Spring 2022

More Than Physical: Covid-19's Devastating Impact

Sadie Wood
The University of Akron, srw93@uakron.edu

Kathryn Pond
The University of Akron, ktpond16@hotmail.com

More Than Physical: Covid-19's Devastating Impact

Sadie R. Wood and Kathryn M. Pond

School of Nursing, The University of Akron

8200:480: Senior Honors Project

Project Sponsor: Lori Kidd, PhD, RN, CNS

April 22, 2022

More Than Physical: Covid-19's Devastating Impact

Abstract

Covid-19 has impacted our world in many ways. In this autoethnographic research paper, two college nursing students share their own unique perspective related to the topic. Through their journaling over the pandemic, they derive three main themes in their writing. These themes included vaccine hesitancy, burnout in healthcare professionals, and online schooling because of isolation protocols. Each theme is explored through research which includes personal experience, scholarly journals, website articles, blog posts, social media posts, and personal interviews. Vaccine hesitancy is explored, and research concludes that misinformation is widely to blame. Burnout in healthcare workers is shown to increase during the pandemic for a variety of reasons, including unsafe patient to nurse ratios, concern for contacting the virus, and poor working conditions related to inadequate PPE (personal protective equipment), all of which are shown to take a toll on the nurse's mental health. Despite some benefits, online schooling has had an overall negative impact on the education of college students. This paper details the devastating effect Covid-19 had on the nursing profession, the education of college students, and the impact it had on these populations' mental health.

It is March 2020, and the world shuts down. Nursing students question their career path as they see hospitals in shambles, their breakdowns depicted on the news and talked about in their community. Lockdown causes a halt in their normal schooling, clinical hours, and social lives. As the pandemic continues, they work in the hospitals and care for Covid-19 patients. They see patients who are released the next day, as well as patients connected to ventilators who have no hope of surviving. These experiences give them a unique stance on virus vaccines once they become available.

The following paper explores the experiences of nursing students within the United States during the Covid-19 pandemic through scholarly articles in the form of autoethnographic research. Autoethnography explores personal experiences to derive a research question that will then be answered through scholarly works (Besio, 2020). This approach to research aims to help understand cultural experiences. To create an autoethnography, one must reflect on their past experiences and convey them on paper in a way that is able to be understood by readers who may not be familiar with said experiences (Besio, 2020). Critical thinking must be employed to derive a specific research question from said experiences. Research is then conducted to answer the research question posed.

The purpose of our autoethnography was to expose the impact of Covid-19 in ways other than physical health from the perspective of young adults involved in the healthcare field. We found that there is a gap in public knowledge, i.e., perspectives such as the three key issues we identified are largely missing from the public dialogue. We believe that sharing our experiences and exploring research will help to fill these gaps and provide a new and unique perspective.

Vaccine Hesitancy

Author 1 Narrative

As soon as Covid-19 crossed into U.S. soil and became a pandemic, I was waiting for the vaccine. As a society, we use and trust vaccines against the flu, MMR, hepatitis, polio, and chickenpox. There are always a handful of people who will disagree with anything, and the topic of vaccines is no exception, but overall vaccines are respected and required in our society. We don't have to worry about getting polio anymore in the year 2021, and this is something that I am so grateful for, both as a future nurse but also as a member of society.

I was so happy that as a healthcare worker I was able to be one of the first to get the vaccine. I will never forget that day. The energy I felt around me was inexplicable. It was the hope that we would start to see the light at the end of the tunnel. It was the first step in the right direction of getting back to normal, both in our personal lives and working lives. As much as we are willing to care for Covid-19 patients, we are stretching ourselves so thin. It is hurting our hearts to see all types of people die from this virus. These patients are hooked to machines, machines that if they are ever unhooked, they immediately die. They are in their rooms alone with minimal human contact of any kind. This vaccine was the best thing to happen in the last 18 months in my eyes. I was beyond happy to get that vaccine because it meant being one step closer to a world without Covid-19.

Before I knew it, the vaccine was slowly being rolled out to more people. It appeared to be accepted at first, as older people were getting the vaccine. My grandparents were excited to get it, as they are 90 years old and wanted to be around their children and grandchildren again without feeling scared. Same with my older aunts and uncles. But as time progressed, the attitude seemed to shift. Social media was a vessel for some extreme opinions. I began hearing from family members and coworkers that they did not want to get the vaccine. A family member told me she was scared, as she

started seeing media saying the vaccine was not safe. A few other family members were flat out against ever getting one, as they related getting the vaccine to a certain political party. Those against the vaccine cited things they heard from social media about the vaccine. I heard from several people that they heard the vaccine causes infertility. Others said they will not get it simply because no one knows the long-term effects of the vaccine.

When I first started to see that the vaccines were not being widely accepted, I got angry. These people did not realize the impact they were making. When healthy individuals that can safely vaccinate do so, they make the world safer for those that are not able to become vaccinated (children and immunocompromised persons being two main groups that cannot safely get certain vaccines) (Al-Amer et al., 2021). When a certain percentage of the population receives a vaccine and/or gets antibodies from a virus, the population can reach herd immunity and therefore the rest of the population is protected from getting the virus (Al-Amer et al., 2021).

Without herd immunity, the world will be living with Covid-19 far longer than needed. More people will lose their lives to Covid. Hospital beds will be taken up for Covid-19 patients and health care personnel will be overwhelmed in our healthcare system for far longer than they need to be. Everyone has a right to their own actions; however, by making the decision to remain unvaccinated, these people are putting so many others in danger. I just hope that the unvaccinated individuals realize the true impact of their choices and how they are impacting so many others.

Author 2 Narrative

As the pandemic began, I dreamed of a solution. I had a feeling this virus would not go away, but we could gain immunity- as we have with many other viruses. I compared it to polio or smallpox, not really knowing any better how pandemics and those affected run their course. I had been anticipating the vaccine for a long time and was proud to get it as a nurse technician through my place of work. I

truly felt no fear, as I have been vaccinated countless times before as a child. It just felt like any other vaccine that I was due for. With that being said, I got the vaccine, had my minor and tolerable reaction, and moved on. I have full faith in those that created the vaccine.

However, many do not have faith in those that created this vaccine. After getting vaccinated and feeling like a true leader with my friends, family, and coworkers, I began to have this weary feeling. As I shared my story with others about my vaccine reaction and how I was able to get it so early as a healthcare worker, people gave me their reasons for not wanting the vaccine. Comments such as "I could never get that vaccine, aren't you nervous of the long-term effects?" "How did you research the vaccine before? Where did you find your research?" left me dumbfounded. I trusted that those creating this vaccine and therefore giving it to the public did the necessary research. I am not qualified to do such things; I trust that the people who have careers in public health or immunity research have done so. I even had a coworker, a registered nurse, say to me "the Moderna vaccine killed all its subjects during its study. I am also scared it will cause fertility issues- aren't you worried about that as a young woman?" I was dumbfounded, once again. I couldn't believe she thought these were appropriate comments in the first place. This vaccine and the controversy surrounding it has created a culture within this country and within the healthcare system that I am struggling to navigate. With that and knowing that I am not alone in this feeling, I wondered what influences play into the strong opinions that people have regarding this vaccine.

Vaccine Hesitancy Research Question

We are two nursing students in the healthcare field that were desperate to receive our Covid-19 vaccines and have emotions such as anger and disbelief that so many others did not feel this same way. To try to better understand those who have not recieved the vaccine, we pose the following research question, focusing on social, cultural, and political aspects as well emphasizing on cohorts within the

United States: In persons choosing to refuse the vaccine, what social, cultural, and political factors impact their decision making that differs from those choosing to accept Covid-19 vaccination?

