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The impact of COVID-19 on burnout among healthcare workers - literature review

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ABSTRACT

Introduction: The COVID-19 pandemic broke out in Wuhan, China, in December 2019. Coronavirus disease is commonly transmitted through contact transmission and direct contact. Considering the transmission mechanism of the virus, healthcare workers are at high risk of becoming infected. SARS-CoV-2 has became a major stressor for medical staff, that can lead to burnout.

The aim of the study: Paying attention to the correlation between COVID-19 pandemic and burnout among healthcare workers.

Material and method: The research was done by the usage of the PubMed and Google Scholar articles about the topic of: burnout; healthcare workers, COVID-19 pandemic, mental health, stress.

Description of the state of knowledge: According to various studies, the COVID-19 pandemic may have negative impact on the mental health of healthcare workers. Worsening systemic stressors may lead to professional burnout. Latest research has identified

associations between burnout and inadequate psychological support, direct contact with infected patients, and working in the nursing profession.
Summary: The results from all studies proved that the COVID-19 pandemic has tremendous impact on professional burnout among medical staff. It is essential to pay attention to the psychological wellbeing of healthcare workers.
Key words: COVID-19, burnout, healthcare workers, stress

INTRODUCTION

COVID-19 was first identified during the outbreak of severe acute respiratory syndrome in December 2019, in Wuhan, China. Free movement of people led to the spread of the virus in Europe and the United States in January-February 2020, becoming soon a pandemic that affected almost all the world [1]. The COVID-19 has spread in more than 200 countries with a mortality rate of about 5.7%. [2]. The rate of spread of coronavirus disease is higher than other coronaviruses: the time to infect the first thousand people was given as 903 days in MERS-CoV, 130 days in SARS CoV and 48 days in COVID-19 [3]. Governments rapidly mobilized to minimize transmission of COVID-19. Measures, such as the obligation to wear masks, closing down of international and state borders, restrictions for workplaces, the cancellation of collective events, and the closure of schools and universities were taken [4].

BURNOUT SYNDROME

Burnout was first described by psychologist Herbert Freudenberger in 1974. He analyzed dissatisfaction with work, related to stress. Burnout is a state of physical or mental collapse caused by overwork or stress. The analytical definition characterizes burnout through three constituent elements. One is represented by emotional exhaustion. The other two are: depersonalization and the feeling of decreased personal accomplishment [5]. Burnout is associated with higher rates of depression, substance abuse, and suicide. Burnout syndrome among healthcare workers (HCWs) also reduces productivity, quality of patient care and patient satisfaction. [6] This syndrome has been considered a very relevant occupational health hazard among HCWs.

WHAT EFFECT DOES COVID-19 HAVE ON BURNOUT?

Coronavirus spread beyond Wuhan within 2 months to more than 25 countries [7]. The number of COVID-19 cases continue to rise with significant impact on healthcare workers (HCWs) and healthcare systems. The COVID-19 pandemic has posed unprecedented challenges to the health care system in all countries and required a reorganization of health services. Individuals have been required to drastically modify their lifestyle. In this context, burnout syndrome has became even more evident.

The COVID-19 outbreak has impacted the workload of HCWs. Clinicians are particularly susceptible to developing this syndrome more than in other jobs. Healthcare workers seem even more exposed due to the higher workload, prolonged exposure and first contact with patients. The impact of COVID-19 is also related to fear of the disease being contracted by themselves and their families, limited personal protective equipment, caring for patients who are very sick, and caring for colleagues who have also fallen ill [8,9]. This pandemic has

exacerbated burnout in healthcare systems, which is associated with variety of negative consequences including risk of medical errors, depression, lower productivity and negative effects on patient safety. The pandemic also has triggered new risks and the high concern that professionals could be potential vectors of disease transmission to their families.

HOW TO CHECK THE LEVEL OF BURNOUT?

Maslach Burnout Inventory (MBI) was described by Maslach and Jackson in 1981 [10]. The MBI is a 22-item instrument that is considered the gold standard for measuring burnout. It defines burnout based on three facets: depersonalization, presence of emotional exhaustion, and lack of personal fulfillment. This instrument has separate subscales to evaluate each facet of burnout. Maslach proposed that a score of 27 or higher on the emotional exhaustion subscale or 10 or higher on the depersonalization subscale was considered an indicator of professional burnout for healthcare workers.[11]

Oldenburg Burnout Inventory is a 16-item validated tool to assess burnout covering 2 dimensions: exhaustion and disengagement [12]. Each dimension consists of 8 items rated on a 4-point Likert scale with options: “Strongly disagree,” “Disagree,” “Agree,” and “Strongly agree” with 4 points for the highest burnout response and 1 point for the lowest [13]. The Oldenburg Burnout Inventory offers advantages over the Maslach Burnout Inventory, as it uses both positively and negatively framed questions for each domain.

