

Impact of COVID-19 on Health Care Workers - Burnout Scenario in This Pandemic

Hebatallah Mostafa Ali^{1,2}

¹Graduate Department, School of Business, University of Wales, Cardiff, UK

²Graduate Department, Faculty of Management, Management and Science University, Shah Alam, Malaysia

Email address:

heba_sfi@yahoo.com

To cite this article:

Hebatallah Mostafa Ali. Impact of COVID-19 on Health Care Workers - Burnout Scenario in This Pandemic. *International Journal of Psychological and Brain Sciences*. Vol. 7, No. 1, 2022, pp. 1-6. doi: 10.11648/j.ijpbs.20220701.12

Received: November 2, 2021; **Accepted:** December 14, 2021; **Published:** April 8, 2022

Abstract: Coronavirus epidemic 2019 (COVID-19) has become a global pandemic and has already ceased millions of peoples lives all over the world, Till today while we are entering 2022 but still struggling with new strains, people who don't want to follow guidelines and/or get vaccination, this situation become extreme out of control for healthcare workers in every country. Because the situation that its uncontrollable prevalence leads to exceed the capacity of healthcare systems and causes an extra burden on healthcare workers. Thus, this study aimed to find the impact of COVID-19 on the front line health care workers in Malaysia and to measure the burnout ratio among them using Maslach Burnout Inventory. 532 healthcare workers including physicians, nurses and other nonspecialists attended an online survey answering questionnaires on the Maslach Burnout Inventory, previous job demands and a checklist on the frequency of psychosomatic symptoms. Results indicated that the level of burnout and frequency of experienced psychosomatic symptoms are correlated to growing demand during COVID 19 pandemic situation. And, finding meaning in one's own work is correlated to personal enjoyment. According to the findings of this study, urgent actions should be taken to minimize the burden on healthcare workers during this pandemic situation to ensure the well being and safety of their lives as well.

Keywords: COVID-19, Burn out, Maslach Burnout Inventory, Healthcare Workers, COVID Pandemic, Corona Virus Pandemic Effects

1. Introduction/Background

The COVID-19 has expanded worldwide swiftly since December 2019, affecting individuals in 210 nations and regions, with more than 53 million people already afflicted and over 1300, 000 fatalities [1, 2]. In addition to the deaths it has taken around the globe, the epidemic has caused widespread dread and fear [3]. Since 6 January 2020, when screening and surveillance methods were reinforced, Malaysia's healthcare system has increased its COVID-19 preparation [32]. The first instance was discovered on January 24, 2020, and the RMO was issued on March 18, 2020 [32]. In the country as of December 16, 2020, 86,618 cases had been detected, with 422 deaths reported [32]. Healthcare workers continue to serve the country in diverse jobs of surveillance, screening, diagnosis, and treatment, despite the rising trend of confirmed cases [32].

The health providers (HCPs) are crucial stakeholders in pandemic management of COVID-19 and are necessarily in the forefront of viral exposure [5]. Consequently, 10% of instances confirmed in some publications represent a significant proportion of persons who have the disease [6].

It's critical to confront the burnout that's afflicting a diverse range of health professionals who are now battling the COVID-19 epidemic. This epidemic has triggered a global public health crisis affecting people all over the world. While that's not the first pandemic to emerge, other outbreaks, such as the SARS epidemic, have resulted in front line healthcare personnel claiming a lack of backup and long-term psychological effects. COVID-19 has proved to be quite destructive, attacking the respiratory system and requiring victims to be admitted to the hospital As a result, many hospitals and clinics are battling to strike a balance between patient attendance and sufficient safety equipment (PPE). These situations may be linked to high levels of stress due to

a high intake of patients and an insufficient amount of PPE. Another source of anxiety for them is the worry of transmitting the sickness to a large number of its own staff. According to Xiang (2020) experts have expressed feeling inadequate and perplexed while dealing with COVID individuals, particularly since technical rules and remedies were not defined from the outset. As a result, this group expressed emotions of powerlessness, loneliness, and insecurity.

