes have resulted in a variety of new employment characteristics connected to menial labor, a high workload, and lower intensity [7]. Two different groups were observed as the properties of work and duties, which are nurses who are working for the casual shift and emergency personnel.

2.1.1. Nurses

The interviews which Zhang et al displayed the actuality of the Chinese health system [7]. A nurse from the basic primary healthcare service in their study said “Too much paperwork and too many follow-up tasks! We need one or two full-time employees to do the daily, weekly, monthly, and yearly reports. But we can’t afford that extra hands, everyone is doing two men’s jobs.” In 2020, the study discovered that the rate of mental distress, anxious feeling, and depressive symptoms among Chinese nurses in China was 15.9%, 16.0%, and 34.6%, correspondingly [4]. Not only the perceived stress on the daily workload, the conversation and task assignment from doctors to nurses may also cause difficulties in collaboration. For instance, social communication may become difficult during COVID-19 due to N95 masks and protective gear, which could lead to irritability or repressed emotions, and psychological stress also affects nurses’ emotions and weakens their coping mechanisms [8]. In addition, as a combination bridge between patients and doctors, nurses are expected to be more capable of communication. However, communication is sometimes disrupted due to the patient’s quality and emotions. Furthermore, even individual nurses displayed indicators of psychological discomforts, such as restlessness, impatience, and excitability, but declined to seek psychiatric assistance and insisted that they were in good health [9]. This may be due to the stigma in the workplace which limited the intention of looking for mental health help.

2.1.2. Emergency Personnel

The emergency personnel also known as ambulance personnel or rescuer personnel, during the pandemic, were also involved as front-line workers. These medical personnel were grouped as the most vulnerable health workers who perceived psychological distress, as apart from the nurses, the medical staff serving in the emergency centers are considered to be the most overworked. The findings showed that anticipated incidence rates for depression, anxiety, PTSD, and general mental health distress in ambulance health workers were 15%, 15%, 11%, and 27%, correspondingly [10]. PTSD has a higher incidence in medical personnel, especially when related to death. A recent study also showed that medical staff who worked in the emergency room (ER) experienced a high incidence of workplace violence which would affect the staff’s mental health status. The heavy workload with distrust from patients leads to a higher chance of psychological distress, as they have to endure the stress externally from patients and internally from their job obligations.

2.1.3. Burnout

In addition to the mental health issues that can cause burnout, it is also caused by heavy workloads. Medical staff can feel tired due to long shift changes and tasks outside of their duties. This is especially true for those who lack family support. It is widely believed that stress in highly intensive work affects burnout among health workers, which impacts their performance in their jobs. This might be due to the challenging conditions such as the COVID-19 pandemic, that are now present in the medical industry, which is quite likely to lead to burnout. In the study of healthcare professionals,

74.6% reported having a poor quality of life, workers who reported higher levels of burnout had the significantly worse overall quality of life, and they also had a higher likelihood of having poorer psychological health [11]. This study also indicated that greater demands and burnout scores are viewed as being harmful to one's health and well-being [11]. In addition, the quality of life which impact psychological health may also be due to the unbalance of duty and life. In other words, health workers' burnout, impacts negativity on patient care [2].

2.2. Doctor-patient Relationships

The doctor-patient relationship is a topic worthy of an in-depth discussion in the Chinese healthcare system. Usually, patients approach doctors for advice or treatment of their problems, so most of them will always have high expectations of them. However, when expectations are not met, patients can become irritable and angry, believing that the doctor has not done his or her job as well as he or she should have. Communication is usually complex between doctors and patients; many doctors reckon they felt anxious and stressed when talking about patients' symptoms. It is widely believed that the relationship between Chinese doctors and patients is vulnerable and needs more accountability in doctors and more truth between them. Overcrowded facilities and overworked medical staff result in hurried, disrespectful treatment of patients, and sometimes make patients feel neglected, which may be the main contributing factors to the friction between doctors and patients [12]. Due to the distrust that happens between doctors and patients, particular events such as violence take place as a risk factor to impact bad psychological health among health workers.