Covid-19 Vaccination Status

As of December 11th, 2021, 61% of the United States' population was fully vaccinated (U.S. CDC, 2021). Fully vaccinated means having two doses of Pfizer or Moderna vaccine, or one dose of the Johnson and Johnson vaccine. Those in the 65-74 age range are most vaccinated, at 89.4%, while 84.1% of those 75 and older are vaccinated. In age ranges preceding this, the younger the age group, the less are vaccinated based on the CDC's data collection as of December 11th, 2021 (U.S. CDC, 2021)

Vaccine hesitancy is defined as the refusal of vaccination despite availability and accessibility and is the leading threat to global health (Dobuv et al., 2021). Vaccine hesitancy can be attributed to numerous factors, including but not limited to fears about vaccine safety and efficacy, the preference for herd immunity (i.e., natural inoculation), distrust in the government, maintaining a sense of personal freedom, sociodemographic characteristics, and broader external or organizational factors (Dubov, et al., 2021).

Hesitation in receiving the vaccine can severely jeopardize herd immunity, which is the indirect protection of those vulnerable within a population by a vaccinated majority (Al-Amer et al., 2021). According to Iyer (2021), herd immunity is vital as it protects a population from a virus even if select individuals are unvaccinated. Individuals that may not be safely vaccinated against certain illnesses include those with severely weakened immune systems, children, or others with certain health conditions that would not safely react to a specific vaccination.

Misinformation and the Media

Present day media and its various forms have a major impact on our society. Traditional media forms include broadcast news stations and print newspapers in local communities, both of which rely on credible sources, such as the CDC and other established health organizations. Social media, however, can include any source and opinion, whether credible or not. When discussing media, there needs to be a distinction between different types of media. Individuals who are not discriminating and critical of the sources they review for health information may take in large amounts of misinformation.

False information related to the Covid-19 vaccine can and has influenced the population's acceptance of the vaccine. Misinformation arises in such situations, like a pandemic, when there is unsettled science (CDC COVID-19 data tracker, 2021). Human nature seeks definitive answers and strives to fill in these gaps in an attempt to better understand what is uncertain (CDC COVID-19 data tracker, 2021). Social media platforms can create a channel for these discussions. However, due to the free nature of social media, false information circulates and is shared at an exceptionally fast rate.

An example of false information that circulated at the start of the pandemic includes an article that claimed that the virus was a bioweapon that was made from 5G cellular networks (Piltch-Loeb et al., 2021). This article ran rampant online, was disproved, but still was seen and believed by thousands of Americans. Another article that surfaced on social media claimed that the Covid-19 vaccine causes infertility in women. Because fertility can be seen as such a delicate issue, many women feared the vaccine and did not want to get it. Researchers at Johns Hopkins (Kelen & Maragaski, 2021) conclude that fertility is not affected by the Covid-19 vaccine. They reference the false report that went around social media, causing people to believe that the vaccine causes infertility. The false reports allege that the spike protein is one that attaches to the placenta in women which causes fertility problems. This was disproved, as the spike protein in the vaccine is one completely different from one that attaches to a woman's placenta (Kelen & Maragaski, 2021). In fact, 23 women that participated in Pfizer vaccination trials later become pregnant (Kelen & Maragaski, 2021).

It was found that these headlines created by unverified sources were shared at a far larger rate than any credible articles from health authorities (Piltch-Loeb et al., 2021). More people are sharing false information promoting discouragement of the vaccine than accurate information, which is making people more hesitant to get the vaccine and lowering our vaccination status as a country (Piltch-Loeb et al., 2021). In one study, high exposure to misinformation regarding Covid-19 and its vaccine, especially within social media, was associated with lower acceptance of the vaccine (Al-Amer et al., 2021).

In a study conducted with unvaccinated healthcare workers, the "misinformed" cluster believed that the seasonal flu was more contagious and deadly than the Covid-19 virus. Members of this cluster were often found to be influenced by politically leaning news media (Dubov et al., 2021). Examples of this type of media include the opinion segments of traditional news media outlets. Many interpret these news outlets to be trustworthy traditional news sources but fail to recognize that information relayed in opinion-based sections in any broadcast news station is not proven information. Further beliefs of those included in the "misinformed" cluster was that Covid-19 is a manmade virus, Covid-19 is a hoax, and Covid-19 is exaggerated (Dubov et al., 2021). In addition, those that believed Covid-19 was exaggerated by the media thought that vaccine risks were higher than the infection risks of Covid-19 (Dubov et al., 2021).

One study referenced participants admitting that they know information they see online is false related to the vaccine, but they are so overwhelmed that they don't know what to do or what to believe (Lockyer et al., 2021). Many stated that they routinely saw blatantly contradictory information. This caused many people to stop looking online altogether and found that the easy decision was to just simply not receive the vaccine (Lockyer et al., 2021).

Researchers found that those that viewed and trusted traditional media had a higher acceptance of the vaccine and were more likely to become vaccinated as opposed to those who did not

watch or trust traditional media (Piltch-Loeb et al., 2021). The traditional media sources, when reviewed, were relaying factually accurate information about the Covid-19 virus as well as the vaccines. The same study also found that those that use social media as at least one source of their information were less likely to get the vaccine (Piltch-Loeb et al., 2021). Another study concluded that those with a higher education (college graduates) and those who trust the government were less likely to believe false information found on the internet (Meiki et al., 2021).

Political Influences

In 2020, the pandemic and other social and political events that occurred throughout the year made people question whether the media and the country's powers of authority were things to trust. This distrust spilled into the U.S. population's thoughts on the Covid-19 vaccine, including differing opinions on the government's handling of the pandemic.

Those against the vaccine say they get a bad taste in their mouth from the traditional media, saying that they seem to be spokespeople for the government (Lockyer et al., 2021). Examples of traditional media can include NBC, ABC, or CBS on television, or print media such as the New York Times, the Washington Post, and local newspapers. The Covid-19 pandemic quickly became political, and some citizens began to view vaccination status as a reflection of their political party (Lockyer et al., 2021).

In a study of healthcare workers and their vaccination status, it was found that those who leaned Democrat were more likely to be vaccinated (Dubov et al., 2021). On the other hand, those in the unvaccinated and "misinformed" cluster, were found to be both older in age and lean Republican (Dubov, et al., 2021). In this same study, the "undecided" cluster regarding receiving the vaccine strongly leaned Republican as well. The "unconcerned" cluster of this study were the most educated and leaned Democrat. Although hesitant to get the vaccine themselves, respondents in the "unconcerned" cluster were willing to recommend the vaccine to others (Dubov et al., 2021). To elaborate further,

those in this study who were hesitant to receive the vaccine were Republican, which underscores the political nature of the Covid-19 pandemic and the potential of one's political status to have more influence on vaccine decisions than one's age or health status (Dubov et al., 2021). Dubov states that "this finding is in line with the surveys of the public" (2021). Furthermore, in another study conducted by Kreps and Kriner, it was found that political affiliation influenced one's vaccine acceptance (2021). For example, those who identified as Republican were more likely to receive the vaccine when it was endorsed by former president Donald Trump, rather than current president Joseph Biden or the Centers for Disease Control (2021). Alternatively, those who leaned Democratic were more likely to vaccinate when the vaccine was supported by Joseph Biden versus Donald Trump (2021).