Burnout is an emotional condition characterized by persistent fatigue. This problem might be the outcome of excessively demanding work environments where tension is not effectively controlled [4]. Burnout may have a significant influence on a person's psychological and emotional well-being, affecting a variety of factors. Burnout is defined as emotions of tiredness, dissatisfaction with one's employment, and a decrease in work performance [4]. A research was carried out to determine the occurrence of burnout among healthcare personnel working in Northern Italian institutions. After evaluating the survey findings, it was shown that more than 60% of the participants had moderate to severe emotional weariness and a reduction in personal accomplishment [8]. While combating this epidemic, professionals who are facing burnout factor may face a great deal of psychological pressure. The study showed a prevalence among 25 per cent of their samples of various mental health conditions, such as sadness, fear and stress [8]. Due to the unpreparedness and lack of equipment in the hospitals in the face of such an unexpected situation many health workers have suffered a burnout.

2. Literature Review/Current Situation of Study

Several databases were used to study the research content. Many research papers were evaluated to highlight the prevailing burnout among health personnel owing to the COVID-19 epidemic. The keywords used to search the following study papers include: COVID-19, burnout, interventions, health professionals and crucial attentiveness. Burnout is a state of psychological, emotional and physical stress, initially discussed [9] as a result of long term exposure to work stress. It involves symptoms of psychological weariness, depersonalization (generating skeptical sentiments towards patients) and diminished professional performance (a sense of negative evaluation of oneself). For both patients and healthcare staff, burnout may have severe repercussions. The consequence is not just bad physical and mental health, lack of motivation, absenteeism and low morality in personnel; the effect is also a decline in the quality of care offered by the staff involved, resulting in bad results for patients. Several systemic evaluations have indicated that greater burnout rates are connected with worse patient care in health workers; [10, 11]. This imposes enormous costs on society [10, 12].

In contrast, the health conditions at the workplace are often

similar all across the industry, and medical practice in particular is often difficult to leave because of the cost and time associated with re-credentialing and re-licensing; emotions and financial capital linked to physician relationships with the health care facilities are often a challenge. Burnout consists of three parts: emotional exhaustion, personalization and self-efficiency, as well as a special stress reaction coming from the interaction between individuals and their job. The condition of exhaustion arising out of the conduct of the task is termed as emotional exhaustion.

COVID-19, combined with its death rates amongst HCPs, can cause worry and tension among medical workers, both fatal and unmanageable. Problems such as societal stigma, lack of personal protective equipment and high strain on the employees might compound the problem. This pandemic is thus predicted to have significant psychological consequences for HCPs [13]. The nature of the job, especially its requirements and effects on its resources (e.g. energy resources, personality and consciousness) generates the special job-related stress response known as burnout [14] [15]. The kind of workplace should be studied in order to comprehend the causes of burnout, to find those characteristics of work which diminish or endanger the resource of an individual. The underlying link between the workplace and an individual can be evaluated in terms of "fit" levels. Theoretical integration is key to this. Fit is the mechanism behind the expectations and capacities link between the individual and his task as in the case of his personal surroundings and/or employment [16]. In circumstances with high work flow demands, the resources that a worker provides for the workplace (for example, effort, ambitions) and the labor requirements (for example the quantity of task necessary) are balanced and COR results are good (e.g. resources are conserved).

The impact of Burnout on the working life of these physicians is estimated at 30-70 percent among all primary care providers [17]. The implications are well generally simple and clear to recognize and may have a dramatic impact both personally and professionally in a variety of areas. However, it is substantially more challenging to determine the best measures for preventing, intervening and managing burnout outcomes. For individual safety and well-being, burnout is especially terrible. Research shows that this can result in poor employee health and, for doctors in particular, to adverse outcome such as increased anxiety, depression, suicide [18, 19] and drug abuse [20], giving rise in an 'impaired medical professionals,' The data shows this can lead to poor employee physical health. The medical profession has been actively engaged in personal intervention for the "impaired medical professional, particularly those with drug addiction and psychiatric diseases [37]. But in this scenario when the whole world is going through the impact of this epidemic and anxiety level are so high burnout must be considered as a key factor raising different issues with those health care workers that need to be addressed properly.

