

## COVID-19 pandemic and its influence on mental health of healthcare professionals in Nepal

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**Background:** Given the unprecedented global public health crisis due to the covid-19 pandemic, it is important to recognize the psychological impact on health care professionals. Previous experiences from the smaller scale epidemiology and new literature on COVID-19 have shown that increased pressure on healthcare professionals is associated with rise in the psychological incidence rates. We have described the psychological burden of the covid-19 pandemic on health care workers in Nepal and reviewed the literature on the impact of previous epidemics on front-line health care workers. In addition, we discussed potential triggers and measures to minimize the front-line psychological pressure to deal with this biological threat.

**Key words:** Covid-19, Health care Professional, Mental Health, Pandemic

Although the first case of novel corona virus disease (COVID-19) was seen in December 2019, on January 3, 2020 the World Health Organization (WHO) declared the COVID-19 outbreak to be a Public Health Emergency of International Concern (PHEIC) and on March 11, 2020 it was declared pandemic by the WHO.<sup>1</sup> The COVID-19 has caused havoc throughout the world not just in terms of health but also economically. Educational institutions have been shut down. The uncertainty and postponement of semester and examinations is also a stressor for young minds. Many people have become jobless, and many are stranded in unknown territories, which are far away from their families. Most

affected countries have imposed 'lockdown' as a primary measure to prevent the transmission of this virus. Educating the young people may also not just help to prevent future outbreaks but also it can be the long term solution to the pandemics that spread throughout the world. Though the epidemiological studies of the disease have revealed that the children group are least affected with this disease, it is very important to raise awareness among them to prevent the further transmission of the disease.

Many emerging infectious diseases, which include several multidrug-resistant organisms and pathogens with pandemic potential, are described

to be originated in the Asia-Pacific region.<sup>2</sup> With many of the countries in this region being either underdeveloped or developing, the awareness towards the control and prevention of the disease transmission is remarkably poor. Moreover, many nations have extremely high population density, with many living under harsh and hostile environment, and the probability of disease transmission remains extremely high. Poor working environment, lack of proper safety equipment such as Personal Protective Equipment (PPE), and shortage of medical staffs, make the healthcare workers to work under immense pressure and highly vulnerable to disease transmission and psychological stress.

Due to the density of international travel and the immune capacity of the population, its transmission and lethality have proved to be higher than previous epidemics,<sup>3</sup> and thus triggering urgent and severe public health measures in many countries, including Nepal. This has created an unprecedented situation for citizens, policymakers, politicians and health care professionals, and the pandemic is considered to be the most serious public health crisis in a generation. As the statistics around the world suggest that healthcare workers are not immune to the COVID-19 infection, it is very important to understand the mental health status of the health personnel in Nepal under current circumstances. While epidemiology, prevention, diagnosis, and treatment of COVID-19 have become the main focus, it is increasingly important to study and address the health care needs of clinicians and other health care workers, who are in the front-line responding to the unprecedented demands of caring for patients with COVID-19.<sup>4,5</sup> As of 16th June 2020, a total of 6211 cases of COVID-19 were confirmed in Nepal, with 19 deaths and 1041 recovered patients. Although much focus has been placed on new vaccine or effective antiviral drugs, psychotherapy and pharmacotherapy interventions for the psychological impact of the COVID-19 outbreak in suspected patient, observed patient, and medical health care personnel are, indeed, completely overlooked.

## Discussion:

### Psychological implications for general public, patients and children

In the face of this large-scale threat of infection, people are under increasing psychological pressure. Data from previous epidemics, such as severe acute respiratory syndrome (SARS) in 2003 and H1N1 influenza in 2009, indicate that the community has suffered from great fear and panic, which has had a significant psychological impact.<sup>6, 7</sup> Similarly, the Covid-19 is affecting the community in similar way. At the initial stage of the prevalence of COVID-19 in China, a recent public survey showed that about 1/3 of participants reported moderate to severe anxiety, while more than half of participants described its psychological impact as moderate to severe.<sup>8</sup> Our outpatient and ward experience in Nepal is consistent with the above report. Over the past few weeks, we have seen a significant increase in the number of phone calls and visits to patients or relatives who have expressed concern and fear about the virus and surrounding uncertainty.

