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Occupational Stress in Long Term Care in Georgia and Virginia During the COVID-19 Pandemic

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Abstract

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BSN, Walden University, 2018

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Public Health

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Abstract

Nursing staff working in long-term care settings experience high levels of occupational stress related to many factors that can lead to poor outcomes for the nursing staff and the residents. In 2020, the World Health Organization declared severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), also known as COVID-19, a pandemic which over the course of 3 years, has added an additional source of work-related stress for long-term care nursing staff. This quantitative cross-sectional study was guided by the job demand-control-support model to explore perceived stress and nursing stress among nursing staff working in the long-term care setting in Georgia and Virginia. This study examined the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Using a quantitative approach, primary data were collected from nursing staff using an online survey (n = 670). Multiple linear regression was used for hypothesis testing of the research questions. The results showed that nursing stress scores above 10 are the strongest predictor of perceived stress. The results also showed that neither nursing unit nor nursing discipline is significantly related to perceived stress and that nursing stress is a stronger predictor of perceived stress as it relates to demographic characteristics. Implications for positive social change include developing and implementing training material specific to public health emergencies such as a pandemic so long-term care nursing staff can learn and develop appropriate responses with fewer experiences of occupational stress and burnout.

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Dedication

I would like to dedicate this dissertation to my family, who has been supportive throughout this doctoral journey. To my “ride or die”; my husband, Tyrone. Thank you for always having my back and being my rock. “Where you go, I go!” Thank you to my daughters, Brianna and Akira. You have been in the background being super supportive and you both know “The Struggle Was Real!” Thank you to my sons, Alex and Nicholas. To my mother, Peggy, who is no longer with us, but has always supported education and learning. Lastly, to my grandson, Ezra Zion Richardson-Henry, who just graced us with his presence on October 26, 2022. Welcome to the world! The future is yours…

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Chapter 1: Introduction to the Study

Introduction

As the elderly population lives longer, there is an increased need for nursing care services that are provided in the long-term care setting (Harrad & Sulla, 2018). Long-term care is a variety of services to meet the short- or long-term needs of a person with the goals of the person having maximum independence (National Institute on Aging, 2017). Long-term care services are needed when it is determined that the person can no longer perform basic day-to-day needs on their own (National Institute on Aging, 2017). In the long-term care setting, nursing staff have constant work stressors such as the workload, verbal and physical aggression from the residents, and staffing shortages (Harrad & Sulla, 2018; White et al., 2019). The long-term care setting has also been known to have a high level of nursing staff burnout, high staff turnover, and high absenteeism rate (Harrad & Sulla, 2018; White et al., 2019). Reasons for increased staff burnout, high turnover, and high absenteeism rate are work-related stress and environmental factors. Long-term care nursing staff are also confronted with uncooperative behavior, inappropriate behavior, unpredictable behavior, and agitation from residents (Cen et al., 2018; Gerritsen et al., 2019; Leontjevas et al., 2020). Continued concerns have been raised about the behavior of the residents towards the nursing staff which can be both physical and verbal aggression (Cen et al., 2018; White et al., 2019). Some forms of physical and verbal aggression are kicking, hitting, screaming, and yelling (Gerritsen et al., 2019). These types of behaviors also lead to staff distress, job dissatisfaction, and increased turnover rates (Cen et al., 2018).

The purpose of this quantitative study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Throughout the study, *work-related stress* referred to a physical and emotional response that can occur when the job requirements do not match the capabilities, needs, and resources that the employee needs to succeed at that job (National Institute for Occupational Safety and Health, 2014) and *COVID stress* referred to the emotional and/or anxiety-related response from fear related to the COVID-19 pandemic (Taylor et al., 2020).

This chapter begins with an overview of the study and leads into the background of the study followed by the problem statement. The problem statement is followed by the purpose of the study, research questions with hypotheses, theoretical framework, and nature of the study. This chapter concludes with definitions, assumptions, scope, delimitations, limitations, challenges and barriers, significance of the study, implications for social change, and a summary of the chapter.

Background of the Study

Nursing has been known as a stressful profession (Chaudhury & Mujawar, 2018; Muhawish et al., 2019). There have been many studies that have discussed occupational stress in health care workers (Chang et al. 2020; Chaudhury & Mujawar, 2018; Halperin, 2020; Hricová, 2020; Muhawish et al., 2019; Peter et al., 2020; Safarpour et al., 2018). Occupational stress has been said to be caused by a combination of work factors such as the physical demands of the job, psychological demands of the job, the amount of skill

needed to complete the job, and the amount of social support on the job (Chang et al. 2020; Chaudhury & Mujawar, 2018; Halperin, 2020; Hricová, 2020; Muhawish et al., 2019; Peter et al., 2020; Safarpour et al., 2018). Several other factors have been documented as additional sources of stress for nursing staff, which are performing direct patient care duties, critical decision making, the nurse-to-patient load, and staffing (Chaudhury & Mujawar, 2018; Muhawish et al., 2019). If long-term care nursing staff continue to work in stressful conditions without making a change, it will lead to different levels of occupational stress such as burnout, psychosocial strain, difficulty performing the duties of the job, and lack of motivation to continue working which can also lead to poor resident outcomes (Bamonti et al., 2019; Cañadas-De la Fuente et al., 2018; Dilig-Ruiz et al., 2018; Eltaybani et al., 2018; Harrad & Sulla, 2018; Muhawish et al., 2019). There can be consequences for the long-term care nursing staff, the residents, and the organization if the staff retaliates against residents, staff neglect residents, or staff abuse residents (Werner et al., 2019; White et al, 2019).

The World Health Organization (WHO) made recommendations to keep healthcare workers safe by protecting them from violence in the workplace, improving their mental health, and improving their psychological well-being (WHO, 2020). Nursing staff that works in occupations where they experience high job demands, critical staffing shortages, and little to no support from leadership have a higher expectancy to leave, change jobs, or leave the nursing profession (Chon & Kim, 2020; Eltaybani et al., 2018; Gaudenz et al., 2019; Pélissier et al., 2018). Many studies have discussed work stress and burnout in nursing staff (Bamonti et al., 2019; Cañadas-De la Fuente et at., 2018; Chang

et al. 2020; Chaudhury & Mujawar, 2018; Dall'Ora et al., 2020; Fawaz et al., 2020; Halperin, 2020; Harrad & Sulla, 2018; Hricová, 2020; Kandelman, et al., 2018; Liu et al., 2018; Muhawish et al., 2019; Peter et al., 2020; Safarpour et al., 2018). The roles are different for nurses and nursing assistants (NAs), which can lead to different sources of stress (Fawaz et al., 2020). Nurses may experience stress regarding being in charge of the unit, medication administration, and mandatory unit inspections (Fawaz et al., 2020). NAs may experience stress due to not getting a proper hand-off report regarding a resident, having a heavy workload, and not having enough staff (Fawaz et al., 2020).

In 2020, when the WHO officially declared severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), also known as COVID-19, a pandemic, nursing staff began to experience added work stressors (Amin, 2020; Azoulay et al., 2020; Gibson & Greene, 2020; McGarry et al., 2020). Some of the stressors related to COVID-19 are increased work hours, caring for patients diagnosed with COVID-19, lack of personal protective equipment (PPE), short-staffed due to staff contracting COVID-19, contracting the virus, patients dying from COVID-19, staff dying from COVID-19, being told that healthcare workers were essential employees, and a deep concern for the safety and welfare of their families and friends (Amin, 2020; Azoulay et al., 2020; Gibson & Greene, 2020; McGarry et al., 2020). These added stressors related to COVID-19 added personal and professional stress to an already stressful work environment. The concern during the pandemic is the mental health of nursing staff that has been working during the pandemic. Since the pandemic began, nursing staff began experiencing high levels of

anxiety, depression, stress, burnout, and post-traumatic stress symptoms (Trumello et al., 2020; Zhao, 2021).

There can be emotional and physical consequences for the nursing staff that does not have an outlet for emotional distress (Chen et al., 2020; Sovold et al., 2021). There can be financial consequences for the long-term care organization if the nursing staff is physically hurt or emotionally scarred by residents (Hassankhani et al., 2018; Najafi et al., 2018). There can be consequences for the nursing staff and the long-term care organization if the nursing staff retaliates against residents and either neglect or abuse them (Botngård et al., 2021). If nursing staff is experiencing burnout, it could negatively impact residents by the nursing staff refusing an assignment, refusing to care for residents, or the quality of care for the residents can decrease (Chen et al., 2020; Sovold et al., 2021). The nursing staff can experience stress, physical and emotional distress, job dissatisfaction, and burnout from continued occupational stressors in the long-term care setting (Chen et al., 2020; Sovold et al., 2021; Leontjevas et al., 2020).

Problem Statement

The Occupational Safety and Health Administration (2016) identified five different settings where workers can potentially face risks of work-related stress which include hospitals, residential treatment such as nursing homes, non-residential treatment such as neighborhood clinics, community care such as group homes, and fieldwork such as home health. Long-term care nursing staff experience high levels of occupational stress that can affect their physical and psychological well-being (Backman et al., 2018). Leontjevas et al. (2020) noted that long-term care nursing staff are at a higher risk for

experiencing workplace stress than in any other healthcare setting. Different types of occupational stress include increased workload, inadequate skills to complete the job, violence from residents, working long hours, and problems with their supervisor (Chang et al., 2020). Nursing staff working in the long-term care setting experience a high level of occupational stress from residents being verbally and physically aggressive towards them, death and dying of the elderly population, and low staffing which increases the workload (Cen et al., 2018).

In 2020, COVID-19 was introduced into the United States (WHO, 2020). The WHO (2020) assessed the outbreak and from the assessment, characterized the COVID-19 outbreak as a pandemic. Due to the COVID-19 pandemic, many facility activities stopped due to efforts by organizations to decrease the potential spread of COVID-19 (Yurkofsky & Ouslander, 2021). In the long-term care environment, all activities including visitation, in-person meetings, and in-person staff training were also stopped. Preventive measures were put in place to reduce introducing and spreading COVID-19 to the elderly population (Yurkofsky & Ouslander, 2021). Zakeri et al. (2021) noted health care workers were at risk for contracting the COVID-19 virus if they cared for patients that had the infection. Even though preventive measures are put in place to limit the spread of COVID-19 into the long-term care setting, long-term care staff are still at risk for contracting the disease (Zakeri et al., 2021).

Purpose of the Study

The purpose of this quantitative study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress,

nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. This was identified by examining (a) is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics; (b) is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics; (c) is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics; and (d) is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit.

Research Questions and Hypotheses

This quantitative study was designed to answer the following research questions:

RQ1: Is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics?

$H_0$1: There is no significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

H_a1: There is a significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

RQ2: Is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics?

$H_0$2: There is no significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

H_a2: There is a significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

RQ3: Is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics?

$H_0$3: There is no significant association between perceived stress and the nursing unit, controlling for demographics.

H_a3: There is a significant association between perceived stress and the nursing unit, controlling for demographics.

RQ4: Is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit?

$H_0$4: There is no significant association between perceived stress and demographics, controlling for nursing unit.

H_a4: There is a significant association between perceived stress and demographics, controlling for nursing unit.

Theoretical Framework

The job demand-control-support (JDCS) model (Karasek, 1979; Karasek et al., 1982). The JDCS model posits that there are three components of mental strain which is high job demand, low job control, and little to no social support from co-workers and/or supervisors (Karasek et al., 1982). Job demand is the workload itself in which the work can be hard, but not excessive, and the expectation is that the work will be completed on time (Karasek, 1979). For this study, job demands are the pandemic-related work stressors placed on the nursing staff who worked during the COVID-19 pandemic. Job control is the skill level and controls a person has on how and when the job is to be done (Karasek, 1979). For this study, job control is the amount of control the nursing staff had

over the conditions in which they worked and the units that they worked on during the COVID-19 pandemic. Social support is the social relationships that a worker has on the job with their co-workers and supervisors can have an impact on managing stress when working (Karasek et al., 1982). For this study, social support is the perceived amount of support the nursing staff had from their co-workers and supervisors while working during the COVID-19 pandemic.

Nature of Study

The nature of this study was to employ a quantitative cross-sectional research design using multiple liner regression analysis. A statistical examination of the association between the independent and dependent variables was used. The dependent variables were perceived stress and nursing stress. The independent variables were the different nursing staff disciplines (RN, LPN, and NA) and working on the different long-term care units (geriatric/psychiatric [geri-psych], dementia, long-term skilled, rehabilitation [rehab], and hospice). The study also collected demographic information: (a) age, (b) gender, (c) race (d) nursing discipline (position title), (e) working during the COVID-19 pandemic, (f) years of experience, (g) state worked in during the COVID-19 pandemic, and (h) type of unit currently work on. The study analyzed primary data for perceived stress and nursing stress in long term care nursing staff while controlling for nursing unit and demographics. This quantitative analysis will help pinpoint the perceived stress and nursing stress in the long-term care setting during the COVID-19 pandemic.

Definitions

Several key terms were featured in this study. To identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic, the following key terms will be defined.

Stress: The body's reaction to challenges or demands that can produce feelings of emotional or physical tension (Berger, 2022).

COVID stress: Exhibiting emotional and/or anxiety-related response from fear related to the COVID-19 pandemic. The fear can include becoming infected with the SARS-CoV-2 virus, fear of wondering if other people are infected, fear of the consequences of the pandemic, and knowing that people are dying from contracting the virus (Taylor et al., 2020).

Occupational stress: When occupational and work demands trigger a stress response. The stress response can be physical or psychological based on the specific trigger (Şanlıtürk, 2021).

Work-related stress: A physical and emotional response that can occur when the job requirements do not match the capabilities, needs, and resources that the employee needs to succeed at that job (National Institute for Occupational Safety and Health, 2014).

Stressors: Anything that can cause the release of stress hormones. Physiological stressors can put a strain on the body such as increased workload and physical demands of the job. Psychological stressors are situations and events that can be perceived as

negative or threatening such as working short-staffed or contracting an infectious disease (Centre for Studies on Human Stress, 2019).

Nursing home: A facility that provides 24-hour assistance to people who can no longer perform the basic day-to-day needs on their own. The need for nursing home services can be age, medical condition, chronic illness, or disability (American Council on Aging, 2020).

Residents: Those persons who live in long-term care facilities full time and it is considered their home. Residents are unable to take care of themselves and require 24-hour assistance (Pioneer Network, 2011)

Nursing staff disciplines: Persons educated in the nursing profession according to nationally regulated standards that include education and practice standards (Parse, 1999).

Burnout: A response to excessive stress at work that can be characterized by exhaustion and being emotionally drained (Dall'Ora et al., 2020).

Turnover: When employees voluntarily or involuntarily leave their position within an organization. Voluntarily could be that the employee changed positions or decided to leave the organization. Involuntarily could be termination of employment or retirement (Campbell et al, 2020).

Registered nurse (RN): Provide and coordinate patient care, nursing interventions, and patient and family education. The RN can work in many different settings such as a clinic, doctor's office, hospital, long-term care facility, and provide home health services. The RN has three education paths from an approved nursing program. The RN education

paths are diploma program, associate degree program, and bachelor's degree program. The RN can also receive graduate-level degrees to include a master's degree and doctoral degree. The RN must pass the state's licensing exam before working in the nursing field (U. S. Bureau of Labor Statistics, 2022c). The RN is also the direct supervisor of the LPN and NA.

Licensed practical nurse (LPN): Provide basic nursing care to include medication administration. The LPN can work in many different settings such as a clinic, doctor's office, hospital, long-term care facility, and provide home health services. The LPN education path is to complete a state-approved LPN program. The LPN must pass the state's licensing exam before working in the nursing field (U. S. Bureau of Labor Statistics, 2022a). The LPN is under the direct supervision of the RN and can be the direct supervisor of the NA.

Nursing assistant (NA): Provide direct patient care and assist patients with all activities of daily living. The NA can work in many different settings such as a long-term care facility, assisted living facility, and hospitals. The NA education path is to complete a state-approved NA program and pass the state's competency exam to become either licensed or certified before working in the nursing field (U. S. Bureau of Labor Statistics, 2022b). The NA is under the direct supervision of the RN, but if the RN is not present, the LPN can be the NAs direct supervisor.

Geriatric/psychiatric (Geri-psych) unit: A long-term care unit that specifically cares for individuals that are 60 years or older who have been diagnosed with advanced

dementia and/or a mental health disorder. These patients required a higher level of care that a regular nursing home cannot provide (Corcorran et al., 2021).

Dementia unit: A long-term care unit that cares for individuals that have been diagnosed with dementia. Individuals with dementia can experience different behaviors such as wandering, agitation, and aggression (Chaudhury et al., 2018).

Long-term skilled unit: long-term care unit that provides a higher level of treatment than a regular long-term care facility. The long-term skilled unit provides 24-hour monitoring of residents, antibiotic therapy, chronic ventilator management, and chronic complex wounds. The staff is trained for the added skill level that is required to work on the long-term skilled unit to treat complications that may arise (Werner et al., 2019).

Rehabilitation unit (Rehab): A short-term care unit that provides rehabilitation for a number of medical diagnoses. The primary goals of rehabilitation are to reduce disability, increase the level of functionality and independence, and improve the quality of life (Damiani et al., 2020).

Hospice unit: A short-term care unit that provides end-of-life care to those individuals that have been diagnosed with a terminal disease or condition and it is determined that the individual has six months or less to live. Under hospice care, the individual is only provided comfort care measures such as chronic pain management and supportive care for family members (Schlick & Bentrem, 2019).

Assumptions

There were several assumptions in this study. The first assumption was that nursing staff experience occupational stress while working in a long-term care setting. This stress can be related to the workload, the work environment, or the skill level of the nursing staff. Another assumption was that the nursing staff had additional stress added while working during the COVID-19 pandemic such as fear of contracting the virus. Another assumption was that my knowledge about the nursing profession and long-term care can put the research at risk for potential bias. I used strategies during data collection, analysis, and interpretation to mitigate this risk. Another assumption was that the study participants will respond to the survey openly and honestly.