Medical institutions have deep implications of employee burnout. The most advanced literature on the effects of burnout

on health care providers is on nurses and the influence on turnover, work satisfaction and late quality of patients [21]. Especially in conditions when the medical facilities need more health care workers but burnout works in negative direction. These implications of burnout include decreasing satisfaction among professionals, an increased risk of negligence, greater turnover, and important healthcare organization concerns if doctors are working in their full capacity and have a strong bond with the organization. Employees pay a big share of healthcare expenditures for most employees in the employed-doctors model and a number of key measures for many programs to enhance their health involve lowering stress in the workplace. Such health programs, in order to reduce burnout, could have benefits [22, 23]. In the process of maintaining a competent and healthier staff to satisfy the ever more demanding requirements of patient care, Burnout imposes tremendous burdens on healthcare systems.

Burnout and stress are commonly listed as main factors why health care professionals opt to leave the field, change skills or switch occupations, compounding an already acute problem of nurse practitioners deficiencies in the USA [24]. A 2009 research from the Medical Foundation indicated that 49% of health care professionals are so disappointed that they contemplate reducing their patient care obligations or sometimes withdrawing early [37]. During COVID when the hospitals are full of patients and health care system have no more capacity the burnout is producing the adverse pressure on health care institutions.

3. Prevalence of Burnout During Pandemic

Many of its personnel are at significant threat of burnout in the healthcare industry. The majority of the day is spent providing high-quality patient care. Burnout is unbelievably prevalent among all Health care workers and is adverse to all health aspects. In order to tackle this illness, COVID-19 has put significant stress on Healthcare workers operating the front lines and they have been faced with significant patient workloads. COVID-19 was first reported in Wuhan, China, where thousands of Healthcare workers from throughout the state were deployed to help local healthcare personnel cater for these ill people. Burnout was shown to be more widespread in nations where the pandemic was on the rise at the time the data was gathered. Leaders of health care system require greater information on the size of this problem and its related variables to better prepare for future outbreaks of infectious diseases, to design good interventions to address health care workers worries and worries and to avoid further deepening [5].

Determinants of Burnout:

Most of the research has thus far concentrated on identification of burnout, categorizing its origins and consequences, and establishing reasons for the influence of the medical system. Investigators only just began attempts to comprehend the history and manifestation of burnout and

study the early warning signals of imminent burnout. Working culture and working environment contributed greatly to doctors' disaffection and burnout [25]. Before the emergence of huge healthcare institutions attention was generally supplied in the same office, as a contract or connection between the patient and the health care professional. New delivery models focus heavily on long term planning, financial challenges and technical expertise, which lead to considerably diminished control of health workers. This loss of control (autonomy) contributes mainly to disengaged and unhappy healthcare professionals [26, 27].

The subsequent burnout has an effect not just on health care employees' satisfaction, but may also result in decreased patient satisfaction, higher medical mistakes and a rise in personal and organizational catastrophes [19, 29]. When these health workers see a difference in organizational ideals, working circumstances and the core principles of patient care, discontent and an increased risk of abandoning the organization or profession are the consequences [24]. In the article published research of burnout, a very limited number of trials assess changes in burnout in an individual's over time. There is an interesting gap [30, 31]. While most studies provide one-time burnout measures and then focus on burnout consequences/effects, some authors note that it is rather important to understand burnout changes across time so they may get insight into possible interventions or solutions to improve burnout experiences for people [16, 30]. In theory, the concept that burnout is a resulting stress response that people experience in their job supports relative stability over time from the point of view of the burnout. The notion of Coordination of Resources (CORs) is believed to blame for the continuous imbalance of resources and demands [11]. When there is not a balance between the demands and resources than the concept of burnout gets stronger and consequences of this factor are seen in shape of anxiety and depression, thought of changing the profession or switching the job are some consequences.

