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The Effects of COVID-19 on Well-Being of Healthcare Workers

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Abstract

The development of the new coronavirus disease, COVID-19, led to the spread of turmoil across the United States and further around the globe. With the virus creating uncertainty among the population, the evidence began to demonstrate that individuals could have devastating health effects, including death. Healthcare workers are among those who were on the frontlines in order to care for the infected, ultimately increasing their own chances of acquiring the virus and putting their health at risk. These workers have experienced a direct impact due to this exposure in the form of isolation, anxiety, depression, suicide, and sleep disturbances. With the spread of burnout occurring throughout the healthcare field, students partaking in healthcare studies will be among the first to begin their careers in such conditions. It is crucial that we understand the effects of COVID-19 on mental health and well-being and formulate coping mechanisms that will prevent such detrimental effects on our future healthcare workers. The purpose of this paper is to review the commonly found impacts of the COVID-19 pandemic on the mental health of healthcare workers and utilize this information to design strategies for students in healthcare to improve their overall well-being. A literature review was conducted utilizing a variety of scholarly articles and journals consisting of information pertaining to this topic. This review aims to answer the following question: How has the COVID-19 pandemic impacted the well-being of our healthcare workers, and how can we utilize such findings to assist with current students in healthcare?

Keywords: COVID-19, well-being, isolation, anxiety, depression, insomnia

The Effects of COVID-19 on Well-Being

The emergence of COVID-19 disrupted life as we knew it, taking a toll on people and changing the way in which healthcare providers are working and students are educated. The guidelines to protect people have changed as the research on the virus has evolved. These everchanging protocols led to the unfortunate panic and negative effects faced by many individuals. Healthcare workers most notably were placed under extreme amounts of pressure, and the mental health of this workforce was put at risk. Students enrolled in healthcare degrees are preparing to enter this field in such demanding conditions. As these students notice the effects of COVID-19 on experienced healthcare workers, this leaves room for concern regarding their own well-being and how they will navigate through such conditions. The purpose of this paper is to review the commonly found impacts of the COVID-19 pandemic on the mental health of healthcare workers and utilize this information to design strategies for students in healthcare to improve their overall well-being.

Background

The concept of an individual's well-being is not universally defined. However, it can be viewed as a positive component to one's life. According to the CDC (2018), well-being typically involves the presence of positive feelings, self-fulfillment, and overall satisfaction with life and a lack of negative emotion. There is a clear connection between the achievement of well-being and the condition of one's mental health. Unfortunately, the emergence of COVID-19 created a state of uncertainty, escalating an additional attack on mental health.

With little known about the emerging virus, this uncertainty turned into a widespread fear of the unknown. Based on previous pandemics and epidemics such as Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome (MERS), and Ebola, it was expected that

healthcare workers would be predisposed to high amounts of pressure in addition to the threat to their well-being (Vizheh et al., 2020). COVID-19 was found to spread via respiratory droplets and possibly airborne transmission, leading to respiratory symptoms that ranged from mild to severe (Yesudhas et al., 2021). The insidious way in which COVID-19 spread created a domino effect of numerous infections and deaths.

Supply shortages were an additional negative effect of the virus. These shortages included personal protective equipment, ultimately putting healthcare workers at increased risk of exposure to COVID-19 (Yesudhas et al., 2021). In addition, the lack of knowledge only led to the misinterpretation of the disease with social media playing a significant role in conflicting information (Yesudhas et al., 2021). New information soared throughout the world every day with multiple news stories including the number of new cases and deaths at every given moment. The fears and anxieties were inevitable, and with that came the destruction of mental health. The direct effects of the pandemic on healthcare workers were shown as isolation, anxiety, depression, suicide, and sleep disturbances.

Isolation

Beginning in March 2020, various government officials within the United States initiated stay-at-home orders for their citizens with the intent of reducing the spread of the virus (Moreland et al., 2020). It is likely that the speed in which government mandates were put into place contributed to the widespread instability and fear growing among the general population. Being isolated, people gained a variety of differing perspectives. For some, it was an excuse to pursue and enjoy an existing introverted lifestyle. For most however, this was a difficult transition leading to feelings of loneliness which then translated into fear, disturbed sleep patterns, anxiety, depression, and increased risk for suicide (Hwang et al., 2020; Usher et al.,

2020). Social isolation also potentiates feelings of loneliness which can create additional complications involving physical health, most commonly cardiac-related issues (Hwang et al., 2020).