Lockdown imposed in the country has affected vulnerable population resulting in an increase in psychological issues from anxiety, anger, panic attacks and depression. Patients with mental disorders such as depression and anxiety have reported a recurrence of their psychosomatic symptoms as they have not been able to go to hospital for regular follow up and get medications. Patients with comorbidities, such as cardiovascular disease, have shown distress with worsening symptoms, especially angina, heart failure and diabetes. Although it is reported that children are less sensitive to covid-19 infection<sup>9</sup>, we have seen the psychological impact on them: the closure of schools and playgrounds, restrictions on outdoor activities and parents' fear of pollution have been causing anxiety manifestations, such as panic attacks and psychosomatic symptoms.

### Psychological impact on healthcare professionals

During this pandemic, not only the general population is at risk of psychological distress but also the healthcare workers are equally affected. The experience of SARS and H1N1 epidemics

shows that psychological stress on medical professionals is very important, and they find themselves at the forefront of trying to quell the outbreak of disease.<sup>6,7</sup> In the early rapid expansion phase of the SARS outbreak, similar to the current covid-19 pandemic, healthcare professionals reported feelings of extreme vulnerability, uncertainty, and life-threatening, as well as physical and cognitive symptoms of anxiety.<sup>6</sup> During the 2009 H1N1 influenza pandemic, more than half of the medical staff in Greece's tertiary hospitals reported moderate anxiety and subsequent psychological distress.<sup>7</sup>

The covid-19 pandemic has not only lead to the high mortality rate from the viral infection but also psychological stress and mental catastrophe to the health care workers. The uncertainty and unpredictability of clinical presentation, etiology and transmission pattern of this COVID-19 outbreak have considerably high potential for psychological fear. This can often result in prevalent multitude of psychological problems such as fear, anxiety, marginalization towards the disease and its relation of all people ranging from healthy to at-risk individuals to care-workers.<sup>10</sup>

The past incident in Nepal, where hospital facilities could not meet the earthquake victim's management has raised big question among health workers and citizens. There are numerous gaps in proper planning in prevention and management of emergency health state. During the outbreak of covid-19, clinicians in Nepal faced unprecedented challenges. Being an underdeveloped country and due to lack of proper health facility at many regions the first problem that was faced was lack of sufficient medical logistics and poor supply system of emergency protective resources for proper management of this pandemic. In addition, most medical centers are in shortage of well-trained medical staffs and medical facilities to fight against covid-19 crisis. This has significantly affected the level of confidence among healthcare workers. Rapid decisions must be made, ranging from the effective classification and isolation of patients suspected of infection to the decision to close the outpatient departments and operate on emergency cases only; all of these are on a limited resource basis. Despite the lack of testing kit, the pressure to act in a timely manner and to successfully

diagnose, isolate and treat has become overwhelming, especially under the scrutiny of the public and the media. This is consistent with the experience of other countries.<sup>11</sup> In addition, because of the increased risk of exposure to the virus, most importantly due to lack of proper PPE's, our front-line doctors, nurses and other medical staffs are worried about possible infection with covid-19. On the one hand, they are in ethical dilemma as they are well aware of their primary duty towards the patients and are ready to serve. On the other hand, due to lack of PPE, they are concerned regarding the possible infection as well as becoming the source of infection, which can spread to their family members and relatives; elderly parents, newborns, and immunocompromised relatives. Moreover, there are social factors affecting the healthcare workers mental states. Unfortunately, there have been reported incidents, where some medical workers have faced the issues, such as avoidance by their landlords and community owing to the fear and social stigma. Furthermore, health care workers working in the high-risk zone of Nepal have separated themselves from their families and are connected to them digitally. Staying away from the family and maintaining a virtual connection with them has led medical professionals to fear more about the well-being of their families.