Scope and Delimitations

The scope of the study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Delimitations are the conscious limitations that are imposed by the researcher so that the aims and objectives of the study can be achieved (Theofanidis & Fountouki, 2018). The scope was to include a specific target population of only RNs, LPNs, and NAs that worked full time in Georgia and Virginia during the COVID-19 pandemic were invited to participate in the study. Other factors will be (a) age, (b) gender, (c) race (d) nursing discipline (position title), (e) working during the COVID-19 pandemic, (f) years of experience, (g) state worked in during the COVID-19 pandemic, and (h) type of unit currently work on. The study was geographically localized to the states of Georgia and

Virginia, which was a delimitation that was imposed by the researcher to broaden the population because of convenience, which allowed me to collect a larger sample. A final delimitation was that the study participants must have been working in a long-term care setting any time during the COVID-19 pandemic.

Limitations

Limitations of a study are potential weaknesses that are out of the researcher's control that can be closely related to the research design and statistical constraints that can affect the results of the study (Theofanidis & Fountouki, 2018). A limitation of this study was using study participants from long-term care facilities in the states of Georgia and Virginia versus study participants throughout the United States. Another limitation was assessing only the nursing staff and not including other health care professionals that work in the long-term care setting. Another limitation was the use of self-reported data which has the possibility of participant bias (Rosenman et al., 2011). Perceived workplace stress and nursing stress are specific to the individual and vary significantly.

Challenges and Barriers

A potential barrier when conducting this study was recruiting study participants through convenience sampling versus using a random sample. Another potential barrier was the sample size due to convenience sampling. Another potential barrier was a separation of roles and understanding the role of the researcher who is also a nurse that works in the long-term care setting (Cumyn et al., 2019). One challenge for this study was ensuring the research was rigorous. Rigour in research is the control that a researcher has to prevent the effects of extraneous or confounding variables has on the dependent

variable (Bloomfield & Fisher, 2019). This was achieved by using the appropriate instruments to measure nursing stress and perceived stress. According to Bloomfield and Fisher (2019), another measure is to ensure the reliability of the instruments being used which was the 11-item short form nursing stress scale (NSS) and the perceived stress scale (PSS). The NSS has been used, studied, and have proven to be a valid instrument for measuring nursing stress. The PSS has been used, studied, and have proven to be a valid instrument for measuring perceived stress. Another challenge can be bias which can distort the results of the research study (Galdas, 2017). Such bias can be researcher bias and respondent bias when collecting the data. Such bias was avoided by self-examination of the researcher regarding their knowledge and bias on the topic and assuring confidentiality and anonymity to the respondents in their responses (Galdas, 2017).

Significance and Implications for Social Change

This study will be significant in the implication for public health by increasing the awareness of the occupational stress that is perceived by long-term care nursing staff. This study will also be significant for public health by increasing the awareness of understudied perceived stress and nursing stress that is placed on nursing staff in the long-term care setting during the COVID-19 pandemic. The nursing staff is at an increased risk for negative health effects and negative mental health outcomes during the COVID-19 pandemic (Hu et al., 2020). The mental health and well-being of the long-term care nursing staff during the COVID-19 pandemic can affect the overall quality of care provided to residents (Hu et al., 2020). Positive social change can occur by creating awareness of perceived stress and nursing stress that happen to the nursing staff which

can lead to unresolved psychological distress. Positive social change can be achieved by developing and implementing interventions that will assist long-term care nursing staff to improve emotional stress and burnout experienced during the COVID-19 pandemic. Positive social change can also occur by developing and implementing training material that is specific to public health emergencies such as a pandemic so long-term care nursing staff can learn and develop appropriate responses to a pandemic.

Summary

Non-profit long-term care settings are an integral part of the public health system due to the elderly population having a growing need for skilled nursing care (Little et al., 2021). The nursing staff working in long-term care have an integral role in the care of the community and are a part of the public health workforce (Little et al., 2021). The mental health and well-being of the nursing staff working in long-term care can affect the overall quality of care provided to residents (Bamonti et al., 2019; Cen et al., 2018). The problem is that the nursing staff in long-term care settings have had additional understudied perceived stress and nursing stress since the start of the pandemic in March 2020. The study examined the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. The significance of this study was to address perceived stress and nursing stress in nursing staff during the COVID-19 pandemic. Positive social change can be achieved by improving the mental health of long-term care nursing staff during a pandemic which will, in turn, improve resident outcomes.

The chapters that follow will provide a detailed description of the elements of the study. Chapter 2 presents the review of the literature with an overview of the theoretical framework JDCS model (Karasek, 1979; Karasek et al., 1982). Chapter 3 presents the research methodology and design of the study. Chapter 4 is a presentation of the results of the study which includes data collection and analysis. Chapter 5 presents discussion of the research findings and recommendations for future research.

Chapter 2: Literature Review

This chapter consists of relevant literature and nursing research studies. The review begins with relevant literature on long-term care, the culture change movement in long-term care, and work-related stress. The chapter then discuss a comprehensive literature review of nursing research within the last 5 years. The research literature consists of work-related stress and perceived stress within the last five years and COVID stress within the last two years pertinent to the nursing profession. This chapter also includes a detailed discussion of the theoretical framework of Karasek (1979) and Karasek et al. (1982) that was in the study.

Long Term Care

The percentage of Americans living past the age of 65 has quadrupled from 4.1% in 1900 to 16% in 2019 (Administration for Community Living, 2021). The WHO (2022) has reported that older people are living longer with a population of over 60 years doubling by 2050. The life expectancy at 65 years for men is 18.2 and women 20.8 and people 65 years or older living with fair to poor health is roughly 22.2% (Centers for Disease Control and Prevention [CDC], 2021). With a decrease in functionality, cognitive decline, and more cases of dementia in the elderly population, there is a need for long-term care services (Rajamohan et al., 2019). Long-term care facilities, formerly called nursing homes, are different than hospitals in that an individual has been admitted for long-term care to be provided to them due to not being able to take care of themselves any longer (National Institute on Aging, 2017). For years, long-term care settings had the same practices as a hospital which was focused on the medical diagnosis and

management of the illness without consultation with the resident or the resident's family members (Sullivan et al., 2018). Long-term care facilities also had a stigma of being a facility where the elderly would be placed to be forgotten by family members, abused, and neglected by nursing staff (Sullivan et al., 2018).

Culture Change Movement

In 1997, the culture-change movement was started by the Pioneer Network (Rahman & Schnelle, 2008). The culture-change movement was a process of changing nursing homes by reexamining the attitudes, behaviors, and fundamental processes of nursing homes (Poey et al., 2017; Thomas et al., 2018). Pioneer Network wanted all nursing home organizations to recreate their facilities and transform them into communities that empowered staff and empowered residents to enhance the resident's quality of life (Rahman & Schnelle, 2008). The culture-change movement involved developing a framework that included changing the nursing home setting into a home-like environment that would improve the quality of care and quality of life of the residents (Poey et al., 2017; Thomas et al., 2018).

The culture-change movement was not implemented in all nursing homes across the country until the Centers for Medicare and Medicaid Services (CMS) officially endorsed the movement in 2005 (CMS, 2005; CMS 2021). The CMS encouraged all nursing homes to work to improve the culture of their organizations (CMS, 2005; CMS 2021). CMS released a 79-item questionnaire called the "Artifacts of Culture Change Tool" that all nursing home facilities were required to fill out monthly to assess their progress toward culture change (Agency for Healthcare Research and Quality, 2021;

Chisholm et al., 2018). CMS also helped launch a 16-year nursing home initiative called the Nursing Home Quality Campaign on Advancing Excellence in America's Nursing Homes (Chisholm et al., 2018). Slowly, nursing home facilities began to implement changes in the culture. Today, long-term care facilities worldwide have joined the culture change movement (Chisholm et al., 2018; Duan et al., 2020). Some of the changes were revamping and redesigning the facilities to make the environments more home-like, changing the dining experience for the residents, changing the terminology that is used by staff, removing the words "nursing home" by changing the name of facilities, and transitioning from traditional care to care that is resident-centered (Chisholm et al., 2018; Duan et al., 2020).

Work-Related Stress

Work-related stress is the physical and emotional response that occurs an employee cannot meet the requirements of the job (CDC, 2022). In the United States, 83% of the population experience work-related stress which can have a negative impact on businesses (The American Institute of Stress, 2019). In healthcare, work-related stress causes over 120,000 deaths per year (The American Institute of Stress, 2019). The American Institute of Stress noted 55% of Americans are stressed during the day, 63% of workers in the United States were ready to quit their jobs due to work-related stress, and 54% of workers reported that the stress from work affects their personal lives (The American Institute of Stress, 2019).

There is a considerable amount of research that cites nursing stress as a significant challenge that health care organizations face (Alanazi et al., 2019; Chetty, 2021;

Muhamad Robat et al., 2021, Muhawish et al., 2019; Sun et al., 2018). Alanazi et al. (2019) conducted a study using 101 primary care nurses in Saudi Arabia to determine the prevalence of job stress and to identify associated factors of job stress. The researchers used a self-reported questionnaire that was comprised of questions related to disagreement, indecision pressure on the job, job description conflict, communication, rapport with the supervisor, job-related health concerns, work overload stress, work underload stress, boredom-induced stress, problems of job security, and time pressure. The results showed that 34.7% of the nurses had work-related stress and that the nurse that had the higher level of education was more likely to have work-related stress than the nurse with less education. The researchers noted that nurses that had a bachelor's degree or higher had added stress from time pressure (42.6%), stress from boredom (32.7%), stress from increased pressure on the job (31.7%), stress from work underload (26.7%), and stress from disagreement and indecision (25.7%). The researchers noted that work-related stress leads to poor health, work-related injuries, and can negatively impact the quality of patient care.

Chetty (2021) explored workload factors experienced by intensive care unit (ICU) nurses that influenced the nurse's well-being. The researchers conducted a mixed-methods study using 200 ICU nurses in Saudi Arabia. Data collection was conducted in two phases: the qualitative phase and then the quantitative phase. The qualitative phase used semi-structured interviews that were completed over a 2-week time frame and assessed perceived workload factors and the influence of those factors on the well-being of the nurses. The quantitative phase was a survey questionnaire that explored the

experiences of the ICU nurses that completed direct patient care. The results of the qualitative review revealed significant themes and sub-themes that showed that ICU nurses had different emotional and/or physical impacts on their health at different intervals related to working in the ICU. The researchers revealed that workload played a significant role in the well-being of the nurses as well as the increased emotional exhaustion of the nurses. Muhamad Robat et al. (2021) estimated the prevalence of stress in hospital and non-hospital female nurses in Malaysia. The researchers conducted a quantitative study using 715 female nurses from Selangor, Malaysia. The researchers used the Personal Stress Inventory: Sign and Symptoms of Stress Questionnaire Malay version to measure stress status, the Personal Stress Inventory: Pressures and Demands from Family and Household Malay version to measure household stressors, and the NSS Malay version to measure workplace stressors. The results showed that the household stressors were equally the same for both the hospital and non-hospital nurses, however, the hospital nurses had a higher level of stress than the non-hospital nurse. The results also showed that the hospital nurse had a higher significance of having workplace stressors, household stressors, and overall stress than the non-hospital nurse.

Muhawish et al. (2019) identified different job-related stressors that affected job satisfaction in nurses. The researchers conducted a quantitative study using 150 nurses in Saudi Arabia. The researchers used the Job Satisfaction Scale to measure job satisfaction and the Expanded Nurse Stress Scale to measure work-related stress. The results of the study showed that job satisfaction was low and that the highest work-related stressors were criticism, conflicts at work, and discrimination. The researchers noted that a high

workload was a contributing factor for work-related stress, the nurses come to work prepared for the increase in workload but has been shown to decrease job satisfaction. Sun et al. (2018) explored correlates of caregiver burden in nursing staff working in a long-term care setting by examining resident characteristics including cognition, function, and behavior in Ontario. The researchers conducted a quantitative study utilizing 55 residents using several assessment questionnaires. The Modified Nursing Care Assessment Scale, the Severe Impairment Battery, the Assessment of Change Scale, the Aggressive Behavior Scale, the Charlson Comorbidity Index, and the Dementia Cognitive Fluctuation Scale. The results of the study showed that resident attitude was significantly associated with nursing staff strain and aggressive behavior predicted nursing staff's attitude and strain in nursing staff. The results also showed that activities of daily living were also a predictor of resident attitude. The researchers found that the most distressing symptom for nursing staff was resident aggression and that aggressive behavior predicted nursing staff burden.

Throughout the decades, long-term care settings have had a reputation as a job where the workload is high, the staff turnover is high, and increase in burnout (Chao & Lu, 2020; Chong & Chiu, 2020; Zwakhalen et al., 2018). Chao and Lu (2020) examined the differences in the determinants of intention to stay and retention behavior between younger and older NAs in long-term care facilities. The researchers conducted a quantitative study using 595 NAs; 258 younger NAs and 337 older NAs. The researchers measured personal characteristics, organizational support, work latitude, selection, optimization, and compensation strategies, burnout, intention to stay, and retention at

follow-up. The results showed that for the older NAs, intention to stay was directly related to income, organizational support, and perceived work latitude and for the younger NAs, the results were the same; however, personal factors played a significant role in how the younger NAs made their decisions.

Chong and Chiu (2020) noted that there is much criticism against nursing homes for the negative outcomes of residents. The researchers surmised that direct care staff in nursing homes has had to endure distress due to increased workloads, residents with dementia, and distressed family members that project their frustration onto the staff. The researchers also noted that the organizational climate of nursing homes also affects and predicts job satisfaction. Zwakhalen et al. (2018) examined burnout symptoms and job characteristics on nursing staff working in dementia care facilities. The researchers conducted a quasi-experimental study using 305 nursing staff from two different dementia care facilities. The study participants were 114 staff from a small eight-bed facility and 191 staff from a 21-bed facility. The researchers assessed burnout symptoms and job characteristics of autonomy, workplace social support, workload, and physical demands. The results showed that the nursing staff working in the larger facility had less autonomy, less workplace social support, more workload, and more physical demands than the staff working in the smaller facility. Burnout symptoms were seen in the facility where the physical demands were higher, and the autonomy was low.

Costello et al. (2018) reviewed stress and burnout and associated factors in staff that work with dementia residents that led to poor quality care. The researchers conducted a meta-analysis using several databases from January 2009 through August 2017. The

researchers used specific search words to gather as much information on nursing care, residents, burnout, stress, anxiety, depression, strain, and nursing staff. The researchers identified 2854 research papers and eliminated 2681 of those papers based on the title of the research article. The researchers had 173 full text research articles to review and included 17 of those articles in the final review. The two primary topics that were identified were levels of burnout and prevalence of burnout. The results of the meta-analysis were that there was evidence to suggest that staff caring for residents in the long-term care setting experience stress; however, some staff was more susceptible to higher level of stress and burnout than other staff. It was determined that there may be different staff members that may have worked in a different nursing environment (Costello et al., 2018).

Sarabia-Cobo et al. (2021) analyzed the relationship between burnout, compassion fatigue, and psychological flexibility in geriatric nurses in Spain. The researchers conducted a quantitative study using 281 nurses that worked in long-term care facilities using an online survey. The researchers used the Acceptance and Action Questionnaire II to measure psychological flexibility, the Maslach Burnout Inventory Scale to measure burnout, and the Professional Quality of Life Scale to measure compassion fatigue. The results showed that burnout score was 26.71, 37.2% had high levels of emotional exhaustion and 47.6% had medium levels of emotional exhaustion. 21.8% had high levels of depersonalization. The results also showed that burnout and compassion fatigue had a higher range than any other health care setting and that younger nursing staff scored higher on emotional exhaustion and depersonalization. The

researchers found that high levels of burnout are positively correlated with compassion fatigue and inversely correlated with psychological flexibility. Over time, the continued work-related stress will lead to poor mental health, burnout, and job dissatisfaction (Sarabia-Cobo et al., 2021).

Literature Search Strategy

I searched several databases that were relevant to the topic. Initially, I searched databases A-Z and selected Health Sciences that returned 39 databases. I then searched within the 10 "Best Bets," which were APA PsycInfo, CINAHL & MEDLINE combined search, CINAHL Plus with full text, Embase, MEDLINE with full text, ProQuest Health & Medical Collection, ProQuest Nursing & Allied Health database, PubMed, TRIP database, and Thoreau Multi-Database search. I reviewed peer-reviewed articles, published books, and scholarly dissertations. I used keywords and the Boolean phrase AND to narrow the focus within each database search. The keywords used were *nursing home staff, stress, end of life care, residents, staffing, staffing shortages, nursing shortages, nursing home, nursing staff, nursing stress, job demand- control- support model, JDCS model, aggressive residents, long term care staff, long term care, aggressive behavior,* perceived stress, *occupational stress, work-related stress, perceptions, COVID-19,* and *COVID stress*. The search was limited to full text, peer-reviewed scholarly journals with publication dates between 2018 and 2022.

In a search of the Walden University library, a search of JDCS revealed 642 full text, peer-reviewed articles. A search for JDCS AND stress revealed 416 peer-reviewed articles with 81 of those articles related to nurse OR nurses OR nursing and 13 of those

articles were between the dates of 2018-2022. A search for JDCS AND nurse OR nurses OR nursing revealed 116 full text, peer-reviewed articles with 17 of those articles were between the dates of 2018-2022. A search for JDCS AND public health revealed 18 full text, peer-reviewed articles between the dates of 2018-2022. Further review of those articles revealed duplicate articles with 10 new articles to review. A total of 19 articles was reviewed, and nine articles was used for the JDCS literature review.