DISCUSSION

According to recent studies, some healthcare workers have developed fatigue, burnout [14], and psychological distress [15, 16], during the COVID-19 pandemic. Lai et al. [15] conducted a study in China with 1257 HCWs (60.8% nurses and 39.2% physicians). They concluded that 71.5% suffered from distress, 50.4% suffered from symptoms of depression, and 44.6% suffered from anxiety. Another study from China with 134 healthcare workers (41% nurses, 35.1% physicians, 23.9% support staff) showed that more than half of the HCWs had moderate to severe levels of stress perception. Anxiety and depression are more common among women [17].

In Italy, Rossi et al. [18] concluded that 24.7% of HCWs had symptoms of depression, 21.9% had high perceived stress, and 19.8% had anxiety symptoms. Another study explore the other recurrent stress factors that can lead to burnout. It was conducted in Italy and shows that anxiety was reported by 16,16% and depression by 20,3% of HCWs [19].

In Portugal [20] was carried a study among healthcare workers. Data collection took place from May 9th to June 8th, 2020. Of the 2008 responding participants, 1678 (83.6%) were women. The mean age of participants was 38 years old. Of the 945 (48.6%) participants who had children, 64% had children who were 12 years old or younger. High levels of personal burnout were found in 1055 (52.5%) participants, and high work-related burnout was found in 1066 (53.1%). It was found that sex, parental status, marriage status and salary reduction are significant factors for personal burnout. Personal and family stressors may impose additional pressures. Having children under 12 years was associated with higher levels of personal burnout. Salary reduction was significantly associated with lower personal burnout levels. This research also suggests that female sex is associated with higher levels of personal burnout. Women personal burnout levels were 4.51 points higher on average in comparison

with men. It may have to do with the double-workload role of women in society between their home lives and professions.

It is worth emphasizing that usually working on the “frontline” is significantly associated with all three dimensions of burnout. In a study conducted in China, the burnout was more prominent among frontline nurses. Hu et al. examined frontline nurses working in Wuhan, and more than half of the subjects reported moderate to high burnout [21].

However, in the second study, which was also conducted in China, found that frontline healthcare workers had significantly lower levels of burnout. Wu et al. measured burnout in 220 oncology medical staff working in Wuhan. Using the Maslach Burnout Inventory-Medical Personnel (MBI), they compared levels of burnout in frontline and other healthcare workers groups. Frontline HCWs also were less worried about becoming ill compared to other groups. The authors have two explanations: frontline HCWs may perceive more control over their situation and may appreciate a closer proximity to decision-makers compared with the other healthcare workers [22].

According to the latest research burnout has a strong link with stress [23]. Stress can lead to anxiety, difficulty in concentration, mental fatigue, and loss of immediate memory. [24] Stier-Jarmer et al. [23] found that a program for burnout prevention and stress reduction was effective. The program aimed at reducing currently perceived stress and providing strategies for dealing with stressors. The optimization of stress-management skills should be required among healthcare workers.

The research shows correlation between levels of professionals’ burnout and physical symptoms. The study was carried out in Italy among 1,153 healthcare professionals. Of the 1,153 HCWs involved, 376 participants reported to have directly assisted COVID-19 infected patients. This research highlighted the tremendous impact of COVID-19 emergency outbreak on Italian healthcare workers. The 45% of the sample experienced in the previous 4 weeks at least one physical symptom, like: difficulty falling asleep, change in food habits, increased irritability, and muscle tension. The study found that, higher levels of burnout were indeed associated with a more frequent experience of symptoms. Especially both higher levels of depersonalization and emotional exhaustion were linked with more frequent experiences of symptoms. The study also shows that, personal gratification emerged as a significant protective factor. The research found that, females showing higher levels emotional exhaustion than male, so males experiencing symptoms less frequently than females and physicians less frequently than nurses [25]. The increased strain on all healthcare sectors may exacerbate inadequate staffing [26]. According to Cao et al., nurses caring for up to 200 SARS-CoV-2 patients a day due to understaffing [27]. In addition to, the percentage of workers with high levels of exhaustion was much higher than the one found in other Italian samples before COVID-19 outbreak [28].