The Unvaccinated Healthcare Worker

A study conducted on unvaccinated individuals looked solely at unvaccinated healthcare workers, as they play a critical role in widespread vaccine acceptance (Dobuv et al., 2021). They sorted unvaccinated healthcare workers into four categories: the misinformed, the undecided, the uninformed, or the unconcerned. The "misinformed" cluster consisted of those dominated by vaccine-related myths and skepticism towards the effectiveness of said vaccines. The "uninformed" cluster consisted of those in need of accurate and understandable vaccine education. The "undecided" cluster consisted of those who were the closest to accepting the vaccine, yet still hesitant. Hesitancy in this cohort may be due to partisan group identity, in which emphasizing the non-partisan nature of vaccination is key. Finally, the "unconcerned" cluster consisted of those who were willing to recommend the vaccine to others but have not yet been vaccinated themselves. The personal hesitancy in this cluster may be attributed to underestimating personal risks of being unvaccinated (Dubov et al., 2021). One could argue that these categories of unvaccinated healthcare workers can compare similarly to the categories of the unvaccinated public, as healthcare workers can strongly influence the public's opinion regarding

vaccination. However, due to widespread lack of acceptance of the Covid-19 vaccine, it is important to dissect all factors that play into one's decision to receive the Covid-19 vaccine.

Vaccine Hesitancy Conclusion

Research has shown that many factors have affected the current vaccination status of our citizens. Social, political, and cultural factors all play a role in the U.S.'s current low vaccination percentage. Political influence is substantial concerning the Covid-19 vaccine. From the research, there were higher tendencies for Democrats to be vaccinated than Republicans. Republicans were also more likely to receive the vaccine if endorsed by a Republican in office, while Democrats were more likely to receive the vaccine if endorsed by a Democrat in office. This is very concerning for our society, as people's vaccination status is being determined by what political party holds office at the time. After seeing how divided citizens became about Covid-19 and the vaccine related to politics, we recommend creation of regulations putting dissemination of scientific health information solely in the hands of health officials. Political leaders and parties are not qualified experts and should not have such an undue influence on the nation's health.

Social factors include what people see in the media, both traditional and social. Social media has been found to increase negative opinions toward the vaccine, thus directly impacting the current vaccination status. As our least vaccinated groups in the U.S. are younger age groups, this can be attributed to their greater use of and reliance on social media to get their news. Older individuals use traditional media that use more credible sources to get their news and are more frequently vaccinated. These findings prove how impactful and detrimental social media can be (U.S. CDC, 2021). Falsely reported stories have picked up enough steam for citizens in our communities to refuse the vaccines and put the rest of our society in danger by not getting the global community up to the threshold of herd immunity. This proves the power of social media and begs the question whether information

should be regulated to allow only accurate Covid-19 information to be present on our phones, tablets, and laptops.

Burnout in Healthcare Professionals

Author 1 Narrative

It was June of 2020 when I cared for Covid-19 patients for the first time. The unit felt chaotic. The personal protective equipment (PPE) carts lined the hallways, with random supplies haphazardly strewn about on random surfaces. People were everywhere, as it was a shift change, which made the noise level uncomfortably high. I was overwhelmed to say the least. Seemingly every task was different from how I have ever worked before. Clustering care was emphasized to avoid having to don and doff PPE an unnecessary number of times. Another nurse reviewed proper donning and doffing with me. Before I knew it, I was on my own.

I was so diligent with my PPE and felt so weird walking into the rooms looking like an astronaut. I barely donned or doffed, as I went from room to room all night getting call lights, vital signs, blood sugars, and changing incontinent patients. Calling nurses to help me turn a patient or bring me supplies would often leave me stranded in a room until they had a second to help me. By the end of the shift, I was sweaty and gross and convinced myself on my drive home that I must have gotten Covid after all that. My face ached from having my three-month-old N-95 mask on my face for 12 hours. I stripped my clothes in the garage, showered, and tried to forget that the whole shift even happened.

After this first shift working on a Covid floor, I quickly became more experienced. My home floor became half Covid several months later, and we were all fumbling so through the rules and requirements that we barely were aware of together. Our “training” consisted of one of the longest emails I have ever seen, a bulleted list of every miniscule thing you could imagine having new requirements. One of the “rules” highlighted a 4:1 Covid-19 patient to nurse ratio. That lasted about one

week before that was simply not possible. Another rule stated that you were only able to care for Covid patients during your shift or non-Covid. This rule flew out the window as soon as the floor only had one nurse technician assigned to the unit for the shift, for 36 patients. The rest of the requirements detailed every new way to send down labs, stock rooms, dispose of waste, and so much more.

My coworkers and I got used to it, but this did not make it any easier. It was hard going in for each shift, knowing what we were walking into. The added physical and mental strain was hard to deal with for weeks on end. We had our regular duties of trying to care for our patients with a decreasing amount of time and resources, and this was only magnified by the time required to care for Covid patients. Never mind the added responsibility of being these patients' only social interaction in their isolated days. We saw young parents on ventilators with no promise of surviving. We became numb to the number of deaths we saw. Through all of this, we were teaching ourselves how to care for and deal with this pandemic in our workplace, having to take on continually increased patient ratios, and all the while sweating through our one N95 mask we had to hold onto for months. Meanwhile, we were supposed to feel blessed that we had any PPE at all, as this was a threat for us all at the beginning of the pandemic. No promise of an end date--of when we would finally go back to our hospital jobs without Covid-19, where there is still a lack of resources, staffing, and gratitude for all that we do.

Author 2 Narrative

Due to losing my hostess job at a restaurant downtown, I started my nursing career as a nurse technician on a neuro- telemetry unit in April 2020. I was eager and excited, as I was not really sure what I was getting myself into with the pandemic. I was new to the hospital culture and was unfamiliar that I would have to "float" to other floors. I always figured that my floor was the floor I would work on, and that was that. However, as I began to get acclimated to the unit and its ways, I became the one who was told to float as I was a PRN, or an "as needed" employee. I never minded the float task, but my

coworkers always made it seem dreadful. It was like they were thankful I was there because they could put it on me, rather than being excited that I was there to help. As a newer member of the team, their opinions regarding certain duties influenced how I felt about such things. I probably would not have minded the float task had it not been perceived so negatively by my coworkers, or if we took turns like I have seen on other units with further experience. I felt bullied in a way and would dread going to work. I strive in a workplace that emphasizes teamwork and camaraderie, rather than throwing each other to the wolves. In this case, the "wolves" included the Covid units and its stressed- and burnt-out staff.

To carry on, to float floors meant to float to a Covid unit, as these units were often the ones with staff shortages. I'd like to reflect on a time I will never forget. I was floated to be a patient companion with a patient on a Covid floor, as this patient was confused, pulling on their necessary lines and tubing. As I was sitting with this patient, I was wearing all the necessary personal protective equipment, including an N95 mask. I was miserable, as it was summertime, and I was in a heavy gown, gloves, and thick mask along with a face shield. My ears were sore, and there was no chance I would remove anything as I was responsible for the direct visualization and safety of this patient. The patient began to pull at their lines, including their tube feed, and was not easily redirected with words. It came to the point where I had to hold both of the patient's hands, as I gently held them down using some of my chest. I couldn't let go, or they would quickly reach for their lines and pull them out. The team had exhausted all options, and it seems that I was the last resort. I was face to face with this patient for many hours, as they coughed and struggled to breathe due to their Covid-19 infection. I couldn't call for help or reach the call light as my hands were bound to the patient's. Check-ins from other members of the unit were minimal as staff were short and to not waste PPE. As a newer nurse technician, I was terrified to let go. What if this patient pulls out an IV or their tube feeds on my watch? To see this suffering so up close was traumatizing, yet my patient's safety was my priority. This story of mine is not

unfamiliar to many, as the pandemic goes on and staffing shortages continue to occur. We do everything we can, but the result is burnout and exhaustion among the staff.