Theoretical Framework

Job Demand-Control-Support Model (JDCS)

The job strain model was developed by Robert A. Karasek in 1979, which was later changed to the job demand-control (JDC) model. This model provides a theoretical approach that has been widely used to understand how job demands and job control intertwine and the potential outcomes for the occupational health of nursing staff. This model posits that the interaction of job demand and job decision latitude can be associated with mental strain. The JDC model states that a combination of decision-making ability and job demands is associated with positive or negative mental health outcomes (Karasek, 1979). The JDC model states that if an employee has heavy job demands with low decision latitude, the employee can have mental stress and job dissatisfaction. In contrast, the model states that if an employee has a heavy job demand with high decision latitude, the job is bearable to work. To reduce the mental health strain, the employee will need to have an increase in decision latitude and a decrease in job demands (Karasek, 1979).

The two components of the JDC model are job demand and job decision latitude (Karasek, 1979). Job demand is the workload itself in which the work can be hard, but not excessive, and the expectation is that the work will be completed on time (Karasek, 1979). Job decision latitude is the skill level and controls a person has on how and when the job is to be done (Karasek, 1979). The theory suggests that the demands that are placed on an employee and the discretion that the employee is allowed to make the decision on how to meet the demands of the job should be evaluated (Karasek, 1979). The JDC model also noted that if no action is taken to change the high demands of the job and the low decision latitude that the employee has to get the job completed, then the frustration from the employee can turn into mental strain (Karasek, 1979).

Karasek and his colleagues later added an additional component to the JDC model which was social support and is now called the JDCS model which posits there are three components of mental strain which is high job demand, low decision support, and little to no social support from co-workers and/or supervisors (Karasek et al., 1982). The model noted that social relationships that a worker has on the job with their co-workers and supervisors can have an impact on managing stress when working (Karasek et al., 1982). The social relationships that staff have at work can either expand or contract the staff's capacity for managing their stress (Karasek et al., 1982). When the social support is adequate on the job, it makes it easier for the staff to handle stressful situations, but conversely, if it is very little to no social support, the staff may not be able to manage stress effectively (Karasek et al., 1982). The theory suggested that if a staff member is stressed and can talk to one of their co-workers about the stress, the other staff member

will buffer some of that stress and absorb some of that emotional burden (Karasek et al., 1982). This could have a positive or negative effect on both sides where one staff has just offloaded some of its stress onto another person which in turn could add stress to the second individual. Two hypotheses were later developed for the JDCS model which are the iso-strain hypothesis and buffer hypothesis (Johnson et al., 1989.). The Iso-strain hypothesis states that workers in a high demand, low control, and low social support job will experience the highest level of job strain and job stress (Johnson et al., 1989). The Buffer hypothesis states that social support from either a co-worker or supervisor can moderate the ill effects of a high demand, low control job (Johnson et al., 1989).

The JDCS model has been used numerous times to explain the relationship between job demands and occupational health (Del Pozo-Antúnez, 2018). Nine quantitative studies (Bagheri et al., 2020; Deng et al., 2021; Jalilian et al., 2019; Junakovic et al., 2021; Navajas-Romero et al, 2020; Norful et al., 2021; Portoghese et al., 2020; Rostamabadi et al., 2019; Zeike et al., 2018) showed how the JDCS model was used in multiple nursing settings. Bagheri et al. (2020) used the JDCS model to evaluate the effects of physical and psychological work demands, social and coworker support, and job control on job satisfaction in 730 Iranian nurses. The researchers conducted a quantitative study using the Job Content Questionnaire to measure job demand, job control, and social support. The researchers also used the Minnesota Satisfaction Questionnaire to measure job satisfaction. The results of the study showed that the that psychological and physical demands had relatively high mean scores. The results also showed that job satisfaction was inversely related to psychological demand and physical

demand and that there was a direct relationship between job satisfaction and skill discretion, decision authority, supervisor support, and co-worker support. The researchers showed that higher psychological demands such as workload constraints and physical demand such as handling patients were stress factors that led to job dissatisfaction.

Deng et al. (2021) used the JDCS model to examine how stress reactivity interacts with work environments in predicting job burnout in Chinese hospitals. The researchers conducted a quantitative study using 341 female nurses in Nanjing city, China. The researchers used the Job Content Questionnaire to measure psychological and social characteristics and the Maslach Burnout Inventory General Survey to measure burnout. The researchers also analyzed cortisol levels using a sample from a one-centimeter strand of each of the study participants hair. The results showed that job control and supervisor support were negatively correlated to emotional exhaustion and job depersonalization. Psychological demands were positively correlated with emotional exhaustion. Coworker support was negatively correlated with depersonalization, but not with emotional exhaustion. The amount of time spent at work was negatively correlated with supervisor support and coworker support. The interaction patterns between job characteristics and hair cortisol content showed that the nurses with high hair cortisol levels had significantly higher professional efficiency and high job control than those nurses with low cortisol levels who had lower professional efficiency and low job control. Nurses with high stress reactivity had high job control and those with low stress reactivity had low job control.

Jalilian et al. (2019) used the JDCS model to investigate the relationship between job stress dimensions and different aspects of fatigue among Iranian nurses. The

researchers conducted a quantitative study using 522 nurses in Shiraz, Iran using a self-reporting questionnaire. The researchers used the Multidimensional Fatigue Inventory to measure fatigue and the Job Content Questionnaire to measure job stress. The results showed high scores were found in psychological job demand and low scores were found social support and decision latitude. The results also showed a positive relationship between psychological and physical job demands and general fatigue. The scores implied that the nurses experienced high levels of job stress for various reasons to include patient safety, high workload, low pay, the work environment, and inexperience. The researchers hypothesized that job stress was a contributing factor to high levels of fatigue, physical disorders and psychological disorders.

Junakovic et al. (2021) used the JDCS model to examine how job demands, job control, and social support from co-workers and supervisors affect occupational wellbeing outcomes. The researchers conducted a quantitative study using 68 Croatian nurses using an online questionnaire that assessed the challenges of working in the palliative care setting. The researchers used the NSS to measure job demands and social support, the Job Control Subscale from the Croatian adaption of the Job Content Questionnaire to measure job control, the Job Satisfaction Scale to measure occupational wellbeing, and the Oldenburg Burnout Inventory Croatian translation to measure burnout. The results showed that job control contributed significantly to occupational wellbeing and job satisfaction. The results also showed that social support at work being a buffer for the adverse effects of the demands of the job due to the protective role of social support against burnout in nursing staff.

Navajas-Romero et al. (2020) used the JDCS model to analyze the effects caused by specific factors related to the context of work in nursing personnel and how they influence work life balance. The researchers used the following factors job demands, job control, and social support. The researchers conducted a quantitative study using 991 nursing professionals. The researchers used the European Foundation for Improvement of Living and Work Conditions survey to assess work environment and work conditions, the Copenhagen Psychosocial Questionnaire to assess the psychosocial environment, and the Job Content Questionnaire to assess physical job demands. The results showed that psychological demands were greater than physical demands in more women than in men. The results also showed nursing professionals had difficulty balancing their personal time with their work time. The results also showed that the weight of psychological demands was greater than the weight of physical demands in the nursing professionals. The results showed that nursing professionals had a higher level of skill discretion, but a lower level of decision authority as well as higher perceived support from supervisors and less perceived support from co-workers. The researchers showed that the demands of the nursing professionals' job decisively contributed to the difficulty of balancing personal and professional time.

Norful et al. (2021) used the JDCS model to understand the physical and psychological impact of high stress clinical environments and contributing factors of burnout in 55 frontline healthcare workers. The researchers used a qualitative interview methodology for data collection based on the dimensions of the JDCS model. Three themes emerged from the interviews: the fear of uncertainty, exhibited physical and

psychological manifestations of stress, and building resilience. Subthemes that emerged were navigating the flow of information, pace of change, PPE stressor, risk of infecting others, physical and psychological stress, anxiety, burnout, organizational efforts, stress mitigation, solidarity, social support, and increased resilience. The results showed that stress manifested more on the psychological level than on the physical level with the staff using individualized stress mitigation techniques.

Portoghese et al. (2020) used the JDCS model to identify distinct latent profile of employees based on simultaneous consideration of job demands, control, and support as it related to occupational stress among 1666 Italian healthcare workers using a person-centered approach. The researchers conducted a quantitative study using a self-reporting questionnaire that measured the constructs of the JDCS model. The researchers also collected data on incivility behaviors and intrinsic work motivation. The results of the study showed four distinct profiles to capture the constellation of job types. The researchers named the four job type profiles isolated prisoner, participatory leader, moderate strain, and low strain. Isolated prisoner (n=105) was characterized by high job demands, very low control, very low managerial support, and very low coworker support. Participatory leader (n=161) was characterized by low job demands, high job control, high managerial support, and high coworker support. Moderate strain (n=650) was characterized by average level of job demands, below average levels of job control, low managerial support, and low coworker support. Low strain (n=750) was characterized by below average level of job demands, slightly above level of job control, moderate managerial support, and moderate coworker support. The results showed that 0.06% of

the healthcare workers fell in the isolated prisoner profile and 39% of the healthcare workers fell in the moderate strain profile. The researchers showed that 45% of the healthcare workers experienced above average job demands, low job control, low managerial support, and low coworker support which ultimately increases occupational stress.

Rostamabadi et al. (2019) used the JDCS model to investigate the relationship between work-related psychosocial risk factors and burnout among Iranian nurses. The researchers conducted a quantitative study using 522 nurses in Shariz, Iran using self-reporting questionnaires. The researchers used the Persian version of the Job Content Questionnaire to measure occupational health and the Maslach Burnout Inventory to measure burnout. The results of the study showed that the psychosocial factors correlated to two dimensions of burnout which were depersonalization and diminished personal accomplishment. The results also showed that psychological job demands, and physical job demands had a significant correlation to depersonalization and diminished personal accomplishment and physical job demands showed a significant correlation to emotional exhaustion. The researchers found that the lack of job control was a predictive factor and had a negative influence on emotional exhaustion and could be considered a factor for the negative mental health of nursing staff.

Zeike et al. (2018) used the JDCS model to identify cut-off scores for job control and job demands that predict the risk of nurses developing a mental disorder from high job strain. The researchers used a sample of 329 nurses that worked in a breast cancer center in Germany. The researchers used the Employee Survey in Centre's Questionnaire

to measure work conditions, the Well-Being Index was used to measure psychological wellbeing, and the Job Content Questionnaire was used to measure job control and job demands. The results showed for job control, nurses had a high risk of having poor psychological wellbeing for a score of 34.5 and lower. The results also showed for job demands, nurses had a high risk of having poor psychological wellbeing for a score of 31.4 and higher. The researchers determined that with low job control and high job demands, the nurse was at a great risk of becoming psychologically ill.

Literature Review Related to Key Variables and Concepts

In this section, I will address the key variables in the study. I will present the current knowledge about the key study variables of nursing stress, perceived stress, different nursing staff disciplines (RNs, LPNs, and NAs), and working on the different nursing home units (geri-psych, dementia, long-term skilled, rehab, and hospice).

Nursing Stress Related to the COVID-19 Pandemic

Nursing stress related to the COVID-19 pandemic is a challenge that nursing staff face that is seen as stressful, overwhelming, and causing strong to severe emotions such as stress, anxiety, grief, and worry that has occurred during the COVID-19 pandemic (CDC, 2021). Before the approval and release of emergency COVID-19 vaccines in December 2020, many people experienced feelings of fear, anger, sadness, worry, frustration, isolation, loneliness, difficulty sleeping related to the pandemic (CDC, 2021). Taylor (2021) investigated the nature of COVID-19 related fear and distress to identify and measure COVID-19 related psychological phenomena. From a review of different COVID stress scales specific fears became abundant which were fear of becoming

infected with the virus, fear of coming into contact with infected surfaces, fear of coming into contact with infected foreigners, fear of the socio-economic consequences of the pandemic, compulsive checking on pandemic-related threats, and having traumatic stress symptoms about the pandemic (Taylor, 2021).

Several studies have documented the stress experienced by nursing staff during the COVID-19 pandemic in acute care settings (Amin, 2020; Cai et al., 2020; El Haj et al., 2020; Xie et al., 2020; Yin et al., 2020), however, there are limited studies that documented nursing stress related to the COVID-19 pandemic in the long-term care setting. Amin (2020) measured the impact of the COVID-19 pandemic on the psychological well-being of 250 healthcare professionals. The researchers used a mixed methods approach to gather the data from healthcare professionals who worked on quarantine wards during the pandemic. The researchers developed a questionnaire that included knowledge and understanding of the unit they were working on which was the quarantined ward, knowledge, and adherence to the infection control directives, and source of the acquired knowledge. The researchers measured the psychological effects by using the Psychological General Well-Being Index. The results showed that a substantial proportion, 72.4%, of the healthcare staff were distressed. Cai et al. (2020) compared the psychological impact of the COVID-19 outbreak between 1173 frontline and 1173 non-frontline medical workers in China. The researchers conducted a quantitative study that measured mental problems, help-seeking behaviors, and treatment for the mental problems. The researchers used the Beck Anxiety Inventory to measure anxiety, the Insomnia Severity Index to measure insomnia, and the Patient Health Questionnaire-9 to

measure depressive symptoms. The results showed that the frontline medical workers had a higher rate of mental problems than the non-frontline medical workers. The results also showed that of the frontline medical workers, 52.6% had mental problems, 15.7% had anxiety symptoms, 14.3% had depressed mood, and 47.8% had insomnia. Of the non-frontline medical workers, 34.0% had mental problems, 7.4% had anxiety symptoms, 10.1% had depressed mood, and 9.1% had insomnia.

El Haj et al. (2020) evaluated burnout in healthcare workers in French acute care geriatrics facilities during the COVID-19 pandemic. The researchers conducted a quantitative study using 84 healthcare workers who used the Oldenburg Burnout Inventory. The researchers noted that many healthcare workers experience challenges while working during the pandemic such as shortages in equipment and supplies including gloves and facemasks, staffing shortages added to the work burden, and safeguarding their health and the health of their families. The results showed the healthcare workers had medium levels of disengagement, exhaustion, and burnout. The results also showed that healthcare workers experienced fatigue, loss of energy, feelings of being emotionally overextended, and exhaustion by the work. The researchers found that the healthcare workers felt “empty, worn out, and feeling used up by the end of the shift” (p.850); to include being exposed to an increased number of traumatic events such as patient deaths from the COVID-19 virus. Xie et al. (2020) investigated the levels of stress and psychological disorders of nurses who provided nursing care during the COVID-19 outbreak. The researchers conducted a quantitative study using 159 nurses who provided direct patient care during the pandemic. The study participants were

divided into two groups: the critical care ward and the non-critical care ward. The staff in the critical care ward provided care that consisted of invasive procedures such as mechanical ventilation for patients with COVID-19 and the staff in the non-critical care wards provided care for the COVID-19 patients that had mild symptoms. The researchers used a questionnaire that evaluated traumatic stress, the impact of events, and stress. The Traumatic Stress Institute Belief Scale, the Impact of Event Scale-Revised (IES-R), and the stress questionnaire were used. The results showed that the nurse who worked on the non-critical care wards showed a higher level of trauma and stress and scored higher on the IES-R level. The researchers found that the nurses on the non-critical care ward experienced fear, physical decline, irritability, sleep disorders, fatigue, and despair related to working with patients that had COVID-19.

Yin et al. (2020) examined posttraumatic stress symptoms in frontline health care workers and evaluated their sleep quality after 1 month of working during the COVID-19 pandemic. The researchers conducted a quantitative study using 377 health care workers that completed an online survey. The researchers attempted to identify challenges faced by nursing home staff and what coping strategies that they used during the COVID-19 pandemic in China. The researchers used the Post-Traumatic Stress Disorder (PTSD) Checklist for DSM-5 to measure PTSD and the Pittsburgh Sleep Quality Index to measure sleep quality. The results showed that 3.8% of the health care workers experienced PTSD and intrusive PTSD symptoms were more prevalent after one month of working during the pandemic. The results for the sleep quality showed that 44.5% had

intrusive symptoms, 12.75% had avoidance symptoms, 16.4% had a negative alteration in cognition and mood symptoms, and 16.2% had hyperarousal symptoms.

Perceived Stress

Several studies have documented perceived stress experienced by nursing staff (Erdoğan et al., 2020; Iftikhar, 2020; Kader et al., 2020; Molero Jurado et al, 2019; Portero de la Cruz et al., 2020; Sutharshan et al., 2021; Tselebis et al., 2020). There are limited studies that documented perceived stress in the long-term care setting. Erdoğan et al. (2020) evaluated whether working in either an ICU, inpatient clinics, or the operating room created differences in job satisfaction, work-related strain, and perceived stress of nurses in Istanbul. The researchers conducted a quantitative study using 411 ICU nurses that completed in-person interviews. The researchers developed a questionnaire that used questions from the Work-Related Strain Inventory, the Short-Form Minnesota Job Satisfaction Questionnaire, and the PSS. The results showed that perceived stress and job satisfaction were associated with the amount of work experience the nurse had. The nurse that had more work experience had lower perceived stress and higher job satisfaction, and the nurse with less than two years of nursing experience had higher perceived stress and lower job satisfaction. The results also showed that increased levels of work-related strain and perceived stress lowered job satisfaction. Iftikhar (2020) examined and contrast the levels of perceived non-specific and work-related stress and sources of work-related stress between medical and psychiatric nurses in Lahore, Pakistan. The researchers conducted a quantitative study using two different types of hospitals: psychiatric and general practice. The researchers used the PSS to measure non-specific stress and the

Devilliers, Carson, and Leary Stress Scale to measure work-related stressors. The researchers assumed that perception of stress is subjective and embedded specifically in the type of work the nurse does due to different sources of stress. The results showed that the medical nurses perceived higher stress on staff-related issues as well as low job satisfaction than the psychiatric nurses. Both the medical and the psychiatric nurse experienced the highest amount of stress related to organizational and supervisor issues.