Significant attention was gained by burnout during residency training. Physical fatigue is added to the mental stress associated with a possible infection. Resident physicians have the most prolonged contact with patients in the time from the testing moment to the arrival of the result for SARS-CoV-2, therefore the stress is even more expressive.
In the study, which was conducted in Romania, all participants completed anonymously the survey's form. The extreme ages of participants were 24 and 35 years, respectively, given that the target was represented by resident doctors. The research found that an average burnout for medical residents of 76%, about two months after the outbreak of the pandemics in Romania. It seems that, the threat posed by SARS-CoV-2 is a major stressor for medical staff, because

the global prevalence of burnout syndrome among medical residents is tremendous [5]. The other study, which was conducted by Jalili et al. shows that resident doctors were at a greater risk of burnout than nurses or specialist doctors [45].

According to study by Lai et al., healthcare workers who were responsible for the care of COVID-19 patients, were more likely to have symptoms of anxiety, depression, insomnia, and distress [15].These stressors can lead to burnout.

The other research shows correlation between burnout among healthcare workers and medical errors. Burnout cause increased medical errors [29, 30, 31]. It can lead to decreased patient satisfaction and thus increases the chances of litigation. The problems of medical errors related to fatigue and burnout syndrome can be more serious especially for the surgical specialties [29]. Burnout also can give major probability of biological occupational injury [32, 33].

According to latest studies the occupational burnout levels of dentists were high even before the epidemic due to factors such as risk of medical error, workload, uncomfortable physical posture and working environment, work environment, repetitive tasks, one-on-one communication with patients, patient anxiety, long working hours, job dissatisfaction, extraordinary responsibility, working with low-qualified dental assistants, and economic pressures [34, 35, 36, 37]. As in all healthcare professionals, the stress of working during the COVID-19 pandemic can also cause a decrease in the resistance to burnout in dentists. It can lead to lower motivation, fatigue for an extended time and low interest in the job [38, 39]. Burnout is associated with increased risk of physician suicide as well as substance abuse, depression, anxiety, unexpected resignations, decreased quality of patient care [39, 40, 41].

It is worth emphasizing that most dentists have high stress levels. According to latest studies psychological distress level of dentists ranging from 55.6% to 81.5% [42]. Another study showed the concerns about the COVID-19 pandemic of dental students in Turkey. This study revealed that most of participants have high level of anxiety [43]. In addition, studies show that the top concern of dentists and frontline healthcare workers was fear of transmitting the virus to family and coworkers [44]. In another study conducted in Turkey, the highest rate was observed in the family-related stress level. More than 90% of dentists are concerned about COVID-19 contamination, and 95% are concerned about carrying this virus to their families [42]. The high levels of burnout and stress was supported by other factors such as COVID-19 test positivity rates, patients treated per week before and after the pandemic, academic degree, and willingness to perform aerosol-generating procedures.

HOW TO PREVENT BURNOUT?

All healthcare workers should have access to Psychiatric Rapid Response teams. Healthcare workers also should be systematically screened for mental health illness using risk factors identified and use this to implement mental health programs. HCWs should have rest periods to prevent burnout and insomnia [47]. Periods of rest and relaxation are important and must be observed to prevent burnout, even if they cannot take place in the privacy of families.

According to latest studies the life satisfaction is a protector against developing burnout [46]. Factors that may contribute to reducing burnout include increasing the employment of auxiliary and administrative staff to alleviate the burden of physicians, having adequate

personal protective equipment, as can ensuring the safety and health of all HCWs members by periodical screening [2].

It seems that protective for mental health were strong belief in infection control procedures and greater family support [47]. Maslach showed that workers could decrease personal anxiety by taking a more optimistic and joy attitude and speaking with their friends about their worries [10].

SUMMARY

To sum up, COVID-19 pandemic has tremendous impact on burnout among healthcare workers. It seems that COVID-19 and the threat to personal safety that it has produced meets the definition of a traumatic event. The study conducted in Singapore shows that every level of the healthcare staff is susceptible to burnout [13]. It is certain, that the COVID-19 pandemic has strained the entire healthcare system. It is important to remediate the burnout issue among healthcare workers to avoid potential adverse outcomes. It is essential to pay attention to the psychological wellbeing of HCWs. Occupational health surveillance and practical training sessions on the use of personal protective equipment can improve healthcare workers wellbeing [48, 5].

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