Burnout in Healthcare Professionals Research Question

We are two students who committed to nursing school prior to the global pandemic. We were aware of low staffing ratios before we decided on this career path. When the pandemic hit, staffing shortages increased exponentially. We have seen ourselves, as well as our coworkers, become exhausted and spread thin. We have heard of burnout affecting many nurses prior to Covid-19 as well as during this pandemic. Using key terms such as "burnout," "pandemic," and "healthcare professionals," and excluding sources outside of the United States, we explore the following question through research: What factors contributed to increased occupational burnout in nurses and healthcare workers during the Covid-19 pandemic?

Burnout Statistics

In the time span of April 2020 to January 2022, there was an average of 131,370 Covid-19 hospitalizations in the U.S. each day (Murphy, 2022). This surge in occupied beds was not the only thing that is causing the hospitals to be overwhelmed. Staffing shortages have increased since the pandemic, especially of staff with ICU experience (Fitzpatrick & Ford, 2021).

Burnout is considered a workplace stress response and is acknowledged by the World Health Organization as well as The Joint Commission as a direct threat to nurses (Ross, 2020). Healthcare is considered one of the professions with the highest burnout rates, due to emotional strain and stress involved in caring for sick and dying patients (Shah et al., 2021). Burnout is a stress response that nurses experience due to extended workplace pressure that is not adequately addressed (Ross, 2020).

Burnout was a threat to our nurses even before Covid-19 began. U.S. nurse burnout rate before the pandemic was estimated to be between 35-45% (Janeway, 2020). Another estimate of burnout in healthcare workers before Covid-19 was 20-40% (Maunder et al., 2021). This same source later found burnout among healthcare workers to be 30-40% in spring of 2020 (Maunder et al., 2021). Major driving factors of healthcare burnout are understaffing along with many other factors that create difficult working conditions (Maunder et al., 2021).

Concern of Contracting the Virus

At the start of the pandemic, the Centers of Disease Control and Prevention identified the elderly, the immunocompromised and healthcare workers as the populations at highest risk for contracting Covid-19 (Frush et al., 2021). The lack of PPE was a direct threat to the frontline workers, as the U.S. and other countries such as Spain, China, and Italy were reporting their frontline workers becoming infected and some dying because of the virus (Klimek Yingling., 2021).

Because of healthcare workers' direct patient care with Covid-19 patients, many had to uproot their lives at home. The virus is known to have a long incubation period, which allows carriers of the virus to spread it to others before showing symptoms (Chen & Bebinger, 2020). Healthcare workers who were exposed at work didn't feel fully protected from Covid-19 even with PPE, as the majority were forced to wear contaminated masks several times over due to PPE supply shortages (Chen & Bebinger, 2020).

Because of these reasons, many healthcare workers did not want to take the chance of spreading Covid-19 to their families. A physician, K. Cheung, MD, who is a critical care doctor located in California, decided to live in his family's garage in a tent to isolate himself from his family (Fichtel & Kaufman, 2020). A nurse practitioner in Missouri moved in with her coworker, away from her immunocompromised husband and 7-year-old daughter with asthma (Fichtel & Kaufman, 2020).

Employees at a hospital in Massachusetts were renting camper vans to share as temporary housing away from their roommates, friends, and family (Chen & Bebinger, 2020). Other healthcare workers who didn't go to lengths of moving out of their house still detailed extensive and time-consuming processes that they diligently went through after their 12-hour hospital shifts (Chen & Bebinger, 2020). Nurses detailed their routines of stripping down their hospital clothes in the garage, spraying and wiping down every surface they touched in their house before they got their shower. One nurse said she felt especially sad every day coming home, having to tell her young children not to touch her before she went through her decontamination routine (Chen & Bebinger, 2020). Any Covid-19 exposure without proper PPE caused healthcare workers to strictly quarantine in their house, away from their families, before they would be released from quarantine and go back to work, where the hospitals desperately needed them (Chen & Bebinger, 2020).

Inadequate Knowledge and Resources

In late 2019, talk of the Covid-19 virus hit the media and became a concern. The first case in the U.S. was confirmed in Washington state in January of 2020. As a result, the United States had a limited amount of time to learn about this virus and develop rules and regulations. Thus, rules and regulations that were offered by the CDC and WHO were changing rapidly and, at times, even conflicted with each other. When Covid-19 began to spread throughout other countries, it was apparent it would eventually reach the U.S. Once this happened, there was an immediate threat to our healthcare resources. These resources included healthcare workers, PPE, space, and equipment (Klimek Yingling, 2021).

Nurses were faced with having to deal with the shortage of PPE at the very beginning of the pandemic. A nurse tech in Ohio reported having to use trash bags as gowns when their hospital ran out of PPE in the early months of the pandemic (K. Jones, personal communication, May 2020). A nurse at a pediatric hospital remembered security guarding the supply room of her unit that had the PPE to try to

conserve it by not allowing nurses to get fresh gowns or masks during their shift (N. Davis, personal communication, September 2021).

These accounts are not singular incidents. They were happening across the country. PPE is a basic need of healthcare workers to be safe in their work environment, just as construction workers need hard hats and firefighters need a way to extinguish the flames. Without these basic needs, there is an exposure that causes fear in these working individuals.

Staffing Issues

The Covid-19 pandemic caused a surge in healthcare needs in communities, which exposed the current nursing shortage already present (The Associated Press, 2021). As The Covid-19 Advisory for Ontario puts it, "...understaffing is both a cause and consequence of burnout" (Maunder et al., *Workload,* 2021). Nurses across the country were retiring early or quitting altogether, as the pandemic became their breaking point (The Associated Press, 2021).

Nurses across the country were required to work overtime in order to keep hospitals afloat (Maunder et al., 2021). Working extra hours each week is linked to increased fatigue and inadequate recovery time, which increases stress response in healthcare workers (Maunder et al., 2021). However, if mandating overtime for healthcare workers was not done, this would result in even higher patient to nurse ratios, a scenario further linked to burnout among nurses (Maunder et al, 2021).

To help mitigate the severe staffing issue, hospitals had to get creative and find short term solutions. San Juan Regional Medical Center was loaned Navy physicians, nurses, and support staff members from the National Disaster Medical System to help lessen the burden on the hospital staff (Fitzpatrick & Ford, 2021). Over 400 medical members of the Army, Navy, and Air Force were sent to hospitals across the country to help staffing ratios (Fitzpatrick & Ford, 2021). San Juan hospital CEO Jeff Bourgeois emphasized that all federal help they received was critical in the hospital's ability to deliver

care (Fitzpatrick & Ford, 2021). San Juan also hired outside staffing (travel nurses), increasing their budget for this by 373% in the past year (Fitzpatrick & Ford, 2021). This was only possible through federal funding (Fitzpatrick & Ford, 2021). The staffing catastrophe highlighted in San Juan are what hospitals across the country are being faced with. Nursing staff turnover is up 23% in all nursing departments, and up 45% in the ICUs since the pandemic began (Fitzpatrick & Ford, 2021).

Travel Nursing

Another way that hospitals are trying to recruit more staff is through the hiring of travel nurses. The pandemic caused an increase in demand for hiring travel nurses, which increased their pay from $1,000-$2,000 per week pre-pandemic to $3,000-$5,000 per week post-pandemic (The Associated Press, 2021). This is significantly higher than those same hospitals are paying their staff nurses (The Associated Press, 2021). Carrie Kroll, the vice president of Texas Hospital Association, admits that many of her hospital's staff nurses are leaving their current hospitals to travel (The Associated Press, 2021). She says this is creating a hostile work environment for those that don't want to travel and are getting paid much less than those who travel to do the same work by the hospital they have been loyal to for years (The Associated Press, 2021). This is also causing nurses to be unwilling to travel to feel undervalued and ultimately leaving the profession altogether (The Associated Press, 2021). A nurse, when asked about the travel nursing pay, stated, "Nursing is the only profession where you can sit next to a person with the same education level and same experience, arguably do the job better, and make a fraction of the amount" (N. Marino, personal communication, December 2021).