Kader et al. (2020) investigated perceived stress and PTSD symptoms reported by ICU nurses that worked directly with COVID-19 patients. The researchers conducted a quantitative study using 124 ICU nurses in Qatar to identify the degree of perceived stress and the prevalence of PTSD. The researchers used the PSS to measure perceived stress and the PTSD Diagnostic Scale for the Diagnostic and Statistical Manual of Mental Disorders (5th edition) to measure PTSD symptoms. The results showed that 37.7% perceived working in the ICU with COVID-19 patients as moderately stressful and 6.5% perceived working in the ICU with COVID-19 patients as highly stressful. The results also showed that 73.9% of the nursing staff reported having a family history of mental illness also reported to have moderate to severe perceived stress. 17.7% of the ICU nursing staff showed a probable diagnosis of PTSD based on a score of 28 or more on the PDS-5 scale. Molero Jurado et al. (2019) described the relationships of self-efficacy and emotional intelligence with perceived stress in nursing professionals in Spain. The researchers used the Perceived Stress Questionnaire to measure stress assessing items such as overload, tension, fatigue, social acceptance, fear-anxiety, self-realization, and satisfaction, and the General Self- Efficacy Scale to measure a person's perception of

their competence in handling stressful situations, and the Brief Emotional Intelligence survey to measure emotional intelligence. The results showed that if the person scored high on self-efficacy, they scored low on perceived stress and that perceived stress is higher when there is less control over the situation and is also consistent with a person's perception of their self-efficacy. The results also showed the higher the emotional intelligence, the lower the perception of stress, and the lower the emotional intelligence, the higher the perception of stress.

Sutharshan et al. (2021) assessed the work-related perceived stress level and coping strategies of critical care nurses in Sri Lanka. The researchers conducted a quantitative study using 105 nurses that worked full time on the critical care unit. The researchers used the PSS to assess work-related stress. The results of the study showed that 46% of the nurses had a moderate perceived stress level while 30% had higher perceived stress levels. The results also showed that 81% of the nurses used emotion-focused coping strategies such as engaging in religious activities as well as talking to friends and loved ones and 58% of the nurses used problem-focused coping strategies such as time management and problem-solving. Tselebis et al. (2020) investigated levels of perceived stress, insomnia, and the sense of family support in nurses working during the pandemic. The researchers conducted a quantitative study using 150 nurses using self-reported questionnaires. The researchers used the Athens Insomnia Scale to measure sleep disturbances, the PSS to measure the perception of stressful experiences, and the Family Support Scale to measure the perception of family support. The results showed that more than half, 50.3%, of the nursing staff who participated in the study had

moderate to high levels of stress while working during the pandemic. The results showed that the pandemic has harmed sleep quality, however, family support had a positive effect on reducing stress levels.

Portero de la Cruz et at. (2020) estimated burnout, perceived stress, job satisfaction, coping, and general health levels that were experienced by 171 nurses working in emergency departments (ED) in Spain. The researchers used the PSS to evaluate the degree to which the nurse believed that their life was unpredictable, uncontrollable, and overloaded while working in the ED. The researchers also used the Maslach Burnout Inventory to measure burnout, the Font–Roja Questionnaire to assess job satisfaction, the Brief Cope Orientation to Problem Experience survey to measure how the nurses coped with stressful situations, and the General Health Questionnaire measured somatic symptoms, anxiety, social dysfunction, and depression. The results showed the perceived stress scores were within the normal range of similar studies, however, the researchers did consider that the perceived stress of the nurses in the ED was higher due to lack of personnel, work overload, shift work, role ambiguity, lack of autonomy, increased pressure in decision making, and changes in technology. The results did show a higher degree of job dissatisfaction which was consistent with a negative correlation in perceived stress and job satisfaction.

Different Nursing Staff Disciplines (RNs, LPNs, and NAs)

Some studies examined work-related stress, perceived stress, and nursing stress related to COVID-19 in nursing staff. Researchers have conducted studies using a single group such as the NAs or the RNs, however, few studies have independently examined

the different nursing staff disciplines which are professional (RNs and LPNs) and paraprofessional nursing staff (NAs) in the long-term care setting. Lin et al. (2021) examined relationships among resilience, professional quality of life, sleep, and demographics in 120 nurses working in long-term care or rehabilitation settings. The researchers conducted a quantitative study using 108 RNs and 12 LPNs that either worked in long-term care or rehabilitation. The researchers used the Connor-Davidson Resilience Scale to measure resilience, the Pittsburgh Sleep Quality Index to measure sleep quality, and the Professional Quality of Life Scale to measure the quality of life. The results of the study showed that resilience was positively associated with age, years of experience, and job satisfaction, but was negatively correlated with education, fatigue, and traumatic stress. The results also showed that prolonged stressors can lead to burnout, increased anxiety, depression, sleep problems, impaired physical health, and impaired clinical judgment.

Pélissier et al. (2018) evaluated the association between intention to leave work, working conditions, and health status of 1770 female nursing staff that worked in nursing homes in France. The researchers conducted a quantitative study using 1428 NAs and 342 RNs using questionnaires that assessed occupational, psychosocial, and medical information. The researchers used the visual analog hardship scales to measure job-related hardship, the Nordic Musculoskeletal Questionnaire to measure musculoskeletal complaints, the General Health Questionnaire to measure impaired mental well-being, and the Siegrist questionnaire to measure psychosocial demands. The results showed that in both the NAs and the RNs, the intent to leave was associated with impaired

relationships with the residents, low salaries without rewards, and job security. The results also showed that the NAs also cited the intent to leave was associated with the physical and verbal aggression of the residents and impaired relationships with supervisors and that the RNs also cited the intent to leave was associated with impaired relationships with the care team.

Zhao et al (2021) attempted to identify challenges faced by nursing home staff and what coping strategies that they used during the COVID-19 pandemic in China. The researchers conducted a qualitative study that used 21 staff from seven nursing homes using a combination of RNs and NAs. The researchers used semi-structured interviews with each study participant that lasted about one hour. The researchers independently coded words based on challenges and coping strategies used by each study participant. The results showed that the RNs were a minority in China nursing homes, and they were responsible for providing direct care to residents and supervising the NAs. The experienced RN remained calm during stressful times such as working during the pandemic, but the inexperienced RN had difficulty working during the pandemic to include working with the residents and with their families. The results also showed that NAs are the predominant workers in nursing homes in China and that the nursing assistants made low wages, had high-intensity jobs, and that the turnover rate was high.

Bamonti et al. (2019) examined the extent to which coping and cognitive emotion regulation predicted burnout in certified nursing assistants (CNAs) in long-term care. The researchers conducted a study using 56 CNAs that completed a self-reporting questionnaire. The researchers used the Maslach Burnout Inventory to measure burnout,

the Brief COPE questionnaire to measure coping, and the Emotion Regulation Questionnaire to measure emotion regulation. The results showed that in the review of the three coping strategies, dysfunctional coping predicted the highest amount of emotional exhaustion, depersonalization, and avoidance of stressors. The researchers concluded that the CNAs had significant patterns of higher levels of burnout due to dysfunctional coping which increased the level of distress, but ultimately continued use of dysfunctional coping will lead to more burnout.

Ecker et al. (2021) examined the challenges and needs of the CNAs in nursing homes during the COVID-19 pandemic in New York. The researchers conducted a quantitative study using 208 CNAs that was administered via telephone. The researchers developed a survey questionnaire that assessed COVID-19 exposure, risk, resources, mental and emotional well-being, work schedules, financial challenges, career outlook, interest in resources for meeting basic needs, and training needs. The results showed that 80.1% of the CNAs reported high rates of exposure to COVID-19, 75% reported being very concerned with being exposed to COVID-19 at work, and 79.7% were concerned with exposing the residents. 32.3% of the CNAs reported testing positive for COVID-19 and had to take time off without pay to recover. 91.3% of the CNAs had experienced the death of the resident while the survey was going on. The results also showed 46.8% of the CNAs reported that the pandemic impacted their emotional well-being and made taking care of their mental health and physical health more challenging. The CNAs reported being emotionally drained and fatigued at least once a week.

Snyder et al. (2021) conducted a qualitative assessment to get a better understanding of what individual and facility-level factors may have contributed to the impact of COVID-19 on 103 CNAs and environmental services (EVS) staff working in nursing homes. The researchers conducted a qualitative study with 52 CNAs and 51 EVS staff through focus groups. The researchers obtained responses to questions about the perceived risk of getting COVID-19 from the facility throughout the pandemic and at the time of the focus group, the greatest barrier to preventing COVID-19 in the facility throughout the pandemic and at the time of the focus group, and the greatest challenge to preventing COVID-19 in the facility throughout the pandemic and at the time of the focus group. The results of the study showed that 44% of the CNAs and 34% of the EVS staff tested positive for COVID-19 before the focus group, 62% of the CNAs and 86% of the EVS staff were fully vaccinated. The results showed that 40% and 30% of the CNAs and EVS had medium to high perceived risk of contracting COVID-19 within the facility at the beginning of the pandemic even though 75% felt they were at a greater risk of contracting COVID-19 outside of the facility. 68% reported that they were performing tasks outside their normal scope of work, and 27% reported there were added pressures when working during the pandemic.

McGilton et al. (2022) assessed the association between job satisfaction and supervisory support as moderated by stress as reported by NAs in Canada. The researchers used the General Job Satisfaction Scale to assess job satisfaction and the Supervisory Support Scale to assess supervisor support. The results showed that NAs was stressed by several factors such as aggressive residents, family conflicts, weak

association with supervisor support, and job satisfaction. The results showed that stress was also caused by increased workload, low pay, and inadequate staffing levels. The researchers found that the role of the supervisor shaped the environment in which the NAs worked and made the stress bearable, however, stress endured by the NAs related to behaviors of the residents also moderated the relationship between supervisory support and job satisfaction.

Work Environment: Working on the Different Nursing Home Units

The work environment is the setting in which individual works that include physical, social, and organizational factors (Rinaldi & Riyanto, 2021). The care that nursing staff provides can be influenced by the work environment (Choi et al., 2021; White et at., 2020). A good work environment is when there is enough staff, appropriate supplies, plenty of resources, good working relationships with co-workers, supportive supervisors, good pay, and opportunities for advancement (Choi et al., 2021; White et al., 2020). A bad work environment is when there is role ambiguity, not enough training for nursing staff regarding care of long-term care residents, long hours, lack of support from supervisors, low salaries, conflicts in communication, limited decision-making, high turnover, and low staffing (Choi et al., 2021).

Several studies discuss the work environment as it relates to nursing stress (Andela et al., 2021; Maneschiold and Lucacia-Maneschiold, 2020; Shiri et at., 2020; Yoben et al., 2019). Andela et al. (2021) examined the relationship between caregiver burnout and various job demands and organizational resources. The researchers focused on psychological and physiological costs to the employee that include the demands of the

job that can lead to emotional exhaustion and disengagement. The researchers conducted a quantitative study using 481 nursing home staff in French nursing homes using self-reported questionnaires. The researchers measured burnout by using the Maslach Burnout Inventory Human Services Survey and job stressors and job resources were measured using a different subscale that included workload, emotional demands, quality of the relationships with colleagues, and quality of the relationship with supervisors. The results showed that a work environment where the workload was high and emotional demands of the job was high led to poor quality outcomes for the residents to include resident abuse. The results also showed that poor relationships with co-workers and supervisors led to burnout, disengagement, and neglect of the residents.

Maneschiold and Lucacia-Maneschiold (2020) conducted a study to investigate aspects related to difficulty to retain NAs in nursing homes in Sweden. The researchers conducted focus groups with NAs from three different nursing homes in Sweden. The researchers used a qualitative methodology using semi-structured interview questions using the BIKVA model. The results of the study suggested that NAs that had greater latitude and direct involvement in decision making had a positive experience and a meaningful workday. The results also showed that to create a positive culture in the workplace, the NAs stated that the manager's needed to communicate with them more openly and allow them to create an individualized schedule. It was noted that recruitment and retention of staff was challenging due to scheduling, work hours, and salary. The largest problem for this group was the workload which that was a significant burden for which staffing shortages was a factor.

Shiri et al. (2020) investigated the relationship between work engagement, meaning in life, and hope to subjective well-being among those working on a hospice unit. The researchers conducted a quantitative study using 71 hospital staff. The researchers used the Hope Scale to measure hope, the Satisfaction with Life scale to measure subjective well-being, the Meaning in Life questionnaire to measure meaning in life, and the Utrecht Work Engagement Scale to measure work engagement. The researchers assumed that nursing staff working in hospice experienced compassion fatigue and burnout due to the nature of being confronted with the death and dying of patients. The results showed that many of the nursing staff had decreased levels of compassion fatigue, increased levels of job satisfaction, elevated satisfaction with life and personal growth working on the hospice unit. The results also showed that higher levels of subjective well-being and work engagement due to the hospice care setting increased the meaning of life and hope in many of the nursing staff. The significance of the results showed that even though working with hospice patients was challenging, the nursing staff was highly motivated and fulfilled with the work which prevented burnout in the hospice setting.

Yoben et al. (2019) conducted a study to assess the association of work environment with missing care tasks and/or rushing care tasks in Western Canada. The researchers conducted a cross-sectional survey to improve the quality of care and ultimately the quality of life for nursing home residents and quality of life for nursing home staff. The researchers conducted a quantitative study surveying 93 nursing homes and identified 4,016 nursing care aides (NCAs) that volunteered to participate. The

researchers measured ten-unit level organizational context using the Alberta Context Tool. The results showed 2306 (57.4%) NCAs reported that they missed at least one care task during their shift. The results also showed 2628 (65.4%) NCAs reported that they rushed at least one care task during their shift. The most missed care task was taking the residents for a walk at 37.2%. The most rushed care task was talking to the residents at 49.2%. Other tasks that were missed was mouth care, toileting, preparing residents for sleep, bathing residents, feeding residents, and dressing residents. Other tasks that were rushed mouth care, toileting, preparing residents for sleep, bathing residents, feeding residents, and dressing residents. The researchers found that many of the same tasks were rushed and missed by NCAs.

Summary

Nursing staff working in any health care setting experience several work-related stressors to include workload, staffing, shift work, difficult/aggressive patients, and limited support from supervisors (Chon & Kim, 2020; Eltaybani et al., 2018; Gaudenz et al., 2019; Pélissier et al., 2018). The COVID-19 pandemic has intensified those work-related stressors to include fear of contracting the virus, lack of PPE, dying patients, worrying about their friends contracting the virus, and worrying about bringing the virus home to their families (Shanafelt et al., 2020). The nursing profession can be very stressful, however, there are limited studies that used the constructs of JDCS in the nursing home setting. Within the last five years, the literature on nursing stress in the long-term care setting has increased, however, there are still limited studies on perceived stress and far fewer studies on nursing stress in the long-term care setting during the

COVID-19 pandemic. This research was provided to examine perceived stress and nursing stress experienced by nursing staff working in the long-term care setting during the COVID-19 pandemic.

Chapter 3: Research Method

Introduction

Perceived stress is defined as the scope in which an individual perceives that their stress level exceeds their ability to handle the stressful event (Kader et al., 2021; Suthershan et al., 2021). COVID stress is the heightened fear, depression, and anxiety that is experienced by individuals that are living through and working during the COVID-19 pandemic (Amin, 2020; El Haj et al., 2020). The purpose of this quantitative study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. This chapter covers the following topics: the methodology that was used to conduct the study, the research design that was used concerning the research questions and hypotheses, a detailed description of the study participants, the procedure that was used for selecting the study participants to include inclusion and exclusion criteria, the data collection method that was used, the instrumentations that were used for the study, the data analysis plan, potential threats to internal and external validity, and ethical procedures that were used.

Research Design and Rationale

This study used a quantitative cross-sectional research design to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Stress is a combination of mental, physical, and emotional reactions of an individual (Alanazi et al., 2019). Using a quantitative

methodology versus a qualitative methodology allowed the researcher to classify data, count the data, and develop statistical models in an attempt to explain the data collected based on the research questions (McCusker & Gunaydin, 2015). A quantitative method also investigates statistical measures, uses operationally defined variables, and may use a structured environment (Coy, 2019). A cross-sectional research design was appropriate for this study due to the study participants were included based solely on the inclusion and exclusion criteria that are set for the study (Setia, 2016). Cross-sectional designs are widely used for population-based surveys to measure exposure and outcomes at the same time (Setia, 2016). A cross-sectional research design allowed the researcher to study the association between variables (Setia, 2016). Using a cross-sectional study allowed the researcher to be able to conduct the study faster and it was less expensive than other study designs (Setia, 2016).

Study Variables

The study was conducted to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. The study participants completed a demographic survey that collected the following demographic information: (a) age, (b) gender, (c) race, (d) nursing discipline (position title), (e) working during the COVID-19 pandemic (f) years of experience, (g) state worked in during the COVID-19 pandemic, and (h) type of unit currently work on. More research may still be needed to identify stress management strategies for staff working in the long-term care setting.

Methodology

Study Population

The target population was nursing staff (RNs, LPNs, and NAs) that work or worked in a long-term care setting in Georgia and Virginia during the COVID-19 pandemic that began March of 2020. The target population work or worked full time or part time on one of the five different types of nursing home units: geri-psych, dementia, long-term skilled, rehab, and hospice during the COVID-19 pandemic. The inclusion criteria were RNs, LPNs, and NAs that work or worked full time or part time in the long-term care setting during the COVID-19 pandemic. Another inclusion criteria were RNs, LPNs, and NAs that were assigned to work on one of the five different types of nursing home units: geri-psych, dementia, long-term skilled, rehab, and hospice during the COVID-19 pandemic. Exclusion criteria were RNs, LPNs, and NAs that do not work in the long-term care setting during the COVID-19 pandemic. Another exclusion criterion were RNs, LPNs, and NAs were not assigned to work on one of the five different types of nursing home units (geri-psych, dementia, long-term skilled, rehab, and hospice) during the COVID-19 pandemic.

Sampling Procedures

According to Devers and Frankel (2000), the researcher must make the research design concrete by identifying the sample that was used for the study. A convenience sample was used in the selection of study participants. Convenience sampling is noted to be non-random (non-probability) sampling (Sedgwick, 2013; Etikan, 2016). The criteria for the convenience sample were based on accessibility, geographical proximity,

willingness, and availability of the target population (Sedgwick, 2013; Etikan, 2016). The sample consisted of nursing staff respondents who agreed to participate in the study by completing the anonymous online survey.

