Burnout in Nursing: Institutional and Societal Impact in the Era of

COVID-19 by

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Abstract

There have been numerous studies indicating high levels of burnout in nurses during and since the SARS – CoV-2 (COVID-19) pandemic (Caruso et al., 2021; Wei et al., 2022). This exploratory online survey of hospital nurses aimed to examine how nurses' perception of institutional emotional support, institutional instrumental support and societal perception of nurses' value changed from the active phase of the pandemic to the post pandemic era. This study assesses how the perceived changes are associated with present burnout scores. Nurse participants (n=312) were asked to complete two burnout scales, the Maslach Burnout Inventory – Health Science Survey and the Oldenburg Burnout Inventory. Additionally, they were asked to complete the Public and Institutional Perception Survey (PIPS), which is a non-validated instrument created by this researcher to evaluate nurses' perception of societal value, institutional emotional support, and instrumental support both during the active phase of the pandemic and "post" pandemic.

Results confirm elevated levels of burnout experienced in hospital nurses in the United States. Unexpectedly, nurses perceive an increase in societal valuing in the post pandemic era compared to the active phase of the pandemic. This increase is associated with a decrease in all three subscales of burnout on the MBI-HSS. Nurses perceived a decrease in both emotional and instrumental support provided by their institutions. The decrease in institutional instrumental support was associated with an increase in emotional exhaustion and depersonalization. Additionally, nurses perceive high levels of present workload which are associated with emotional exhaustion as well as a lack of perceived personal achievement.

The results of this study emphasize the importance of the role of both perceived societal and institutional support plays in burnout for hospital working nurses during this post pandemic era. In order to support nurses effectively, it is suggested that there be further research exploring specific interventions that may be useful now, as well as when future epidemics or pandemics occur.

Chapter One

Burnout in Nursing; Institutional and Societal Impact in the Era of COVID-19

Burnout has been a significant problem in the professional world for years. Generally conceptualized as emotional exhaustion that affects all areas of life as a result of work-related stressors (Leiter et al., 2015; Maslach & Leiter, 2016). Burnout is often measured using the Maslach Burnout Inventory (MBI) scale that has three dimensions; depersonalization, emotional exhaustion, and low levels of personal achievement (or accomplishment) (Molina-Praena et al., 2018). For nurses, burnout has reached epidemic proportions, not only in the United States (US) but worldwide (Caruso et al., 2021). This is problematic as nurses make up 59% of the world's healthcare professionals, which is equivalent to 27.9 million nurses globally (Caruso et al., 2021). A pre-pandemic meta-analysis indicated that up to 38% of nurses, across a variety of settings worldwide, experienced some aspect of burnout (Molina-Praena et al., 2018). Traditional factors found to contribute to burnout includes age, gender, marital status, professional experience and perceived levels of social support (Davis et al., 2013), the number of hours worked (Neumann et al., 2018), and other psychological factors (Caruso et al., 2021; Molina-Praena et al., 2018). Additionally, burnout rates vary depending on the healthcare settings as well as nursing disciplines (Molina-Praena et al., 2018; Neumann et al., 2018). Burnout in nurses may potentially affect more than the individual nurse, as it may also increase healthcare spending and negatively affect patient health outcomes (Wu et al., 2016).

The onset of the COVID-19 pandemic has exacerbated aspects of burnout. A study measuring the burnout rates of nurses worldwide during the initial phases of the pandemic ranged from 3.1%-43% (Caruso et al., 2021). Interestingly, a study of 222 medical staff in China found that those who were on the frontline treating COVID-19 patients had higher than average levels of personal achievement (Wu et al., 2020.). Similar findings were noted that nurses in Turkey. Some nurses found a great amount of meaning in their work during the active phase of the pandemic while simultaneously struggling with the additional burdens imposed by the crisis (Uzunbacak et al., 2023). This finding may reflect cultural differences in China and Turkey. At this time, there do not appear to be the same findings within nurses in the United States (Sagherian et al., 2020). Despite these two studies, others have reported that since the initial stage of the pandemic about 68%-70.5% of nurses are experiencing burnout symptoms in the United States (Wei et al., 2022). Factors that have been identified as playing a significant role since the onset of the pandemic includes poor administrative support and leadership, role conflict (Caruso et al., 2021; Dall'Ora et al., 2020), reduced personal protective equipment, staffing shortages, increased psychological burdens, and rapidly changing information regarding COVID-19 policy (Crowe et al., 2021). Some of these factors result in more hours worked, especially as mandated shifts increase and scheduling flexibility decreases (Caruso et al., 2021) thus further contributing to burnout. Furthermore, studies have found that since the start of the COVID-19 pandemic, nurses have had increased anxiety, fear, and compassion fatigue (Caruso et al., 2021). These factors have also contributed to burnout (Caruso et al., 2021; Mealer et al., 2009; Wei et al., 2022).

The latest data shows that burnout rates in the US, since the critical stages of the COVID-19 pandemic, are up to 68%-70.5% (Mealer et al., 2009; Wei et al., 2022). During the

initial phases of the pandemic, 3.1%-43% percent of nurses met criteria for burnout (Caruso et al., 2021). With this significant increase, it is important to also recognize the factors that are considered to be protective against burnout, including the perception of safety (Caruso et al., 2021), feeling of providing personalized care (Molina-Praena et al., 2018), and a supportive work environment (Wu et al., 2016). Social support can be expressed in diverse ways. Social support includes intra and extra family support (Caruso et al., 2021) as well as support within the workplace provided by supervisors and co-workers. Both have been found to be fundamental in preventing burnout (Velando-Soriano et al., 2020). A study addressing the effect of social support in burnout found that work related support had a larger influence on emotional exhaustion, whereas non-work-related support influenced symptoms of depersonalization and personal accomplishment (Halbesleben, 2006). Despite this, little to no attention has been focused on the impact that societal changes have had on work conditions and concomitant burnout for nurses. This includes hospitals dropping safety protocols as well as the pandemic label on everyday tasks. It is also unclear to what extent societal attitudes, regarding the role of nurses, are impacting the post pandemic world while nurses continue to face stressful working conditions.

Burnout

Burnout is described as the downward spiral stress reaction that is a result of chronic exposure to emotional and interpersonal stressors from a job (Leiter et al., 2015; Maslach & Leiter, 2016). Burnout was first recognized by Freudenberger in 1975 when he noticed the emotional depletion of workers in a healthcare agency (Leiter et al., 2015). In 1976, Maslach and her colleagues identified the two contributing symptoms of burnout to be emotional exhaustion (EE) and depersonalization (DP) (Leiter et al., 2015). Added later, the third largest dimension of

burnout was identified as feeling a reduced sense of personal accomplishment (PA) (Leiter et al., 2015; Maslach & Leiter, 2016). Those three complete Maslach and Jackson's (1981) three factor burnout theory (Leiter et al., 2015). Burnout is currently considered to be a three-factorial construct composed of EE, DE, and PA (Bakker et al., 2005; Leiter et al., 2015; Maslach & Leiter, 2016). In addition, cynicism and professional inefficiency have been identified as important constructs that load onto all three factors and should be considered as highly relevant to burnout (Leiter et al., 2015). This is further described below in "Burnout Measurement". It should also be noted that what distinguishes burnout from exhaustion is that in burnout the exhaustion must lead one to distance themself both emotionally and cognitively from work and the relationships at work (Maslach & Leiter, 2016).

The effects of burnout can be attributed to both personal and organizational impacts. As a result, both are affected. The clinical sequelae of burnout include reduced levels of productivity, reduced commitment to the work engaged in, decreased enjoyment, and potentially harmful or negative attitudes towards clients or colleagues. As a result, these symptoms might contribute to a person deciding to quit or change jobs (Leiter et al., 2015; Maslach & Leiter, 2016), resulting in high turnover rates that can currently be seen in nurses. These symptoms are measured as depersonalization (DA) and personal accomplishment (PA) in the MBI. Psychological symptoms include feelings of exhaustion or being worn out (Leiter et al., 2015). Additionally, burnout has been found to completely mediate the relationship between the strains of a job and depression. This suggests that if someone is struggling at work and feeling depressed, burnout may be the salient factor that turns struggling into depression (Maslach & Leiter, 2016), which is measured as emotional exhaustion (EE). Furthermore, there are physical symptoms that are associated with the result of prolonged stress and the emotional exhaustion component of burnout. These

symptoms include trouble sleeping, viral infections, headaches, gastrointestinal challenges, chronic fatigue, hypertension, and increased muscle tension (Maslach & Leiter, 2016). Burnout has also been correlated with the microinflammation biomarkers that lead to cardiovascular disease in females (Toker et al., 2005).

As suggested above, the research suggests that the risk factors for burnout fall into two broad categories: individual and occupational. There are multiple demographic factors that have been associated with higher rates of general burnout. Concerning age, studies have found that younger people may experience more burnout symptoms than older individuals. However, it appears that this factor is comorbid with the number of years of work experience that an individual has. Nurses early in their career often experience more burnout symptoms than those who have more experience (Caruso et al., 2021; Leiter et al., 2015; Maslach & Leiter, 2016). Another demographic factor is marital status. People who are single are at a greater risk of burnout than those who are married (Leiter et al., 2015). It is likely that this is related to perceived social support (Halbesleben, 2006). Additionally, levels of education have also been linked as a risk factor. Studies found that people with higher levels of education have reported slightly higher levels of burnout compared to those who have less education (Caruso et al., 2021; Leiter et al., 2015). Some personal characteristics and emotional factors may also increase the risk of burnout (Caruso et al., 2021). These include having an external locus of control, low scores on the personal characteristic of openness, low self-esteem, and using an avoidant style of coping (Leiter et al., 2015). It is plausible that the characteristics mentioned above can make a person more rigid and therefore less adaptable to changing circumstances. As a result, they may not be equipped with the coping skills to adjust to unpredictable environments, leading to exhaustion and ultimately burnout.