Mental Health

To have successful, high-quality patient outcomes is to have health care workers who are supported in their safety, health, and well-being, especially in times of crisis such as that of the Covid-19 pandemic (Frush, et al, 2021). However, with the factors previously discussed, many hospitals and their staff began to drown. In a qualitative study conducted to explore care experiences of nurses during the

pandemic, themes such as nursing responsibility, uncertainty, and the feeling of inadequacy were identified (White, 2021). Exploration of these themes demonstrated clear mental health impacts.

The theme “If not us, then who?” had three subsets that described nurse’s feelings on the importance of the profession, the way that the profession “calls” them, and that they are not heroes. (White, 2021). Participants of this study, all from units converted into Covid-19 floors, stated that they believed in the importance of nursing, and that nurses possessed the skill of engagement that was unique to the profession. They stated that they feel needed and depended on and could not turn away from their patients despite the strain that Covid-19 brought about (White, 2021). Furthermore, participants emphasized the feeling of being “called upon.” They could not let down their peers and patients, and to fulfill their responsibilities within the nursing profession was without question; however, participants shared that they stayed away from accepting the title of heroes. (White, 2021). Although grateful for this newer respect for the nursing profession, this did not influence how the participants viewed themselves. Their identity was founded on their rigorous nursing training and passion for the care they provide (White, 2021). Thus, one may state that because of the internal motives' nurses possess, it can be difficult for them to turn away in times of crisis, creating more strain and internal conflict and therefore mental health consequences.

Theme two, “accepting uncertainty,” dived into points discussed previously as well. The subsets under this theme included unknowns about the disease, assignment shifts, and frequently changing protocols (White, 2021). With this uncertainty, participants stated feelings of anxiety surrounding unknowns about the virus and associated patient outcomes, as well as outcomes for healthcare staff and their respective loved ones. This led to discomfort in participants of this specific study, and they were not alone in this feeling (White, 2021). In terms of assignments, the study emphasized the anxiety participants experienced when “floating” to Covid-19 units, where staff and patient situations were unfamiliar to them. The task of floating to different units each day disrupts both the continuity of care of

patients that is heavily valued within the nursing profession, as well as the familiarity of coworkers and aspect of teamwork (White, 2021). With ever-changing protocols, participants stated worries with "doing the right thing" (White, p. 1090, 2021). Nurses felt distressed and on-edge regarding their license and scope of practice. For example, protocols regarding oxygen levels and associated interventions changed frequently due to this new virus that was overwhelming the healthcare system (White, 2021).

The third theme "It was never enough" dives into feelings of defeat, exhaustion, isolation, powerlessness and helplessness. As healthcare professionals, the suffering and death of patients was not unfamiliar. However, the suffering and demise associated with that of the Covid-19 virus was new to all (White, 2021). Nurse participants within this study described feelings of distress, frustration and anxiety related to the unrelieved pain and suffering of patients with Covid-19. With that came exhaustion and feelings of isolation within the study participants, both physically and emotionally (White, 2021). It felt as though all they did was work and sleep, in isolation from their loved ones to not expose them, leading to minimal support during this stressful time. These nurses felt powerless, as the care they could provide differed from the care they wanted to provide (White, 2021). With staffing shortages and high-patient acuity, participants stated only the ability to provide the "basics" for their patients. Rapport and relationship building tasks such as meaningful conversation or providing patients with a cup of warm coffee went undone (White, 2021).

Burnout before Covid-19

Burnout among nurses was an issue far before Covid-19 and has only escalated the problem since the pandemic began. The Joint Commission saw burnout rates rising in July of 2019 after a survey and released an advisory, warning hospitals to protect their nurses by taking actions to prevent and treat burnout in their healthcare workers (Ross, 2020). After this advisory was released, 5% of U.S. nurses reported their workplace taking action to help prevent or treat workplace burnout (Ross, 2020).

Increased stress and burnout among nurses are anticipated to persist and increase after the pandemic (Maunder et al, 2021). This problem needs to be addressed to save our healthcare system. It has been noted that organization level interventions to reduce burnout have a greater positive effect than relying on individual interventions (Maunder et al, 2021). Staffing, working conditions, leadership, instilling confidence, support networks, and moral distress are all areas that need to be addressed by organizations to help combat the growing issue of burnout among nurses (Maunder et al, 2021).

Burnout in Nursing Conclusion

As we reflect on past experiences, it is imperative to us as future nurses that we explore the reasons for burnout within our profession. Diving into the literature allowed us to find that reasons for nurse burnout can include staffing and supply shortages, the risk of disease exposure, the uncertainty of disease exposure and patient health outcomes, lack of support from healthcare organizations in terms of incentives and pay, and the mental health impacts that come into play with all these factors.

Impact of Isolation and Online School on Students

Author 1 Narrative

I was at clinical when we heard that a major college in our area was canceling all in person classes and going online for the rest of the semester. My classmates and I went to the break room and started looking on our phones at all the new information that was coming out online. It was overwhelming. We felt so caught off guard. Call us ignorant, but we didn't think Covid-19 had gotten that bad in the U.S. yet. Sure, we heard about the increasing cases in Washington, but here? Ohio? We all left clinical that day, thinking to ourselves it might be the last one we have for a while. We were right.

That afternoon marked The University of Akron announcing no in person meetings for the rest of the semester. Nursing faculty were scrambling to change our curriculum to suit online learning. All of

our classes were over video, and all our clinical hours were now completed with virtual simulations. No more hands-on practice in clinical or lab. In the blink of an eye, our reality was isolation from the rest of the world for the foreseeable future.

With my dad and brother both working from home, there was always someone listening to a lecture, on a work call, or in a live online class. This made it impossible to pay attention to any of my schoolwork. The motivation to continue to learn was not there; I felt completely separated from everyone and everything. I missed our clinicals every week, and the virtual simulations and reflection papers that took their place were mundane and lacked the hands-on aspect we need so badly in nursing school. The live online classes were missing the active participation; as soon as we got behind camera screens, we all felt shy to ask questions and engage. I felt out of touch with my peers who I leaned on to vent about issues and help me get through stressful times. I felt like I was learning a fraction of what I would have if we were in person still, both in lectures and skill experience.

Don't get me wrong, there were benefits. I could sleep in (a major plus as a college student and nightshift worker) and work at my own pace, get ahead when I wanted to. I did this often, as I truly had nothing else to do, and when I was doing nothing for too long, I felt worthless. I went on walks with my family almost every day to get out of the house, which helped me tremendously. Despite the benefits, I remember going to sleep every night, thinking I would have the same dull day to wake up to. I wanted my old life back, when I had a million places to go and not enough time in the day to get everything done. I wanted to be able to see my classmates again, and really feel like I was in college, getting my BSN, and developing the skills that would help me after I graduate.

Author 2 Narrative

I was in my second clinical rotation during the spring of 2020 when talk of the "Coronavirus" came about. It almost seemed unreachable to us, and I figured it was just a topic within the medical

setting due to its nature. I vividly remember one nurse saying, “your university will close soon.” I thought nothing of it, engaging in this small talk as if it would pass by like any other news topic. Sure enough, that day during our lunch break, Ohio State University announced the transition into online instruction. We all knew The University of Akron was sure to follow. I went home after clinical, the day ending early as we were still in our first year and woke up from my nap-feeling not so refreshed due to this looming anxiety I felt to the news that the university was going online. Fueled with anxiety and the unknown, I called my mom and other nursing students to vent. What does this mean for us? What is next? Will we need to graduate a semester behind, as we are losing this one to the virus? It was almost selfish of me to think about my own academic advancement. However, I did not know any better. I cannot blame myself for not knowing how to think or react to this. Of course, no one knew the answers, but I felt a sense of comfort knowing we were all in it together. Reflecting, it feels like a lifetime ago. I have grown accustomed to the life of online lectures and meetings.

