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Job burnout among healthcare workers—The impact of the COVID-19 pandemic

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Abstract: The overall impact of pandemics on the healthcare sector has been substantial and multidimensional, presenting numerous challenges that have affected healthcare workers on various fronts. Pandemics, particularly the COVID-19 epidemic, caused destabilization in healthcare systems, creating complex challenges for both medical staff and patients. During the pandemic, healthcare professionals faced exceptionally difficult working conditions, such as increased workload, inadequate medical resources, and the pressure of making challenging moral decisions, for instance, related to the allocation of limited resources during a crisis. These factors increased the risk of occupational burnout—a state that may manifest as emotional exhaustion, depersonalization, and decreased self-esteem and efficacy. Occupational burnout among healthcare workers is a highly significant phenomenon because it can directly impact the quality of care provided to patients. Higher levels of burnout are associated with an increased risk of medical errors, decreased work engagement, and reduced empathy in patient interactions. Additionally, individuals experiencing burnout may encounter reduced social support, further complicating the issue. Consequently, the negative consequences of occupational burnout can have a long-term impact on healthcare workers themselves, the quality of medical care, and patient-provider relationships. Therefore, managing the risk of burnout among medical staff becomes a crucial challenge not only for the mental health of healthcare workers but also for ensuring high-quality healthcare for society. Providing psychological support, proper human resource management, and promoting a healthy lifestyle among medical personnel are essential to alleviate the psychological burden on workers and ensure sustained, high-quality healthcare.

Keywords: burnout; COVID-19; healthcare workers

1. Introduction

Healthcare workers who are the front line of the fight against the COVID-19 pandemic are among a group particularly vulnerable to a decline in quality of life. These professionals have been subjected to a number of potentially damaging factors to their health during the upsurge in infections, among which are both the shortage of personal protective equipment and its cumbersome use, increased working hours, the lack of a standardized management algorithm or fear of infection (Lyuch et al., 2022; Pfefferbaum and North, 2020). The unexpected increase in the number of people diagnosed with Severe Acute Respiratory Syndrome 2 (SARS-CoV-2) has contributed to the increased demand for healthcare facilities. The rapidly increasing number of patients per number of specialists has translated into both physical and mental fatigue,

the symptoms of which may continue even after the outbreak ends (Chigwedere et al., 2021). Previous pandemics of Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) have indicated the critical importance of the mental well-being of healthcare workers, including especially the occurrence of burnout, for the proper functioning of healthcare bodies (Chahramani et al., 2021).

Methodology: Occupational burnout, encompassing dimensions of emotional exhaustion, depersonalization, and reduced personal accomplishment, is a prevalent issue affecting healthcare workers. Studies describing methods for diagnosing and assessing burnout were analyzed, focusing on the context of medical personnel. The literature review provides objective data regarding the frequency of burnout among healthcare workers during the COVID-19 pandemic. Comparative analysis was conducted with pre-pandemic data to identify potential changes in the occurrence of this phenomenon. The literature analysis thoroughly examined major risk factors for burnout, such as excessive workload, resource scarcity, pandemic-related stress, and the pressure of making challenging decisions. Mechanisms through which these factors may lead to the development of burnout among healthcare professionals were identified. Scientific literature facilitates the identification of burnout consequences for healthcare workers, the quality of medical care, and patient-provider relationships. The analysis also encompasses long-term implications of this phenomenon and its impact on the healthcare system. Drawing upon the literature review, an analysis was conducted on various strategies for managing burnout among medical staff during the pandemic. Discussions included psychological support programs, stress reduction strategies, and organizational changes, highlighting their effectiveness in mitigating burnout. Identifying challenges associated with managing burnout during the pandemic resulted from the literature analysis. The work points out areas that require further research and potential directions for effectively managing this issue. Based on the literature review, a more comprehensive understanding of occupational burnout among healthcare workers in the context of the COVID-19 pandemic has emerged. The need for further research is highlighted, emphasizing the significance of burnout management strategies in ensuring the mental well-being of healthcare professionals and the provision of high-quality medical care. This methodological perspective allows for an objective analysis of available scientific literature concerning occupational burnout among healthcare workers during the COVID-19 pandemic. Incorporating diverse information sources enables a holistic view of this complex phenomenon and indicates potential areas for further research.