Occupational related factors that increase the risk of burnout can be separated into six domains: workload, amount of control, the reward, community at work, fairness, and values (Leiter et al., 2015; Maslach & Leiter, 2016). Each of these affects the other. Workload is both the quantitative and qualitative amount of work that one has including workload and demand, deadlines, expectations, role conflicts, and the ambiguity of the job (Leiter et al., 2015). Overwork reduces a person's capacity to keep up with the tasks and the demands of their role due to an increase in time and energy needed to sustain the increased workload. This results in diminished time to rest and recuperate, which in turn causes erosion on the efficiency and effectiveness in which work is done, ultimately leading to burnout (Caruso et al., 2021; Maslach & Leiter, 2016). This also has personal consequences as one is no longer able to meet the expectations outside of work. As mentioned previously, when a person has an external locus of control they are at a greater risk of burnout. This can be exacerbated by the lack of autonomy in the workplace. When an employee perceives more control in their choices and work-related factors, they are less likely to experience burnout and more likely to be satisfied and committed to their company (Leiter et al., 2015; Maslach & Leiter, 2016). Furthermore, the community work environment, including the social characteristics of the workplace, can be a risk factor for burnout. Studies have found that employees who trust their supervisors and superiors are less likely to experience burnout (Lambert et al., 2012). This includes social support from both colleagues and managerial positions and the decisions made that go beyond the employment contract. Examples include decisions to downsize, merge, etc. (Leiter et al., 2015). When a person has a greater level of perceived work-related social support, they are less likely to experience symptoms of burnout (Maslach & Leiter, 2016). Furthermore, burnout can be considered contagious. For example, if a colleague is experiencing burnout, those that work

around them are at a higher risk of 'contracting' burnout related symptoms (Bakker et al., 2005, 2006). This further emphasizes the importance of social relationships at work. Reward relates to the recognition of value that a person receives for their efforts. These may be intrinsic or extrinsic and come in the form of social praise, institutional recognition, or financial increases (Maslach & Leiter, 2016). An increase of reward can prevent feelings of diminished personal achievement as it brings value to the work that someone is doing. Fairness is the perception that the decisions being made at a managerial level are fair and equitable for everyone (Maslach & Leiter, 2016). Finally, the values of a company might be similar to the values of their employees, which can contribute a highly rewarding aspect to the work. When there is a large overlap between an individual and an organization's values, there is less risk of burnout. However, if there is little overlap in personal values and the values of an organization, the individual is forced to make a choice between value and work, leading to burnout (Maslach & Leiter, 2016).

Burnout Measure

The Maslach Burnout Inventory (MBI) was developed to measure occupational stressors such as job satisfaction, turnover, and commitment to work (Leiter et al., 2015). This is the gold standard theoretical framework used to measure burnout (Sullivan et al., 2022). There are currently five versions of the MBI which include the Human Services Survey (MBI-HSS), Human Services Survey for Medical Personnel (MBI-HSS (MP)), Educators Survey (MBI-ES), General Survey (MBI-GS) and General Survey for Students (MBI-GS (S)). The MBI measures the three main dimensions of burnout: Emotional Exhaustion (EE), Depersonalization (DP), and reduced feelings of Personal Accomplishment (PA). There are two additional characteristics of burnout; cynicism and feeling a sense of inefficiency, mostly used in the MBI-GS (S) (Leiter et al., 2015). How these characteristics demonstrate themselves vary slightly between the three

dimensions. The first dimension measured in the MBI is emotional exhaustion, which is also considered to be the defining feature of burnout (Leiter et al., 2015). This category encapsulates feelings of emotional, cognitive, and physical depletion; not having enough energy to face the day or task at hand and feeling as though their fatigue is incurable (Maslach & Leiter, 2016). In an attempt to cope with the overwhelming feelings of complete exhaustion, individuals will often try to distance themselves both cognitively and emotionally from the work-related tasks that they are expected to be engaged in. This immediate negative, detached, and hostile response to exhaustion may be referred to as cynicism (Maslach & Leiter, 2016). Cynicism is the negative feelings towards the job and the people that they work with (Bakker et al., 2006). A strong relationship between exhaustion and cynicism is found throughout the literature due to the immediate attempt to distance oneself from work as a result of feeling overextended and exhausted (Maslach & Leiter, 2016).

The second dimension measured in the MBI is depersonalizations, formally called psychological distancing. Depersonalization has cynical characteristics involved such as the loss of personal connection to work and the people around them (Maslach & Leiter, 2016). The term depersonalization refers to treating other people, such as clients, in an apathetic manner (Leiter et al., 2015) which may in turn become dehumanizing (Maslach & Leiter, 2016). Cynicism in this dimension is related to the interpersonal dimension of burnout, which is what helps to distinguish burnout from chronic exhaustion (Maslach & Leiter, 2016). Additionally, cynicism has been determined to be the mediating factor between the relationship of being bullied in the workplace and intending to quit (Maslach & Leiter, 2016). As a person starts to distance themself from their work, their productivity level may decrease. As a result of this decrease, they may begin to feel inadequate, incompetent, and unable to perform at a high level. These feelings may also result in

a diminished sense of self and increased belief that they are a failure and incapable (Maslach & Leiter, 2016). As a result of these feelings of inadequacy, they may begin to treat those around them in a way which would usually be historically uncharacteristic for themselves. In turn, this leads to the third dimension of burnout.

The third dimension is a diminished sense of personal accomplishment or achievement in a person's job (Leiter et al., 2015). A person may no longer feel their work has value or that they are making a difference with their field of influence (Leiter et al., 2015). In regard to work related activities, the loss of personal connection (cynicism) as well as inspiration and effectiveness (inefficiency) is what distinguishes burnout from chronic fatigue. Burnout scores are measured for each scale. Burnout is when a person scores highly in either emotional exhaustion and depersonalization or has low scores in feelings of personal accomplishment. These three categories of symptoms are similar across all employment. However, the result of burnout may differ in severity.

Nurse Burnout Rates Post Pandemic

As described above, nurse burnout has been a significant problem even pre-pandemic. However, the increased burden of the pandemic has exasperated these numbers (Sullivan et al., 2022). In a study done by Sagherian et al (2020), they found that 68% of hospital working nurses in the United States met the criteria for emotional exhaustion, 88.3% met the criteria for depersonalization, and 76% had diminished feelings of personal accomplishment. A further study of 18,935 nurses worldwide found 34.1% of nurses met the criteria for emotional exhaustion, 12.6% depersonalization, and 15.2% met criteria for feeling a lack of personal accomplishment (Galanis et al., 2021). This means that United States nurses experience about twice as much emotional exhaustion and reduced feeling of personal accomplishment and about

seven times more depersonalization than the average nurse worldwide. It is notable that this data was not specific to hospital nurses. However, the difference in burnout rates suggests that there are other influences in America that are resulting in significantly higher rates of burnout in nurses compared to other countries.

Clinical Sequelae

The medical population, as well as the general population, cannot afford to have nurse burnout levels as high as they are. This not only affects their personal quality of life (Davis et al., 2013) but it affects the way that they work. This may even drive nurses to leave work completely as nurses who burnout are more likely to be absent from work (Bakker & Costa, 2014). Yet, if they do go to work burnt out, they are less productive than their non-burnt-out counterparts (Leiter et al., 2015). Employment of nurses remains 10% lower than it was before the pandemic (Buerhaus et al., 2022). According to AHA in 2020, the registered turnover rate was 18.7%, which is an increase from 2019. Additionally, due to the aging population and high levels of burnout, the nurse population is expected to decrease significantly. This may result in a circular problem where burnout results in higher levels of turnover, reduced staffing, and increased workload for employed nurses which puts them at a higher risk of also getting burned out.

Emotional exhaustion is likely to result in more unintentional medical errors which may cause harm to patients (Leiter et al., 2015; Vahey et al., 2004). Medical errors already account for about 250,000 deaths a year, making it the third highest cause of death in America (Makary & Daniel, 2016). Patients who had nurses that met criteria for burnout reported lower levels of patient care (Vahey et al., 2004). This means that patients and healthcare outcomes are at risk when there is such a high prevalence of practicing nurses who are burned out.

Primary Contributing Factors for Nurses

A primary factor found to contribute to burnout in nurses during the pandemic is an increased workload (Dall'Ora et al., 2020; Galanis et al., 2021). Nurses prior to the pandemic already experienced a high workload (Sullivan et al., 2022) and the pandemic significantly increased the workload of nurses working in hospitals. This is evidenced by several factors including staffing shortages, increased hours, and more patients that they are responsible for. Staffing shortages are a large problem both for the nurses and the patients, as well as for the managing nurses who do the scheduling (Gray et al., 2021). While hospitals are short staffed, The Bureau of Labor Statistics reports that nurses experienced the highest levels of unemployment from February 2020 - June 2021 as private sectors shut down and as less people used health care (Buerhaus et al., 2022). April 2020 through June 2020 showed a 20% decrease in nurse employment (Buerhaus et al., 2022). For the most part, employment has restabilized in private sectors, but nurses' unemployment rates still remain low for ethnic minorities as well as nurses in nursing homes (Buerhaus et al., 2022). Nonetheless, the high rates of unemployment suggest that there was an availability of qualified nurses without jobs. Therefore, either nurses no longer wanted to work, or hospitals were not hiring in order to improve staffing shortages. Another contributing factor to an increased workload is an increase in hours worked per week. Nurses who work more than 40 hours a week experience higher rates of burnout than those who do not (Neumann et al., 2018; Sagherian et al., 2020). The Bureau of Labor Statistics (2023) data reports that from March 2020 to January 2023, a nurse worked an average of 33.38 hours per week with the highest being 33.7 hours per week and the lowest 32.9 hours per week in January 2021.This statistic appears to grossly underestimates the majority of nurses working in hospitals throughout this period. Throughout this period, hospitals mandated nurses to work more than

their contracted hours (Chamlou, 2022,). Additionally, some hospitals allegedly removed all paid time off. As this may vary from hospital to hospital, there is no clear data that accurately reflects the experience of a hospital nurse during this time or published reports that describe this. Saherian et al. (2020) reports that one third of their nursing sample worked more than 40 hours a week early on in the pandemic. At one hospital, The Center for Infectious Disease and Research Policy found a nurses' patient responsibility had increased from 1:1 to 1:4, quadrupling their workload (McMahon, 2021). However, this does not seem to be a problem related to this specific hospital alone. Instead, it seems to describe the vast majority of hospitals (McMahon, 2021).