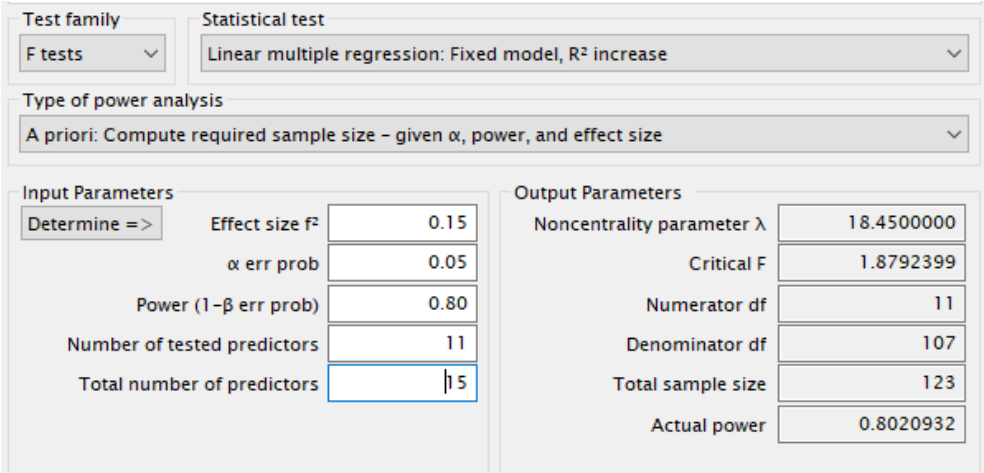
An a priori power analysis requires anticipating the number of independent variables in the multiple regressions that test the hypotheses. The majority of the independent variables perform the function of "controlling for nursing unit and demographics." These independent variables are of instrumental value only as control variables. The sole purpose of the control variables is to control for sources of extraneous variation that may confound the attempt to identify statistically significant predictors of perceived stress. This research is not concerned with identifying which control variables are statistically significant. The potential number of control variables is huge, with up to four dummy variables for nursing unit, as well as two continuous demographic variables and up to 10 additional dummy variables for demographics. This collection of control variables would almost certainly suffer from severe multicollinearity. The number of independent variables must be reduced prior to hypothesis testing. In the first block, forward stepwise regression will be used to identify the control variables used in the second block. The stepping method criteria will be to include variables contributing explained variance of 2% or more. The number of variables that satisfy this criterion cannot be known until after the data is collected; however, the power analysis will be conducted on the conservative, but unlikely, assumption that all of the potential control variables will meet the stepping method criteria.

Power Analysis

I conducted a G*Power analysis using G*Power software, version 3.1.9.2 to determine the minimum sample size that would be adequate to detect meaningful effect in the data (Faul et al., 2009). A G*Power analysis was conducted using an F test and linear multiple regression: fixed model, R^2 increase to determine the minimum sample size (Faul et al., 2009). The test of the fourth hypothesis involves the largest number of tested predictors and consequently the largest sample size. A G*Power analysis using a significance level of 0.05, a statistical power of 80%, an effect size of 0.15, using 11 tested predictors and 15 total predictors in all yielded a minimum sample size of 123 participants (Faul et al., 2009), see Figure 1.

Figure 1

*G*Power Statistical Power Analysis*



Research Questions and Hypotheses

This quantitative study was designed to answer the following research questions:

RQ1: Is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics?

$H_0$1: There is no significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

H_a1: There is a significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

RQ2: Is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics?

$H_0$2: There is no significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

H_a2: There is a significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

RQ3: Is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics?

$H_0$3: There is no significant association between perceived stress and the nursing unit, controlling for demographics.

H_a3: There is a significant association between perceived stress and the nursing unit, controlling for demographics.

RQ4: Is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit?

$H_0$4: There is no significant association between perceived stress and demographics, controlling for nursing unit.

H_a4: There is a significant association between perceived stress and demographics, controlling for nursing unit.

Instrumentation

Two quantitative instruments along with a demographic questionnaire was used to collect quantitative data from the study participants for this study. Perceived stress and nursing stress was measured using quantitative survey tools. Nursing unit was operationalized with four dummy variables for (chronic geriatric/psychiatric [geri-psych], dementia, long-term skilled, rehabilitation [rehab], and hospice). Demographics were controlled by:

- Two continuous variables: age and years worked as RN, LPN or NA.
- Two dummy variables for discipline (position title): RN and LPN
- One dummy variable for work or worked full or part time in a nursing home setting during the pandemic: yes
- One dummy variable for gender: man
- One dummy variable for state worked in during the pandemic: Georgia
- Four dummy variables for race: Black or African American, Hispanic or Latino, Asian or Asian American, and White or Caucasian

Perceived Stress Scale (PSS)

Perceived stress was measured using the 14-item PSS that uses a 5-point Likert scale. The responses ranged from never (0) to very often (4) for negative items and never (4) to very often (0) for positive items (Cohen et al., 1983). The PSS is a tool that has been widely used to validate psychometric properties of perceived stress (Cohen et al.,

1983). The PSS scale was developed to measure the degree to which events that occur in an individual's life are perceived as stressful (Cohen et al., 1983). The items in the PSS were developed to measure the degree to which an individual has determined that his or her life was unpredictable, uncontrollable, and overloaded (Cohen et al., 1983). The PSS scores are obtained by reversing the scores on the seven positive items which are 0=4, 1=3, 2=2, 3=1, 4=0. and then summing across all 14 items (Cohen et al., 1983). The seven positive items are numbers 4, 5, 6, 7, 9, 10, and 13 and the negative items are numbers 1, 2, 3, 8, 11, 12, and 14. The negative items in the tool measure the degree of control that the individual has while the positive items in the tool measure the degree of coping that the individual has (Cohen et al., 1983). The scores range from 0 to 56 with a high score indicating a greater amount of stress (Cohen et al., 1983). Scores range from 0-18 would be considered low stress, 19-37 would be considered moderate stress, and 38-56 would be considered high perceived stress.

The PSS was designed to be used by individuals with at least a junior high school education (Cohen et al., 1983). The items that were developed are easy for the individual to understand with responses simple to grasp (Cohen et al., 1983). Validation of the PSS was through three independent studies; two with college students and one using a smoking-cessation program (Cohen et al., 1983). From the three studies, the researchers found internal reliability of the PSS at 0.84, 0.85, and 0.86 respectively (Cohen et al., 1983). From the three studies, the researchers found predictive validity of the PSS at 0.52, 0.65, and 0.70 respectively (Cohen et al., 1983).

Short Form Nursing Stress Scale (NSS)- 11-item

Nursing stress was measured using the 11-item short form NSS that used a 4-point Likert scale (Porcel-Gálvez et al., 2020). The responses ranged from never (0) to very frequently (3). The scores range from 0 to 33 with a high score indicating a greater amount of stress. The scores range from 0-11 is considered low stress, 12-22 is considered moderate stress, and 23-33 is considered high nursing stress. The NSS was originally developed and validated by Gray and Anderson in 1981 through completing a literature review and interviews with nurse, doctors, and chaplains. The original 34-item tool was administered to 122 nurses from five clinical units in a private general hospital (Gray & Anderson, 1981). The original instrument has been validated in several other countries. The short version was developed and validated from the original 34-item NSS created by Gray and Anderson (1981). The 11-item short form NSS was developed to update the psychometric properties of the NSS with a working population of registered nurses and licensed practical nurses (Porcel-Gálvez et al., 2020).

The Spanish version of the 34-item NSS was validated by Más Pons et al. in 1998. The 34-item NSS was translated into Spanish using two independent bilingual nurses who were born in Spain and lived in the United States, validated, and then translated back into English by two American translators who lived in Spain, but were born in the United States (Porcel-Gálvez et al., 2020). Validation of the NSS 11-item was completed using an independent study using 4109 nurses from Spain (Porcel-Gálvez et al., 2020). The researchers used a reliability analysis, confirmatory factor analysis, and an exploratory factory analysis (Porcel-Gálvez et al., 2020). In order to reduce the scale to

11 items, the researcher systematically identified items for reduction using statistical and theoretical analysis (Porcel-Gálvez et al., 2020). The researchers conducted psychometric analysis that included reliability and validity testing (Porcel-Gálvez et al., 2020). Internal consistency was calculated using Cronbach's alpha coefficient of 0.83 for RNs and 0.79 for LPNs (Porcel-Gálvez et al., 2020).

The researchers used a Confirmatory Factor Analysis (CFA) to test the factor structure and a root mean square approximation residue (RMSEA) was used for a model fit evaluation (Porcel-Gálvez et al., 2020). The RMSEA values lower to 0.06 were obtained that yielded 0.058 and the standardized root mean square residue (SRMR) values lower to 0.08 yielded 0.052 (Porcel-Gálvez et al., 2020). The researchers used p-value of the closeness of fit (PCLOSE) that yielded <0.01and Chi-square and the number of degrees of freedom (x^2/DF) that yielded 15.018 (Porcel-Gálvez et al., 2020). The researchers used an exploratory factor analysis (EFA) with Principal Component Analysis and varimax rotation that yielded 54.7% for RNs and 50.3% for LPNs (Porcel-Gálvez et al., 2020). Kaiser-Meyer-Olkin (KMO) and Bartlett's sphericity test was used to determine the suitability for the factor analysis that was significant for RNs (0.803) and LPNs (0.781) a $p<0.001$ (Porcel-Gálvez et al., 2020). The corrected item-total correlation within each subscale by using the correlation coefficient >=0.4 and removing items with low factor loads that were <0.5 (Porcel-Gálvez et al., 2020).

Procedure for Recruitment and Participation

The researcher posted recruitment through the social media platforms Facebook and Instagram. I provided a complete description of the study and invited those who met

the criteria to participate. The researcher included an informed consent page with a description of the research study that the study participant had an opportunity to review and acknowledge prior to completing the survey.

Data Collection

Data were collected using the 14-item PSS, the 11-item short form NSS survey tools, and a demographic survey in the SurveyMonkey online platform. Nursing staff were invited to participate in the study. I collected data using an online questionnaire through the SurveyMonkey cloud-based platform. Survey Monkey offered a paid subscription that is user-friendly and provides password-protected secured data. I used my personal Facebook and Instagram pages as well as solicited for my family members to share the invitation on their social media pages. The pages included the invitation with a link to the survey's web page for those who are interested in completing the survey. Once the study participant was on the web page, there was a welcome page that provided the recruitment information, description of the study, and informed consent. The study participants were informed of their right to exit the survey at any time without penalty or consequence. If the participant consented to the study, there was a link that navigated the participant to the next page of the study which had four qualifying questions. If the participant met the criteria for inclusion into the study, the participant advanced to the first page of the survey. The survey was in the following order: demographics, PSS, and NSS. After participant completed the survey, there was a debriefing page thanking the study participant for participation in the study and the time frame that the study will be conducted.

Data Analysis Plan

The SurveyMonkey cloud-based software platform (Momentive, 2022) was used for data collection. SurveyMonkey is designed to build surveys, manage the survey data, protect the survey data with secure encryption (Momentive, 2022). SurveyMonkey is also designed to export data into statistical packages and spreadsheets (Momentive, 2022). I used Statistical Package for Social Sciences (SPSS) version 20 to complete the data analysis. The data were exported from SurveyMonkey to SPSS to be analyzed.

Statistical Procedures for Hypothesis Testing

The hypothesis testing was focused on assessing the extent to which the source of perceived stress lies in:

- The stress of nursing staff during the COVID-19 pandemic (nursing stress),
- The specific nursing discipline (position title) of nursing staff (RN, LPN, and NA),
- The unit on which the nursing staff worked (geri-psych, dementia, long-term skilled nursing, rehab, and hospice), and/or
- Demographic characteristics of the nursing staff (age, gender, race, nursing discipline (position title), working during the COVID-19 pandemic, years of experience, State worked in during the COVID-19 pandemic, and type of unit currently work on).

RQ1- Is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics?

$H_0$1: There is no positive correlation between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

H_a1: There is a positive correlation between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

A multiple linear regression was used to assess the strength of the relationship between perceived stress of long-term care nursing staff (dependent variable) and the level of nursing stress (independent variable) after controlling for selected demographic and nursing unit variables (additional independent variables). The control variables were entered in the first block and a forward stepwise regression was used to identify the predictors that contributed at least 2% to explained variance. Level of nursing stress was entered in the second block. The null hypothesis will be rejected if the second block makes a significant contribution to R^2 based on an F-test.

RQ2- Is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics?

$H_0$2: There is no significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

H_a2: There is a significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

A multiple linear regression was used to assess the strength of the relationship between perceived stress of long-term care nursing staff (dependent variable) and nursing discipline (independent variable) after controlling for selected demographic and nursing unit variables (additional independent variables). The control variables were entered in

the first block and a forward stepwise regression was used to identify the predictors that contribute at least 2% to explained variance. Nursing discipline was entered in the second block. The null hypothesis will be rejected if the second block makes a significant contribution to R^2 based on an F-test.

RQ3- Is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics?

$H_0$3: There is no significant association between perceived stress and the nursing unit, controlling for demographics.

H_a3: There is a significant association between perceived stress and the nursing unit, controlling for demographics.

A multiple linear regression was used to assess the strength of the relationship between perceived stress of long-term care nursing staff (dependent variable) and nursing unit (independent variable) after controlling for selected demographic variables (additional independent variables). The control variables were entered in the first block and a forward stepwise regression was used to identify the predictors that contribute at least 2% to explained variance. Nursing unit was entered in the second block. The null hypothesis will be rejected if the second block makes a significant contribution to R^2 based on an F-test.

RQ4- Is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit?

$H_0$4: There is no significant association between perceived stress and demographics, controlling for nursing unit.

H_a4: There is a significant association between perceived stress and demographics, controlling for nursing unit.

A multiple linear regression was used to assess the strength of the relationship between perceived stress of long-term care nursing staff (dependent variable) and selected demographic characteristics (independent variable) after controlling for nursing unit (additional independent variables). The control variables were entered in the first block and a forward stepwise regression was used to identify the predictors that contribute at least 2% to explained variance. Selected demographic characteristics was entered in the second block. The null hypothesis will be rejected if the second block makes a significant contribution to R^2 based on an F-test.

Testing the Assumptions of Linear Regression Analysis

The required assumptions of linear regression were examined in the following steps:

- Check distribution of dependent variable for symmetry—boxplot, Q–Q plot.
- Check distribution of continuous independent variables for symmetry—boxplot, Q–Q plot.
- Check for linear relationship between dependent variable and each continuous independent variable—scatterplot.
- Check for multicollinearity—condition indices above 30.
- Check Studentized deleted residuals for normal distribution—P-P plot (want less than 5% of Studentized residuals to exceed ±2).
- Plot absolute value of Studentized deleted residuals vs predicted value to check homogeneity of variance.

- Look at observations with high influence or leverage to check again for data entry errors and to see if these observations have something in common, suggesting a missing variable- standardized DfBeta(s) (want values less than 2/Sqrt(n), leverage (want values less than 2*(k+1)/n), and Cook's distance (want values less than 1).
- Since data are cross-sectional not time series a test for serial correlation using the Durbin-Watson statistic is unnecessary.

Threats to Validity

Researchers must test both the validity and reliability of all measuring instruments that are intended to be used (Surucu & Maslakci, 2020). Validity refers to whether the instrumentation that is being used for the study is used for what it was developed to measure (Surucu & Maslakci, 2020). The validity of a research instrument depends in part on its intended purpose and whether it is used for that purpose (Burkholder et al., 2016). Researchers should choose appropriate methods and samples when conducting studies to ensure validity in the research (Middleton, 2021). This was done by choosing the appropriate data collection method, choosing the best instrumentation to measure the variables, and choosing the appropriate method of sampling the target population (Middleton, 2021). Reliability refers to the stability of the measured values that are obtained from the repeated measurements when used under the same circumstances (Surucu & Maslakci, 2020). Researchers must consider the best data collection method that is consistent (Middleton, 2021). This was done by choosing the most appropriate

method which was using an anonymous survey via the only survey method (Middleton, 2021).

Ethical Considerations

The researcher must have a clear understanding of the ethical codes and regulations for the protection of human subjects that are to be used in research (Burkholder et al., 2016). Before the development of the study, I assessed the risks and benefits of conducting a study that uses human subjects (Burkholder et al., 2016). Ethical considerations were taken by receiving committee approval of the study content and then receiving approval from the Walden University Institutional Review Board (IRB). Approval from the Walden University IRB was needed before conducting the proposed study. The Walden University IRB made the final determination that the proposed study caused no harm or risk to the human participants (Burkholder et al., 2016). The Walden University IRB approval number is 08-22-22-0150341. After the Walden University IRB approved the study, I took other ethical measures to protect the study participants. Some of those measures was getting informed consent from the potential study participants. The informed consent provided the potential study participants with a detailed description of the study, any procedures involved in the study, description of how the data will be kept secured, the confidentiality of the data, privacy, and confidentiality of the study participants (Burkholder et al., 2016).

Summary

This chapter represents a description of the research methodology that I used when the study was conducted. This chapter discussed the research design and rationale

included the study variables. The chapter provided a detailed methodology that included the study population, sampling and sampling procedures, and research questions and hypotheses. This chapter provided a detailed description of the instrumentations that was used. The chapter provided the procedure for recruitment and participation, data collection, data analysis plan, threats to validity, and ethical considerations for the study. Presentation of the results of the study follows in Chapter 4.

Chapter 4: Results

Introduction

The purpose of this quantitative, cross-sectional study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Perceived stress refers to the scope in which an individual perceives that their stress level exceeds their ability to handle the stressful event (Kader et al., 2021; Suthershan et al., 2021). This was identified by examining (a) whether perceived stress of long-term care nursing staff was predicted by their level of nursing stress, controlling for nursing unit and demographics; (b) whether perceived stress of long-term care nursing staff predicted was by their discipline, controlling for nursing unit and demographics; (c) whether perceived stress of long-term care nursing staff was predicted by the nursing unit, controlling for demographics; and (d) whether perceived stress of long-term care nursing staff was predicted by demographics, controlling for nursing unit. This chapter provides an overview of the data collection, discrepancies in the data collection plan, descriptive analysis of participants demographic characteristics, statistical analysis, results of hypothesis testing, and a summary.

