

COVID 19 Research Paper

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At the end of 2019, coronavirus began to spread rapidly in Wuhan, China which resulted in an epidemic in that region. A few months later, it became a global pandemic where chaos and frenzy ensued for cleaning supplies, toilet paper, food and water. COVID-19 is designated as a severe acute respiratory syndrome spread mainly by person-person transmission, which has varying levels of effectiveness based on the person who is infected. The infection can be asymptomatic in some individuals, and it can be severe in others along with mild and moderate presentation. Like other viruses, coronavirus evolves over time and depending on the variant can spread more rapidly and be more severe – in which case the Delta variant (detected in December 2020) is now the biggest concern for individuals and families in the United States amongst other countries such as India and the United Kingdom. (McIntosh et al., 2021) The Delta variant is recognized as highly transmissible and has a higher risk of hospitalization; and while several studies suggest that vaccine effectiveness is slightly decreased against the Delta variant, it remains high against severe disease and hospitalization. (Edwards & Orenstein, 2021). COVID-19 cases increase by the day and as of August 18, 2021 the United States has seen 37 million cases and has claimed 620k deaths. Additionally, according to the CDC, adults with at least one (1) vaccination in the United States is 72%. (CDC COVID Data Tracker, 2021).

There are several fears and concerns within the medical industry to include supply shortage, fear of infection while caring for COVID-19 positive individuals, concerns of burnout amongst all healthcare workers and psychological trauma of frontline workers caring for individuals with severe cases such as emergency departments and intensive care units. All of these factors play into the development and symptoms of stress, anxiety and depression, which is increasing amongst healthcare workers who are directly impacted by this pandemic. (Chatzittofis et al., 2021). Nurses have played a vital role in the care for patients with COVID-19 as they are

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the ones with the patient for 12 hours a day monitoring them, administering medication and being attentive to their needs as they fight this virus.

Since the beginning of the Coronavirus pandemic, nursing professionals have encountered various challenges while caring for COVID 19 patients. The swift spread of the infection in the early 2020 and late 2019 found several healthcare systems unaware, thus making them struggle in providing ventilators, personal protective equipment, and intensive care unit beds for both patients and healthcare workers. With the virus pandemic, nurses have faced perfect episodes of a storm threatening their well-being, health, and ability to carry out their jobs (Arnetz et al., 2020). All these challenges have had some impacts on the lives of nurses, and in particular, their mental health status. Nurses have indeed faced devastating challenges from this pandemic, and this experience has shaped and prepared them for a future pandemic. Pandemics have massive effects on the healthcare system, specifically on the workforce. COVID 19 is particularly virulent among other respiratory infectious diseases since it is transmissible via interpersonal contact and droplets. As the frontline health workforce, nurses comprise the largest group in the healthcare environment, and they have responded to this pandemic. The most traumatic challenge nurse profession while curbing the pandemic is that they are at greater risk of contracting the viruses because they deliver direct care to COVID 19 patients.

Various reports have suggested that the rate of viral infection among the healthcare workforce is more extensive than anticipating; according to Fernandez et al. (2020), in Taiwan, out of 70 Severe Acute Respiratory Syndrome (SARS) deaths, 4 of the victims were nurses. Another challenge faced by nurses during the pandemic is the lack of personal protective equipment (PPEs). Recent studies noted that those nurses assigned duties without PPEs had a greater rate of infection, which could be transmitted to other clients and their family members.

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This ethical challenge violates non-maleficence, which states that "do no harm to others" (Gebreheat & Teame, 2021). Furthermore, staffing shortage and psychological stress have been considered critical challenges throughout the pandemic. The nursing shortage is supported by the Shiow-Ching, S. H. U. N. (2021) report, which found that nurses and nursing students perceived nursing work as too risky to participate in during COVID 19, which led to about 9.3% of nurses intending to quit the job. On the other hand, the psychological impacts on nurses were associated with a heavy workload, sleep deprivation, and separation from family members due to staff shortages and high health system demand during the pandemic. It has been noted that these psychological impacts have both long and short-term consequences on nurses. Comprehending a nurse's experience at this time of pandemic can be crucial for identifying specific stressors and workable plans to inform support services.