The onset of the pandemic changed life for everyone. For nurses working in hospitals, these changes may have exacerbated an already difficult profession. Caruso et al., (2021) describes the fear of COVID-19 infection, anxiety, and depression related to the pandemic as risk factors for burnout. Additionally, these fears go further than just themselves. When nurse managers were interviewed on their largest stressors, two of the top five were regarding the safety of their families at home and the impact that their career would have on them (Gray et al., 2021). Separation of work life and home life was not an option for hospital nurses unless they stayed away from their families. As a result, they felt isolated from those that they love which in turn compounds the emotional exhaustion leading to burnout (White, 2021).

Nurses who spent more time with COVID-19 positive patients or were in quarantine areas were found to have higher rates of burnout than those working in other units (Caruso et al., 2021). Nurses describe feelings of fear, uncertainty, worry, depression, anxiety, and emotional exhaustion throughout the pandemic (Caruso et al., 2021; White, 2021). These symptoms resulted in compassion fatigue for their patients and then ultimately to burnout (Caruso et al., 2021). Furthermore, the nurses mentioned that they felt they had to choose between duty and

safety for themselves and their families (Gray et al., 2021), specifically when there was an inadequate supply of PPE (Crowe et al., 2021) and high exposure to the virus. This likely further exacerbates the nurses' anxiety as well as reduces their ability to connect with their support systems. The PPE that was available for nurses caused skin lesions on their faces (Caruso et al., 2021), leaving physical reminders of the emotional burden that work had become. Some nurses' comments during the pandemic suggest that their job was no longer vocational but rather a "call of duty." Many felt there was no choice in going to work (Gray et al., 2021) which may have possibly led to the high rates of low personal accomplishment and depersonalization. Across the country, nursing strikes were reported by the media at large. These strikes aimed at increasing respect and safety for both themselves' and their patients. Despite wage increases, nurses felt as if their needs were not being met (Buerhaus et al., 2022). In addition, staffing shortages, mandatory overtime, and patient safety were among the top three reasons for striking (Chamlou, 2022). The continuation of strikes further reinforces the perception that nurses are not feeling like they are being respected or heard.

Secondary Factors

Prior to the COVID-19 pandemic, hospitals ran as their own ecosystem. However, due to the international circumstances of the virus, hospitals had to adjust to rapidly changing Federal and State mandates. As a result, burnout research lists lack of control as a risk factor for burnout (Leiter et al., 2015; Maslach & Leiter, 2016). During the COVID-19 pandemic, information about the virus protocols, standards, and public opinion changed rapidly. The changing of practice intervention and safety protocols seemed to have an additional effect on nurse burnout (White, 2021). The pandemic changed the way decisions were made and responses needed to be adjusted on the fly. Not only were the hospitals adjusting regulations, they also

needed to adjust to the additional Federal and State regulations that were being imposed. This is likely to have contributed to higher levels of nurses having little to no control in their work environment or ability to make decisions during this time (Dall'Ora et al., 2020).

Impact of Public at Large

The effect of the media surrounding nurses during the pandemic also seemed to have an impact. This author has found no empirically supported data to suggest a direct influence on burnout, however, the magnitude of the public response to nurses suggests that there may have been a secondary effect. Worldwide, nurses and hospital staff were celebrated and hailed as heroes and symbols of hope (Różyk-Myrta et al., 2021). In the United States, people had signs outside their houses. In Europe, people lined the streets with pots and pans thanking the hospital staff at the changing of shifts. While these gestures may have been well intended, they do not seem to accurately represent what the nurses were feeling. Nurses were being hailed as the heroes, yet not all nurses appreciated this title. A few nurses even made remarks that suggested they felt as if they were at war, completely unprotected and unprepared with no will to be there (Mohammed et al., 2021). Another argument is that nurses and the hero figurines that they were portrayed as highlighted a traditionally feminine, caring, and angelic persona (Garcia & Qureshi, 2022; Stokes-Parish et al., 2020). However, the conversation regarding physicians was that they were knowledgeable and qualified. This undermined the ability and qualifications of registered nurses who are well educated, highly trained, and experienced (Garcia & Qureshi, 2022). Additionally, when the pandemic labels were dropped, the heroic titles were removed, and the general public no longer praised their healthcare workers, it may have caused negative feelings for the nurses who enjoyed the appreciation and recognitions and positive feelings for those who did not.

The Effects of Social Support during COVID-19

The burnout literature implies that social support within the work environment is a vital protective factor and prevents all three factors related to burnout (Caruso et al., 2021; Davis et al., 2013; Velando-Soriano et al., 2020; Wu et al., 2016). However, throughout the literature, there are a variety of definitions as to what social support means or how much is required (Velando-Soriano et al., 2020). Most agree that the most effective social support is from a person's superiors at work as well as their co-workers (Velando-Soriano et al., 2020). Caruso et al. (2021) found that both intra and extra family support were also effective as protective factors for burnout. As work related social support is directly related to the impact of work, it seems to be the larger cause of burnout symptoms as opposed to non-work-related social support (Halbesleben, 2006).

During COVID-19, Galanis et al., (2021) found multiple social factors that increased burnout. In the hospitals, nurses with a lack of human resources and support from supervisors had higher levels of burnout (Galanis et al., 2021). Other factors that increased burnout included having a friend or family member being diagnosed with COVID-19, as well as other people's inability to cope with the pandemic (Galanis et al., 2021). Nurses who had good social support systems (which suggests both in the hospital and at home) had less chance of burnout as they were able to combat the feelings of loneliness and isolation, which in turn may have increased resilience (Davis et al., 2013; Galanis et al., 2021). Furthermore, Davis et al., (2013) found that social support specifically can be correlated to lower levels of depersonalization. Nurse managers listed feelings of hatred towards them as one of the most severe stressors they faced during the pandemic (Gray et al., 2021). This suggests that social factors outside of the hospital may play a role in the symptoms of burnout.

Present Study

Given the pandemic related contributions to the experience of burnout for nurses, it is critical for both the nurses themselves and their patients to understand the risk factors more fully. Specifically assessing the novel associations between nurses' change in perception of societal support, institutional emotional support and institutional instrumental support and how they are related to current burnout scores. Despite the limited studies examination of relative contributing risk factors it is reasonable to hypothesize that, given the extensive research on general nursing burnout, pandemic related issues would have a significant additional impact. Indeed, during the active phase of the pandemic, factors, such as poor perceived institutional support by nurses, may have been exacerbated by the inability to rapidly adjust to the disruptions brought about by the pandemic. Based on the significant social and institutional demands and response to the pandemic, the following factors related to pandemic induced nursing burnout were hypothesized.

1. Given the societal decrease in COVID-19 concerns, nurses will score lower on current perceived social valuation relative to perceived social valuation during the active pandemic period.

2. Nurses will endorse continued perceptions of being unsupported emotionally by their institution, both during and since the end of the active phase of the pandemic.

3. Nurses will endorse that institutions are not addressing pandemic related stressors that continue to impact shift hours and nurse to patient ratios.

4A. Workload from post pandemic periods will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement.

4B. It is anticipated the association between current nursing workload and emotional exhaustion scores will be significantly stronger than the association between workload and depersonalization scores.

4C. Furthermore, it is anticipated the association of current nursing workload and emotional exhaustion will be significantly stronger than the association between current nursing workload and personal achievement scores.

5A. Loss in the nurses' perceived societal value from during the pandemic period to post pandemic periods will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement.

5B. The decrease in perceived institutional emotional support from during to post pandemic time periods will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement.

5C. Decrease in perceived institutional instrumental support from pre to post pandemic time periods will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement.

6. Lack of perceived institutional instrumental support will be a mediator between lack of institutional emotional support and scores of each subscale of the MBI.

Chapter Two

Methods

Design

This study was exploratory in nature. It was a retrospective quantitative design study in the form of an online survey.

Participants

Participants were recruited using Connect, an online platform that distributes research. Inclusion requirements included participants to be registered nurses working in a hospital setting from January 1, 2020, to the present. While no specific exclusion criteria were included, other variables were incorporated into the demographics assessment (Appendix A) in order to more fully explore potential associations with burnout. There appears to be insufficient data on this topic to conduct a priori power analysis; however, for this exploratory study 500 participants were targeted.

Three hundred and ninety-four participants identified as nurses and completed the consent and assessment questionnaires. Of these, 82 were excluded for either not passing the attention checks, if they reported having less than 3 years of clinical experience, or if they completed the survey in less than 3 minutes with inappropriate responses. The final data set included 312 participants.

As shown in Table 1, the majority of the participants identified as female (49.4%, n=154), Caucasian (71.2%, n=222), married (49%, n=153), and with a bachelor's degree (57.4%, n=179). The age of the nurses ranged from 18-65 years old; the most prominent age range was 25-34 years old (48.4%, n=151). Many of the nurses had three to five years of work experience (42.6%, n=133) and worked in a medium sized hospital (60.9%, n=190). Out of the nurses who responded, 33.5% (n=91) of them had experienced a close family or friend die as a result of COVID-19.