RQ1: Is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics?

$H_0$1: There is no significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

H_a1: There is a significant association between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

RQ2: Is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics?

H_02: There is no significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

H_a2: There is a significant association between perceived stress and the nursing staff discipline, controlling for nursing unit and demographics.

RQ3: Is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics?

H_03: There is no significant association between perceived stress and the nursing unit, controlling for demographics.

H_a3: There is a significant association between perceived stress and the nursing unit, controlling for demographics.

RQ4: Is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit?

H_04: There is no significant association between perceived stress and demographics, controlling for nursing unit.

H_a4: There is a significant association between perceived stress and demographics, controlling for nursing unit.

Data Collection

Prior to data collection, the study had to be approved by the Walden University's Institution Review Board (IRB). The online survey was open from August 26, 2022 through October 22, 2022. Primary data collection consisted of social media recruitment posts with links to the self-administered questionnaire via Facebook and Instagram with approval from family and friends to share on their social media pages for a period of eight weeks. I reposted the survey link once a week and received significant response each week until week four which received only one response. The data collection process was changed from the plan presented in Chapter 3 due to a stall in the survey results during Week 4. The new plan was approved by the Walden IRB on October 5, 2022 that included adding an $10 e-Gift card as a thank you for completing the survey. There was a total of 772 respondents. After review of the results, 52 filled out only the demographic survey, an additional six filled out the PSS but not the NSS, 24 had incomplete demographic surveys, 19 entered an age of 6 and one entered an age of 10. Consequently, a sample of 670 was available for the hypothesis tests.

Descriptive Analysis of Participant Demographics

Table 1 summarizes the frequency distribution of characteristics of the 670-nursing staff that participated in this study. Of the 670 participants in this study, 65.7% (n = 440) were women and 34.3% (n = 230) were men. Ethnicity demographics showed 45.8% (n = 307) identified as White or Caucasian, 38.5% (n = 258) identified as Black or African American, 10.6% (n = 71) identified as Hispanic or Latino, 4.0% (n = 27) identified as Asian or Asian American, and 1.0% (n = 7) identified as Mixed Race or

Other. Nursing discipline demographics showed 43.6% (n = 292) were RNs, 36.0% (n = 241) were LPNs, and 20.4% (n = 137) were NAs. Nursing unit demographics showed 32.7% (n = 219) worked on the geriatric/psychiatric unit, 22.8% (n = 153) worked on the dementia unit, 21.0% (n = 141) worked on the long-term skilled unit, 15.8% (n = 106) worked on the rehabilitation unit, and 7.6% (n = 51) worked on the hospice unit. There were 66.3% (n = 444) respondents from Georgia and 33.7% (n = 226) respondents from Virginia. The typical respondent was middle aged, mean (M) = 35.9, standard deviation (SD) = 7.60, with more than seven years of nursing experience = 7.4, SD = 5.03.

Table 1

Demographic Characteristics of Sample

Characteristic		Frequency	Percent
Gender			
	Women	440	65.7
	Men	230	34.3
Ethnicity			
	Asian or Asian American	27	4.0
	Black or African American	258	38.5
	Hispanic or Latino	71	10.6
	Mixed Race or Other	7	1.0
	White or Caucasian	307	45.8
State			
	Virginia	226	33.7
	Georgia	444	66.3
Discipline			
	Licensed practical nurse (LPN)	241	36.0
	Nursing assistant (NA)	137	20.4
	Registered nurse (RN)	292	43.6
Unit			
	Dementia unit	153	22.8
	Geriatric/psychiatric (geri-psych) unit	219	32.7
	Hospice unit	51	7.6
	Long-term skilled unit	141	21.0
	Rehabilitation (rehab) unit	106	15.8

Results

Data were imported into and analyzed using SPSS. While there were many high and low extreme values for both NSS and PSS, the boxplots show that both variables are symmetrically distributed; see Figures 2 and 3. Extremely high or low levels of stress are to be expected in such a large sample; consequently, no extreme values were deleted for purposes of the analysis. A PSS score greater than 18 indicates the presence of stress. Several studies have documented medium to high levels of perceived stress experienced by nursing staff (Erdoğan et al., 2020; Iftikhar, 2020; Kader et al., 2020; Portero de la Cruz et al., 2020; Sierakowska & Doroszkiewicz 2022; Sutharshan et al., 2021). Erdogan et al. (2020) and Kadar et al. (2020) showed nursing staff with high levels of perceived stress with means as high as 40.04. Iftikhar (2020), Portero de la Cruz et al. (2020), and Sierakowska & Doroszkiewicz (2022) showed nursing staff with moderate levels of perceived stress with means as high as 23.45. Sutharshan et al. (2021) showed as low as 46% and up to as high as 76% of the nursing staff experiencing moderate to high levels of perceived stress. These studies are consistent with the current study showing high and low levels of perceived stress.

Several studies have documented nursing stress experienced by nursing staff during the COVID-19 pandemic (Amin, 2020; Cai et al., 2020; El Haj et al., 2020; Xie et al., 2020; Yin et al., 2020). Amin (2020) and Cai et al. (2020) showed over 50% of the nursing staff experienced stress, El Haj et al. (2020) showed medium levels of burnout, exhaustion, and fatigue, Xie et al (2020) showed nursing staff experiencing high levels of trauma and stress, and Yin et al. (2020) showed 44.5% of the nursing staff experienced

PTSD while working during the COVID-19 pandemic. The current study is showing both high and low levels of nursing stress while the previous studies showed more high levels of nursing stress during the COVID-19 pandemic. Tselebis et al. (2020) showed nursing staff experiencing low levels of perceived stress and low levels of nursing stress with a mean of 14.6 and SD of 7.09. Table 2 summarizes the scores on the PSS and the NSS.

There was no significant difference in PSS between Virginia, M = 25.9, SD = 5.08 and Georgia, M = 26.3, SD = 6.22, t =.668, p = 0.48. However, NSS was significantly higher in Georgia, M = 15.14, SD = 5.35, than in Virginia, M = 13.79, SD = 5.53, t (668) = 3.04, p = .002. As shown in Table 3, the average PSS is lower for NA's, F (2,667) = 3.78, p = .023, however, there were no significant differences in average NSS, F (2,667) = 2.814, p =.061.

Table 2

Summary Statistics for Instruments

Instrument	Min	Max	Mean	SD
PSS	0	44	26.2	6.17
NSS	0	33	14.7	5.45

Figure 2

Boxplot for PSS

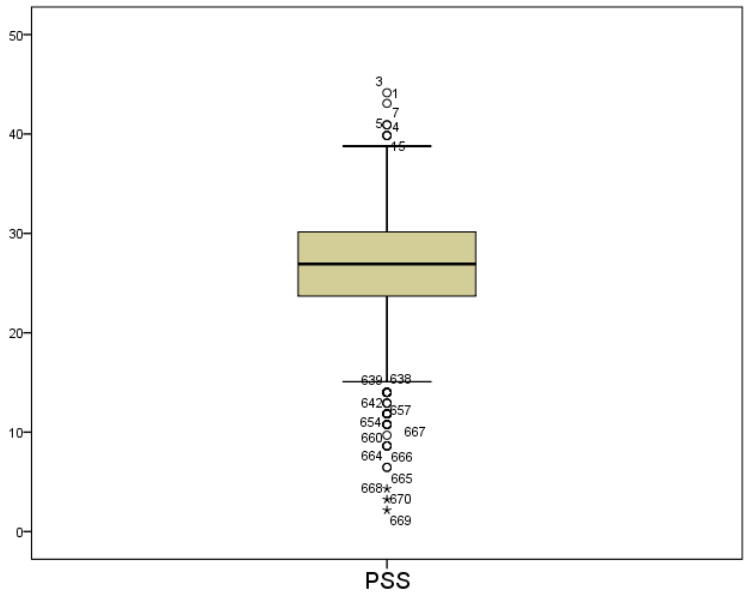


Figure 3

Boxplot for NSS

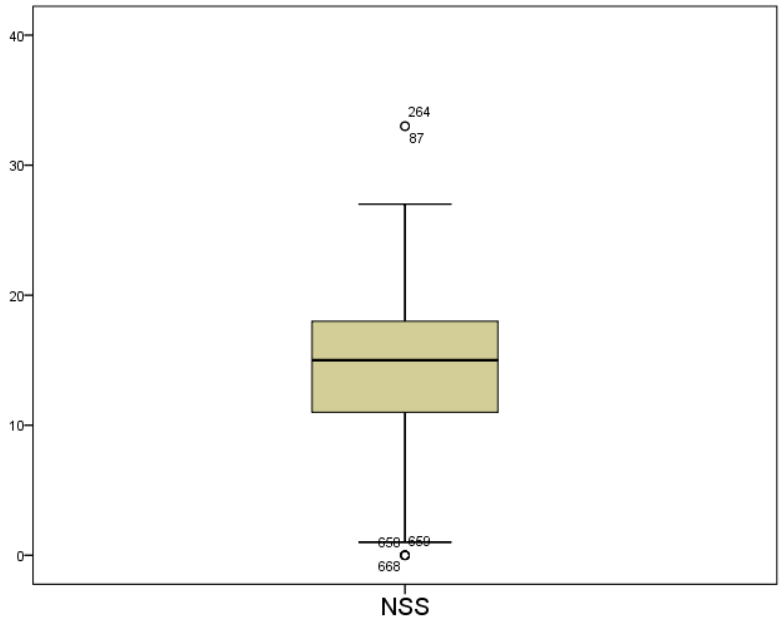


Table 3

Average Stress by Nursing Discipline

	PSS		NSS	
Discipline	Mean	Std. Error	Mean	Std. Error
LPN	26.481	.396	15.091	.350
NA	24.879	.525	13.737	.464
RN	26.510	.360	14.791	.318

Exploratory Data Analysis

George and Mallery (2022) suggests that Cronbach's alpha coefficient provides and examination of reliability with ranges of >.7 or greater as acceptable. For this sample the reliability of the NSS is $\alpha = 0.76$ and the reliability of the PSS is $\alpha = 0.79$. Tables 4 and 5 shows a breakdown of Cronbach's Alpha for both the PSS and NSS.

Table 4

Cronbach's Alpha by Discipline: Perceived Stress Scale

Discipline	Cronbach's alpha
NA	.769
LPN	.795
RN	.817

Table 5

Cronbach's Alpha by Discipline: Nursing Stress Scale

Discipline	Cronbach's alpha
NA	.803
LPN	.715
RN	.785

Statistical Analysis

Linear regression requires that continuous variables, PSS, NSS, age and experience do not seriously violate the assumption of normality. Furthermore, there must be a linear relationship between the dependent variable, PSS, the independent variables, NSS, age and experience. Figures 4 and 5 shows the scores on the PSS and NSS are approximately normally distributed. Figure 6 shows the distribution of experience suffers from kurtosis as there are a disproportionately large number of respondents with five to ten years of nursing experience. The assumption of normality is violated for experience so caution must be exercised in generalizing conclusions about experience beyond this sample. Figure 7 shows age is approximately normally distributed. Figure 8 shows that both years of experience and age are symmetrically distributed; however, there are many very high values for both variables. This reflects the presence of many older experienced nursing staff in the workforce. No values were deleted for purposes of the hypothesis tests.

Figure 4

Distribution of PSS Scores

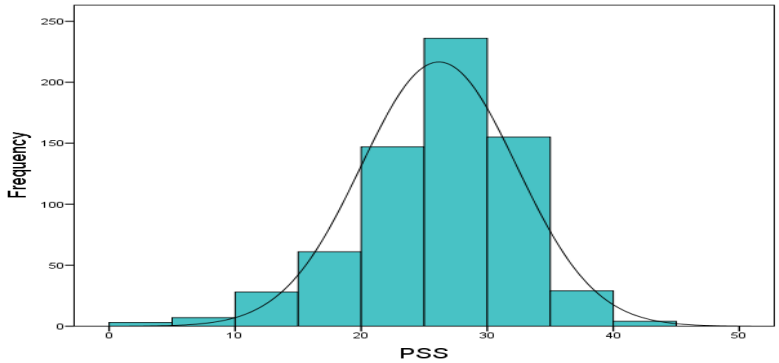


Figure 5

Distribution of NSS Scores

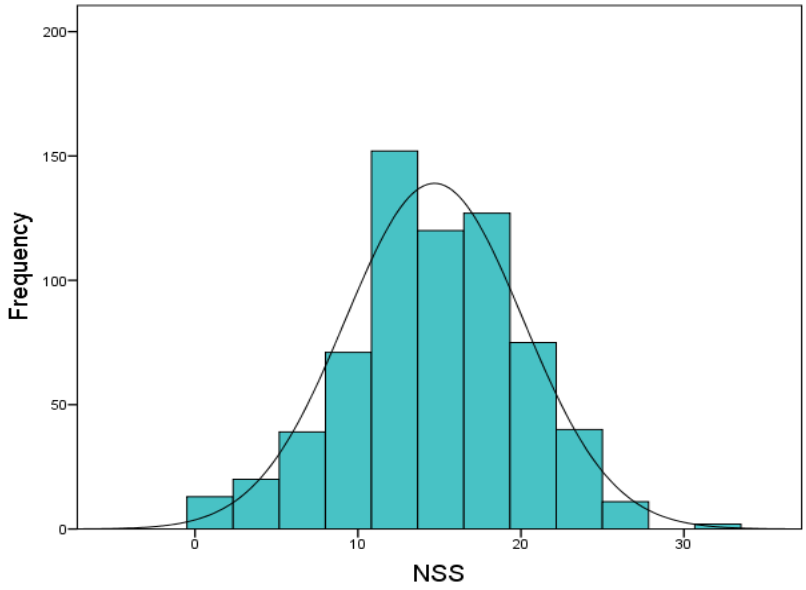


Figure 6

Distribution of Years of Nursing Experience

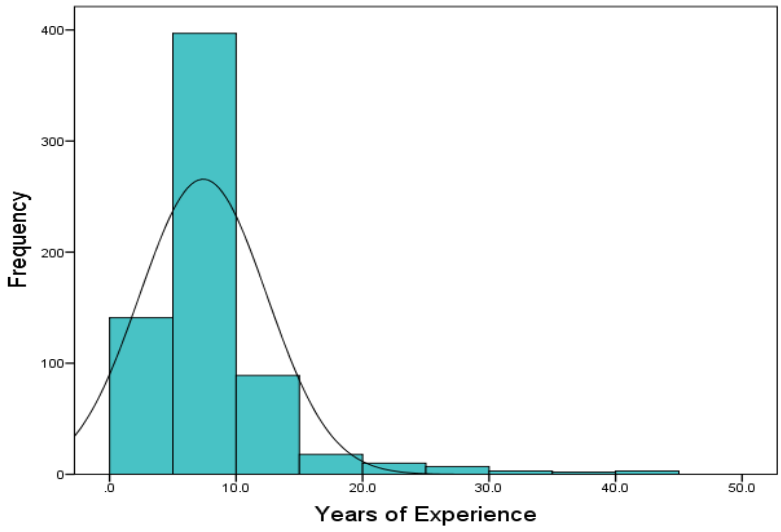


Figure 7

Distribution of Age

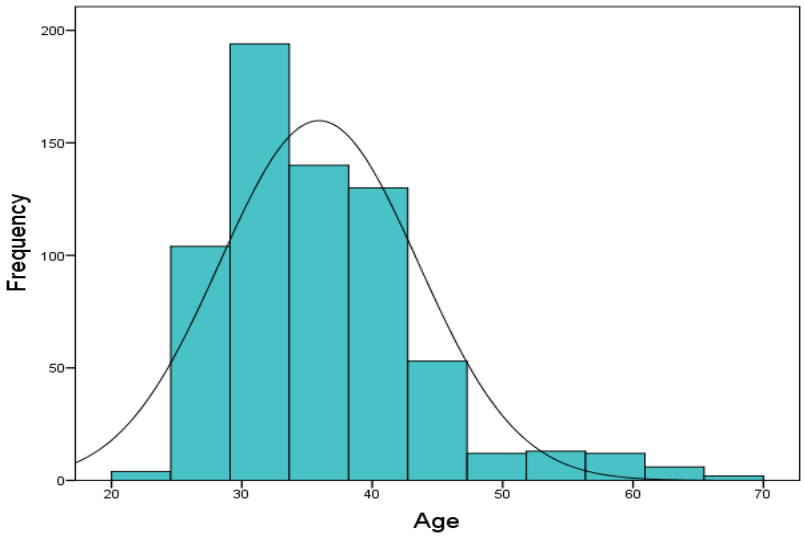


Figure 8

Boxplots for Years of Experience and Age

Figure 9 shows the relationship between PSS and NSS is split into two dramatically different linear relationships. When NSS is 9 or lower the correlation is high and very statistically significant, r = 0.51, P < .001. Nursing stress explains

approximately one quarter of the variation in perceived stress. However, when NSS is 10 or higher there is no statistically significant correlation with PSS, r = 0,06, p = .18. NSS was recoded into two variables: one when NSS is 9 or below and one when NSS is 10 or above. Figure 10 shows the relationship between PSS and years of nursing experience is linear and significantly negative, r = -0.17, p < .001. Figure 11 shows the relationship between PSS and age is linear and also significantly negative r = -0.18, p < .001.