4. Statement of Problem

Physician burnout must be addressed in addition to maintain an individual's best health. Healthcare workers unable to manage for themselves are unable to treat people in hospitals. They are inadequate to treat people. Recognizing and addressing this problem may help HCWs to provide the right treatment to all of their clients. Not only must individuals working on the front lines be cared for, but it is also crucial to investigate how it has impacted others in the past and to apply that information to assist address the existing situation. This worry is followed by many medical services owing to the insecurity of the COVID-19 dissemination and the elements that contribute to the stress have to be addressed. A study of nurses in Wuhan found that their burnout sentiments were somewhat unfavorable with the lack of social support [7]. One of the main indicators in relation to unfavorable psychological consequences was a lack of social support. Those who strive to balance

physiological and emotional changes, and address other elements which might contribute to the workplace can be addressed with the aim of reducing burnout levels must have sufficient emotional support. When every country is relying heavily upon their medical health care workers due to this pandemic burnout decrease the performance of those health care workers with more thoughts of leaving or switching jobs or even professions due to the pandemic pressure. So to measure this burnout factor and devise the methods to decrease the burnout ratio and intervening somehow and controlling the ratio of burnout is very important at this time. This will help not only to thrive as a nation but also saving many precious lives.

5. Aims of Objectives

The purpose of this study was to investigate the burnout level in this group and to analyze variables linked with the emergence of this psychological sequel in medical professionals giving care to COVID-19 patients and methods to cope with this situation. So the aim of this study to find the impact of COVID 19 on the front line health care workers and measuring burnout ratio among them. Addressing those issue which are the base of increasing burnout ratio and providing suggestions to control includes the objective of current study.

6. Research Questions/Hypothesis

H1: Do critical care professionals have an increase in burnout as a result of the COVID 19 eruption?

H2: How to intervene to control this burnout impact during this pandemic?

7. Methodology

In Malaysia's hospitals, a cross-sectional research will be undertaken focusing on front line healthcare professionals care for COVID-19 patients. The Maslach Burnout Inventory provides a questionnaire on-line to determine their burnout levels. In order to acquire the sample for present research a group of 550 healthcare workers was asked to participate the questionnaire. The online instrument was comprised with three phases.

- 1) Maslach Burnout Inventory: Consisted of 22 items divided into three categories: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). The Likert scale for each item ranges from "never" or 0 to "every day" or 6.
- 2) Perceived job demands and resources: The survey included questions on professional hazards, emotional demands, instability, work-family balance, and the meaning of work.
- 3) Checklist: Participants were asked to rate the frequency of psychosomatic symptoms they had in the previous four weeks on a six-point scale ranging from "never" to "often."

8. Scope and Limitations of the Study

The articles selected in the literature review have a number of restrictions. Diversity of all sample groups can be a significant element which can influence the outcomes of all sampling studies. It may be a problem in the timing of the surveys and generalize the entire HCW community if individuals at that time may not indicate burnout levels. Some research carried out before serious issues early in the epidemic may not give a full picture of the extent of burnout and a more detailed study focusing on other countries could show a good result. It's difficult to say whether or not these strategies will be affective to cope with this situation and many of these measures will have long-term consequences in this epidemic. Interventions must last for a lengthy period, especially as the duration of the worldwide COVID-19 is unknown.

8.1. Significance or Importance of the Study

The pandemic of COVID-19 has caused a wide range of national difficulties and has affected a large number of health personnel. The uncertainties of the epidemic have created worry and terror, which are as adapted to home adaptation as many. The risk of interaction with COVID-19 patients makes it challenging for health staff to treat patients. This leads to the possibility that the virus may be brought home and exposed to its own family. Many have indicated reservations and anxiety when they return home that they pose an infectious risk, which ultimately impacts how they feel emotionally. A few initiatives were carried out to assess the rising burnout levels in different nations, but were not evaluated for Malaysia. So current study is very significant to measure the level of burnout in health care workers of Malaysia.