Workplace violence (WPV) is one risk factor that may impair medical employees' mental health and the trust they have in one another when treating patients. Harassment, difficulty, reputational damage, mob behaviour, threatening behaviour, physical assault, and sexual harassment are the types of violence that occur more frequently among health workers [13]. According to the previous study, sleep quality, psychological stress and other self-reported health problems of health workers were all significantly impacted by WPV exposure [13]. 7.8% of nurses overall said they had experienced physical violence, while 71.9% said they had experienced non-physical violence in the year before [12]. According to a large number of complaints from medical staff, violence, whether contact or non-contact, is very common and unavoidable in medical settings. This fact is a source of tension for some personnel working in high-risk medical sectors. In the mental health sector, for example, the chances of encountering emotionally unstable patients and family members are high, so doctors and nurses usually have to be concerned about the mood of patients and their families while serving in this sector. The study by Zhou et al demonstrated that 87.5% of participants believed that workplace violence or clinical conflicts affected the attitude of health workers [1]. This may be because that patients and their families typically have beliefs about medical care and a propensity to think that disease symptoms may be completely disciplined or alleviated in hospitals, which leads to limited tolerance for unsuccessful medical treatments [12]. This implicates medical workers often struggle with not letting the patients and their families down. Jiao et al also indicated that several variables, such as disappointing treatment outcomes, misunderstandings, and the qualities of the healthcare staff, may contribute to WPV against health practitioners. [12]

2.3. Risk of Exposure/ Contact with Patients during a Pandemic

Doctors and nurses are high-risk exposure populations because respiratory droplets and close contact are the main ways that COVID-19 is spread, especially in the initial phase of the pandemic when these medical workers were unaware of the risk of infection [6]. At the beginning of the pandemic, restricting access to personal protective equipment (PPE) is the most pragmatic problem in the health workforce. Medical staff who were working on the frontline had to overcome the limitation of the

mask, as well as the lack of family support due to the quarantine. They were more likely to experience insomnia, anxiety, sadness, and obsessive-compulsive symptoms if they were at risk of contact with hospitalized patients who were infected with COVID-19 [3]. The risk components of mental health problems during the outbreak are also associated with less social support and PPE.

2.3.1. Lack of Social Support

Social support often occurs as a mediation between mental health problems and social factors. It is an external source which provides better resilience for health workers. But it is sometimes absent, especially during COVID-19. In addition to this, some medical professionals have a background lack of social support, such as being divorced, widowed, or living alone. These confounding factors affect the mental health of these healthcare professionals. Some healthcare professionals even lose family members or workmates during an epidemic, which can contribute to the grief of losing someone even in a high-pressure environment. Social support is always known as informal support, it could come from a family, co-workers and even patients. Family as one of the social supports is also regarded as a protective factor against psychological distress. However, if the medical workers had contact with the COVID-19 patients, they would decide to stay away from their families who might have a positive impact on them due to afraid of contamination, therefore, the support is involuntarily absent in this case. Losing contact with family members causes isolation on a physical and psychological level, which can strain relationships [8]. Healthy relationships serve as a social safety net during difficult times like the COVID-19 pandemic.

2.3.2. Lack of PPE

PPE functions as an important role, which helps to prevent the spread of the virus. Lack of PPE is one of the most concerning risk factors which affect health workers' mental health status during the pandemic. The applications of PPEs are critical for health workers during the pandemic. However, medical staff, especially those who work at the frontline had to manage high exposure to infection, managing patients' angst, diminished access to protective gear, and a lack of knowledge on how to treat and react to the virus's varied manifestations at the beginning of the pandemic. A high workload was present as the capacity of taking care of patients and adherence to care needed to be considered at the same time. Hence, it is undoubtedly that lack of protection and restriction on accessing PPE could overlie the stress on health workers. They were more likely to experience depression and mental distress when access to personal protective equipment was limited since they were concerned over a lack of protective gear and feelings of helplessness while dealing with seriously unwell patients [9]. As a result, perceived danger and anxiety among healthcare providers might lead to an increase in mental health issues, which may have short- or long-term psychological repercussions [5].

3. Recommendation

Implementing a feasible policy can effectively remit the mental health problem among health workers. However, it is controversial that implement interventions for health workers due to the public resource and the obscure policy. Zhang et al suggested both the national and local governments can play a part in promoting healthy coping by increasing investments in Chinese health system resources such as more input in finance and reforming ineffective human resource regulations [7]. Policymakers need to take the pandemic as an opportunity to improve mental health care for medical staff and constitute a far-reaching strategy for the welfare of health workers, instead of a short-term plan. How to sustain mental health wellness in the health workforce needs to be considered beyond the COVID-19 pandemic. Therefore, the suggestion of prevention and self-care, easy access to mental health help and possible policy which can protect them from negativity in the work environment. Effective

interventions can support clinicians in maintaining their psychological state so they can carry on working to provide basic care and health services in critical circumstances without experiencing mental issues [5]. As a group of people who are more vulnerable to WPV, it is essential to teach healthcare workers how to protect their legal rights in the event of violence and avoid means of crisis for their safety. Therefore, different tools need to be involved in the Chinese healthcare system to help medical staff address these potential dangers and therefore give them a more relaxed and pleasant working environment. Self-care, prevention, intervention tools and protection are three means which are suggested in this article.