Measures

Demographics

A variety of demographic information was included that was based on the risk factors that have been associated with burnout (Appendix A). These variables include age, gender, ethnicity, marital status, and highest level of education as the number of years of experience as a registered nurse. Additionally, questions that may specifically influence the results of this study, such as "did a close friend or family member die of COVID-19", "how many beds does your hospital have", and "what unit did you work on during COVID-19" were asked.

Burnout

Maslach Burnout Inventory - Health Services Survey

Maslach Burnout Inventory: Health Services Survey (MBI-HSS; Appendix B) is the gold standard measure of burnout in nurses (MBI-Maslach and Jackson, 1986). The MBI has three scales: emotional exhaustion, depersonalization, and personal accomplishment (Leiter et al., 2015; Maslach & Leiter, 2016). Each scale is measured separately, high scores of emotional exhaustion and depersonalization indicate burnout, with low scores of personal accomplishment (Woo, et al., 2020). There are seven questions for each subscale. Each statement is answered on

a 0 “never” to 6 “every day.” The original published Cronbach alphas range from 0.71-0.90 for the three subscales (Maslach et al., 1996). A more recent study on nurses in Florida found the Cronbach alpha for the scales to range between 0.75-0.88 (Beckstead, 2002), which are similar to those published in 1996. The MBI has good internal consistency and discriminant validity (Schaufeli et al., 2001). In this study, Cronbach alpha was 0.81 for personal accomplishment, depersonalization was 0.81, and emotional exhaustion was 0.92.

Oldenburg Burnout Inventory

The final measure that was used is the Oldenburg Burnout Inventory. The Oldenburg Burnout Inventory (OLBI; Appendix D) is a validated scale. The scale supports a two-factor model of the scales; exhaustion and disengagement (Halbesleben & Demerouti, 2005). The scale has 16 statements that can be answered on a scale of 1 (strongly disagree) to 4 (strongly agree), higher scores suggest a higher level of burnout related symptoms. These statements can be found in Appendix D. The benefit of the OLBI is that the wording of the statements is less one-sided than the MBI (Halbesleben & Demerouti, 2005). The OLBI was found to have internal consistency scores ranging from 0.74-0.87 and Cronbach alphas ranging from 0.74-0.83. Additionally, Halbeslenben & Demerouti (2005) found that the OLBI had good enough discriminant validity. In this study, the disengagement scale’s reliability was 0.69, exhaustion was 0.69, and the full scale was 0.80, which is in line with the predicted alpha scores.

Nurses Perceptions of Societal and Institutional Support

The Public and Institutional Perception Survey (PIPS; Appendix C) is a questionnaire created by the author designed to address nurses' perceptions of societal and institutional factors, such as instrumental and emotional support. This questionnaire has not yet been validated and was created given that the researcher found no valid survey to target these

domains. The PIPS is a total of 36 questions to be answered on rating scales. The questionnaire is split into “during the pandemic” and “post pandemic” in order to compare the perceptions of nurses for these times. There are 14 statements that address “during the pandemic” and 14 similar statements for the “since the pandemic.” Furthermore, to address the ongoing nature of the burnout in nurses, eight additional questions are added to the “since the pandemic” statements. Throughout this study the pandemic time period is considered to be 2020 through 2022. The post pandemic period is considerd to be 2023 since the World Health Organization declared COVID-19 no longer an international health crisis (2023). Furthermore, while using the term post pandemic time period, it is within the context of a fully reopened society despite a continuing crisis with the SARS COV-2 virus. In order to measure the hypotheses, the PIPS was divided into seven subscales, three for “During the Pandemic:” Public value, Institutional Emotional Support, and Institutional Instrumental Support. “Post Pandemic” comparison scales include the three “During the Pandemic” scales as well as workload, which is measured inversely to all the other scales; high scores are considered to suggest more workload. The Cronbach alpha of each scale was calculated, alpha scores ranged from 0.78-0.92, which suggest the scales have good reliability (Table 4).

Protocol

The survey protocol was conducted using the Connect platform and Qualtrics. Individuals who expressed interest were first asked if he/she has been continually employed as a registered nurse in one or more hospital settings from January 1, 2020, to the present. Participants who met this inclusion criteria were then presented with a consent form (Appendix D). Those who completed the consent form were directed to a Qualtrics database to first complete the demographic questions. They then completed the MBI, followed by PIPS and

finally the Oldenburg questionnaire. Upon completion, participants were thanked and dismissed. The PIPS evaluated data on an individual basis and paid participants based on stand protocols for survey research, including the amount of time taken and appropriate patterns of responding. Data was anonymized using Qualtrics and Connect's protocol.

Ethical Considerations

Approval for this study was obtained from the International Review Board at the University of Michigan - Dearborn for Health Science and Behavioral Sciences. All data from this study was anonymized and stored in an encrypted folder.

Chapter Three

Results

Data Analysis

Quantitative data analyses were conducted on the results of the survey through IBM SPSS 28. Prior to analysis, multiple imputations were used to compute missing data. No participants had to be excluded due to excessive missing data. Data were examined for skewness and kurtosis. As anticipated, several scales were mildly skewed. However, the only measure that was mildly problematic was the OLBI. As it was only used as verification for the MBI- HSS scale no transformation was performed. Thus, results are presented for non-transformed data for ease of interpretation. Descriptive and frequency statistics were computed for all the measures: demographics, MBI, OLBI and PIPS as shown in Tables 1-4.

Descriptive Statistics

Basic descriptive statistics were run for demographics, as well as for all the subscales of MBI, the OLBI and PIPS. Furthermore, the MBI-HSS and Oldenburg Burnout Inventory subscales scores were sorted into categories of high, moderate, and low levels of burnout. The MBI-HSS scores for emotional exhaustion had a mean of 38.16 (SD=12.8). Out of the 312 participants, 81.4% (n=254) reported high levels of emotional exhaustion burnout, 9.9% (n=31) a

moderate amount of burnout and only 8.7% (n=27) with low levels of burnout. Scores for depersonalization had a mean of 16.58 (SD=7.12), with 69.6% (n=217) of participants reporting

high levels of feelings of depersonalization, 19.9% (n=62) with moderate amounts and 10.6% (n=33) with low levels of burnout. While 65.1% (n=203) of the participants report low levels of personal achievement which indicates a higher level of burnout, 26% (n=81) report a moderate level of personal accomplishment and 9% (n=28) report high levels.

The Oldenburg Burnout Inventory also indicated that the nurses who participated in this study are experiencing high levels of burnout. The full scale had a mean score of 2.77 (SD=0.41). Scores of disengagement indicated that 62.5% (n=195) of the participants are presently experiencing high levels of burnout, 30.4% (n=95) medium amounts, and 3.8% (n=12) low levels of burnout. On the exhaustion scale, 66% (n=209) of the nurses reported high levels of burnout, 29.2% (n=91) medium amounts, and 1% (n=6) experienced low levels of exhaustion burnout.

Bivariate correlations between scores of burnout as assessed by the Oldenburg and MBI-HSS were conducted to verify consistency between the two measures. Significant positive associations were found between Oldenburg full scale scores and MBI depersonalization (r=.374, n=302, ρ=<.001), emotional exhaustion (r=.526, n=302, ρ=<.001) as well as significant negative correlation with lack of personal achievement (r=-.256, n=302, ρ=<.001). Finally, bivariate correlations between score of burnout and the relevant variables for the pandemic period and post pandemic periods are presented in Table 5. As expected, significant correlations are found between measures of burnout and public and institutional factors.

The PIPS scores for during the pandemic suggested that nurses perceived significant valuation from the public (M=23.12, SD=3.89; range 8-28.23), as well as receiving emotional support from their institution (M=14.19, SD=4.12; range 4-20.56). Despite high perception of institutional and emotional support, participants reported significant institutional instrumental

support (M=7.19, SD=2.23; range 2-10). The post pandemic scores suggest an elevation of nurse value post pandemic (M=24.4, SD=4.60; range 7-33), a decrease in institutional emotional support (M=13.78, SD=4.34; range 4-20.87) and an increase in institutional instrumental support (M=6.97, SD=2.25; range 2-10). Workload post pandemic scores were measured and indicate significant perception of high amount of workload (M=19.52, SD=5.67; range 7-30).

Hypothesis 1

The first hypothesis predicted that there would be a significant decrease in the nurse's perception of public value from during the pandemic era to the present day. Unexpectedly, scores for nurses' perceived valuation from the public during the pandemic (M=23.12, SD=3.89; range 8-28.12) and post pandemic (M=24.4, SD=4.60; range 7-33) suggest that perceived valuation from the public has increased. A paired samples t-test indicated a significant increase in the nurses' perception of societal value, t (311) = -7.428, ρ=<.001. Cohen d = -0.30, a small effect size.

Hypothesis 2

The second hypothesis predicted that nurses would perceive no emotional support from their institution in both the pandemic and post pandemic eras. The analysis found that nurses perceived a high level of emotional support from their institutions. A comparison of institutional emotional support found that during the pandemic, nurses on average reported higher mean scores (M=14.19, SD=4.21; range 4-20.56) of institutional emotional support compared to the present time (M=13.78, SD=4.34; range 4-20.87). A paired sample t-test found this to be a statistically significant decrease in the perception of emotional institutional support since the pandemic, t (311) = 3.606, ρ=<.001. Cohen d = 0.10, a very small effect size.