Naturally, I worried about my experience and my technical skills. To complete patient care on an online simulation was obviously not as productive as being in the hospital setting. To be honest, if I did not get the simulation “correct” on my first attempt, I would complete it again and just look at what I was supposed to do to pass. We were docked for things such as introducing ourselves before washing our hands or washing our hands before asking about allergies. It seemed bizarre. In real life, this small switch of tasks is not an issue. These online simulations became second nature to me, and I just simply clicked through to get the passing score, instead of truly engaging.

I could not engage as much as I tried. I aim to be transparent about this lack of motivation and drive to learn because I lost the setting that I thrive the most in- interacting with peers, professors, patients, and other staff within the units. The stress of this new way of learning, combined with the isolation from my friends and family, was unprecedented. With this understanding, we hope to explore

the effects of the instant transition into this, seemingly "normal" now, new way of life and learning to become nurses.

Impact of Isolation and Online School on Students Research Question

We are two nursing students who had a major change in our lives when the initial social isolation and lockdown happened in March of 2020. One of the most difficult adjustments was the abrupt transition from in person classes to online learning. We felt changes in our mental health and learning outcomes as a result. We investigated the following question further, putting focus on words such as "mental health impacts," "nursing students," "remote learning," and "quarantine" through scholarly research: How did social isolation related to online classes affect learning outcomes and mental health of college students during the 2020 Covid-19 lockdown?

The Move to Social Isolation and Online Learning

Public health care professionals urged people to stay inside and isolate themselves to flatten the curve. It was March 2020, and the U.S. was under stay-at-home orders with nightly curfews. School closures were shown to be one of the most efficient ways to lessen the spread of the virus (Hammerstein et al, 2021). Over 14 million college students transitioned from in person classes to online learning (Hess, 2020). Online learning is defined as a fully technologically based way to distribute, track, and manage classes over the internet (Bdair, 2020). Due to current technological advancements, students are able to engage in online lectures live or asynchronously and solve and submit work without having to meet with a professor face to face (Armstrong-Mensah, 2020). Before the pandemic, most colleges across the U.S. were utilizing technology to do things such as record lectures, take quizzes and exams, and submit assignments. When the pandemic hit, colleges and universities were required to go completely online, while still delivering the same level of education to their students (Bdair, 2020). Google Classroom, Zoom, WebEx, Microsoft Teams, and other online platforms were utilized to submit

work and engage in online discussion, which is essential for online learning (Suliman et al, 2021). Distance learning requires a start-up investment, as students need access to a laptop with a webcam, access to video conference applications, and a stable internet connection (Armstrong-Mensah, 2020).

Learning Outcomes: The Benefits

Due to the unexpected pandemic, the transition from in-person learning to complete remote and online learning occurred. When students registered for the Spring 2020 semester, this type of learning was not something they signed up for (Suliman et al, 2021). However, a qualitative study that sampled 18 undergraduate nursing students showed positive impacts that Covid-19 online learning had on their education (Suliman et al, 2021). This study found that online learning improved their academic achievement and enhanced their evidence-based learning competences (Suliman et al, 2021). Online learning has been helpful to these students as they were able to learn at their own pace (Suliman et al., 2021).

Informal interviews with peers conducted by the authors showed that students cited many benefits of online learning when looking back on that time, all seemingly related to convenience. One student cites that she was happy to not have to have an hour of commute time every day to campus (M. Davidson, personal communication, February 2022). Another student recalls the “simplicity” in life at the time, as she felt so many of her prior responsibilities in life were now no longer there, and she had much more free time (M. Kristen, personal communication, February 2022).

In another study, over 711 students were surveyed to determine consequences of online learning during the pandemic (Filho et al, 2021). Ninety percent of respondents reported a notable change in their learning because of Covid-19 related shutdowns (Filho et al, 2021). Of these same respondents, 60% reported the positive impact online learning had on quality family time (Filho et al., 2021). Students had many things taken away from them at this time, the majority not being able to

work, go to school, or see friends (Filho et al., 2021). The ability for these students to have quality, positive family time significantly helped their mental health and overall view on the lockdown at the time. While beneficial in these aspects, this transition had its drawbacks as well and it is imperative that discussions on both ends are had.

Learning Outcomes: The Costs

Studies have shown that classroom experience is more beneficial than online learning, as students are able and more likely to clarify information and interact with their professor and classmates (Bdair, 2021). Evidence is proving that the encouragement students receive in the classroom cannot be replicated with online learning (Singh et al., 2021). Bdair (2021) conducted a qualitative study about student satisfaction with online learning. One of their participants, while overall moderately satisfied, stated, “I really missed the direct communication with colleagues, nurses, and instructors, and that’s affecting my learning somehow” (Bdair, 2021, p.222).

A systematic literature review analyzing impacts of Covid-19 on student success showed unmistakable evidence that there were negative effects on students' academic achievements (Hammerstein et al., 2021). This study contributes a portion of the negative academic achievement on the lack of time that the students, teachers, and families had to prepare for remote learning (Hammerstein et al., 2021).

With the transition from in class learning to remote and online teaching, many aspects of nursing students' education were lost. One of these aspects was live simulation activities which were integral in developing communication skills (Wittenberg et al., 2021). The type of therapeutic communication nurses need is a skill that is not natural but must be taught and developed through education and practice (Wittenberg et al., 2021). From patient handoff to relaying information to patient and family, therapeutic communication is a skill that is integral to a Bachelor of Science in

Nursing program. Nursing faculty struggled with having to teach this skill online and not having the ability to practice it through student engagement and interaction (Wittenberg et al., 2021). There are currently no evidence-based health communication materials for remote learning for nursing students (Wittenberg et al., 2021). Tools for faculty to help teach evidence-based health communication are nonexistent (Wittenberg et al., 2021).

Another aspect nursing students missed while having to go remote were clinical hours that were completed in hospitals. To be an accredited school and have students graduate with minimum requirements, these hours were made up online with virtual simulations and/or coursework for many students (Wittenberg et al., 2021). When nursing students were asked about the virtual simulation experience, one student recalled, “It was pointless. They did not seem very real life based. We even ran out of new simulations, so we were required to do the same one's multiple times to get clinical hour credits. I know it set me back in my studies, having to miss all that hands-on clinical experience” (M. Kristen, personal communication, February 2022).

As nursing students faced these challenges, many shared thoughts on social media to share these experiences and explain the sheer difficulty that online schooling gives. In March of 2020, a nursing student shared on Instagram her personal account of how Covid-19 has affected her education. She stated: “The hospital I was assigned to this semester for clinical announced that they no longer want nursing students in their facility as a safety measure. For the past week faculty and students have been frantic in trying to find an alternative… to this sudden announcement… This news has been upsetting for my classmates and me, being that we want and need as much hands-on experience and lab time as we can… I am worried about what will happen to my education at this point” (Asia, BSN, RN, 2020). Many nursing students found comfort and camaraderie with sharing their views on social media, and Asia’s account of this drastic shift is something that every college student can relate to.