Healthcare workers maintained a responsibility to care for those infected with the virus despite the lack of information and additional risks. Since the communicability of COVID-19 was still unknown, many healthcare workers chose isolation from family and friends as a way of not spreading the virus to others. This forced isolation seemed to be the most appropriate decision which unfortunately contributed to many healthcare workers' mental trauma (Vizheh et al., 2020). Pappa et al. (2020) added that isolation and a reduced social support can compromise the resilience they previously possessed. With little to no contact with anyone other than those in their work setting, it is no question that the well-being of this workforce was compromised. With that said, recognizing that healthcare workers are taking care of themselves whether on the front lines or in isolation should be prioritized.

A qualitative study by Fawaz and Samaha (2020) found that healthcare workers experienced feelings of isolation related to COVID-19. The premise of this study was to investigate the specific effects of isolation on 13 healthcare workers, making note of their responses and identifying common themes. Commonalities that were identified among these healthcare workers included fear of contracting COVID-19 and spreading it to others, as well as becoming stigmatized by others who were fearful of contracting COVID-19 due to their work environment (Fawaz & Samaha, 2020). It was noted that certain acquaintances of those workers refused to come into any sort of physical contact with them (Fawaz & Samaha, 2020). Not only were workers afraid of spreading it themselves, but others were essentially starting to become

afraid of them. These types of situations potentiated feelings of isolation, further putting people at risk for worsening mental health and well-being.

Participants of this study expressed one common theme in which they held concerns about both contracting and spreading the virus. With healthcare workers being most involved in caring for patients infected with COVID-19, they are seen as the individuals more vulnerable to becoming infected. According to Fawaz and Samaha (2020), healthcare workers comprise at least 20% of those who acquired the virus. An additional study found that when the pandemic began, 29% of those hospitalized were healthcare workers (Vizheh et al., 2020). Even so, this puts them in a conflicting position of wanting to do what is morally right by helping patients while also developing anxiety about infecting their loved ones (Fawaz & Samaha, 2020). Some health professionals chose to go to the extent of renting places to live near the hospital to avoid such anxieties, and these temporary homes were not readily affordable (Fawaz & Samaha, 2020). Questions may be raised by those working on COVID-19 units: Will this type of behavior persist even if the situation begins to resolve?

Anxiety, Depression, and Suicide

The effects of isolation and loneliness potentiate further health risks associated with mental health such as anxiety, depression, and suicide (Hwang et al., 2020). With anxiety already being quite common separate from the emergence of COVID-19, it became a pandemic of its own as cases began to rise. In a systematic review, Vizheh et al. (2020) found that out of 11 selected studies, anxiety was the most common outcome of the pandemic, followed by depression, stress, and insomnia. These studies included between 59 to 5,062 healthcare worker participants. Among the 11 studies, the prevalence of anxiety reported by healthcare workers ranged from 24.1% to 44.6% (Vizheh et al., 2020). Such anxieties went to the lengths of turning

into fear. Vizheh et al. (2020) found in a similar study that up to 70.6% of medical staff claimed to suffer from moderate to severe fear.

A similar study conducted by Pappa et al. (2020) found anxiety symptoms to be common among 33,062 healthcare workers due to the pandemic, primarily those that were female nurses. This is likely due to the fact that most nurses are composed of females. According to this study, anxiety was found in 23.2% of healthcare workers with severities ranging from mild to severe (Pappa et al., 2020). Although all healthcare workers may experience some level of anxiety, nurses are in a slightly more vulnerable position. Nurses are typically more hands on with patients, increasing their risk of exposure (Pappa et al., 2020). Due to their existing vulnerability and increased exposure, it is understandable that this group is experiencing higher levels of anxiety. An additional study by Xu et al. (2020) studied the anxiety levels of two groups of surgical staff, one during the COVID-19 outbreak and the other prior to the outbreak. Of the 60 individuals in each group, 28 out of 60 were considered positive for anxiety during the outbreak whereas only six out of 60 were considered positive in the pre-outbreak group (Xu et al., 2020). The results of this study demonstrate the increasing levels of anxiety directly related to COVID-19. According to Hwang et al. (2020), many individuals are already predisposed with some type of mental illness making the additional burden of the pandemic difficult to withstand. The anxiety that was experienced caused a significant number of healthcare workers to step away from their jobs (Vizheh et al, 2020).