2. Professional burnout: Emotional exhaustion, depersonalization, self-realization

Occupational burnout is defined as, “a state of mental fatigue associated with a person’s working life”, and is also referred to as physical and mental strength syndrome. This condition is associated with an emotional and passive response to chronic stress, the consequences of which are a deepening depletion of internal energy resources. The condition of occupational burnout was first described by Herbert Freudenberger in 1974 (Alkhamees et al., 2023; Meira-Silva et al., 2022). The problem

is measured in three distinct dimensions: emotional exhaustion, depersonalization and a sense of ineffectiveness (self-actualization) (Macaron et al., 2023).

Emotional exhaustion is considered the predominant factor in occupational burnout, and includes the sensation of exhaustion accompanying the end of the workday. The consequences of feeling emotionally exhausted and fatigued despite the occurrence of rest are both a reduction in positive attitudes toward assigned tasks and a lack of emotional involvement in patient problems. Healthcare workers facing burnout syndrome are characterized by a desire to avoid contact with patients, accompanied by persistent emotional, physical and mental fatigue (Ulfa et al., 2022; West et al., 2018).

Depersonalization is the second dimension of the burnout syndrome, characterized by an attitude of indifference, prejudice and increasing negativity towards both the profession and co-workers. In addition, this dimension is characterized by quick anger and separation from others. With regard to healthcare, attitudes associated with depersonalization contribute to a lack of commitment to one's work environment, the frequent goal of which is to avoid disappointment, which can consequently affect the effectiveness of the work performed (Romani and Ashkar, 2014; Ulfa et al., 2022).

Self-actualization is the final third dimension of the burnout syndrome, and it is related to the personal achievements of healthcare workers who show reduced performance. It is associated with a lack of self-confidence and a sense of achieving insufficient professional success. Low self-efficacy is also characterized by feelings of helplessness and a sense of inadequacy in the face of the tasks at hand. The consequences of low self-efficacy among medical personnel include a lack of confidence in both the individual to the organization and the organization to the individual, as well as a sense of inadequacy (Stehman et al., 2019; Ulfa et al., 2022).

3. Risk factors for burnout

Among the factors contributing to job burnout are situational and individual factors including personality. The posture of situational factors in the work environment overrides high job demands and low work resources. Studies also point to the undeniable role of individual factors such as neuroticism and perfectionism. These traits contribute to the development of burnout by predisposing employees to cope inappropriately with high demands in the work environment (Aronsson et al., 2017; Bakker and Costa, 2014).

4. Tools for assessing job burnout

A number of tools are now available to assess the incidence of occupational burnout. The first questionnaire to objectively measure occupational burnout was developed in 1981 by Maslach et al. The Maslach Burnout Inventory (MBI) is the most widely used evaluative tool for diagnosing occupational burnout. Containing 22 questions, this questionnaire addresses all three dimensions of the occupational burnout syndrome. The degree of this phenomenon is assessed according to the score, the higher the score the higher the degree of burnout is determined. The MBI has varied forms adapted and condensed for specific populations. In the medical

community, the Maslach Burnout Inventory-Human Services Survey for Medical Professionals is used to assess the degree of burnout. Among the most popular tools developed today are the Professional Quality of Life or Burnout Assessment Tool (Alanazy and Alruwaili, 2023; Rossi et al., 2023).

5. Compassion fatigue

Stress being the main cause of occupational burnout can lead to many negative consequences, which include compassion fatigue. In addition, it should be mentioned that the very presence of occupational burnout can increase the risk of compassion fatigue. According to Joinson, the term compassion fatigue describes a condition in which emotional, physical and mental exhaustion occurs, the cause of which is exposure to chronic stress. The consequences of its occurrence are insomnia, exhaustion, depression, impaired judgment and discernment as well as lack of spiritual awareness. In addition, with regard to the medical profession, numerous studies suggest the negative impact of this phenomenon in the patient-specialist area. The incidence of compassion fatigue is most often determined using the Professional Quality of Life (ProQOL) Scale developed by Stamm. It consists of three dimensions: professional burnout, secondary traumatic stress and compassion satisfaction. Its final score represents 30 items with 10 in each subscale, according to which receiving a score of ≤ 22 is associated with low levels of compassion, satisfaction and secondary traumatic stress (Rizzo et al., 2023; Xie et al., 2021).

The problem of burnout among healthcare workers in terms of the occurrence of COVID-19 has become an important topic that requires further research and systematization of its results. Such activities can help not only employees but also managers to gather the appropriate tools but also to introduce the necessary interventions that can protect against the occurrence of the aforementioned syndrome (Stodolska et al., 2023).