Social Media Use During Isolation

As a result of the pandemic, there was a dramatic increase in overall social media usage in individuals. Pandya and Lodha conducted an academic review of current evidence regarding social media use during the Covid-19 pandemic lockdown (2021). There was a 50-70 percent increase in digital screen time during the Covid-19 lockdown (Pandya & Lodha, 2021). Some of this extra time can be attributed to online schooling, work meetings, and virtual family gatherings. The technology of the world came in handy during this time, as it was the only way to stay connected and feel less isolated from the outside world and helped the overall wellbeing of individuals when used in these ways. However, of the 50-70 percent increase in digital use, 50 percent of this time was spent on social media (Pandya & Lodha, 2021). Excessive social media usage is shown to have negative consequences on mental health, including psychological problems, emotional instability, and greater risk for anxiety and depression (Pandya & Lodha, 2021).

Isolation Related to Mental Health

The abrupt switch to online learning created major shocks to the lives of millions of college students across the country. Many college students were given just days to evacuate their dorms and figure out new living arrangements (Hess, 2020). The abruptness of university closings caused emotions such as fear, stress, and uncertainty among many students (Hess, 2020).

90% of college presidents stated that they were concerned about the mental health of their students during the Covid-19 crisis (Active Minds et al., 2020). The disruption and uncertainty of university closings was worrisome, especially since anxiety and depression rates have been increasing in university students (Active Minds et al., 2020). Many students reported minimal compassionate and regular communication from their university as a top stressor during Covid-19. With this came uncertainty on where to turn for much needed mental health support (Active Minds et al., 2020).

A qualitative study surveying nursing students about their experience with online learning showed that all students surveyed expressed fear and worry related to their education with the current climate (Suliman et al., 2021). Students felt terrified of how they would achieve decent grades, and considered dropping out (Suliman et al., 2021). Students also cited increased stress related to equipment needed for online learning, as many found themselves having to upgrade Wi-Fi and buy printers and laptops to keep up with the online schooling that they felt rushed into (Suliman et al., 2021).

As discussed above, many universities are "home" to students as they navigate their studies and future career. With this sudden loss of university resources came a huge strain on students who relied on such resources, including but not limited to housing, food, counseling services, affordable or free access to healthcare services, affordable or free fitness centers, and an overall sense of community. In a blog post published by Active Minds, a few universities were highlighted for their quick response to this loss of resources for their students. Kent State University in Kent, Ohio-among other universities around the country- moved their typically in-person services of intakes, counseling, and medication management to phone and video platforms, ensuring that students in need of these services continued to receive them (Horne, 2020). They implemented a program providing funds for students in need of clothing, food, and shelter. They also continued to pay all university-employed students whose shifts were lost due to university closure. Finally, they distributed refunds. Refunds from Kent State amounted to over $14 million for housing, meal plans, and parking fees that were no longer useful to those who purchased them (Horne, 2020). Santa Monica College in California also implemented a food security program, in which seven meals were delivered weekly to hundreds of students who were food insecure. The reimbursement of resources and support to students from the very universities that they invested a lot of time and money into was vital, and it is important to highlight these actions as we explore their impact.

Online Learning Conclusion

No matter the "convenience" aspect of virtual learning, there was a major gap in education during the Covid-19 isolation period. Technology has come a long way to allow college students to get an education online, but nothing will compare to the skills and experiences received when in person, face to face with classmates and professors. Covid-19 required virtual learning, which was an excellent option, as the alternative for many could have been a halt in education completely. From this period, many students and professors learned how to be successful at virtual learning and established a routine. New skills were learned related to using technology, which is highly beneficial as our world is so reliant on technology today. We challenge colleges and universities to not forget these skills and use them when appropriate. However, we also challenge them to appreciate the immeasurable benefits students receive from having face to face classes. The relationships built through in person classes are hard to replicate through a computer screen, and communication skills and hands-on experience, no matter how much we continue to develop current technology, will not be able to be replicated.

Summary

To live through a major historical and traumatic event has allowed us, especially as nursing students, to learn a lot about ourselves and the impacts of the Covid-19 pandemic on our personal and professional lives. As we reflected on our experiences within vaccine hesitancy, nursing burnout, and isolation related to online schooling, we were able to navigate our thoughts and feelings as well as be transparent about them. We independently wrote about our own experiences in our own time and found that we shared many of the same feelings. These shared emotions and encounters within our community regarding these three themes gave us the drive to dive into literature in a collaborative manner. With this, we found solid and credible evidence that validated our experiences as well as many other perspectives. As we discussed and questioned our community's reasons for feelings of hesitation about the Covid-19 vaccine, we learned that vaccine hesitancy can be attributed to the culture of

widespread public misinformation and the politics that the United States possesses. In terms of healthcare worker burnout, the uncertainty of the virus itself, the lack of knowledge about and tools against Covid-19, the staffing crisis, and higher pay rates of travel positions all contributed. As healthcare workers ourselves, the exhaustion we feel combined with the mental exhaustion and isolation related to online courses on our education motivated us even further to investigate these themes. We worked productively, as a team, to explore these three different aspects of Covid-19 and its effects, as well as how they all affect one another.

As we researched our themes and the causes and impacts for each, we contemplated solutions that we can implement and advocate for. As future healthcare professionals, it is vital that we educate our community on vaccine effectiveness, as well as help facilitate proper and adequate research for those who choose to do so. Furthermore, we must learn how to overcome the challenges that we may face with the burnout that surrounds our profession. Advocating for systemic changes through legislation and educating ourselves and our peers on effective self-care are just a part of the solutions that we can implement. Related to online learning, we recognize that while convenient, the hands-on experience and presence of peer and instructor interaction is a vital part of our education system. As college graduates interested in going back to school eventually, we can advocate for, as well as seek out, education that we find the most worthwhile for our future careers.

Throughout this research, we found that we have remained motivated as partners in this process, regardless of the effects the pandemic had on us and our environment. To write about such themes was not an easy task, but as we researched these topics further, we truly got a grasp on how to discuss the impacts of the pandemic. Combining these personal and exceedingly difficult situations with studious research and teamwork both with each other and our respective faculty was very rewarding.

References

Active Minds, et al. “Mental Health, Higher Education, and Covid-19- Strategies for Leaders to Support Campus Well-Being.” American Council on Education, 2020. Mental-Health-Higher-Education-Covid-19.pdf (acenet.edu)

Al, A. R., Maneze, D., Everett, B., Montayre, J., Villarosa, A. R., Dwekat, E., & Salamonson, Y. (2022). COVID-19 vaccination intention in the first year of the pandemic: A systematic review. *Journal of Clinical Nursing (John Wiley & Sons, Inc.)*, *31*(1/2), 62–86. https://doi-org.ezproxy.uakron.edu:2443/10.1111/jocn.15951Armstrong-Mensah, E., Ramsey-White, K., Yankey, B., & Self-Brown, S. (2020). Covid-19 and distance learning: Effects on Georgia State University School of Public Health students. *Frontiers in Public Health*, *8*. https://doi.org/10.3389/fpubh.2020.576227

Asia, BSN, RN [@nurse.asia]. (12, March 2020). “*How COVID-19 has been affecting my education.”* Instagram.