The presence of anxiety is often accompanied by an additional diagnosis of depression and vice versa. According to Coplan et al. (2015), 62% of those with generalized anxiety disorder had experienced an episode of depression in their life. That being said, addressing the depression that individuals have reported due to COVID-19 is critical. It has been suggested that

a positive correlation exists between depressive symptoms and higher exposure to the virus (Carmassi et al., 2022). This can be explained as the “Epicenter Effect.” This is a finding in which healthcare workers seem to experience compromised mental health in correlation to heightened exposure to COVID-19 (Carmassi et al., 2022). Healthcare workers are among those who have suffered from this unfortunate condition.

Olaya et al. (2021) conducted a study exploring depressive symptoms that healthcare workers experienced during the COVID-19 outbreak. Of the 57 chosen studies, sample sizes ranged from 46 to 14,825 healthcare workers. Using online questionnaires, participants self-reported symptoms that correlated with depression. Olaya et al. (2021) reported that 24% of healthcare workers reported depressive symptoms during the COVID-19 outbreak. This is consistent with a study conducted by Carmassi et al. (2022) who found that 20.2% of the 514 healthcare workers in their study screened positive for moderate to severe depressive symptoms during exposure to the pandemic.

According to Carmassi et al. (2022), symptoms signifying depression appeared to play a more significant role in functional impairment of healthcare workers. Not only would this impairment impact their quality of life, but it would appear to have effects on patient care as well. Healthcare workers are tirelessly told the importance of taking care of themselves in order to care for others. Unfortunately, working amidst COVID-19 has made this a challenge. Although healthcare workers may be experiencing imbalances within their mental health, some may not come forward with complaints. Instead, they may be reluctant asking for help or be in denial of experiencing depressive symptoms (Braquehais et al., 2020). In a study conducted by Takada et al. (2022), 1269 healthcare workers completed questionnaires regarding their mental health. Of this sample, 23% claimed their mental health has declined since the start of the

pandemic (Takada et al., 2022). More alarmingly, 16% of respondents stated they would not consult anyone regarding their condition (Takada et al., 2022). Although it seems like an insignificant percentage, the numbers should not be disregarded. If healthcare workers avoid seeking help, this may increase their risk for a worsening condition and may introduce suicidal ideation (Halter, 2018).

Suicide is a devastating result of declining mental health and can have a variety of contributing factors. It is the 10th leading cause of death in the United States (American Foundation for Suicide Prevention, 2022). Healthcare workers are in a position of vulnerability when it comes to suicide (CDC, 2021). According to the CDC (2021), the factors that put them at risk include difficult working conditions, emotionally troubling situations involving patients, exposure to infectious diseases, and constant exposure to patient suffering and death. The current pandemic has introduced these factors for a much longer period, making working conditions incredibly intolerable.

A study conducted by Davis et al. (2021) examined suicide rates for nurses and physicians in comparison to the general population. The results of their study were divided between men and women and included the rate of suicide per 100,000 individuals. For women, the suicide rates were 17.1 for nurses, 10.1 for physicians, and 8.6 for the general population (Davis et al., 2021). Among the men, their suicide rates were 31.1 for nurses, 31.5 for physicians, and 32.6 for the general population (Davis et al., 2021). These rates may continue to worsen in the current conditions provided by the pandemic. It is critical that we take these numbers into consideration and encourage healthcare workers to seek help if needed.

Sleep Disturbances

In addition to mental health challenges, the COVID-19 pandemic has opened an additional area of concern regarding sleep. The importance of adequate sleep and its effect on our ability to function is often overlooked. According to Hirshkowitz et al. (2015), adults and older adults should be getting between seven and nine hours of sleep each night to be considered sufficient. Unfortunately, the pandemic has brought about barriers that have made sleeping much more difficult for healthcare workers. With social isolation causing many to experience anxiety and depression, an imbalance has been created within the circadian rhythm of healthcare workers. Obtaining enough sleep is especially critical for those working in a healthcare environment. These individuals must assure they are well rested in order to work at an optimal level. Working in healthcare requires the ability to think critically and make decisions regarding people's lives. A lack of sleep can thus increase the risk for medical errors and accidents (Giardino et al., 2020).

Of the many sleep disorders in existence, insomnia has been a prevalent issue faced by healthcare workers amid COVID-19. In a study by Diaz et al. (2022), 813 healthcare workers in New York City who were working during the pandemic completed surveys pertaining to their sleep quality and mental health. The results showed that the prevalence of insomnia symptoms was 72.8%, a significantly high percentage (Diaz et al., 2022). In addition, 38.8% claimed to be sleeping less than six hours per night (Diaz et al., 2022). This goes against the average recommendations of obtaining seven to nine hours of sleep for adults (Hirshkowitz et al., 2015). Diaz et al. (2022) also investigated the link between insomnia and acute stress symptoms. Results of the survey also showed that out of those with insomnia, 67.4% screened positive for an elevation in acute stress symptoms (Diaz et al., 2022). This is more significant in comparison

to those without insomnia in which just 32.6% screened positive for an elevation in these symptoms (Diaz et al., 2022).