Hypothesis 3

The third hypothesis predicted that nurses would endorse feelings that their institutions are not addressing the pandemic related stressors that continue to affect their workload. Nurses endorse higher levels of institutional instrumental support related to workload stressors during the pandemic (M=7.19, SD=2.23; range 2-10) compared to the present day (M=6.97, SD=2.25; range 2-10). The results of the paired samples t-test show a statistically significant decrease in the average scores of perceived institutional instrumental stressor support scores in the post pandemic era compared to during the pandemic, t (311) = 2.74, ρ=.007. Cohen's d = 0.1, a small effect size.

Hypothesis 4A

It was hypothesized that workload from post pandemic period will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement. A bivariate linear regression was performed to assess the relationships with workload and MBI-HSS scales. As shown in Table 5, Hypothesis 4A is partially supported. A statistically significant negative association was found between workload and emotional exhaustion *R*=-*.241*, F (1,310) = 19.15, ρ=<.001 as well as a non-significant negative relationship between workload and depersonalization *R* =-*.085*, F (1,310) = 2.26, ρ=<.134. In addition, Table 5 shows a statistically significant positive association between the present levels of workload and with lack of personal achievement *R*= *.157*, F (1,310) = 7.85, ρ=.005.

Hypothesis 4B

Hypothesis 4B predicted that there would be a significant difference between the association of workload and emotional exhaustion compared to the association with workload

and depersonalization. A bivariate correlation found a statistically significant relationship between post pandemic workload and emotional exhaustion (r=-.241, n=312, ρ=<.001), yet there was no statistically significant association with depersonalization (r=-.085, n=312, ρ=.134). As predicted, a fisher z analysis found that the association between emotional exhaustion and workload is statistically significantly greater than the relationship between depersonalization and workload (z=3.616, ρ=<.001).

Hypothesis 4C

Similarly, it was predicted that there would be a statistically significant difference between the association between workload and emotional exhaustion compared to workload and personal achievement, with emotional exhaustion being significantly greater. A bivariate correlation found a statistically significant relationship between post pandemic workload and emotional exhaustion (r=-.241, n=312, ρ=<.001) as well as with lack of personal achievement and workload (r=.157, n=312, ρ=.005). A fisher z analysis found that the association between emotional exhaustion and workload is not statistically significantly greater than the relationship between personal achievement and workload (z=1.154, ρ=0.124).

Hypothesis 5A

It was hypothesized that loss in perceived societal value from during the pandemic period to post pandemic period will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement scores. The hierarchical regression during the pandemic scores of perceived public value of nurses were entered into Step 1 and post pandemic scores of perceived public value were entered into Step 2 are shown in Table 6. As shown, hypothesis 5A was supported, a statistically significant negative

association was found between the increase in perceived public support and depersonalization ΔR^2 =.047, F (1,309) = 17.6, ρ=<.001, as well as with emotional exhaustion ΔR^2 =.074, F (1,309) = 27.97, ρ=<.00. Finally, a statistically significant positive association with lack of personal achievement ΔR^2 =.020, F (1,309) = 7.668, ρ=.006 was also found.

Hypothesis 5B

It was hypothesized that decrease in institutional emotional support value from during the pandemic period to post pandemic period will be negatively associated with current scores of depersonalization and emotional exhaustion. It will be positively associated with personal achievement. Hierarchical regression was used to measure the relationship. The scores of perceived institutional emotional support during the pandemic were entered into Step 1 and post pandemic scores of perceived institutional emotional support were entered into Step 2 are shown in Table 6. As shown, this hypothesis was partially supported. No statistically significant relationship was found. The change in institutional emotional support was negatively associated with both emotional exhaustion ΔR^2 =.007, F(1,309) = 2.699, ρ=.101 and depersonalization ΔR^2 =.025, F(1,309) = .025, ρ=.874; here is a positive relationship with lack of personal achievement ΔR^2 =.001, F(1,309) = .432, ρ=.511.

Hypothesis 5C

It was hypothesized that decrease in institutional instrumental support value from during the pandemic period to post pandemic periods will be negatively associated with current depersonalization and emotional exhaustion scores. It will be positively associated with personal achievement. The scores of perceived institutional instrumental support from during the pandemic were entered into Step 1 of the hierarchical regression and post pandemic scores of perceived institutional instrumental support entered into Step 2 are shown in Table 6. As shown,

this hypothesis was partially supported. The positive relationship between the decrease in institutional instrumental support and personal achievement was not statistically significant ΔR^2 =.006, F (1,309) = 1.853, ρ=.174. However, there was a statistically significant negative relationship with the decrease in instrumental support and depersonalization ΔR^2 =.020, F (1,309) = 6.455, ρ=.012 and with the negative association with emotional exhaustion ΔR^2 =.030, F (1,309) = 10.690, ρ=.001.

Hypothesis 6

To measure the mediation effect between the current level of perceived institutional instrumental support and perceived institutional emotional support and MBI subscales, Hayes Process V3.4 Model 4 (Hayes, 2022) with bootstrap 1000 was used. Lack of perceived institutional instrumental support was found to be a partial mediator between the lack of emotional support and emotional exhaustion (effect = -.0922, 95% Confidence Interval [CI], -.1243: -.0602) as well as with depersonalization (effect = -.0874, 95% CI, -.1485: -.0268) and lack of personal achievement (effect = .0794, 95% CI, .0089: .0696).

Chapter Four

Discussion

Sample Description

The purpose of this study was to gain a better understanding how nurses perceive the relationship between public perception and the role that institutions may have with burnout, both during the active pandemic and post-pandemic periods in the United States. Overall, nurses in the post pandemic period indicated high levels of burnout on both measures. According to the MBI-HSS, 81.4% of participants report high levels of emotional exhaustion burnout, 69.6% report high levels of depersonalization and 65.1% report low feelings of personal achievement. It is noteworthy that a bivariate correlation shows that depersonalization and emotional exhaustion share a large amount of variance, whereas the emotional exhaustion and personal achievement scores do not. The OLBI measure is positively correlated to the MBI-HSS and suggests very high levels of burnout across the board with 62.5% of nurses reporting high levels of disengagement, and 66% reporting high levels of exhaustion. The burnout levels reported in this study are consistent with studies during and since the COVID-19 pandemic (Wei et al., 2022). Wei et al., recorded 65% with high emotional exhaustion, 90.4% with low levels of personal accomplishment and 38.4% depersonalization. Furthermore, they found that 60% of younger nurses experienced higher emotional exhaustion than older nurses. This sample was predominately made up of younger nurses (56.4% under the age of 34) and only had five years of clinical experience (43%) which may explain the higher levels of emotional exhaustion in this

sample. The literature consistently has listed these as demographic variables associated with higher burnout. It is noteworthy to mention that 34% of the sample experienced a death of a close family or friend as a result of the COVID-19 virus; how this impacts burnout around the COVID-19 era needs to be further explored.

Study Hypotheses

It is noteworthy that the hypotheses will not be discussed in chronological order as the first few hypotheses were studied to explore the underlying assumptions of the latter hypotheses. Therefore, the author has combined the applicable hypotheses in the discussion.

Hypothesis 1 & 5A

The results of the first hypothesis show that nurses perceive a statistically significant increase in public support since the active phase of the pandemic ended. Hypothesis 1 predicted a decrease in the nurses' perception of the societal value of nurses. There are a variety of potential explanations for the increase rather than the decrease in their perception of public support. The first possible explanation is that the influence of conflict that was present in society during the active phase of the pandemic (Stogner et al., 2020) may have tempered nurses' perception of public support. For example, a study using primates found that social pressure and conflict conditions negatively impacted task performance (Belletier et al., 2019). The external circumstances may have affected the way that nurses were working, which could explain why they did not perceive the support as beneficial at that time. Additionally, the fear and health anxiety for nurses during the height of the pandemic was recorded as a significant stressor (Caruso et al., 2021). This often led to the isolation of nurses from their families for fear of contamination (White, 2021), this distancing may have also prevented the perception of social support. Research on threat appraisals have been associated with negative health outcomes,

including heightened anxiety and fear (Curran et al., 2020). Further research needs to be conducted. However, it is plausible that the threat appraisals made, both out of health concern and societal conflict, may have prevented them from perceiving social support at the height of the pandemic.

Another potential explanation is that value given to nurses during the active phase of the pandemic may not have been the support they felt they needed. There are different types of social support and a variety of ways to show it (Jolly et al., 2021). Matching the type of support to the job demand is important in the perception of support (Jolly et al., 2021). This is in line with some of the media reports of nurses not liking the "hero" narrative; it is possible that the social support given was not matching the need during the pandemic. It is also possible that the removal of mismatched support may have inherently increased the perception of support, not necessarily that the support increased.

Hypothesis 5A further explored the relationship between the change of nurses' perception of public value from during the active phase of the pandemic to post pandemic and the association with burnout scales. The prediction was that the decrease in public perception over time would have a positive association with overall burnout. Thus, a negative association with emotional exhaustion and depersonalization and a positive association with personal achievement was expected. Despite Hypothesis 1 not being supported, the current findings that the increased perception of support was negatively associated with depersonalization and emotional exhaustion, and positively associated with personal achievement remains consistent with the theoretical expectation of this hypothesis. Thus the directions of associations remain unchanged, and hypothesis 5A is supported. Consistent with the robust literature and expectations, these findings support the potential protective influence of perceived social support

(Caruso et al., 2021; Davis et al., 2013; Velando-Soriano et al., 2020; Wu et al., 2016). Yet, this is the first study to the best of this author's knowledge, to examine the potential importance of societal perceptions such as social support and the association to burnout in nurses. Further investigation into the impact of societal influence and the potential protective benefits needs to be further explored.