Following the pandemic, WHO declaring the infection outbreak on January 30, 2020, as a global emergency led to several implications on the socioeconomic status in the USA and other countries worldwide. As a way of flattening the curve, several countries enforced border lockdowns, quarantine, and travel restrictions in nations that are the world's leading economies, such as the United States, thus igniting the fears of the looming economic recession and crisis (Nicola et al., 2020). Travel restriction and working from home have negatively affected many people financially and limited social interaction by banning all social congregation and sporting activities. Through traveling restrictions and mandatory national lockdowns, several sectors of the economy have faced challenges, in particular, workforce shortages. The sectors affected by the pandemic involve primary, secondary, and tertiary sectors.

Examples of the primary sectors are the agriculture, and petroleum, and oil sectors. With the pandemic, several restaurants and hotels have been closed, resulting in a 20% decline in

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agricultural products since these restaurants are the major customers of farm products. Also, trading has been negatively impacted by pandemics since most nations shut down trading. Despite the negative impact of the virus on socioeconomic status, other sectors went on well and even gained fame during the pandemic period.

An example of the sector that improved in healthcare is that of telehealth. Telehealth is offering care by healthcare professionals to patients while at the comfort of their homes by utilizing communication and information technology by exchanging correct and valid information; bearing in mind that crucial measure in curbing the spread of the virus is through enforcement of travel restriction, quarantine, and maintaining of social distance. With all these measures in place, telehealth has played an essential role in preventing the spread of the disease by providing patient-centered care where distance is a critical factor. Through telehealth, those groups at greater risks of contracting the virus, like the elderly, and those with underlying conditions like diabetes and high blood pressure, could receive care without necessarily visiting the healthcare facility (Monaghesh & Hajizadeh, 2020). An example of telehealth technology is video conferencing, where the physician can interact with patients online and provide relevant health programs for patients at homes and those in quarantine facilities. In the United States, telehealth has been used in monitoring the health status of patients recovering from COVID 19 following their discharge from the hospitals.

Nurses have critical responsibilities and roles to play at this time of the Coronavirus disease pandemic. As frontline workers in a healthcare setting, nurses monitor and evaluate patients admitted to the hospital. In both pandemic and daily care routines, nurses are at the forefront and have an obligation to offer holistic care for all kinds of patients. Nurses have vital roles in the healthcare environment since they constitute most caregivers (Al Thobaity &

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Alshammari, 2020). Nurses have positively contributed to healthcare during the pandemic by detecting the suspected cases with disease and triaging patients; coordinating with other healthcare professionals and assisting in decontamination; employing holistic nursing processes by simultaneously managing numerous infections; playing crucial functions of expanding care services. During the pandemic, nurses have had more tasks of meeting patients' needs, which has called for the provision of appropriate skills and knowledge to nurses to address the pandemic. Currently, nurses are actively participating in COVID 19 interventions, and they will continue curbing the spread of pandemics given adequate support (Fawaz et al., 2020).

The current evidence found in the literature comprises information on the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) variants and the vaccine against the virus. SARS-CoV-2, just like other RNA viruses, is susceptible to genetic mutation while adapting to the new host, which can result in an emergence of a new variant of the mutant virus with distinct characteristics compared to ancestral strains. During the pandemic, various variants of SARS-CoV-2 have been identified with WHO considering a view of them as a variant of concern (VOCs), given their influence on global public health. Based on the current epidemiological report update by the WHO on June 22, 2021, since the inception of the pandemic, four VOCs of SARS-CoV-2 have been identified, and they include; Delta (B.1.617.2) reported first in December 2020 in India; Gamma (P.1) reported first in Brazil early January 2021; Beta (B.1.351) first reported in South Africa in December 2021, and alpha (B.1.1.7) first VOC identified in the U.K. in late December 2020 (Cascella et al., 2021). Despite the exceptional rapid vaccine development and high global mass vaccinations efforts on COVID 19, these viral variants pose a significant challenge in trying to overwhelm these efforts of preventing the viral spread and associated illness.