Our healthcare staffs, who are working with limited intensive care beds and resources, also reported that dealing with uncooperative patients, who do not follow instructions, their stress level increases. Similarly, prolonged use of PPE can cause breathing difficulties, as well as restricted access to toilets and water; can lead to subsequent physical and mental fatigue. In the two countries (China and Italy), which were two of the hardest hit countries by covid-19, emerging scientific literature<sup>12</sup> and media reports have recorded very similar medical staff experience. With the advent of COVID-19 in Nepal, the frontline workers have been under physical and psychological pressure because of the high risk of infection, inadequate equipment such as PPE, isolation, exhaustion, and being away from the family. The severity is causing further mental health problems, which not only affect medical workers' decision making ability but could also have long term detrimental effect on their overall well-being. The unremitting stress medical health-

care workers is experiencing could trigger psychological issues of anxiety, fear, panic attacks, posttraumatic stress symptoms, psychological distress, stigma and avoidance of contact, depressive tendencies, sleep disturbances, helplessness, interpersonal social isolation from family social support and concern regarding contagion exposure to their friends and family.

Therefore, the medical staffs who deal with COVID-19 are under increasing psychological pressure and have experienced a high incidence rate of mental illness, similar to the prevalence of SARS and H1N1.<sup>6,13</sup> According to a recent study on covid-19 conducted by medical staff in a tertiary infectious disease hospital in China, the incidence of anxiety and stress disorder in front-line medical staff is very high,<sup>14</sup> with that in nurses being higher than that in doctors. Although the experience in our hospital in the past few weeks is anecdotal, it is consistent with these reports. The interruption of routine clinical practice, the awareness of loss of control and the consequent concerns about the possible instability of health services and salary cuts have caused "excessive" anxiety and depression among health care professionals, which is not uncommon in epidemics.<sup>13, 15</sup> Depression is associated with poor drug compliance,<sup>16</sup> which may increase the incidence rate of elderly health professionals with comorbidity.

### **Willingness of staff to work and their need for psychological support**

On the positive side, the experience of our departments to date shows that the willingness of staff to work has not been significantly affected, which is consistent with previous reports of pandemics.<sup>7</sup> However, due to constant criticism from media and lack of availability of proper PPE's from both government and private institute level, the moral of health professional is being challenged now and then. Despite the initial impact, the health professionals of the Nepal National Health Service seem to show a high level of dedication and professionalism. We know that confidence in safety, perception of risk and confidence in skills have proved to be promoters of willingness to work.<sup>15</sup> Our impression is that the growing knowledge of disease prevention and treatment, as well as the development of more specific

procedures and treatment programs and educational activities, availability of adequate testing kit and PPE's will help to improve the morale of medical staff in response to the pandemic. However, in view of the increasing psychological pressure on front-line medical staff, it should be based on past experience<sup>7, 13</sup> and emerging initiatives and cultures.<sup>11, 12, 17</sup>

We agree with the previous report<sup>18</sup> that a detailed psychological crisis intervention plan should be developed: a) by building a mental health intervention medical team to provide online courses for awareness of psychological impact of stressful events to guide medical workers, b) and a psychological assistance hotline intervention for medical workers to discuss their psychological concerns with the trained and specialized team of mental health practitioners. Hospitals in this regard should provide frequent shift-system, guarantee food and living supplies, offer pre-job training to address identification and responses to psychological issues in patients, families, and themselves. Moreover, psychological counselors/counselling psychologists should regularly visit medical workers to listen to their stories for their catharsis and provide support.

In the long run, this unprecedented health crisis should significantly enhance our understanding of the mental health risk factors among the health care professionals facing the COVID-19 pandemic. Reporting information such as this is essential to plan future prevention strategies. Protecting health care professionals is indeed an important component of public health measures to address large-scale health crisis. Thus, interventions to promote mental well-being in health care professionals exposed to COVID-19 need to be immediately implemented, and to strengthen prevention and response strategies by training health care professionals on mental help and crisis management.

### **Conclusion:**

We are facing an unprecedented situation; this biological threat is the most serious global crisis of our generation. It is a serious psychological injury for medical staff at the front line of this struggle. Since only health care professional can give us a

proper solution to this pandemic, we need to support them to boost their morale.

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