Problems of the Medical Staff and Supporting Them in Fighting against COVID-19 Epidemic

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ABSTRACT

Background: COVID-19 has a significant impact on public health and poses a challenge to medical staff, especially to front-line medical staff who are exposed to and in direct contact with patients. Medical staff were under enormous physical and psychological pressure due to overwork, high risk of infection, and isolation during COVID-19.

Methods: The aim of this study was to review the literature on health problems of medical staff and supporting program for them during COVID-19 pandemic disease. Literature searches were performed on the following databases: Pubmed, Sciencedirect, Scopus, Google Scholar, ProQuest, SID, Iranmedax and Magiran. The types of articles published during the outbreak that were relevant to the subject were searched.

Results: A review of the literature showed that current research focuses on assessing several aspects of COVID-19-induced mental health in medical staff. Stress, anxiety, sleep disorders, depression, burnout, fatigue and physical problems are among the serious issues of the medical staff in the front line of the Corona fight. Various demographic variables such as gender, occupation, long working hours, history of mental illness and psychological variables such as poor social support, self-efficacy were important risk factors.

Conclusion: Regular screening of medical staff involved in the treatment and diagnosis of patients with COVID-19 should be performed to assess physical and psychological problems using multidisciplinary psychiatric teams.

The outbreak of the new 2019 Coronavirus (COVID-19) infection in Wuhan, China on December 31 [1], has spread rapidly and widely around the world, leading to an exponential increase in the number of infected patients. With the increasing prevalence of the virus worldwide, the prevalence of COVID-19 has become a pandemic. As of 15 November 2020, there have been 53,766,728 confirmed cases of COVID-19, including 1,308,975 deaths, reported to WHO (https://covid19.who.int), the overall mortality rate in this pandemic is approximately 3.0% [2].

Medical staff specially nurses and doctors played a key role in combating the outbreak of COVID-19. During the months of infection with the coronavirus, many patients are discharged from the hospital after recovery and return to normal life, while the medical staff is in a state of long-term fight against the virus and they face patients and deaths from this disease repeatedly [3].

The large number of COVID-19 patients, suspected cases, hospitalization, and patients in critical condition have made medical work extremely difficult. Transmission of COVID-19 and an increase in the number of deaths cause them discomfort and fear of infection. Bad results for some critical patients, suffering of patients and their relatives can lead to aggravation of anxiety and mental distress. Protective covers and related restrictions, lack of medical equipment, uncertain information from various sources, quarantine and loneliness and worry for their loved ones may increase the risk of existing stress [4-5]. Given that the physical and mental health of medical staff is an important factor in controlling the coronavirus pandemic. here, we discuss problems and challenges and provide informed evidence guidance to address the physical and mental needs of medical staff and Supportive interventions during the COVID-19 pandemic.

Methods

This review examines studies on the psychological and physical problems caused by the Corona virus in the medical staff and Supporting programs from January 1 to November 15, 2020.

Using the keywords SARS-CoV-2, psychological interventions in crises, mental health, anxiety, stress, support programs, COVID-19, medical staff, epidemic. The databases were searched in Pubmed, Sciencedirect, Scopus, Google Scholar, ProQuest, as well as the most popular Iranian databases, SID, Iranmedax and Magiran. In addition, articles by the China National Health Commission and the World Health Organization published online were reviewed.

Results

The high prevalence of COVID-19 in many countries, and the announcement of pandemic conditions, its new and highly infectious nature and its high mortality rate and the Probability of re-infection and the resulting mortality, demand unprecedented for health services. With the onset of coronavirus infection, medical staff, especially nurses, are at the forefront of health care in the most severe conditions [6].

The results showed that during the COVID-19 pandemic, negative psychological effects such as stress, depression, anxiety, obsession, sleep disorders and anger increased significantly in the medical staff [7]. The following are the medical staff problems in the Covid 19 pandemic that have been reviewed in the articles.

Insomnia

Insomnia is a clinical condition that is associated with difficulty initiating or maintaining sleep and is associated with symptoms such as irritability or fatigue on waking [8]. According to studies, more than a third of medical staff suffered from insomnia during COVID-19, which was consistent with studies conducted during the SARS epidemic.

The results of studies show that the insomnia group had more psychological problems related to the prevalence of COVID-19. Depression [9], low levels of education, an environment of isolation, concerns about COVID-19 infection, the lack of psychological support from news or social media about the prevalence of COVID-19, and severe uncertainty about effective disease control all are risk factors for insomnia, also women are more likely than men to have sleep disorders at the forefront of the COVID-19 [10].

Given that insomnia is a risk factor for dysfunction, other medical and psychological disorders, treatment options should be considered [3].

If possible, behavioral therapies should be used and medications should be limited to the lowest dose and the shortest possible duration [11].