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Despite the significance of enforcing health measures to control the infection by preventing or decreasing COVID-19 transmission, the most vital step is to contain the pandemic by administering the vaccine. Researchers have done extraordinary work during the pandemic by developing novel vaccines against the Coronavirus. The role of the coronavirus vaccine is to stimulate the body's immune system leading to the secretion of antibodies against the SARS virus. As of August 18, 2021, the WHO COVID 19 dashboard approximately 4,543,716,443 vaccine doses have been administered, with about 1,768,545,062 people being vaccinated with at least one dose. According to the CDC, in the United States, as of August 12, 2021, approximately 353,859,894 doses of vaccine have been administered, with 196,505,543 persons having received at least one dose 167,354,729 persons being fully vaccinated.

Since the outbreak of COVID-19 several people have encountered mental health issues associated with massive lockdowns and cessations of traveling as measures to contain the virus spread. There has been an escalation of suicide in various parts of the world during a pandemic linked to mental health issues. For instance, Canadian suicide cases related to joblessness showed a projected incline in suicide from 418 to 2114 cases (Xiong et al., 2020). The same trend was also reported in the USA, India, France, Italy, and Germany. Also, the literature suggests an escalation in psychological agony in the entire population, with healthcare workers being affected the most. It is also evident that during a pandemic, the Coronavirus patients were facing stigma from the people, which contributed to adverse mental health, leading to stress, depression, and anxiety being observed in the victims. A literature review by Muller et al. (2020) found that healthcare workers reported mental health issues associated with the high workload during the pandemics. This was supported by symptoms related to mental health problems like burnout and post-traumatic stress, and depression.

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In conclusion, both nurses and the entire healthcare system have encountered several challenges. For nurses since the outbreak of the pandemic majority have contracted COVID-19 since they are the frontline workers, and some have succumbed due to the infection. Another challenge nurses face during the pandemic is adequate PPEs, making them at greater risk of contracting the disease. Also, the nursing profession has encountered a workforce shortage, thus making them available nurses working for long hours, thus leading to mental health problems. During the pandemic, the socioeconomic statuses of several countries were negatively affected due to the measures imposed to curb the spread of the virus, such as travel restrictions and national lockdown. Telehealth during COVID-19 has proven effective in offering care to patients while at home by employing various technological approaches like video conferencing. Nurses have brought dramatic changes in healthcare during the pandemic by providing direct care to COVID-19 patients.

They have also assisted in detecting the suspected cases with disease and triaging patients, coordinating with other healthcare professionals and assisting in decontamination, employing holistic nursing processes by simultaneously managing numerous infections, playing crucial functions of expanding care services. Recently vaccination against COVID-19 is ongoing, with approximately 353 thousand doses of vaccine being administered, with 196,505,543 persons having received at least one amount and 167,354,729 persons being fully vaccinated in the U.S. as of August 12, 2021. The vaccine is specifically meant to offer immunity and prevent people from contracting the disease. COVID-19 has negatively impacted various people's mental health, ranging from healthcare professionals and the general population, with more cases of suicide associated with mental being reported in multiple parts of the world during the pandemic.

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COVID-19 outbreak has impacted professionals' practice in several ways. First, healthcare workers have learned from the pandemic that one must decontaminate the working environment to contain the spread of infection. Also, washing and sanitizing hands every time they come into contact with an object or patient. Another action plan for minimizing the spread of the virus is by keeping a distance of at least 1.5 meters. Furthermore, nurses should ensure that they wear proper PPE to protect themselves and others from the disease. Some PPEs include wearing a face shield, particulate filters like N95, goggles, aprons, and gowns. From the pandemic, the healthcare system should appreciate the work of nurses as the frontline workforce in the healthcare environment.