Figure 9

Relationship between NSS and PSS

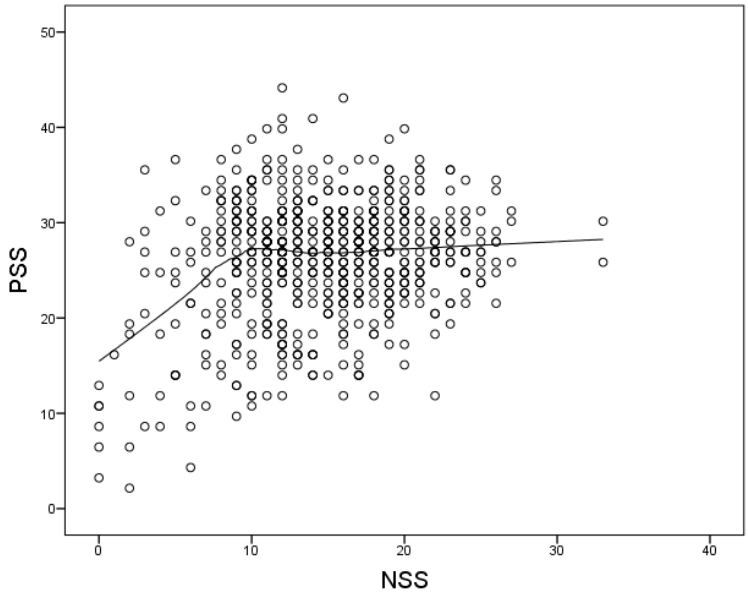


Figure 10

Relationship between PSS and Nursing Experience

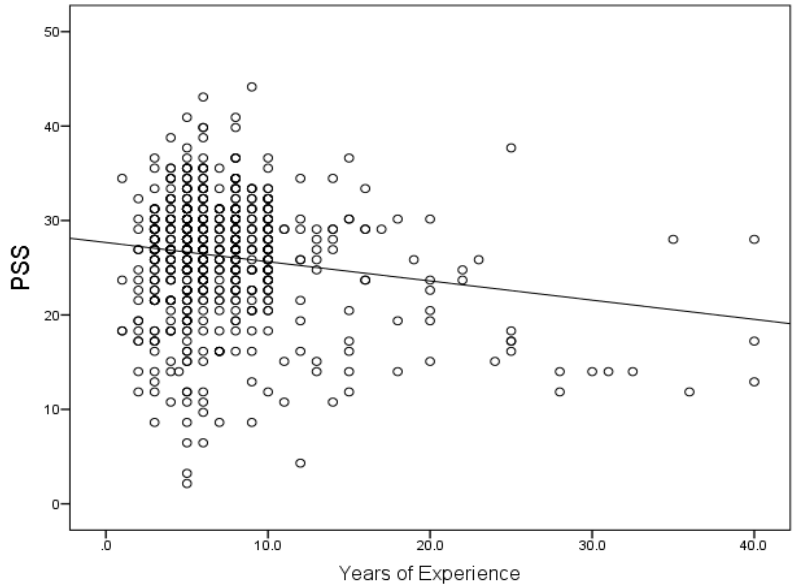
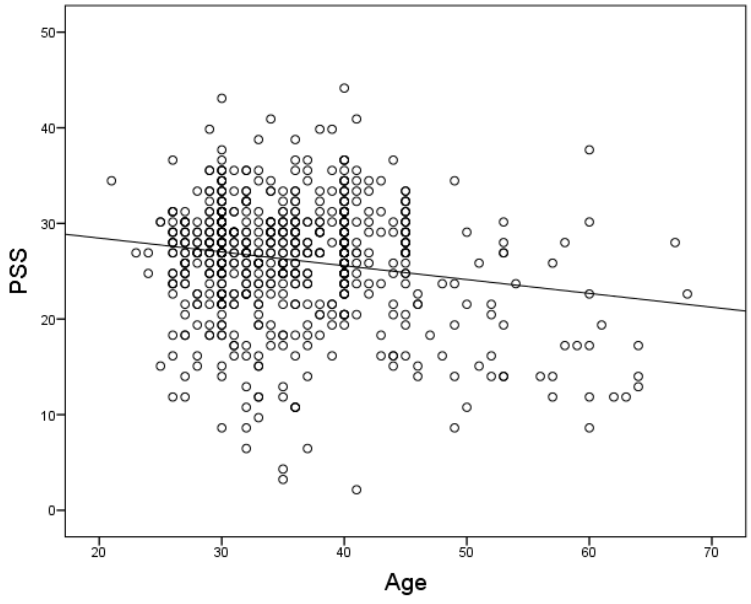


Figure 11

Relationship between PSS and Age



Hypothesis Tests

If all 16 independent variables are entered into a multiple linear regression there is severe multicollinearity. The condition index is 29.8. A condition index above 30 indicates serious multicollinearity. Consequently, for the hypothesis tests the independent variables were entered in two blocks. The control variables were entered in the first block. Multicollinearity among these control variables did not affect the hypothesis tests. The independent variable which is the focus of the research question was entered in the second block.

RQ1- Is the perceived stress of long-term care nursing staff predicted by their level of nursing stress, controlling for nursing unit and demographics?

$H_0$1: There is no positive correlation between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

H_a1: There is a positive correlation between perceived stress and the level of nursing stress, controlling for nursing unit and demographics.

The level of nursing stress raises explained variance, R^2, significantly from 0.095 with the control variables alone to 0.137, $F(2,656) = 16.10$, $p < .001$; see Table 6. For both high and low levels of nursing stress, there is a significant positive relationship between perceived stress and the level of nursing stress. After controlling for nursing unit and demographics, the relationship between perceived stress and the level of nursing stress was stronger for higher levels of nursing stress. Men, Hispanics, and Whites also had significantly higher levels of perceived stress. The data support the alternative hypothesis that there is a positive correlation between perceived stress and the level of

nursing stress when controlling for nursing unit and demographics. 5.8% of the Studentized deleted residuals exceed ±2 which is slightly more than the desired 5%. The coefficient estimates are still unbiased, but their variability is inflated making statistical significance less likely. The plot of Studentized deleted residuals against the predicted values, see Figure 12 that shows the assumption of homoscedasticity is satisfied. Only 5.8% of the observations were high influence. Deleting high influence observations would raise the R^2 from .137 to .147, however, the high influence participants are an important part of the population that I was trying to understand. I did not remove the high influence participants from the sample.

Table 6

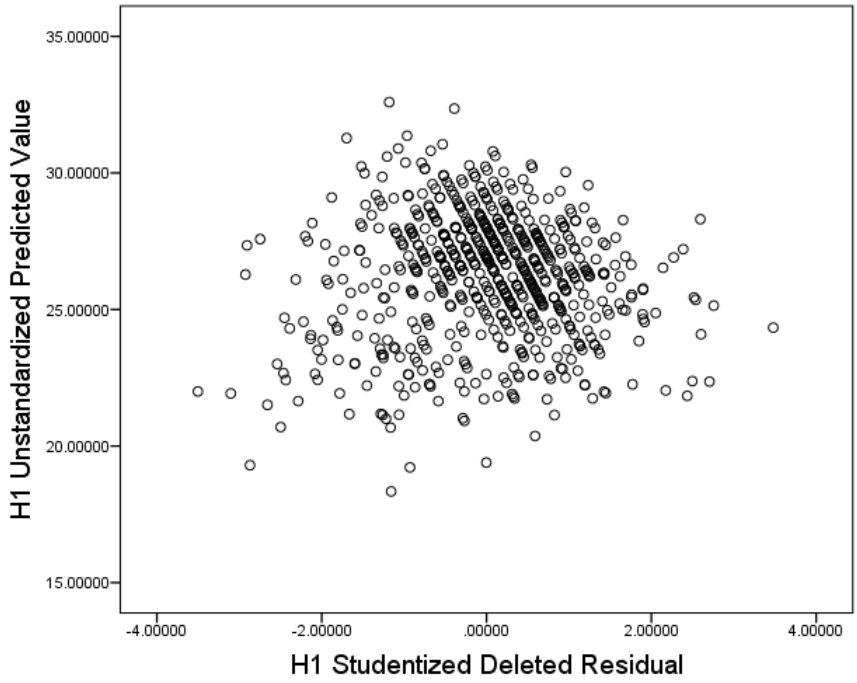
Regression Summary for Level of Nursing Stress Controlling for Nursing Unit and Demographics

Variable	Coefficient	Standard Error	Standardized Coefficient	t	Significance
(Constant)	20.78	2.03			
Dementia	0.321	0.691	0.022	0.46	0.64
Geriatric/psychiatric	1.015	0.649	0.077	1.56	0.12
Hospice	-0.327	0.997	-0.014	-0.33	0.74
Rehabilitation	0.218	0.774	0.013	0.28	0.78
Years of experience	-0.068	0.062	-0.055	-1.10	0.27
Age	-0.040	0.043	-0.050	-0.95	0.34
Man***	1.442	0.492	0.111	2.93	0.00
Black	0.954	1.072	0.075	0.89	0.37
Hispanic***	3.616	1.215	0.181	2.98	0.00
White***	3.539	1.058	0.286	3.34	0.00
Georgia	-0.365	0.497	-0.028	-0.73	0.46
NSS 9 or below***	0.426	0.132	0.185	3.23	0.00
NSS 10 or above***	0.281	0.051	0.329	5.49	0.00

Note. $R^2 = 0.14$ ($N = 670$, $p < .001$)
*** $p < .001$

Figure 12

H1: Plot of Studentized Deleted Residuals against Predicted Values



RQ2- Is the perceived stress of long-term care nursing staff predicted by their discipline, controlling for nursing unit and demographics?

$H_0$2: There is no significant association between perceived stress and the nursing staff disciplines, controlling for nursing unit and demographics.

H_a2: There is a significant association between perceived stress and the nursing staff disciplines, controlling for nursing unit and demographics.

Nursing discipline did not raise explained variance, R^2, significantly, F (2,656) = 1.28, p = .28; see Table 7. Men, Hispanics and Whites had significantly higher levels of perceived stress. Perceived stress significantly declined with age. The data support the null hypothesis that there is no significant association between perceived stress and the

nursing staff disciplines when controlling for nursing unit and demographics. 6.6% of the Studentized deleted residuals exceed ±2 which is slightly more than the desired 5%. The coefficient estimates are still unbiased, but their variability is inflated making statistical significance less likely. The plot of Studentized deleted residuals against the predicted values, see Figure 13 that shows the assumption of homoscedasticity is satisfied. Only 4.8% of the observations were high influence. The high influence observations were likely significantly older nursing staff with more experience. Deleting the high influence observations may raise the R^2 from .098 to .103, however, the high influence participants are an important part of the population that I was trying to understand. I did not remove the high influence participants from the sample.

Table 7

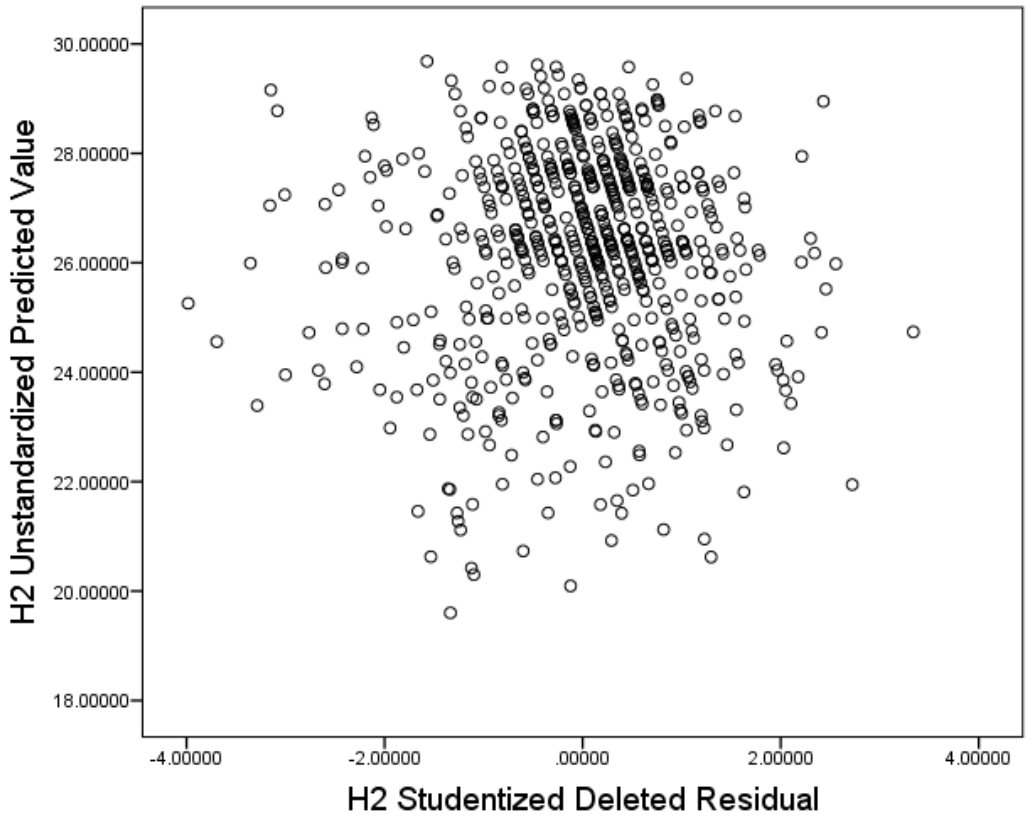
Regression Summary for Nursing Discipline Controlling for Nursing Unit and Demographics

Variable	Coefficient	Standard Error	Standardized Coefficient	t	Significance
(Constant)	26.36	1.79			
Dementia	0.346	0.711	0.024	0.49	0.63
Geriatric/psychiatric	1.115	0.671	0.085	1.66	0.10
Hospice	0.231	1.022	0.010	0.23	0.82
Rehabilitation	0.346	0.796	0.020	0.43	0.66
Years of experience	-0.038	0.063	-0.031	-0.61	0.54
Age*	-0.105	0.042	-0.129	-2.50	0.01
Man*	1.214	0.510	0.093	2.38	0.02
Black	0.893	1.100	0.070	0.81	0.42
Hispanic***	3.832	1.246	0.191	3.08	0.00
White***	3.290	1.093	0.266	3.01	0.00
Georgia	-0.082	0.506	-0.006	-0.16	0.87
RN	0.807	0.637	0.065	1.27	0.21
LPN	1.017	0.651	0.079	1.56	0.12

Note. $R^2 = 0.10$ (N = 670, $p < .001$) * $p < .05$*** $p < .001$

Figure 13

H2: Plot of Studentized Deleted Residuals against Predicted Values



RQ3- Is the perceived stress of long-term care nursing staff predicted by the nursing unit, controlling for demographics?

$H_0$3: There is no significant association between perceived stress and the nursing unit, controlling for demographics.

H_a3: There is a significant association between perceived stress and the nursing unit, controlling for demographics.

Nursing unit did not raise explained variance, R^2, significantly, F (4,658) = 0.937, p = .44; see Table 8. Men, Hispanics, and Whites had significantly higher levels of

perceived stress. Perceived stress significantly declined with age. The data support the null hypothesis that there is no significant association between perceived stress and the nursing unit when controlling for demographics. 6.3% of the Studentized deleted residuals exceed ±2 which is slightly more than the desired 5%. The coefficient estimates are still unbiased, but their variability is inflated making statistical significance less likely. The plot of Studentized deleted residuals against the predicted values, see Figure 14 that shows the assumption of homoscedasticity is violated. There is less variation in observations with smaller residuals. 8.5% of the observations were high influence. High influence participants had significantly higher PSS scores but significantly lower NSS scores. They were more likely to be non-White and less likely to work in a Geri-psych unit and more likely to work in Hospice. This is congruent with the literature that there is less nursing stress working on the Hospice unit (Shiri et al., 2020; Tselebis et al., 2020). Their responses on the PSS were much more reliable, α=.84, than participants who were not high influence, α=.40. The high influence observations were likely non-White nursing staff that likely worked on the Hospice unit. Deleting the high influence observations may raise the R^2 from .095 to .129, however, the high influence participants are an important part of the population that I was trying to understand. I did not remove the high influence participants from the sample.

Table 8

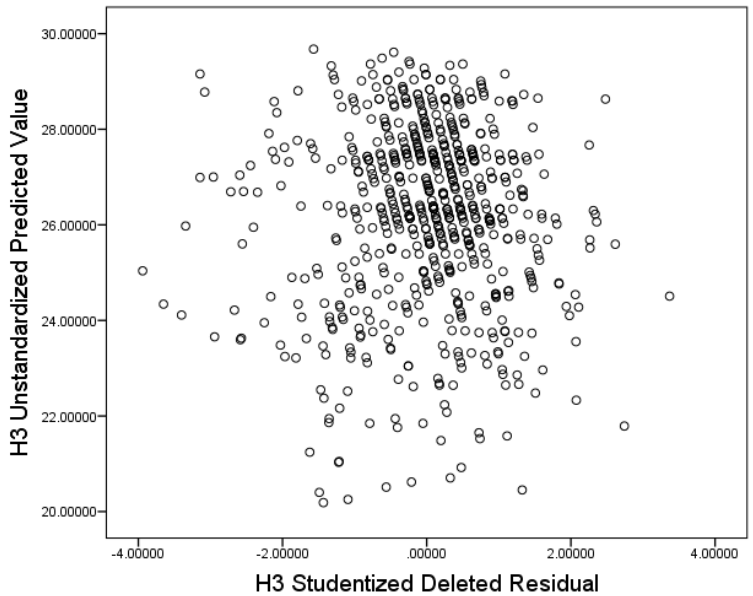
Regression Summary for Nursing Unit Controlling for Demographics

Variable	Coefficient	Standard Error	Standardized Coefficient	t	Significance
(Constant)	26.79	1.77			
Years of experience	-0.039	0.063	-0.031	-0.61	0.54
Age*	-0.104	0.042	-0.128	-2.49	0.01
Man*	1.278	0.501	0.098	2.55	0.01
Black	0.956	1.095	0.075	0.87	0.38
Hispanic***	3.969	1.240	0.198	3.20	0.00
White***	3.405	1.082	0.275	3.15	0.00
Georgia	-0.018	0.504	-0.001	-0.04	0.97
Dementia	0.499	0.705	0.034	0.71	0.48
Geriatric/psychiatric	1.230	0.662	0.094	1.86	0.06
Hospice	0.454	1.010	0.020	0.45	0.65
Rehabilitation	0.496	0.790	0.029	0.63	0.53

Note. $R^2 = 0.10$ (N = 670, $p < .001$)
* $p < .05$*** $p < .001$

Figure 14

H3: Plot of Studentized Deleted Residuals Against Predicted Values



RQ4- Is the perceived stress of long-term care nursing staff predicted by demographics, controlling for nursing unit?