8.2. Outline and Timetable

This study is conducted to find the impact of the COVID-19 on the health care workers in this pandemic when hospitals are full and these health care workers are working with risk of being infected all the time. That factor is generating a feeling dis-satisfaction, not enough gear available for protection and not much methods devised to remain safe are the factors that are increasing the burnout ration among these workers. To find this increasing ratio of burnout and devising strategy to control these factors include the outlines of current study. This study will be a time lag study and data will be collected in two different phases with a difference of one month time to ensure the reliability.

9. Results

Only 532 people completed the online survey, with a response rate of 96.72%. Due to incomplete work or dull submissions, 18 entries were excluded from this study.

From 532 precipitants in this study, 303 healthcare workers (57 percent) received a greater level of enjoyment from their work. 218 (41 percent) reported a greater level of

Emotional Exhaustion while 143 (27 percent) reported a greater level of Depersonalization.

A set of Spearman's correlations were used to analyze the relationship between the level of burnout, psychosomatic distress, and job expectations to further understand the variables driving these high levels of burnout and distress.

Emotional exhaustion was linked with numerous health professionals' perceptions towards professional risks, emotional demands, clinical ambiguity and work-family conflict. And also, a correlation between emotional exhaustion and the occurrence of psychosomatic symptoms was found but there was no correlation between emotional exhaustion and personal enjoyment.

In addition, the ability to feel that one's own work has importance and to be motivated by it was negatively correlated with both emotional exhaustion and depersonalization but positively correlated with and personal enjoyment.

Limitations

The sample size of this study is not statistically significant to make generalizations about the entire Malaysian population of healthcare workers.

10. Conclusion

In order to provide care for the growing number of COVID-19 cases, healthcare professionals had to work with higher pressure due to increasing workload, risk for being expose to COVID-19 patients, lack of personal protection equipment and lack of enough time to rest and spend with family. Thus, prevalence of COVID-19 cause extra burden of healthcare workers in a country.

In addition, to increase in their emotional demands, healthcare practitioners were more regularly confronted with other people's hardships, difficult decisions, and unclear situations while facing their own health risks. According to the findings of this study, growing emotional demands are linked with the level of burnout in respect to emotional exhaustion and the frequency of experienced symptoms that could be markers of psycho-somatic discomfort.

Due to the high demands coming from their jobs, doctors, nurses, and other nonspecialists in the health sector are facing a higher degree of burnout and discomfort [35, 36].

In this context, the ability of professionals to find meaning and inspiration in their work appears to be a valuable resource and a protective factor, since higher levels are linked to reduced emotional exhaustion and depersonalization, as well as higher personal enjoyment at work.

In order to reduce the higher level of burnout of healthcare workers at their workplace, strategies like increasing the availability of personal protective equipment (PPE) and giving psychological support can be used while reducing their workload [33]. And also, it is essential to find out a method to prevent or limit burnout and other discomfort conditions [33].

In addition, individual and organizational wellness strategies should be implemented for healthcare providers in

the areas of diet, exercise, mindfulness, sleep quality, and burnout reduction [34]. The stigma associated with mental health symptoms and the psychosocial effect of major life events among healthcare workers should be reduced [34]. In order to reduce the feeling of isolation, the formulation of community groups among healthcare professionals and making connections with others should be encouraged [34].

These initiatives are necessary to address clinicians' and their families' concerns about their well-being. The strategic approach to the COVID-19 pandemic must include a focus on bettering the lives of healthcare personnel.