Some of the changes regarding nursing care include giving the nurses full responsibilities like decision making during the implementation of various COVID-19 interventions. Also, nurses have been given diverse leadership and management roles during the pandemic since they comprise a large healthcare workforce. The COVID-19 pandemic experience has helped nursing practice advancement by equipping nurses with practical knowledge through active participation in caring for COVID-19 patients. By involving nurses in various stages of fighting this pandemic and training needed knowledge, the entire healthcare system will be well prepared to face future pandemics like Coronavirus.

References

- Al Thobaity, A., & Alshammari, F. (2020). Nurses on the frontline against the COVID-19 pandemic: an integrative review. *Dubai Medical Journal*, 3(3), 87-92.
- Arnetz, J. E., Goetz, C. M., Arnetz, B. B., & Arble, E. (2020). Nurse reports of stressful situations during the Covid-19 pandemic: qualitative analysis of survey responses. *International journal of environmental research and public health*, 17(21), 8126.
- Cascella, M., Rajnik, M., Aleem, A., Dulebohn, S., & Di Napoli, R. (2021). Features, evaluation, and treatment of Coronavirus (COVID-19). *StatPearls*.
- Centers for Disease Control and Prevention. (n.d.). *CDC COVID Data Tracker*. Centers for Disease Control and Prevention. <https://covid.cdc.gov/covid-data-tracker/#datatracker-home>.
- Chatzittofis, A., Karanikola, M., Michailidou, K., & Constantinidou, A. (2021, February 3). *Impact of the Covid-19 pandemic on the mental health of healthcare workers*. *International journal of environmental research and public health*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7913751/>. (Chatzittofis et al., 2021)
- Edwards, K., & Orenstein, W. (2021, August 16). *COVID-19: Vaccines to prevent SARS-CoV-2 infection*. Uptodate. https://www.uptodate.com/contents/covid-19-vaccines-to-prevent-sars-cov-2-infection?sectionName=IMMUNOGENICITY%2C+EFFICACY%2C+AND+SAFETY+OF+SELECT+VACCINES&topicRef=126981&anchor=H4048778065&source=see_link#H4048778065.

Fawaz, M., Anshasi, H., & Samaha, A. (2020). Nurses at the front line of COVID-19: Roles, responsibilities, risks, and rights. *The American journal of tropical medicine and hygiene*, 103(4), 1341.

Fernandez, R., Lord, H., Halcomb, E., Moxham, L., Middleton, R., Alananzeh, I., & Ellwood, L. (2020). Implications for COVID-19: a systematic review of nurses' experiences working in acute care hospital settings during a respiratory pandemic. *International journal of nursing studies*, 111, 103637.

Gebreheat, G., & Teame, H. (2021). Ethical Challenges of Nurses in COVID-19 Pandemic: Integrative Review. *Journal of Multidisciplinary Healthcare*, 14, 1029. <https://doi.org/10.2147/JMDH.S308758>

McIntosh, K. (2021, August 4). *COVID-19: Epidemiology, virology, and prevention*. Uptodate. <https://www.uptodate.com/contents/covid-19-epidemiology-virology-and-prevention>. (McIntosh et al., 2021)

Monaghesh, E., & Hajizadeh, A. (2020). The role of telehealth during COVID-19 outbreak: a systematic review based on current evidence. *BMC Public Health*, 20(1), 1-9.

Muller, R. A. E., Stensland, R. S. Ø., & van de Velde, R. S. (2020). The mental health impact of the covid-19 pandemic on healthcare workers, and interventions to help them: A rapid systematic review. *Psychiatry Research*, 113441.

Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., Al-Jabir, A., Iosifidis, C., ... & Agha, R. (2020). The socioeconomic implications of the coronavirus pandemic (COVID-19): A review. *International journal of surgery*, 78, 185-193.

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Shiow-Ching, S. H. U. N. (2021). COVID-19 Pandemic: The Challenges to the Professional Identity of Nurses and Nursing Education. *Journal of Nursing Research*, 29(2), e138.

Xiong, J., Lipsitz, O., Nasri, F., Lui, L. M., Gill, H., Phan, L., ... & McIntyre, R. S. (2020). Impact of COVID-19 pandemic on mental health in the general population: A systematic review. *Journal of affective disorders*.