Hypotheses 2 & 5B

Hypothesis 2 predicted that nurses will endorse continued perceptions of being unsupported emotionally by their institution both during and since the end of the active phase of the pandemic. The results of the hypothesis were mixed. Overall, nurses reported relatively high scores of institutional support both during and post pandemic. This was unexpected and may suggest that measures are being taken to emotionally support nurses within the hospital. However, as anticipated, there is a statistically significant decrease in institutional emotional support experienced by nurses in the present day. It is noteworthy to mention that the way the questions were worded in the PIPS allowed room for multiple interpretation of the source of emotional support. The questions did not specify who in the hospital was providing the perceived emotional support whether that be other nurses, colleagues in general, administration, or patients.

Hypothesis 5B further explored how the change in perceived institutional emotional support related to the subscales of the MBI-HSS. First, as would be expected, institutional and emotional support both during and post pandemic was negatively associated with emotional exhaustion and depersonalization and positively associated with personal achievement. In terms of the specific hypothesis, the results were again mixed. The decrease in institutional emotional support from pandemic to post pandemic periods was statistically significant as expected. However, this change did not predict any of the subscales of the MBI-HSS. This may be an

artifact of restricted range, meaning that while there is a statistically significant change in the nurses' perception of emotional support, there is only a very small effect size. The small effect size suggests that there is not a clinically significant change on an individual level. This may explain the non-significant result. The result of Hypothesis 3 suggests that when focus is drawn more to institutional administrative support, nurses do not have such high scores. This further suggests that the nurses are feeling supported by their colleagues but potentially not at an administrative level. Future studies should clarify who is providing the emotional support to further understand the relationships between administrative emotional support to evaluate whether or not there would be a statistically significant change in the perception of emotional support and burnout.

Hypothesis 3 & 5C

The third hypothesis predicted that the nurses in this study would endorse that institutions are not addressing pandemic related stressors that continue to impact shift hours and nurse to patient ratios. As predicted, there was a significant decrease in the nurses' perception of institutional instrumental support from the active phase of the pandemic to the post pandemic phase. Furthermore, nurses in this study indicated a high level of workload. Workload measured staffing ratios, working more hours than contracted, and working on understaffed floors in the hospital. The combination of the high workload perception and the decrease in institutional action suggest that nurses do not believe that the hospitals they are working for are taking the appropriate action to reduce the additional workload that has been associated with the changes that the pandemic brought on.

Again, hypothesis 5C further explored how this decrease in the nurses' perception of institutional instrumental stressors related to burnout. The hypothesis was partially supported as

there was a statistically significant negative association between change in instrumental support and both emotional exhaustion and depersonalization; and while the positive association was not statistically significant with personal achievement. The theoretical conceptualization of personal achievement is the value and importance one feels about the work that one is doing (Leiter et al., 2015). A study done with Turkish nurses found that many nurses had a high perception of the importance of their role and the work they do as well as a large desire to serve their sick patients as a reason for positive outcomes (Uzunbacak et al., 2023). Furthermore, a study in China also found that nurses had a high sense of personal achievement because of the importance of the work and role that they had during the height of the pandemic (Li et al., 2021). It appears that personal achievement is intrinsically driven and may be attached to one's own perception of self. It appears to hold more stable even when external factors are not favorable, such as feeling statistically less supported by one's institution.

Hypotheses 4A, 4B & 4C

As predicted in Hypothesis 4A, workload has a statistically significant negative relationship with emotional exhaustion and a statistically significant positive relationship with lack of personal achievement. However, there is a non-statistically significant negative relationship with depersonalization. Leiter et al., (2015) describes depersonalization as the change in the way that nurses treat and view their patients. Care may be more apathetic, dehumanizing, and nurses will begin to distance themselves from the job and possibly their own values. The nonsignificant association between workload and depersonalization suggests that once a person meets criteria for depersonalization, their workload makes little difference in reducing or increasing depersonalization scores. The implications of this nonsignificant result may be that intervention for depersonalization may include more than just reducing workload.

The results of the fisher z analysis confirm the prediction of Hypothesis 4B, that a statistically significant difference would exist between the association of current nursing workload and emotional exhaustion being greater than the association between depersonalization and workload. Hypothesis 4C made the same prediction using personal achievement rather than depersonalization. To the author's knowledge there is no research that has addressed the relative contributions between workload and each subscale of the MBI-HSS. The results of the analysis did not find a statistically significant difference in strength of association with emotional exhaustion and workload compared to personal achievement and workload, which is a novel finding. This begs the question: Why is workload impacting personal achievement to the same extent that it is associated with emotional exhaustion? Moreso knowing that emotional exhaustion and personal achievement only share a small amount of variance. The results of Hypothesis 4C suggest nurses are limited by workload in their performance of their duties. As a result of no longer performing their tasks to their desired standard, it is possible they may no longer see their work as valuable. Research has established that finding work meaningful predicts more work engagement, higher levels of motivation, and commitment to work (Uzunbacak et al., 2023). The results of this hypothesis suggest that as workload fluctuates in a pandemic related environment, it may be equally important to openly acknowledge the positive impact of nurses' work as well as providing emotional support. Providing support to encourage nurses to see their value in the work they are doing may be the controllable variable, as workload in a pandemic era is unlikely to be within the health professional's control. Institutions should find ways to encourage and value the work that nurses are achieving under constrained working conditions to keep personal achievement high.

Hypothesis 6

The results of this study provide support for Hypothesis 6 in that the levels of perceived institutional instrumental support in the post pandemic era does have a statistically significant partial mediation effect on the perception of post pandemic institutional emotional support on each separate subscale of the MBI-HSS: emotional exhaustion, depersonalization as well as in the lack of personal achievement. This is an important and novel finding in that, to the best of the author's knowledge, there are no previous studies that have assessed the relative importance of institutional support and institutional emotional support on burnout. The finding is somewhat difficult to interpret within the context of the current environment. The active phase of the pandemic clearly impacted the world's healthcare system in a variety of ways with institutions unable to provide basic personal protective equipment or sufficient hospital space and ICU space for patients. It is unclear to what extent this is a lingering effect of the additional stressors placed on nurses during the pandemic; if this relationship was present prior to the pandemic or if it will continue to be a mediation relationship in the future. This partial mediation effect suggests the importance of institutional emotional support despite much of the variance being taken by instrumental support. Longitudinal research should continue to monitor this relationship to evaluate whether it is a lingering effect of additional stressors produced by the pandemic or not. During this time, institutions should consider both emotional and instrumental support as key factors to consider when targeting burnout in nurses.

Implication of Research

The result of this study continues to highlight the high prevalence of burnout throughout the United States in hospital nurses. There is no doubt that the pandemic created an unusual burden for all healthcare workers, including nurses. The implications of burnout have been examined and can often lead to individuals leaving their workplace (Leiter et al., 2015; Maslach

& Leiter, 2016). Concern is already high for an impending nurse shortage as a result of the ageing populations as well as the effects of the pandemic (Turale & Nantsupawat, 2021). There should be no doubt about the importance of nurses in society. It is unlikely that any person shall escape life without finding themselves under the care of a nurse in some capacity. Furthermore, it is beyond doubt that a future pandemic or epidemic will occur, the results of this study are not only important in this post pandemic period as nurses are recovering from the realities of the COVID-19 pandemic, but this study is also relevant in preparation for the next time a critical event occurs.

The decrease in institutional instrumental support since the end of the pandemic, combined with a high workload, is significantly correlated to all aspects of burnout. The relationship suggests that the implementation of strategies to improve instrumental support and decrease workload could potentially aid in the reduction of burnout. Specifically, an increase in appreciation and awareness of the importance of the work that nurses are doing under difficult circumstances. The result of this study suggests that a combination of increase in instrumental support and a decrease in workload may be a more beneficial intervention than only focusing on one aspect. However, where workload cannot be controlled nurses need to feel personal achievement within their work. Institutions should use interventions that target the nurse's value of work and making a difference in order to increase personal achievement. Maslach and Leiter (2016) found that both intrinsic and extrinsic forms of reward can prevent a lack of personal achievement. Hospitals should consider forms of institutional recognition or praise of their nurses, especially in situations like the pandemic where the circumstances appear dire. Other institutional considerations for support may include the use of gardens or outdoor respite spaces. Some hospitals have implemented recreational spaces which have improved psychological

wellbeing for nurses (Iqbal & Abubakar, 2022). Future studies should consider these findings and assess what strategies are most helpful for the reduction or prevention of nurse burnout during pandemics. Nonetheless, the results of this research suggest that administration should consider cost effective strategies and begin implementing them soon to begin the process of supporting nurses and reducing burnout.

A critical finding of this study is the importance of the increase in societal value of nurses and the impact that it has had on burnout since the active phase of the pandemic to now. To the author's knowledge, no studies have been done either within the context of the COVID-19 pandemic or prior to the pandemic that have related the perception that nurses have of societal value and the association with burnout. At least within the context of the pandemic and post pandemic eras, it is clear that the overall perception of societal value of nurses plays an important role in burnout and the psychological wellbeing of nurses. Whether this association would exist in a non-pandemic context would need to be further evaluated. The potentially protective, or reducing influence, that societal value may have on burnout in nurses begs the question of the role that the medical community has in highlighting the importance of the part that nurses play in the healthcare system to the greater society. It is important to consider that promotional language was used around nurses during the active phase of the pandemic, yet nurses perceived lower societal value at that time. This is suggestive that some promotional language, such as the "hero" narrative may have a negative impact on nurses' perception of their societal value. This author suggests that 'promotions' should be focused on educating society of the value and expertise of nurses, such as through promoting nursing school programs. By focusing on the rigorous curriculum of nursing school, the unique role that nurses have within the healthcare system and the strength of character that is required, promotions may indirectly

increase societal value of nurses. This approach may have a dual benefit, one, indirectly educating the public of the value of practicing nurses, two, increasing nursing school enrollment and creating future nurses to employ in the future. A second suggestion may include using patient or relatives' testimonials that highlight how the expertise and care given by the nurses influenced their health outcome. Testimonies have been often used as marketing strategies of healthcare (Balogun & Ogunnaike, 2017). This allows institutions to promote both nurses and the health outcomes of the institution. A third potential strategy may be for institutions to advertise their healthcare professionals as highly trained professional that are all essential, being careful not to market any specific profession as greater than the other, rather focusing on the unique role each profession plays. Future research should analyze the effectiveness of each marketing strategy as well as the different aspects of how nurses desire to be valued. Such aspects of value may include respect and appreciation of nurses for all aspects of their vocation and whether the institutions' active role in promoting nurses' value would aid in the reduction or prevention of burnout.