References

- [1] Jin, Y. H., Cai, L., Cheng, Z. S., Cheng, H., Deng, T., Fan, Y. P., & Wang, X. H. (2020). A rapid advice guideline for the diagnosis and treatment of 2019 novel coronavirus (2019-nCoV) infected pneumonia (standard version). *Military Medical Research*, 7 (1), 1-23.
- [2] World Health Organization (2019) <https://www.who.int/emergencies/diseases/novel-coronavirus-2019>.
- [3] Chong, M. Y., Wang, W. C., Hsieh, W. C., Lee, C. Y., Chiu, N. M., Yeh, W. C.,... & Chen, C. L. (2004). Psychological impact of severe acute respiratory syndrome on health workers in a tertiary hospital. *The British Journal of Psychiatry*, 185 (2), 127-133.
- [4] World Health Organization (2020b) COVID-19 weekly epidemiological update. www.who.int/publications/m/item/weekly-epidemiological-update---17-november-2020.
- [5] Draper, H., Wilson, S., Ives, J., Gratus, C., Greenfield, S., Parry, J.,... & Sorell, T. (2008). Healthcare workers' attitudes towards working during pandemic influenza: a multi method study. *BMC Public Health*, 8 (1), 1-7.
- [6] Medscape. (2020). In Memoriam: healthcare workers who have died of COVID-19.
- [7] Liu, S., Yang, L., Zhang, C., Xiang, Y. T., Liu, Z., Hu, S., & Zhang, B. (2020). Online mental health services in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7 (4), e17-e18.
- [8] Giusti, E. M., Pedroli, E., D'Aniello, G. E., Badiale, C. S., Pietrabissa, G., Manna, C.,... & Molinari, E. (2020). The psychological impact of the COVID-19 outbreak on health professionals: a cross-sectional study. *Frontiers in Psychology*, 11.
- [9] Maslach, C., Jackson, SE, & Leiter, MP (1996). *MBI: Maslach burnout inventory*. Sunnyvale, CA: CPP, Incorporated.
- [10] Dewa, C. S., Loong, D., Bonato, S. and Trojanowski, L., 2017. The relationship between physician burnout and quality of healthcare in terms of safety and acceptability: a systematic review. *BMJ open*, 7 (6), p. e015141.
- [11] Hall, L. H., Johnson, J., Watt, I., Tsipa, A., & O'Connor, D. B. (2016). Healthcare staff well being, burnout, and patient safety: a systematic review. *PloS one*, 11 (7), e0159015.

