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Mental Health Impact of the COVID-19 Pandemic on Healthcare Workers

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ABSTRACT

A brief review of the literature surrounding healthcare workers, with a focus on nurses, and how the global COVID-19 pandemic impacted their mental health. A review of the situation before the pandemic as well as during and after the pandemic, including coping mechanisms being employed, both adaptive and not. A brief review of some actions that can be taken by management teams to support their staff as the pandemic comes to an end.

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In December of 2020, the first cases of the SARS-CoV-2, also known as COVID-19, outbreak was reported in a Wuhan, China. The Centers for Disease and Control and Prevention (CDC) was initially notified of a pneumonia like illness with an unknown source that would not respond to traditional treatments. On March 11, 2020, the World Health Organization first declared COVID-19 as a pandemic [1]. On May 11, 2023, the Biden administration declared and end to the public health and the COVID-19 pandemic emergencies that were initially enacted by the Trump administration [2].

The official estimate of the number of deaths related to the approximately 3-year COVID- 19 pandemic is approximately 5.4 million people in 2020 and 2021, however the World Health Organization has stated that this number is grossly under-reported and the true number could be as high as 14.9 million deaths, worldwide [3].

Before the Pandemic

Even before the pandemic, healthcare workers were under a significant amount of stress. Using data collected by the CDC between 2019 and 2019, Silver et al. found that, as a whole, over 40% of healthcare workers reported insufficient sleep and nearly 19% reported a diagnosis of depression [4]. Depression was said to be highest for female nurses who worked in either a psychiatric or intensive care settings. For nurses, age was also found to be a factor, with younger female nurses having a higher prevalence than their older female counterparts, or their male counterparts.

Davis et al. reported in that during the years, 2017 & 2018, healthcare worker suicide rates were 17.1 for nurses and 10.1 for physicians, and only 8.6 for the female general population of the United States [5]. The same study found even higher results for males, with 31.1 for nurses, 31.5 for physicians, and 32.6 for the general male population. Of interest, is that there was no statistical difference in suicide rates for male physicians nor nurses versus the general population over this time frame, however female nurses and physicians were both significantly more likely to commit suicide, versus the general population.

Stressors Faced During the Pandemic

The stressors placed on healthcare workers as as whole were varied. One key stressor was the availability and quality of Personal Protective Equipment (PPE). One study found that less than half of frontline nurses felt that provided PPE was capable of offering effective protection [6].

Change fatigue, a state of rapid and continual changes in information regarding the disease, as well as treatment modalities, has been found to be a significant stressor to nurses in general [7]. Treatment plans for patients with COVID-19 changed rapidly and quickly, sometimes in seemingly contradictory ways. This fostered a sense of chaos, and lack trust in the treatment methods among frontline healthcare workers.

Poor patient outcomes related to COVID-19 has been cited as an additional nursing stressor [7]. In one retrospective study, it was found that after accounting for secondary risk factors, such as heart disease and diabetes, patients who were on mechanical ventilators spent double the amount of time reliant on those ventilators, as well as had a 2.25 increase in risk of death. In addition to the increased risk of death, the increased amount of time in the intensive care unit further depleted available resources that may have been used for other patients, with greater chance of survival [8].

An additional stressor placed on nursing during the pandemic was social isolation. Most of the country was going through social distancing, but nurses were being isolated from their families as a means to prevent transmission of COVID to their family members. This physical isolation morphed into psychological

isolation, further increasing psychological distress [9].

Deleterious Coping Mechanisms

When faced with severe life stressors, it is not uncommon for people to turn substances, legal or otherwise, as a way to deal with the additional stress. One study looked at only the first six months of the pandemic and found that among the 310 nurses involved in their study, over half reported alcohol misuse, and over 12% reported drinking alcohol purely to cope with their daily routine In the same study, it was found that almost 30% reported clinical signs of moderate to high depression, nearly 39% reported clinical signs of PTSD, and 56% reported signs of generalized anxiety disorder [10].

One study found that alcohol use to be the most reported substance used to cope with the stress of the pandemic, but also listed in this study were tobacco, recreational drugs. Food was also listed as a substance that was imbibed as a coping mechanism for this stressful time [9].

Effective Therapies

- **Cognitive Behavioral Therapy**

Cognitive Behavioral Therapy (CBT) is a psychological therapy that involves recognizing emotions and feelings with specific triggers associated with that feeling. Specific coping skills are then introduced and implemented with these feelings are later experienced [11].