6. Research overview

The topic of professional burnout described in the introduction of the paper in question is a fairly common phenomenon among healthcare workers. According to previous studies, this problem can affect up to 46% of people working in healthcare. Its occurrence carries a number of negative consequences in the area of mental health. The above considerations are confirmed, numerous publications described below, on mental health and burnout among healthcare workers.

Dincer and Inangil conducted a survey among 72 nurses caring for patients diagnosed with COVID-19 working at a university hospital in Turkey. The survey instrument used in this study to measure the level of job burnout was the Job Burnout Inventory, according to which a higher score indicates an increase in job burnout. The authors' results underscore the significant problem of occupational burnout incidence among the described group furthermore indicated a statistically significant relationship ($p < 0.001$), between the reduction of its incidence and the use of 20-minute group therapy using Emotional Freedom Techniques (EFT) (Dincer and Inangil, 2021).

In a study conducted by Teo et al. the authors discussed the prevalence of stress, anxiety and job burnout among 2744 healthcare workers (including nurses, doctors, administrative staff) during the peak illness wave falling in March-August 2020 in Singapore. A one-item question from the Physicians' Work Life Scale was used to assess the prevalence of burnout, according to which a score ≥ 3 indicates work exhaustion. The prevalence of job burnout was found among 24% of the total, including 17% of physicians, 27% of nurses and 16% of other healthcare workers. In addition, in the present study, the authors observed a significant increase in the burnout index during the July-August period. It should be noted, however, that the burnout rate among the total of the surveyed group was not significantly different from the pre-pandemic period, in which it was 26% among palliative care health workers in Singapore. It is also worth pointing out the authors' observation about the impact of teamwork and professional appreciation on the incidence of burnout. According to the authors' study, healthcare workers among whom good teamwork and frequent or all-time work appreciation were observed showed a 35%–66% lower probability of job burnout (Teo et al., 2021).

The topic of burnout among 506 healthcare workers providing direct services to patients with COVID-19 in healthcare centers was addressed in their study by Ruiz-Fernandez et al. The authors of the study used the Professional Quality of Life Scale (ProQOL) to determine the prevalence of the phenomenon. Among the surveyed personnel, 16% found the occurrence of professional burnout at a low level, 48% at a medium level, while 36% observed the occurrence of this phenomenon at a medium level. It is also worth mentioning the phenomenon of compassion fatigue also addressed in the subject of the above publication. The authors, in the work they presented, observed that as many as 60.5% of those participating in the study showed the occurrence of compassion fatigue at a high level (Ruiz-Fernández et al., 2020). The Quality of Work Life Scale (ProQOL-5) to determine the prevalence of job burnout was used in their paper by Buselli et al. who studied the mental health of 265 healthcare workers such as doctors, nurses and medical assistants. The mean burnout score among the surveyed participants was 19.8 ± 5.0 , while the mean compassion saturation was 38.2 ± 7.0 (Buselli et al., 2020).

Occupational burnout among Canadian emergency physicians for the first 10 weeks of the pandemic, including its two distinct dimensions, was described in their study by de Wit et al. (2020) using Maslach's Occupational Burnout Inventory. The methodology of the study conducted by the authors was based on the weekly completion of a questionnaire by a specific group over a 10-week period. The authors of the study indicated that there was no time trend on the level of occupational burnout. The reason for this phenomenon is not entirely clear, but the authors of the study see it as having started too early in terms of the development of events, which may have contributed to the failure to detect changes within the level of occupational burnout over time. The high emotional exhaustion described by the study's authors in the 4th week of the study was present among 18% of emergency workers, in the 6th week among 17%, in the 8th week the condition was found in 14%, while 16% of respondents indicated high emotional exhaustion in the 10th week of the study. The second dimension of occupational burnout syndrome, which is depersonalization at a high level, was observed among 15% in week 4, 13% in week 6, 10% in week 8 and

13% in week 10. It is also noteworthy that there was a changing trend among the study participants over the course of the study. Among the 13 doctors participating in the study, their level of emotional exhaustion changed from a low level to a high level, while with regard to depersonalization, such a change was present in 12 people surveyed. Anesthesiologists constituted another group of healthcare professionals among whom professional burnout was examined using the Maslach Burnout Inventory. The aforementioned group of 88 professionals was described in a study by Tsan et al. examining professional burnout and the risk of depression during the COVID-19 pandemic. Among the anesthesiologists surveyed, high emotional exhaustion was reported by 31.8% of the subjects, high depersonalization occurred in 47.1% of them, while a sense of low personal achievement affected 63.5% of those surveyed. The authors of the study also indicated correlations between the risk of burnout and the number of phone calls and the risk of burnout and concerns related to COVID-19 for which the *p*-values were 0.038 and 0.014, respectively (Tsan et al., 2021).