- [12] Shanafelt, T. D., Dyrbye, L. N., West, C. P., & Sinsky, C. A. (2016, November). Potential impact of burnout on the US physician workforce. In *Mayo Clinic Proceedings* (Vol. 91, No. 11, pp. 1667-1668). Elsevier.
- [13] Guo, J., Liao, L., Wang, B., Li, X., Guo, L., Tong, Z.,... & Gu, Y. (2021). Psychological effects of COVID-19 on hospital staff: A national cross-sectional survey in mainland China. *Vascular Investigation and Therapy*, 4 (1), 6.
- [14] Maslach, C. and Leiter, M. P., 2006. Burnout. *Stress and quality of working life: current perspectives in occupational health*, 37, pp. 42-9.
- [15] Maslach, C. (2001). What have we learned about burnout and health?. *Psychology & health*, 16 (5), 607-611.
- [16] Saks, A. M., & Ashforth, B. E. (1997). A longitudinal investigation of the relationships between job information sources, applicant perceptions of fit, and work outcomes. *Personnel psychology*, 50 (2), 395-426.
- [17] Shanafelt, T. D., Sloan, J. A., & Habermann, T. M. (2003). The well-being of physicians. *The American journal of medicine*, 114 (6), 513-519.
- [18] Allo, M. (2009). Presidential address: Widening the circle of compassion. *The American Journal of Surgery*, 198 (6), 733-735.
- [19] Balch, C. M., & Shanafelt, T. (2010). Combating stress and burnout in surgical practice: a review. *Advances in surgery*, 44 (1), 29-47.
- [20] Saadat, H., Lin, S. L., & Kain, Z. N. (2010). The role of "wellness" in medical education. *International anesthesiology clinics*, 48 (3), 131-138.
- [21] Aiken, L. H., Cimiotti, J. P., Sloane, D. M., Smith, H. L., Flynn, L., & Neff, D. F. (2012). Effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *The Journal of nursing administration*, 42 (10 Suppl), S10.
- [22] Chapman, L. 2005. Meta-evaluation of work site health promotion economic return studies: 2005 update. *American Journal of Health Promotion*, 19 (16): 1A.
- [23] Linnan, L. A. (2010). The business case for employee health: what we know and what we need to do. *North Carolina medical journal*, 71 (1), 69-74.
- [24] Blanchard, P., Truchot, D., Albiges-Sauvin, L., Dewas, S., Pointreau, Y., Rodrigues, M.,... & Kantor, G. (2010). Prevalence and causes of burnout amongst oncology residents: a comprehensive nationwide cross-sectional study. *European journal of cancer*, 46 (15), 2708-2715.
- [25] Williams, E. S., Konrad, T. R., Scheckler, W. E., Pathman, D. E., Linzer, M., McMurray, J. E.,... & Schwartz, M. (2010). Understanding physicians' intentions to withdraw from practice: the role of job satisfaction, job stress, mental and physical health. *Health care management review*, 35 (2), 105-115.
- [26] Cole, T. R., & Carlin, N. (2009). The suffering of physicians. *The Lancet*, 374 (9699), 1414-1415.
- [27] Cossman, J. S., & Street, D. (2009). Mississippi burnout part II: satisfaction, autonomy and work/family balance. *Journal of the Mississippi State Medical Association*, 50 (10), 338-345.
- [28] Shanafelt, T. D., Balch, C. M., Bechamps, G., Russell, T., Dyrbye, L., Satele, D.,... & Freischlag, J. (2010). Burnout and medical errors among American surgeons. *Annals of surgery*, 251 (6), 995-1000.
- [29] Jones, J. W., Barge, B. N., Steffy, B. D., Fay, L. M., Kunz, L. K., & Wuebker, L. J. (1988). Stress and medical malpractice: organizational risk assessment and intervention. *Journal of Applied Psychology*, 73 (4), 727.
- [30] Dunford, B. B., Shipp, A. J., Boss, R. W., Angermeier, I., & Boss, A. D. (2012). Is burnout static or dynamic? A career transition perspective of employee burnout trajectories. *Journal of Applied Psychology*, 97 (3), 637.
- [31] Leiter, M. P., Hakanen, J. J., Ahola, K., Toppinen-Tanner, S., Koskinen, A., & Väänänen, A. (2013). Organizational predictors and health consequences of changes in burnout: A 12-year cohort study. *Journal of Organizational Behavior*, 34 (7), 959-973.
- [32] Roslan, N. S., Yusoff, M. S. B., Razak, A. A., & Morgan, K. (2021, January). Burnout prevalence and its associated factors among Malaysian healthcare workers during COVID-19 pandemic: an embedded mixed-method study. In *Healthcare* (Vol. 9, No. 1, p. 90). Multidisciplinary Digital Publishing Institute.
- [33] West, C. P., Dyrbye, L. N., & Shanafelt, T. D. (2018). Physician burnout: contributors, consequences and solutions. *Journal of internal medicine*, 283 (6), 516-529.
- [34] Shreffler, J., Petrey, J., & Huecker, M. (2020). The impact of COVID-19 on healthcare worker wellness: A scoping review. *Western Journal of Emergency Medicine*, 21 (5), 1059.
- [35] Harrison, K. L., Dzeng, E., Ritchie, C. S., Shanafelt, T. D., Kamal, A. H., Bull, J. H.,... & Swetz, K. M. (2017). Addressing palliative care clinician burnout in organizations: a workforce necessity, an ethical imperative. *Journal of pain and symptom management*, 53 (6), 1091-1096.
- [36] Rizo-Baeza, M., Mendiola-Infante, S. V., Sepehri, A., Palazón-Bru, A., Gil-Guillén, V. F., & Cortés-Castell, E. (2018). Burnout syndrome in nurses working in palliative care units: An analysis of associated factors. *Journal of Nursing Management*, 26 (1), 19-25.
- [37] Ulwelling, J. J., & Christensen, J. F. (2001). Letters from the Northwest: Northwest Center for Physician Well-Being. *Western Journal of Medicine*, 174 (1), 70.