According to Giardino et al. (2020), anxiety and depression potentiate sleep disorders such as insomnia and nightmares and can create alterations in circadian rhythms. Within this study, there appeared to be a close correlation between nightmares and partaking in stressful situations. They found that 58.9% of subjects reported experiences of nightmares or violent dreams, and 3.4% of these individuals injured their bed partner during such dreams (Giardino et al., 2020). With COVID-19 posing as a high-stress situation, this brings upon concern as many healthcare workers have been living and working in such poor environments for extended periods of time.

Discussion

The effects of the COVID-19 pandemic have caused debilitating effects to surface throughout the healthcare workforce. This new and troubling virus led to the immediate isolation guidelines developed by the CDC. With healthcare workers having to commit to their jobs, this left them with few choices but to put themselves at risk of exposure. The fears of contracting and spreading the virus forced many of these individuals into isolation from loved ones, thus further potentiating effects such as anxiety, depression, and suicide. Many individuals had additional experiences of insomnia related to mental health struggles. This cascade of effects ultimately began a detrimental cycle, creating severe damage to the mental health of these important workers.

The previously discussed studies thus far have suggested that numerous individuals working amid the pandemic have struggled with maintaining well-being and adapting adequate coping skills. It is important to address these concerns that have developed; however, attention

must also be brought to those who are studying to soon enter this field. The notable effects on the well-being of this workforce will likely have a direct impact on those who will soon be in their position. Despite the lack of studies regarding students in healthcare, implications can be drawn from the lived experiences and extrapolation from research on those currently working in healthcare. Students were also put into a dilemma in the primary stages of COVID-19, being forced to transition to virtual education and potentially miss out on certain clinical opportunities. Students in healthcare likely were unable to attend their rotations that provided them with the hands-on skills necessary to be successful in their future roles. Additional stressors among students may also stem from difficulty accessing the internet or computers at home, concerns for the health of themselves and their family members, and financial concerns (Keckojevic et al., 2020). Utilizing what is known about the effects of the pandemic on healthcare workers, it is critical that we in turn assist our future healthcare workers to prevent such effects. Not only will they be entering the workforce amid COVID-19, but they will be a part of the next generation of healthcare workers.

Isolation has shown to have negative impacts on individuals. As students begin their journey into their specialty, they too may feel the pressures of having to keep their distance or may continue to face stigmatization from others. That said, it is important that these students maintain connections with close acquaintances as much as possible in order to combat feelings of isolation. Technology is an ideal method of accomplishing such a task. When access is available, individuals can take the time to reach out to others to maintain such connections and stay in touch as much as possible (Hwang et al., 2020). This can be done via phone calls, video chats, social media, or any unique method that fits the individual. In addition, it is recommended that students maintain a consistent routine as much as possible. It is critical to incorporate exercise,

healthy foods, and making time for hobbies that contribute to overall well-being (Razai et al., 2020). As suggested in previous studies, the feeling of isolation has the potential to escalate feelings of fear, anxiety, and depression (Hwang et al., 2020). Students should anticipate utilizing these strategies to keep in contact with others in the early stages so negative feelings do not develop and preserve well-being.

Not only are healthcare students at risk for developing anxiety and depression related to the stressors of their education, but the pandemic has increased the chances of such conditions (Larkin & Loughran, 2020). Identifying individual signs and symptoms of anxiety and depression is critical in preventing the devastating actions of suicide. Many coping mechanisms exist as well for helping with anxiety and depression among students. Despite the benefits brought about by technology and social media, they come with risks. Social media platforms have been shown to increase the likelihood of spreading misinformation, further increasing anxiety among students (Kecojevic et al., 2020). Students who find themselves seeking information should utilize appropriate outlets, such as health professionals and government sites, to prevent utilizing false information (Kecojevic et al., 2020). Doing so can be helpful in promoting a positive environment, as well as easing the symptoms associated with their anxiety (Kecojevic et al., 2020).