Chor et al. conducted a study on the prevalence of job burnout among 337 healthcare workers, among whom 84.6% worked in a hospital emergency department before the COVID-19 pandemic. Using the Copenhagen Burnout Inventory, the prevalence of moderate and severe job burnout was found in 49.3% of those surveyed. The authors of the study observed that it was nurses who showed a significantly higher percentage of burnout compared to doctors, 51.3% and 45.7%, respectively. The authors of the study attributed the reason for such a high percentage of this phenomenon among nursing staff to workload and weaker social support, as well as increased levels of physical discomfort in relation to prolonged use of personal protective equipment (Chor et al., 2021). The highest rate of burnout among nurses in relation to other medical workers was also observed in their study by Chou et al. (2014) who examined the incidence of the phenomenon among 1329 healthcare workers. The incidence of burnout was found in 69.1% of nurses which, with respect to the doctors surveyed, was a difference of more than 20%. However, it is worth mentioning that with regard to the causes of this phenomenon contained in the article by Chor et al. in the work of Chou et al. the results obtained with regard to working time and social support are different. In the cited work, it was doctors who, despite a lower percentage of burnout, showed more frequent overtime work (48.5%) and a lower percentage of social support (28.7%) compared to nurses at 44.1% and 60.3%, respectively. It should be noted, however, that the work of Chou et al. did not clearly specify the specifics of each specialist's work related to, among other things, working on a particular ward. The resulting equality may also have resulted in the percentage of nurses and doctors surveyed.

Professional burnout during the COVID-19 pandemic among nurses was also studied by Chen et al. (2021) using the Maslach Burnout Inventory. The study included 12,596 nurses of varying ages and length of service. The subjects studied worked in intensive care, infectious disease and pulmonology wards, among others. As the most common reactions to the occurrence of COVID-19, nurses pointed to difficulties with sleep and its poor quality—34.8% of people, the belief that a similar tragedy will happen in the future—33.9%, and feeling irritation and anger respectively indicated by 27.6% of those surveyed. Also worth mentioning are unhappy thoughts and memories

related to the epidemic experienced by 24.6% of them. The authors observed the occurrence of high emotional exhaustion in 21.5% of nurses, while the study's creators note that such a condition was primarily accompanied by nursing staff working in intensive care units and units associated with COVID-19. Depersonalization as the second dimension of professional burnout to a moderate degree and a high degree was observed in 24.6% and 17.9% of those surveyed, respectively, in that this tendency prevailed as in the case of emotional exhaustion among nurses working in intensive care units and those associated with COVID-19. Feelings associated with a lack of personal achievement by study participants were experienced to a slight degree.

Citing the studies of previous authors, there is a trend of high occupational burnout among employees working in intensive care. These findings are confirmed by a study by Gomez et al. (2020) comparing the well-being of those working in intensive care before and after the COVID-19 pandemic in December–May 2018/2020. The study group consisted of 481 intensive care professionals including 58 doctors, 353 nurses, and 13 pharmacists. During the COVID-19 pandemic, a state of burnout was found in 57% of doctors working in intensive care units, while in the post-pandemic period the percentage was 35%. The authors of the study also point to the presence of the problem of professional fulfillment, which was reported by a smaller percentage of medical personnel compared to professional burnout. The condition was present in 23% of pharmacists and 53% of physicians, respectively. As predictive factors for the occurrence of both professional burnout and professional fulfillment, the study's authors point to workload and work demand.

7. Summary

Healthcare workers, as those on the front lines of the fight against the COVID-19 pandemic, particularly in departments that are burdened by great stress and quick decisions, are a group particularly vulnerable to the onset of burnout. Additional lack of support from patients and the public may exacerbate the occurrence of this phenomenon. In the face of this phenomenon, it seems reasonable to undertake immediate interventions to support this group in order to provide them with adequate care and provide them with the necessary tools that can facilitate their mental health recovery process. Such treatment may have a positive impact on improving the individual's ability to cope with stress and a better perception of their skills and value to their profession. It also seems important to increase public awareness of the problems faced by this professional group, thus enabling them to show greater understanding and support in the context of an existing and developing health crisis.

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