The Associated Press. (2021, September 3). *U.S. hospitals hit with nurse staffing crisis as pandemic rages on*. NBCNews. Retrieved January 10, 2022, from https://www.nbcnews.com/health/health-news/u-s-hospitals-hit-nurse-staffing-crisis-pandemic-rages-n1278465

Besio, K. (2020). Autoethnography. *International Encyclopedia of Human Geography*, 243–247. https://doi.org/10.1016/b978-0-08-102295-5.10160-x

Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in Nursing*, *16*(3), 220–226. https://doi.org/10.1016/j.teln.2021.02.008

Centers for Disease Control and Prevention. (2022). *CDC Covid Data tracker*. Centers for Disease Control and Prevention. Retrieved January 9, 2022, from https://covid.cdc.gov/covid-data-tracker/#datatracker-home

Centers for Disease Control and Prevention. (2021, November 3). *How to address COVID-19 vaccine misinformation*. Centers for Disease Control and Prevention. Retrieved January 9, 2022, from https://www.cdc.gov/vaccines/covid-19/health-departments/addressing-vaccine-misinformation.htmlChen, A., & Bebinger, M. (2020, April 3). *Bringing home something deadly: How health workers are isolating from their families*. WBUR. Retrieved January 22, 2022, from https://www.wbur.org/news/2020/04/03/bringing-home-something-deadly-how-health-workers-are-isolating-from-their-families

Dubov, A., Distelberg, B. J., Abdul-Mutakabbir, J. C., Beeson, W. L., Loo, L. K., Montgomery, S. B., Oyoyo, U. E., Patel, P., Peteet, B., Shoptaw, S., Tavakoli, S., & Chrissian, A. A. (2021). Predictors of COVID-19 vaccine acceptance and hesitancy among healthcare workers in southern California: Not just "anti" vs. "pro" vaccine. *Vaccines*, *9*(12). https://doi-org.ezproxy.uakron.edu:2443/10.3390/vaccines9121428

Fichtel, C., & Kaufman, S. (2020, March 31). *Fearing covid-19 spread to families, health care workers self-isolate at home*. NBCNews.com. Retrieved January 27, 2022, from https://www.nbcnews.com/health/health-news/fearing-covid-19-spread-families-health-care-workers-self-isolate-n1171726

Filho, W., Wall, T., Rayman-Bacchus, L., Mifsud, M., Pritchard, D. J., Lovren, V. O., Farinha, C., Petrovic, D. S., & Balogun, A.-L. (2021). Impacts of Covid-19 and social isolation on academic staff and students at universities: A cross-sectional study. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-021-11040-z

Fitzpatrick, S., & Ford, S. (2021, December 8). *Understaffed hospitals struggle with Covid surge among unvaccinated*. NBCNews. Retrieved January 10, 2022, from https://www.nbcnews.com/health/health-news/understaffed-hospitals-struggle-deal-covid-surge-unvaccinated-rcna7858

Frush, K., Lee, G., Wald, S. H., Hawn, M., Krna, C., Holubar, M., Beatty, D., Chawla, A., Pinsky, B. A., Schilling, L., & Maldonado, Y. (2021). Navigating the COVID-19 pandemic by caring for our health care workforce as they care for our patients. *NEJM Catalyst*, *2*(1). https://doi.org/10.1056/cat.20.0378

Hammerstein, S., König, C., Dreisörner, T., & Frey, A. (2021). Effects of COVID-19-related school closures on student achievement: A systematic review. *Frontiers in Psychology*, *12*, 746289. https://doi.org/10.3389/fpsyg.2021.746289

Hess, A. (2020, March 26). *How coronavirus dramatically changed college for over 14 million students*. CNBC. Retrieved January 21, 2022, from https://www.cnbc.com/2020/03/26/how-coronavirus-changed-college-for-over-14-million-students.html

Horne, Laura. (2020, April 20). *Supporting a healthy campus community during COVID-19.* Active Minds Blog. Retrieved January 24, 2022, from https://www.activeminds.org/blog/supporting-a-healthy-campus-community-during-covid-19/.

Iyer, V. (2021, May 5). *Herd immunity: What is it and why it's important*. Allina Health. Retrieved January 9, 2022, from https://www.allinahealth.org/healthysetgo/prevent/herd-immunity-what-it-is-and-why-its-important

Janeway, D. (2020). The role of psychiatry in treating burnout among nurses during the Covid-19 pandemic. *Journal of Radiology Nursing*, *39*(3), 176–178. https://doi.org/10.1016/j.jradnu.2020.06.004

Kelen, G., & Maragakis, L. (2021, September 23). *Covid-19 vaccines: Myth versus fact*. Johns Hopkins Medicine. Retrieved January 9, 2022, from https://www.hopkinsmedicine.org/health/conditions-and-diseases/coronavirus/covid-19-vaccines-myth-versus-fact

Klimek Yingling, J. (2021). Rationing evidence-based nursing practice: Considering a resource-based approach. *OJIN: The Online Journal of Issues in Nursing*, *26*(1). https://doi.org/10.3912/ojin.vol26no01ppt62

Kreps, S. E., & Kriner, D. L. (2021). Factors influencing Covid-19 vaccine acceptance across subgroups in the United States: Evidence from a conjoint experiment. *Vaccine*, *39*(24), 3250–3258. https://doi.org/10.1016/j.vaccine.2021.04.044

Lockyer, B., Islam, S., Rahman, A., Dickerson, J., Pickett, K., Sheldon, T., Wright, J., McEachan, R., & Sheard, L. (2021). Understanding COVID-19 misinformation and vaccine hesitancy in context: Findings from a qualitative study involving citizens in Bradford, UK. *Health Expectations*, *24*(4), 1158–1167. https://doi-org.ezproxy.uakron.edu:2443/10.1111/hex.13240

Maunder, R. G., Heeney, N. D., Strudwick, G., Shin, H. D., O'Neill, B., Young, N., Jeffs, L. P., Barrett, K., Bodmer, N. S., Born, K. B., Hopkins, J., Jüni, P., Perkhun, A., Price, D. J., Razak, F., Mushquash, C. J., & Mah, L. (2021). Burnout in hospital-based healthcare workers during COVID-19. *Science Briefs of the Ontario COVID-19 Advisory Table*. https://doi.org/10.47326/ocsat.2021.02.46.1.0

Murphy, J. (2022, January 10). *Covid hospitalization hot spots across the U.S., in five charts*. NBCNews.com. Retrieved January 10, 2022, from https://www.nbcnews.com/health/article/covid-hospitalization-hot-spots-across-u-s-five-charts-n1285965

Pandya, A., & Lodha, P. (2021). Social connectedness, excessive screen time during COVID-19 and mental health: A review of current evidence. *Frontiers in Human Dynamics*, *3*. https://doi.org/10.3389/fhumd.2021.684137

Piltch-Loeb, R., Savoia, E., Goldberg, B., Hughes, B., Verhey, T., Kayyem, J., Miller-Idriss, C., & Testa, M. (2021). Examining the effect of information channel on COVID-19 vaccine acceptance. *PLoS ONE*, *16*(5), 1–14. https://doi-org.ezproxy.uakron.edu:2443/10.1371/journal.pone.0251095

Ross, J. (2020). The exacerbation of burnout during COVID-19: A major concern for nurse safety. *Journal of PeriAnesthesia Nursing*, *35*(4), 439–440. https://doi.org/10.1016/j.jopan.2020.04.001

Shah, M., Gandrakota, N., Cimiotti, J., Ghose, N., Moore, M., & Ali, M. (2021). Prevalence of and factors associated with nurse burnout in the US. *JAMA Network Open*, *4*(2). https://doi.org/10.1001/jamanetworkopen.2020.36469

Suliman, W. A., Abu-Moghli, F. A., Khalaf, I., Zumot, A. F., & Nabolsi, M. (2021). Experiences of nursing students under the unprecedented abrupt online learning format forced by the national curfew due to covid-19: A qualitative research study. *Nurse Education Today*, *100*. https://doi.org/10.1016/j.nedt.2021.104829

White, J. H. (2021). "It was never enough": The meaning of nurses' experiences caring for patients during the COVID-19 pandemic. *Issues in Mental Health Nursing*, *42*(12), 1084–1094. https://doi.org/10.1080/01612840.2021.1931586

Wittenberg, E., Goldsmith, J. V., Chen, C., Prince-Paul, M., & Capper, B. (2021). Covid 19-transformed Nursing Education and communication competency: Testing comfort educational resources. *Nurse Education Today*, *107*. https://doi.org/10.1016/j.nedt.2021.105105