Anxiety and Stress:

Anxiety is a negative emotional state condition characterized by cognitive, physical, emotional, and behavioral components that creates an unpleasant feeling that is usually accompanied by apprehension, fear, or worry [12-13]. Many studies have shown an increase in the level of anxiety of medical staff who are in contact with patients with Covid 19 [14-15]. The results of studies have shown that anxiety is an important factor on stress in the medical staff, especially nurses. Anxiety also has a positive relationship with stress load [16]. Stress is a common physical and mental phenomenon, and the body responds to harmful stimuli [17]. Many previous studies of the Covid 19 pandemic have also shown that high stress in nurses leads to anxiety, frustration, depression, and other mental disorders and emotions [18-19]. Being the only child of the family, long working hours per week, education level, as well as anxiety increase the level of stress in the medical staff [11].

COVID-19 is a contagious and rapidly spreading disease, and the number of suspected and confirmed patients is increasing daily. Medical staff feel anxious and helpless due to the large number of patients. Medical staff, especially nurses, should maintain their mental health to ensure the quality of patient care ..

Depression:

Depression is one of the most common mood disorders [21]. Studies conducted during the Covid 19 epidemic have shown that the incidence of depression in medical staff is higher than the general population [22]. Depression is higher among medical staff, especially nurses, than doctors. History of depression and low educational background and frontline health care workers are recognized as risk factor and male gender is identified as a protective factor [23-24].

The rate of fatigue and resilience was also higher in the medical staff, who are at the forefront of the fight against

Covid 19, than in other occupations and the general population [25-16].

Despite the mental problems created during the fight against the COVID-19, the medical staff suffers from physical problems caused by inappropriate mental conditions and a lot of work and being exposed to a lot of infections. In addition, medical staff are in a position to help and care for others while they are at risk. Medical staff must be equipped with all-body protective equipment under negative pressure for more than 12 hours, including double-layer protective equipment, face mask, double-layer gloves, insulated caps, foot coverings and glasses. To prevent contamination when removing protective equipment, employees may not eat, drink or take a shower during working hours. Many of them suffer from dehydration due to excessive sweating and some of them suffer from bladder inflammation and skin rash. After wearing full protective clothing, medical staff breathing is somewhat restricted. To save on the use of detached clothing while working, nurses do not drink water or go to the toilet, thus increasing the difficulty of the medical staff 's work. Medical staff working in the quarantine area should always have close contact with infected patients and be exposed to the disease more than once. In these dangerous situations, the medical staff becomes mentally and physically exhausted. According to studies, the more working time per week, the more physical and mental consumption. Hence, the body is in a state of tension and fatigue. If the stress is not relieved for a long time, the nurse is prone to burnout. Burnout is related to the physical and mental health of nurses and affects the quality and safety of nurses. Work-related stress moderately affects burnout [26-11]. Ongoing studies have reported mental and physical health problems among medical staff, however, the results vary depending on the measurement tool, time of study, and location.

Supportive interventions:

Social support is an important protective factor for psychological resilience that reduces stress and removes psychological barriers [27]. Strengthening social support among medical staff can also reduce the effect of job stress on health, therefore, the social support system for medical staff should be actively mobilized. Medical staff need to be in touch with family and friends for spiritual support. At the same time, medical staff should encourage each other, discuss their feelings and experiences with their colleagues in a timely manner, and vent negative feelings.

Studies have reported that social support for nurses who are the only children in their families maintains their mental health. In addition, concerns of front-line nurses must be resolved. In some countries, the government has policies in place to care for medical workers. For example, community workers turn to nurses' families and help families in need so nurses can focus their work [11]. Studies show a significant relationship between the prevalence of physical symptoms and psychological

outcomes among health care workers during the outbreak of COVID-19 [28]. Studies have shown that support programs such as online cognitive-behavioral therapy are also effective in the event of COVID-19 outbreak. Female gender and a history of psychiatric illness, working as a nurse, undergoing COVID -19 testing, and being at the forefront of the fight against illness and exposure to adverse events such as death also appeared as risk factors for depression, anxiety, insomnia, and distress symptoms [29-30]. Reducing these risk factors, along with the support provided, will improve the psychological effects of a pandemic in the medical staff. Studies have shown that support programs such as online cognitive-behavioral therapy are also effective in the event of COVID-19 outbreak. psychological intervention programs should be offered to medical staff, especially for married people, those with relatively low education, who never pass on their problems to others and are more stressed [30].

Discussion

The results showed that during the COVID-19 pandemic, negative psychological effects such as stress, depression, anxiety, obsession, sleep disorders and anger increased significantly in the medical staff [31]. Outbreak of Coronavirus 2019 (COVID-19) has caused great psychological distress for medical staff. The experience of medical staff in responding to diseases such as SARS shows that its effects on the mental health of medical staff have long-term effects and the value of the support of this group in the front line and effective training is significant [32]. Medical staff are the backbone of the first line of epidemic treatment and control, who are at high risk of infection and work pressure, and need a great deal of attention and basic support to defeat the virus. This epidemic has had far-reaching and devastating effects around the world.

Conclusion

Management of this epidemic requires the production of safe antiviral drugs with specific activity against the virus, the production of effective vaccinations, or spontaneous changes in viral virulence, until then, support for medical staff is essential to reduce physical and psychological problems so that they can fight the virus as well as prevent problems and burnout, so governments should have clear policies in place to support medical staff so that they can treat patients with high motivation.

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