Students studying within healthcare are typically overwhelmed with their schoolwork tasks. With the addition of the pandemic potentiating the mental health challenges discussed previously, they too are at risk for sleep disturbances. In most instances, such sleeping issues are associated with mental health disturbances. According to Diaz et al. (2022), symptoms of insomnia were associated with a 50% increase in acute stress, a 100% increase in acute depressive symptoms, and a 70% increase in anxiety. With these statistics in mind, students who

may be suffering from insomnia may benefit by utilizing interventions that help with symptoms of anxiety and depression. In addition, cognitive behavioral therapy for insomnia (CBTI) has been shown to benefit sleep schedules. In previous studies, CBTI has led to a reduction in depressive symptoms in those who experienced insomnia and psychological distress (Diaz et al., 2022). This can also be a useful intervention if simpler coping mechanisms fail.

Implications for Practice

Many interventions exist to address the current burden that has developed within the healthcare field. Although simple interventions such as performing self-care, exercising, and living a healthy lifestyle are important, additional methods, such as holistic modalities, have been shown to have a positive impact on our well-being. Such activities can be utilized by our healthcare student population in preparation for what is to come.

Holistic health and holistic nursing have been a topic of discussion for many years. Holistic nursing takes the profession a step further and focuses on the patient as a whole, regarding more than just physical health but “attending to the complexities of the human experience” (Frisch & Rabinowitsch, 2019, p. 262). When utilizing holistic nursing, health professionals will often incorporate or suggest complementary and alternative medicine (CAM) as a means to improve well-being. Examples of CAM methods include massage, therapeutic touch, relaxation, cold and heat therapies, imagery, music, and creating an optimal healing environment overall (Hajbaghery & Mokhtari, 2018). A study conducted by holistic nursing faculty at Mercy College in New York provides evidence to support CAM interventions on current students.

Students attending Mercy College during the pandemic had appeared to develop both exhaustion and moral distress due to their residence in an epicenter for the virus (Larkin &

Loughran, 2020). Faculty at the school decided to incorporate a variety of holistic modalities including the following: progressive relaxation, meaningful dialogue, guided imagery, therapeutic suggestions, mindful meditation, therapeutic touch, reiki, polarity therapy, Jin Shin Jyutsu, self-help tools, aromatherapy, therapeutic music, and theory-informed presencing (Larkin & Loughran, 2020). It was hopeful that these resources would be beneficial in the improvement of student well-being and ability to optimally perform in the school setting (Larkin & Loughran, 2020). Participants completed the Micro-Grant Visual Stress Scale Evaluation to assess their stress levels before and after the activity. Stress scores were rated on a scale of 0 to 10, with 0 meaning no stress and 10 meaning high levels of stress (Larkin & Loughran, 2020). Sixteen students had the opportunity to attend one-on-one sessions which incorporated the various modalities. With a starting mean stress score of 5.7 out of ten, this score was reduced to 0.5 following participation in the holistic interventions (Larkin & Loughran, 2020). In addition, 163 students chose to participate in online classroom presentations that utilized some of the listed interventions. Seventy-eight students identified their pre-session stress scores resulting in a mean of 6.4 out of ten. Following their online sessions, stress levels were reduced to 2.5 (Larkin & Loughran, 2020).

Based on the previous study, both the in-person and online sessions led to a dramatic reduction in stress levels among students, emphasizing the importance of holistic interventions on well-being. Students within healthcare are often exposed to high amounts of workload throughout their programs. In addition to their education, they are balancing additional aspects of their personal lives which may also contribute to additional stressors and mental health challenges. Holistic health is an incredibly important element to the self and is often overlooked. Students who struggle with identifying self-care needs may benefit from the multiple options

provided through CAM interventions and holistic health. The well-being of this population is critical to the future of our healthcare workers, and we must pay deliberate attention to assure they are taking care of themselves.

Conclusion

Based on the previously discussed research, the COVID-19 pandemic has led to devastating impacts on our healthcare workers globally. Strains on mental health have included isolation, anxiety, depression, suicide, and sleep disturbances among this workforce. We can extrapolate that this will eventually take a toll on current students who are studying within the field of healthcare. Mental health and well-being are critical to the functioning of healthcare workers. By understanding the calamitous effects faced by current employees, such insights must be utilized to prevent current students in healthcare from facing similar challenges. Implementing early interventions that address strains on the above findings will help to prevent early burnout among new healthcare workers. In addition, the implementation of holistic health should also be taken into consideration to prevent the destruction of students' well-being. Healthcare workers are an imperative component to our society. Time must be taken to prioritize their well-being and prevent early destruction of our future healthcare workers.

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