CBT is a tool based on the concept that how an individual thinks, feels, and acts are all interrelated. Untreated, negative thoughts, possibly related to past traumas, can lead to negative behavior and thought patterns. CBT trains individuals to recognize their own negative thoughts or cognitive distortions, and to consciously address and alter those thoughts, and their associated actions [12].

- **Eye Movement Desensitization and Reprocessing Therapy**

Eye Movement Desensitization and Reprocessing Therapy (EMDR) is a process that involves the patient recalling their traumatic feelings and then using a distracting task that involves eye movements [11].

EMDR was inadvertently discovered when psychologist Francine Shapiro noted that specific eye movements had an impact on the intensity of traumatic thoughts. She completed studies and was able to show a significant effect desensitizing the individual to traumatic thoughts versus her control group. These effects were shown to persist over a period of up to three months following treatment [13].

- **Prolonged Exposure**

Prolonged Exposure (PE) is another desensitatzion therapy that is often used in conjunction with with EMDR. PE therapy is a morestraight forward therapy than EMDR in that it involves the patient recalling their fear/traumatic event repeatedly in a therapy session with the end goal of habituation, decreasing the anxiety level caused by the memory [11].

- **Medications**

Pharmacologic treatment of PTSD is largely relegated to seratonin-reuptake inhibitors (SSRI) medications. In their 2021 systematic review of treatment guidelines, Martin, Naunton, Kosari, Peterson, Thomas, & Christenson, found that nearly all treatment guidelines recommended SSRIs such as sertraline (Zoloft), paroxetine (Paxil), and the SNRI (seratonin- norepinepherine reuptake inhibitor) venlafaxine (Effexor) were the most commonly indicated medications. Of interest is that several articles indicate that SSRIs are best used in conjunction with psychotherapies, such as PE and MDR mentioned above. There are new studies being performed investigating the use of MDMA that may provide new pharmacological treatments in the future [14].

Implications for the Future of Nursing

Healthcare workers have been shown to have an increased prior to the COVID-19 pandemic, which in no way made the situation better for these workers. A number of short-term studies have been reviewed and shown an increase in mental health issues, as defined by meeting clinical diagnoses, or merely an increase in unhealthy coping skills. Suicide rates among nurses are nearly 50% higher, for both men and women, than that of the general public. Latest published data for suicide rates only goes up to 2019, which does not include any impact the pandemic may have had on these rates [15]. The short-term impact cannot be evaluated for approximately another 2 years, and the full impact will take many more to be fully analyzed.

A number of writers have proposed as many plans to help nurses, and others, recover from the traumas endured during the COVID-19 pandemic. One of the simplest to implement is merely having an awareness that there is a healthcare crisis that has resulted from the COVID-19 pandemic. Awareness of the problem is the first step towards repairing damage that has resulted, and towards making improvements in support systems for future situations that may also bring about increased levels of psychological trauma [16].

Routine debriefings can also be used for staff to talk about their shared experiences. Discussing critical experiences and events is a simple, but important, way to support the mental well-being of staff involved [16]. Open conversation about these experiences can allow healthcare workers to move beyond simple trauma-bonding, and towards creating true supportive relationships where all parties benefit from the relationship.

Management needs to begin open conversations regarding substance abuse, without fear of reprisals. Most healthcare workers are employed within an environment that prohibits the use of most substances, even when on personal time [17]. With the increased availability of marijuana resulting from its decriminalization in many states, and with increased self-reporting of substance use, which is known to be under-reported, there is a high probability that nurses and other healthcare workers will develop substance use disorders, and have no easily available resources for treatment [18,19].

Nurses and other healthcare workers who test positive in random tests are often terminated from their employment, which would only further serve to isolate them, further reduce treatment opportunities, and continue to deplete the nursing supply.

Conclusion

In late 2019, and continuing for almost three years, the SARS-CoV-2 virus, COVID-19, ran amok worldwide, infecting nearly every human on the plant, and killing millions. Healthcare workers, and nurses in particular, were at the forefront of the battle caring for those individuals who were unfortunate enough to succumb to this terrible pandemic. As a result of this pandemic, a significant number of nurses have had a measurable decline in their mental health, many turning using unhealthy coping skills to get through these times. It's time for healthcare systems to begin supporting those who carried them through this pandemic.

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