Overall, the most important implication of this study is that the results suggest that there are potentially helpful institutional and societal steps and strategies that can be taken to either reduce or stabilize the amount of burnout, in nurses within the context of the post pandemic era. Previous research has correlated lower rates of burnout to better health outcomes (Leiter et al., 2015), more investment into jobs, and job retention (Bakker & Costa, 2014). The outcomes of lower burnout scores are arguably beneficial for each nurse's mental health, patient care, and hospital institutional stability.

Limitations

There are several limitations to this study to acknowledge. First, there was no empirically validated survey available to measure the perception of nurses on societal and institutional influences they experience which resulted in the production of the PIPS. While the Cronbach alphas of each scale in this measure is an acceptable standard, ranging from 0.89–0.92, validation of this measure is needed. Furthermore, the distinction of who is providing institutional support should have been distinguished. Secondly, online research has many benefits that include fast research and is available to the entire United States, however it is limited to people who have access to the internet and only to people who have signed up for a Connect account. Researchers must take the word of the participant, in this case, that they are registered nurses employed in a hospital setting from January 2020 to the present day. Further research should be done within hospitals to ensure the reliability of the participants taking the survey. Using a paper format should also be a consideration to include nurses who do not have online survey profiles. Another potential limitation was, despite the presence of attention checks, none of them required specific nursing knowledge, which means that anyone paying attention would be able to pass them, bringing into question the reliability of the responders. However, as mentioned, the burnout scores of this study are similar to other nurse burnout studies in the last three years in the United States. A third limitation is the retrospective nature of this study. In the PIPS, nurses are asked to consider what they were thinking and feeling during the pandemic. Retrospective studies are subject to recall bias (Talari & Goyal, 2020). Additionally, no specific time during the pandemic was mentioned, rather nurses were asked to consider the active phase of the pandemic, which could also make recalling their experience more difficult. Lastly, there is the correlational nature of this research. No conclusions can be drawn to what is causing such high burnout among

nurses in hospital settings. Nonetheless, the study was adequately able to address the research questions and guide future research into drawing more causal conclusions.

Tables

Table 1
Descriptive Statistics of Demographics

	N	%
Gender		
Female	154	49.4
Male	149	47.4
Non-binary/third gender	2	0.6
Non-specified	2	0.6
Marital Status		
Single/Never been married	93	29.8
Married	153	49.0
Divorced/Separated	10	3.2
Widowed	2	0.6
Living with a partner	51	16.3
Educational Status		
Bachelor's degree	179	57.4
Master's degree	80	25.6
High school diploma or GED	7	2.2
Some college	14	4.5
Associates or technical degree	29	9.3
Years of Experience		
< 5 years	117	43
6 - 10 years	88	32.4
11 - 15 years	29	10.7
16 - 20 years	19	7
21 - 25 years	11	4
26+ years	8	2.2
Age		
18 - 24 years old	25	8.0
25 - 34 years old	151	48.4
35 - 44 years old	96	30.8
45 - 54 years old	32	10.3
55 - 64 years old	7	2.2
65+ years old	1	0.3
Ethnicity		
White/Caucasian	222	71.2
Black/African American	52	16.7

Asian	29	9.3
Native Hawaiian/Pacific Islander	2	0.6
American Indian/Native American	7	2.2
Other/prefer not to say	8	2.5
Hospital Size		
Small, less 100 beds	34	10.9
Medium, 100 - 499 beds	190	60.9
Large, 500+ beds	88	28.2
COVID-19 family/friend death*	107	34.3

Table 2
Descriptive statistics of MBI-HSS

Maslach Burnout Inventory	N	%	Mean (SD)	Skewness	Kurtosis	Cronbach alpha (α)
Emotional Exhaustion			38.16 (12.8)	-.438	-.375	.924
High (>27)	254	81.4	42.86			
Moderate (17-26)	31	9.9	22.23			
Low (0-16)	27	8.7	12.10			
Depersonalization			16.58 (7.12)	.096	-.837	.817
High (>13)	217	69.6	20.28			
Moderate (7-12)	62	19.9	9.60			
Low (0-6)	33	10.6	5.33			
Personal Achievement			41.7 (8.02)	-.596	.732	.818
High (0-31)	28	9.0	26.35			
Moderate (32-38)	81	26.0	31.29			
Low (>39)	203	65.1	46.41			

Table 3
Descriptive statistics of the OLBI

Oldenburg Burnout Inventory	N	%	Mean (SD)	Skewness	Kurtosis	Cronbach Alpha (α)
Full scale	302		2.77 (0.41)	-1.190	2.828	.80
Disengagement	304		2.74 (0.48)	-1.174	1.946	.67
Low (< 1.62)	12	3.8				
Moderate (1.63-2.67)	95	30.4				
High (> 2.68)	195	62.5				
Exhaustion	306		2.80 (0.43)	-.963	3.535	.67
Low (<1.62)	6	1.0				
Moderate (1.63-2.67)	91	29.2				
High (> 2.68)	209	66.0				

Table 4
Descriptive statistics of the PIPS

PIPS	N	%	Mean (SD)	Skewness	Kurtosis	Cronbach Alpha (α)
During COVID-19 Pandemic						
Public Value	312	100	23.12 (3.89)	-.811	.678	0.88
Institutional Emotional Support	312	100	14.19 (4.21)	-.585	-.241	0.89
Institutional Instrumental Support	312	100	7.19 (2.23)	-.675	-.165	0.78
Post COVID-19 Pandemic		100				
Public Value	312	100	24.46 (4.60)	-.357	.227	0.84
Institutional Emotional Support	312	100	13.78 (4.34)	-.553	-.337	0.92
Institutional Instrumental Support	312	100	6.97 (2.25)	-.575	-.426	0.82
Workload	312	100	19.52 (5.67)	-.127	-.668	0.84

Table 5
Bivariate correlations between the PIPS subscales and MBI-HSS burnout scales as well as OLBI.

Variable	1	2	3	4	5	6	7	8	9	10
1. Emotional Exhaustion										
2. Personal Achievement	-.131*									
3. Depersonalization	.702**	-.250**								
4. Public Value I	-.324**	.402**	-.320**							
5. Public Value II	-.423**	.391**	-.382**	.731**						
6. Institutional Emotional I	-.371**	.228**	-.259**	.462**	.542**					
7. Institutional Emotional II	-.369**	.219**	-.234**	.399**	.536**	.888**				

8. Institutional Instrumental I	-.318**	.234**	-.166**	.468**	.564**	.866**	.814**			
9. Institutional Instrumental II	-.359**	.232**	-.217**	.383**	.527**	.793**	.866**	.801**		
10. Workload	-.241**	.157**	-.085	.282**	.440**	.738**	.825**	.722**	.820**	
11. OLBI Full	.526**	-.256**	.374**	-.348**	-.450**	-.408**	-.485**	-.387**	-.426**	-.358**

Notes: I = During the pandemic time period; II = Post pandemic time period; * = $\rho < .05$, ** = $\rho < .01$, ** = $\rho < .001$

Table 6

Hierarchical Regression assessing change in perceived public valuation and institutional factors from during the pandemic to the current post pandemic period.

Variable	B	SE	β	R^2	ΔR^2
Emotional Exhaustion					
Step 1: Public Value I	-1.073	.178	-324***	.105	.105***
Step 2: Public Value II	-.1.118	.211	-.399***	.179	.074***
Personal Achievement					
Step 1: Public Value I	.830	.107	.402***	.162	.162***
Step 2: Public Value II	.364	.131	.209**	.182	.020**
Depersonalization					
Step 1: Public Value I	-.586	.099	-.320***	.102	.102***
Step 2: Public Value II	-.491	.119	-.317***	.149	.047***
Emotional Exhaustion					
Step 1: Institutional Emotional Support I	-1.134	.161	-.371***	.138	.138***
Step 2: Institutional Emotional Support II	-.558	.350	-.204	1.45	.007
Personal Achievement					

Step 1: Institutional Emotional Support I	.434	.105	.228***	.052	.052***
Step 2: Institutional Emotional Support II	.146	.222	.079	.053	.001
Depersonalization					
Step 1: Institutional Emotional Support I	-.438	.093	-.259***	.064	.067***
Step 2: Institutional Emotional Support II	-.031	.196	-.019	.067	.025
Emotional Exhaution					
Step 1: Institutional Instrumental Support I	-1.837	.311	-.318***	.101	.101***
Step 2: Institutional Instrumental Support II	-1.659	.507	-.289***	.131	.030***
Personal Achievement					
Step 1: Institutional Instrumental Support I	.840	.198	.234***	.055	.055***
Step 2: Institutional Instrumental Support II	.447	.329	.125	.060	.006
Depersonalization					
Step 1: Institutional Instrumental Support I	-.530	.179	-.166**	.028	.028**
Step 2: Institutional Instrumental Support II	-.746	.294	-.235**	.047	.020**

Notes: I = During the pandemic time period; II = Post pandemic time period; * = $\rho < .05$, ** = $\rho < .01$, ** = $\rho < .001$

Appendices

Appendix A: Qualifier Questions and Informed Consent

Qualifiers

Q1. Are you a registered nurse?