3.1. Self-care/Prevention

It is noted that some health workers lack awareness of mental health wellness even though they displayed symptoms of psychological distress. Chen et al demonstrated that there are lots of health workers who refused to receive help due to a lack of awareness or stigma [9]. There is a Chinese proverb that says, "It is difficult for a healer to heal himself". The self-condemnation and fear of changes in the attitudes of colleagues and superiors that doctors experience when they learn they have a mental illness can follow from the medical practitioner's level of self-esteem. There is only one-third of the medical staff has reportedly sought assistance from mental health professionals, according to a self-reported survey [6]. Therefore, it is critical to expand psychoeducation among health workers to increase their knowledge and awareness of mental health wellness. It is also critical to arrange for appropriate rest, provide essential and sufficient medical protection equipment, and provide rehabilitation programmes focused on enhancing psychological well-being and resilience [3]. Psychological health professionals are the suitable group to hold this workshop, which can also help colleagues earn ownership in their workplace by sustaining stable mental health status.

3.2. Intervention

It is necessary to carry out appropriate interventions to improve mental health and lessen long-lasting psychological effects [6]. To combat the COVID-19 epidemic, focused psychological interventions for medical professionals should be included in the work plan [4]. Besides, free access to mental health services needs to be provided in the hospital, to make every health worker equally access the service when they feel stressed. To accomplish that, the most susceptible employees, such as those who interact with patients most frequently, should have access to the resources they need at work, and employers should foster a positive environment there. Further, the COVID-19 outbreak offers a lesson for bettering China's psychosocial and mental health support infrastructure, such as the availability of online mental services at this trying time [8]. In addition, the medical community should provide psychological interventions, particularly for single people, married, have low educational backgrounds, lack social support, never confide their problems to others, and report higher levels of perceived stress [4]. Monitoring the mental health status of each health service provider constantly, priorly health workers who are under pressure – such as emergency providers, nurses, and frontline health workers (even post-pandemic).

3.3. Protection from WPV and Risk of Exposure

The most concerning problem in the Chinese health workplace is WPV. To diminish WPV at the organizational level, preplacement training should concentrate on at-risk populations, and national initiatives should also be devised to address WPV [12]. They also recommended improving public understanding of the adverse effects of the WPV issue on healthcare providers through a large-scale media campaign and implementing the necessary policies and laws. For example, to advocate and encourage health workers to report the violent experience and then provide timely protection for them.

Furthermore, health workers should have the capacity on detecting hazards, to achieve self-help and early-stage prevention. During the pandemic, it is also important to address protection against exposure to the virus. Yıldırım et al advocated that social networking sites need to be broadly used, to easily offer the least bodily contact with medical practitioners and can be used to administer resilience-based interventions remotely, then lowering the risk of coronavirus infection [5].

4. Conclusion

To sum up, the purpose of this paper discusses the potential risk factors which more likely to influence mental health wellness among health workers, while the incidence rate of health workers' mental disorders raised during the COVID-19 pandemic world widely. Different risk factors were displayed in each situation. The main problems that happened among health workers in China are the workload, intense relationships between doctors and patients and lack of protection, and each factor has been stratified by a different group of people or scenarios. This article focuses on the psychological difficulties faced by healthcare workers during the outbreak. Research that studied current events needs to catch up to examine what other problems medical personnel may face during the later stages of the epidemic. Therefore, confines the study of the psychological suffering of medical personnel to a particular era, while the study of mental health is a long-term process. Even though a lot of pieces of literature are in the Chinese context, data is still undermined due to the short-period studies and the difference between stress experience and psychological condition is obscured. This article enumerated the possible risk factors related to mental health problems among medical workers. Some groups in the health workforce shared the same risk factors, and these risk factors overlap in the work environment, especially how mental health wellness has been disrupted by the COVID-19 pandemic. Even though the risk factors in the medical workplace are putatively associated with psychological conditions, other personal factors such as personality or educational background may also exist to influence the rate of mental health outcomes to come. Home difficulties can affect people's ability to work, and vice versa; problems at work, such as a lack of support from co-workers and superiors, a lack of prospects for advancement, and poor leadership, can affect people's personal lives as well. As a result, even if these risk factors may not be the only reason why health workers have mental health problems, they could be the main clues for inducing pragmatic reasons when consulting mental health problems among health workers. One risk factor cannot be noted as the exclusive cause of fragile mental health among health workers, therefore, confound factors and mediators are required by further quantitative research. What is more worth discussing is the fact that healthcare in remote areas is more backward compared to urban areas. The quality of patients and medical staff varies, and while barefoot doctors can go some way to alleviating the heavy workload of medical staff, some of the more challenging treatments still require the intervention of medical professionals, and the risk factors present in remote areas may be different from those in urban medicine, so the reasons for affecting the mental health of medical staff may be different. However, the specific causes may require more in-depth research.

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