- ○ Yes
- ○ No

Q2. Have you been employed in a hospital setting from January 2020 to the present day?

- ○ Yes
- ○ No

Informed Consent.

INFORMATION SHEET

Burnout in Nursing; Institutional and Societal Impact in the Era of COVID Principle

HUM#00234604

Principal Investigator: Sarah Hall, B.S., University of Michigan – Dearborn Faculty Advisor: David Chatkoff, PhD, University of Michigan - Dearborn Susana Pecina, PhD, University Michigan – Dearborn.

You are invited to participate in a research study about burnout in registered nurses. This study aims to evaluate the relationship between societal and institutional influences on burnout in nurses who worked in hospitals during the COVID-19 pandemic. This study is being conducted by the University of Michigan – Dearborn. In order to participate, you must be a registered nurse, who worked through the COVID-19 pandemic in a hospital and is still employed in a hospital setting presently. Additionally, you need to be able to understand the English language.

If you agree to be part of the research study, you will be asked to complete an online survey. These questions focus on your experiences working during the pandemic and since the pandemic. There are some questions that are designed to ensure that you are paying attention. The survey will take approximately 10-15 minutes of your time.

No identifiable information will be collected. Therefore, your information will be confidential.

Benefits of the research will be to gain insight into the factors that are contributing to current levels of nurse burnout. This insight can then hopefully be used to create more targeted intervention strategies to prevent and treat levels of burnout. The benefits of participating in this study may include gaining insight into your previous experiences and how they have impacted your current experiences.

Additionally, you may gain greater understanding of the process of psychological research methods in general.

Risks and discomforts to this study are quite minimal however, there may still be risk related to participation even when the researchers are careful to avoid them.

Specifically, this research study may include a slight chance for distress (such as experiencing feelings of anxiety or sadness) when recalling your experiences working through the COVID-19 pandemic and present feelings.

To compensate you for your time, participants who satisfactorily complete the survey will be paid $3.00. Satisfactory completion of work is determined in a number of ways including the time that is taken to complete the survey, the number of questions or sections that are missed, and responding appropriately to attention checks that are located throughout the survey. Please answer the questions within 24 hours of beginning the survey.

Participating in this study is completely voluntary. Even if you decide to participate now, you may change your mind and stop at any time. You may choose not to answer questions or stop the survey for any reason. If you have questions about this research study,

please contact Sarah Hall (email: sarhal@umich.edu) or Dr. David Chatkoff (email: chatkoff@umich.edu). The University of Michigan Institutional Review Board Health Sciences and Behavioral Sciences has determined that this study is exempt from IRB oversight.

Do you agree to participate in this study?

- ○ I agree.
- ○ I disagree.

Appendix B: Demographics

Age How old are you?

- ○ Under 18
- ○ 18-24 years old
- ○ 25-34 years old
- ○ 35-44 years old
- ○ 45-54 years old
- ○ 55-64 years old
- ○ 65+ years old

Gender How do you describe yourself?

- ○ Male
- ○ Female
- ○ Non-binary / third gender
- ○ Prefer to self-describe

_____

- ○ Prefer not to say.

Ethnicity Choose one or more races that you consider yourself to be.

- [ ] White or Caucasian
- [ ] Black or African American
- [ ] American Indian/Native American or Alaska Native
- [ ] Asian
- [ ] Native Hawaiian or Other Pacific Islander
- [ ] Other
- [ ] Prefer not to say.

Marital Status What is your current marital status?

- ○ Married
- ○ Living with a partner
- ○ Widowed
- ○ Divorced/Separated
- ○ Never been married.

Education What is the highest level of education you have completed?

- ○ Some high school or less
- ○ High school diploma or GED
- ○ Some college, but no degree
- ○ Associates or technical degree
- ○ Bachelor's degree
- ○ Graduate or professional degree (MA, MS, MBA, PhD, JD, MD, DDS, etc.)
- ○ Prefer not to say.

Hospital Size What is the size of the hospital that you work in?

- ○ small, less than 100 beds
- ○ medium, 100 - 499 beds
- ○ large, more than 500 beds

Clinical Experience How many years of experience as an RN do you have?

_____

Unit worked on

What type of floor did you work on during COVID-19?

_____

COVID-19 Deaths Did a close family member or friend pass away from COVID-19 or COVID-19 related complications?

- ○ Yes
- ○ No

Appendix C: MBI- Human Services Survey (MBI-HSS)

I feel emotionally drained from my work.

I have accomplished many worthwhile things in this job.

I don't really care what happened to some recipients.

Appendix D: Public and Institutional Perception Survey: Pre and Post Pandemic

PIPS For the following questions select the option that most accurately describes how you felt while working during the pandemic.

	Not at all	Somewhat Valued	Valued	Very Valued
To what extent did you feel your work as a nurse was valued?	○	○	○	○
To what extent did you feel valued by the public as a nurse?	○	○	○	○

During the pandemic What would you rate the public perception of the nurse profession?

- ○ Very Low
- ○ Low
- ○ Medium
- ○ High
- ○ Very High

During the pandemic I received praise for my work from the people around me.

- ○ Never
- ○ Once a year
- ○ A few times a year
- ○ Once a month
- ○ A few times a month
- ○ Once a week
- ○ Every day

Q59 For the following questions select the option that most accurately describes how you felt while working during the pandemic.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
My community thought working as a nurse was important.	○	○	○	○	○
There was evidence to suggest that people thought nurses work was important.	○	○	○	○	○

The public thought our work was worthwhile.	○	○	○	○	○
My institution created emotional support for me to help cope with COVID-19.	○	○	○	○	○
The hospital did what they could to protect me.	○	○	○	○	○

The hospital took extra precautions to prevent burnout during extended periods of mandated overtime.	○	○	○	○	○
My hospital supported my emotional needs throughout the pandemic.	○	○	○	○	○

I felt like the institution had my best interest at heart.	○	○	○	○	○
My time, effort, sacrifices, and expertise were valued by the hospital.	○	○	○	○	○

My mental health was important to my hospital.	○	○	○	○	○

Since the pandemic.

For the following questions select the option that most accurately describes how you know.

	Not at all	Somewhat Valued	Valued	Very Valued
To what extent do you feel your work as a nurse is valued?	○	○	○	○
To what extent do you feel valued by the public as a nurse?	○	○	○	○

Since the pandemic What would you rate the public perception of the nurse profession?

- ○ Very Low
- ○ Low
- ○ Medium
- ○ High
- ○ Very High

Since the pandemic I received praise for my work from the people around me.

- ○ Never
- ○ Once a year
- ○ A few times a year
- ○ Once a month
- ○ A few times a month
- ○ Once a week
- ○ Every day

Q60 For the following questions select the option that most accurately describes how you feel now.

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
My community thinks working as a nurse is important.	○	○	○	○	○
There is evidence to suggest that people think that nurses work is important.	○	○	○	○	○
The public thinks our work is worthwhile.	○	○	○	○	○

It feels that society does not care about nurses as much as they did during the pandemic.	○	○	○	○	○
My institution still has available emotional support for me to deal with the emotional effects of COVID-19.	○	○	○	○	○

My hospital does what it can to protect me.	○	○	○	○	○
The hospital is taking precautions to prevent burnout by reducing mandated overtime during a nursing shortage.	○	○	○	○	○
My hospital continues to support my emotional needs.	○	○	○	○	○

I feel that my institution has my best interest at heart.	○	○	○	○	○
My time, effort, sacrifices, and expertise are valued by the hospital.	○	○	○	○	○
My mental health is important to my hospital.	○	○	○	○	○

The institution that I am at is actively trying to reduce pandemic related stressors to reduce my workload.	○	○	○	○	○
My institution has tried, since the pandemic, to decrease the number of hours that I work.	○	○	○	○	○

My institution is doing something to ensure we have no more mandated hours.	○	○	○	○	○
The pandemic increased the number of hours I had to work.	○	○	○	○	○
My floor is fully staffed every shift.	○	○	○	○	○

I have been mandated to work more than my contracted hours.	○	○	○	○	○
Things are getting better.	○	○	○	○	○

End of Block: Public and Institutional Perception Survey: Pre and Post Pandemic

---

Start of Block: Attention Check

Clinical Experience How many years of experience as an RN do you have?

_____

Appendix E: Oldenburg Burnout Inventory

Q57 Below you find a series of statements with which you may agree or disagree. Using the scale, please indicate the degree of your agreement by selecting the number that corresponds with each statement.

	Strongly Agree	Agree	Disagree	Strongly Disagree
I always find new and interesting aspects in my work.	○	○	○	○
There are days when I feel tired before I arrive at work.	○	○	○	○
It happens more and more often that I talk about my work in a negative way.	○	○	○	○
After work, I tend to need more time than in the past in order to relax and feel better.	○	○	○	○

I can tolerate the pressure of my work very well.	○	○	○	○
Lately, I tend to think less at work and do my job almost mechanically.	○	○	○	○
I find my work to be a positive challenge.	○	○	○	○
During my work, I often feel emotionally drained.	○	○	○	○
Overtime, one can become disconnected from this type of work.	○	○	○	○
After working, I have enough energy for my leisure activities.	○	○	○	○
Sometimes I feel sickened by my work tasks.	○	○	○	○

After my work, I usually feel worn out and weary.	○	○	○	○
This is the only type of work that I can imagine myself doing.	○	○	○	○
Usually, I can manage the amount of my work well.	○	○	○	○
I feel more and more engaged in my work.	○	○	○	○
When I work, I usually feel energized.	○	○	○	○

Start of Block: attention check

Q23 Which of these is not a day of the week?

- Monday
- Tuesday
- Wednesday
- Every day
- Friday

End of Block: attention check

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