$H_0$4:is no significant association between perceived stress and demographics, controlling for nursing unit.

H_a4: There is a significant association between perceived stress and demographics, controlling for nursing unit.

Nursing demographics raises explained variance, R^2, significantly from 0.013 with the control variables alone to 0,095, $F(7,658) = 8.48$, $p < .001$; see Table 9. Men, Hispanics and Whites also had significantly higher levels of perceived stress. Perceived stress significantly declined with age. The data support the alternative hypothesis that there is a significant association between perceived stress and demographics when controlling for nursing unit. 6.3% of the Studentized deleted residuals exceed ±2 which is slightly more than the desired 5%. The coefficient estimates are still unbiased, but their variability is inflated making statistical significance less likely. The plot of Studentized deleted residuals against the predicted values, see Figure 14 above that shows the assumption of homoscedasticity is violated. There is less variation in observations with smaller residuals. The coefficient estimates are still unbiased, but their variability is inflated making statistical significance less likely.

Due to the large number of demographic variables 11.3% of the observations were high influence. Again, high influence participants were older and more experienced. They had significantly lower stress. They were more likely to be non-White and more likely to be NA's. Their responses on the PSS were much more reliable, α=.90, than

participants who were not high influence, α=.16. Deleting the high influence observations may raise the R^2 from .095 to .117, however, the high influence participants are an important part of the population that I was trying to understand. I did not remove the high influence participants from the sample.

Table 9

Regression Summary for Demographics Controlling for Nursing Unit

Variable	Coefficient	Standard Error	Standardized Coefficient	t	Significance
(Constant)	26.79	1.77			
Years of experience	-0.039	0.063	-0.031	-0.61	0.54
Age*	-0.104	0.042	-0.128	-2.49	0.01
Man*	1.278	0.501	0.098	2.55	0.01
Black	0.956	1.095	0.075	0.87	0.38
Hispanic***	3.969	1.240	0.198	3.20	0.00
White***	3.405	1.082	0.275	3.15	0.00
Georgia	-0.018	0.504	-0.001	-0.04	0.97
Dementia	0.499	0.705	0.034	0.71	0.48
Geriatric/psychiatric	1.230	0.662	0.094	1.86	0.06
Hospice	0.454	1.010	0.020	0.45	0.65
Rehabilitation	0.496	0.790	0.029	0.63	0.53

Note. $R^2 = 0.10$ ($N = 670$, $p < .001$)
* $p < .05$*** $p < .001$

Table 10 identifies the statistically significant predictors of PSS. Neither unit nor discipline is significantly related to PSS. NSS is a stronger predictor of PSS than demographic characteristics. Recall that Figure 5 showed that NSS was not significantly correlated with PSS when NSS scores were 10 or higher. In contrast Table 8 shows that after controlling for selected demographic characteristics, NSS scores above 10 are the strongest predictor of PSS. Apparently demographic characteristics play an important

role in the relationship between NSS and PSS. A full analysis of the role of demographics on the relationship between NSS and PSS is beyond the scope of this research.

Table 10

Regression Summary for Predictors of Perceived Stress

Variable	Coefficient	Standard Error	Standardized Coefficient	t	Significance
(Constant)	22.496	1.612	0.000	13.95	0.000
NSS 10 or above***	0.275	0.050	0.321	5.47	0.000
White***	2.815	0.474	0.227	5.93	0.000
NSS 9 or below**	0.424	0.130	0.184	3.25	0.001
Hispanic***	2.990	0.771	0.149	3.88	0.000
Man**	1.351	0.475	0.104	2.84	0.005
Age*	-0.072	0.031	-0.089	-2.30	0.022

Note. $R^2 = 0.13$ ($N = 670$, $p < .001$)
* $p < .05$ ** $p < .01$ *** $p < .001$

Summary

In this chapter, for each hypothesis test, I used multiple regression analysis to assess the strength of the relationship between perceived stress of long-term care nursing staff (dependent variable) and a tested predictor while controlling for specific variables. The control variable was entered into block 1 and the tested predictor was entered into block 2. Forward stepwise regression was then used to identify the predictors that contribute at least 2% of the explained variance. The results for RQ1 showed that the data supported the alternative hypothesis that there was a positive correlation between perceived stress and the level of nursing stress when controlling for nursing unit and demographics. There was a significant positive relationship between perceived stress and the level of nursing stress. The results for RQ2 showed that the data supported the null hypothesis that there was no significant association between perceived stress and the

nursing staff disciplines when controlling for nursing unit and demographics. The results for RQ3 showed that the data support the null hypothesis that there was no significant association between perceived stress and the nursing unit when controlling for demographics. The results for RQ4 showed that the data support the alternative hypothesis that there was a significant association between perceived stress and demographics when controlling for nursing unit. Neither unit nor discipline is significantly related to PSS while NSS is a stronger predictor of PSS than demographic characteristics. NSS was not significantly correlated with PSS when NSS scores were 10 or higher, however, after controlling for selected demographic characteristics, NSS scores above 10 are the strongest predictor of PSS.

Chapter 5 will provide an interpretation of the findings as it relates to the existing literature and theoretical framework. I will also present the limitations of the study, recommendations, and implications to positive social change, to research, and to public health, a summary and a conclusion.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The purpose of this quantitative, cross-sectional study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. The null hypothesis was rejected, and the alternative hypothesis was accepted for RQ1, which was that there is a significant correlation between perceived stress and the level of nursing stress when controlling for nursing unit and demographics. The null hypothesis was accepted for RQ2, which was that there is no significant association between perceived stress and the nursing staff discipline when controlling for nursing unit and demographics. The null hypothesis was accepted for RQ3, which was that there is no significant association between perceived stress and the nursing unit when controlling for demographics. The null hypothesis was rejected and the alternative hypothesis was accepted for RQ4, which was that there is a significant association between perceived stress and demographics when controlling for nursing unit.

Interpretation of the Findings

Findings to Existing Literature

This study had four research questions that were examined. The first research question examined whether the perceived stress of long-term care nursing staff was predicted by their level of nursing stress, controlling for nursing unit and demographics. The study results revealed that after controlling for nursing unit and demographics, the relationship between perceived stress and the level of nursing stress was stronger for

higher levels of nursing stress during the COVID-19 pandemic. The positive correlation signified the level of nursing stress and perceived stress is based on specific demographics and specific nursing units. These findings are corroborated with the assertions of Choi et al. (2021) and White et al. (2020) that state during the COVID-19 pandemic, nursing stress was influenced by the work environment which for nursing staff is the nursing unit. Nursing turnover, burnout, and intent to leave was exacerbated during the COVID-19 pandemic and was associated with high levels of nursing stress in relation to the nursing unit that the nursing staff is assigned to (Andella et al., 2021; Maneschiold & Lucacia-Maneschiold, 2020). Nursing staff's perception of the unit they are about to work on can increase or decrease their level of nursing stress as some units are more challenging to work on than others (Gerritsen et al., 2019; Leontjevas et al., 2020). Yoben et al. (2019) noted that 65.4% of NAs working on a long-term dementia unit missed care tasks related to increased levels of nursing stress. In contrast, Shiri et al. (2020), showed nursing staff with low levels of nursing stress when working on a Hospice unit.

The second research question examined whether the perceived stress of long-term care nursing staff was predicted by their discipline, controlling for nursing unit and demographics. The study results revealed that after controlling for nursing unit and demographics, there was no significant association between perceived stress and the nursing staff disciplines during the COVID-19 pandemic. These findings were contrary to the literature findings that showed that nursing staff can have different levels of stress based on their discipline. Due to having different roles and responsibilities, RNs, LPNs,

and NAs can have different perceptions of stress based on the assigned duties specifically related to their discipline (Fawaz et al., 2020). RNs may experience stress regarding being in charge of the unit, medication administration, having to admit patients, and having to discharge patients (Fawaz et al., 2020). LPNs may experience stress due to having to be a team leader, medication administration, and potentially overseeing NAs (Fawaz et al., 2020). NAs may experience stress due to not getting a proper hand-off report regarding patients, having a heavy workload, and not having enough staff to complete the nursing tasks (Fawaz et al., 2020).

In contrast, when comparing other studies to the current study, many studies examined nursing stress and perceived stress in different nursing disciplines, however, it was difficult to find a study that had all three nursing disciplines in one study. These studies support the null hypothesis of the second research question that there was no significant association between perceived stress and the nursing staff disciplines. Lin et al. (2021) studied RNs and LPNs and both disciplines had prolonged stressors that lead to occupational stress; however, no significant difference were documented regarding the perception of stress related whether the staff was a RN or LPN. Zhao et al. (2021) showed experienced RNs and NAs with low levels of stress and inexperienced RNs and NAs with high levels of stress. This study showed both disciplines experiencing stress, however, did not show that the stress was higher or lower based on being a RN or NA. McGilton et al. (2022), Snyder et al. (2021), and Ecker et al. (2021) conducted studies where they examined NAs in nursing homes. Each researcher noted levels of stress was

based on different COVID-19 factors, but the stress was not based on the participant's discipline.

The third research question examined whether perceived stress of long-term care nursing staff was predicted by the nursing unit, controlling for demographics. The study results revealed that after controlling for demographics, there was no significant association between perceived stress and the nursing unit during the COVID-19 pandemic. These findings were contrary to the literature findings that showed that during the COVID-19 pandemic, working on specific nursing units can increase nursing staff's perception of stress. Erdoğan et al. (2020) documented nursing staff working in the ICU had high levels of perceived stress while working during the COVID-19 pandemic. Iftikhar (2020) showed nursing staff working on a hospital medical unit had moderate levels of perceived stress while working during the COVID-19 pandemic. Kader et al. (2020) documented moderate and high levels of perceived stress from nursing staff working in the ICU during the COVID-19 pandemic. Portero de la Cruz et al. (2020) reported moderate levels of perceived stress from nursing staff working in the emergency department during the COVID-19 pandemic. Andela et al. (2020) reported high levels of nursing stress from nursing staff working in a long-term dementia unit during the COVID-19 pandemic.

The fourth research question examined whether perceived stress of long-term care nursing staff was predicted by demographics, controlling for nursing unit. The study results revealed that after controlling for nursing unit, there was a significant association between perceived stress and demographics while working during the COVID-19

pandemic. The current study showed 65.7% of the study participants were women and 34.3% were men and that men had significantly higher levels of perceived stress. This could be due to the nursing field is predominantly women who may experience lower levels of perceived stress due to working in the field longer. These findings are corroborated with the assertions of Marshall (2022), who documented that 13% of the current nursing school enrollees are male which is an increase from 12% in 2019 that was documented by Mao et al. (2021).

The current study showed that the nursing staff in Georgia and Virginia had moderate levels of perceived stress, however, nursing stress was significantly higher in Georgia than in Virginia. This finding could be associated with the current COVID-19 vaccination rates in Virginia are higher than in Georgia. 59% of the population in Georgia are fully vaccinated and 73.7% of the population in Virginia are fully vaccinated (Georgia Department of Public Health, 2023; Virginia Department of Health, 2023). Since the COVID-19 pandemic began in early 2020, healthcare workers are considered essential employees and have been required to work (Zakeri et al., 2021), which can have a negative effect on Georgia healthcare workers level of perceived stress. The public has grown more confident that the research and development process has produced safe and effective vaccines which may have assisted with decreasing the nursing stress in Virginia (Funk & Tyson, 2020).

Comparison of Findings to Theoretical Framework

The theoretical framework for this study was Karasek's (1979) JDCS model, which asserts that there are three components of mental strain which are high job

demand, low job control, and little to no support (Karasek et al., 1982). Job demand is the workload and the expectation is that the work will be completed on time (Karasek, 1979). In this study, job demands were the pandemic-related work stressors placed on the nursing staff who worked during the COVID-19 pandemic. Job control is the control a person has on how and when the job was completed (Karasek, 1979). In this study, job control was the amount of control the nursing staff had over the conditions in which they worked and the units that they worked on during the COVID-19 pandemic. Support is the work relationships that a person has formed with a peer or supervisor that can impact that person's perception of stress and how a person handles stress (Karasek et al., 1982). In this study, support was the perceived amount of support the nursing staff had from their peers and/or supervisors while working during the COVID-19 pandemic. The JDCS model has demonstrated efficacy for conceptualizing occupational stress in the nursing field (Bagheri et al., 2020; Deng et al., 2021; Junakovic et al., 2021; and Navajas-Romero et al, 2020).

The results of this study showed a positive correlation between perceived stress and the level of nursing stress which is congruent with the JDCS model. The current study also showed that perceived stress was stronger for higher levels of nursing stress. The current study also showed that there was a significant association between perceived stress and demographics. Bagheri et al. (2020), Deng et al. (2021), Junakovic et al. (2021), and Navajas-Romero et al. (2020) showed how the JDCS model was used in multiple nursing settings. Bagheri et al. (2020) measured job demand, job control, and social support; Deng et al. (2021) examined stress reactivity in the work environment,

Junakovic et al. (2021) examined how job demands, job control, and social support from co-workers and supervisors affect occupational wellbeing outcomes, and Navajas-Romero et al. (2020) analyzed the effects caused by specific factors related to the context of work in nursing personnel and how they influence work life balance. The perceived stress and the level of nursing stress could be related to the demands of the job, the control a person had while performing specific nursing tasks, or the support a person perceived to have while working during the COVID-19 pandemic.

Limitation of the Study

I identified several limitations in this study. The first limitation was recruiting only through the use of social media websites versus partnering with local hospitals or long-term care facilities which could have widened the participant search. The second limitation was the use of self-reported data which has the possibility of participant bias (Rosenman et al., 2011). Another limitation was noted in Chapter 4, Figure 3 which showed the distribution of experience suffered from kurtosis due to having a large number of respondents with five to ten years of nursing experience. The assumption of normality is violated for experience and caution must be exercised in generalizing conclusions about experience beyond this sample. The use of a cross-sectional design limited the collection of this research to one point in time rather than over a longer period. The study was completed during the COVID-19 pandemic where perceived stress and nursing stress could have been higher due to having different occupational stressors related to the COVID-19 pandemic. The final limitation was the use of convenience sampling versus the use of randomized sampling. The participants came solely from the

convenience of using social media sites and asking family members and friends to share the invitation on their social media sites.

Recommendations

In Chapter 1, I imposed delimitations in this study that can also be recommendations for future research. The first delimitation of this study was only using study participants from long-term care facilities that worked in the states of Georgia and Virginia during the COVID-19 pandemic versus study participants throughout the United States. Future research would be to conduct the same study and allow nursing staff throughout the United States to participate. The second delimitation was assessing only the RNs, LPNs, and NAs. Future research would be to conduct the same study and allow all health care workers that work in the long-term care setting to include physicians, nurse practitioners, pharmacists, food service workers, and environmental management workers which will add a different perspective of healthcare workers in long-term care working during the pandemic. The final delimitation was that the study participants must have been working in a long-term care setting on one of five specific long-term care units during the COVID-19 pandemic. Future research would be to not set limitations on a specific long-term care unit and open the study up to all long-term care units. Further research is needed that examine other factors that can cause nursing stress in long-term care nursing staff such as personal factors. Further research is needed to determine if the findings in this study could be replicated. A final recommendation for future research is to complete a retrospective study of long-term care nursing staff that worked during the

pandemic before the availability of the COVID-19 vaccine to determine stress levels during that specific timeframe.

Implications

Positive Social Change

Positive social change can occur by creating awareness of perceived stress and nursing stress that happen to long-term care nursing staff which can lead to unresolved psychological distress. Positive social change can be achieved by developing stress management strategies and implementing interventions that will assist long-term care nursing staff to improve emotional stress and burnout experienced during the COVID-19 pandemic. Positive social change can also occur by developing and implementing training material that is specific to public health emergencies such as a pandemic so long-term care nursing staff can learn and develop appropriate responses to a pandemic.

Significance to Research

The empirical implication of this study is that the link to perceived stress and the level of nursing stress in long-term care nursing staff working during the COVID-19 pandemic has been established and confirmed. The long-term care nursing staff is at an increased risk for negative health effects and negative mental health outcomes during the COVID-19 pandemic (Hu et al., 2020). The mental health and well-being of the long-term care nursing staff during the COVID-19 pandemic can affect the overall quality of care provided to residents (Hu et al., 2020). The results of this study could be instrumental to expanding the support that long-term care nursing staff receive during the COVID-19 pandemic.

Significance to Public Health

This study will be significant in the implication for public health by increasing the awareness of the occupational stress that is perceived by long-term care nursing staff. This study will also be significant for public health by increasing the awareness of perceived stress and nursing stress of nursing staff in the long-term care setting during the COVID-19 pandemic. A review of policies within public health in order to make adjustments to accommodate the needs of public health and long-term care nursing professionals as a result of the additional occupational stressors brought about by the COVID-19 pandemic.

Summary

The purpose of this quantitative, cross-sectional study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. The results showed that there was no positive correlation between nursing unit nor nursing discipline on perceived stress and nursing stress. The results showed that nursing stress is a strong predictor of perceived stress when the NSS scores are above 10 or higher and after controlling for selected demographic characteristics. The results also showed that nursing stress scores above 10 was the strongest predictor of perceived stress. These findings are consistent with increased vulnerability of nursing staff to perceived stress and high levels of nursing stress while working in a long-term care setting during the COVID-19 pandemic.

Conclusion

The COVID-19 pandemic has taken its toll on the world starting in 2019 in Wuhan China and entering the United States in 2020 (CDC, 2021). Prior to the development of COVID-19 vaccines, there were significant COVID-19 pandemic-related illnesses and deaths (CDC, 2021). According to the WHO (2023), there have been over 757 million confirmed cases of COVID-19 and over 6.8 million confirmed deaths from people contracting COVID-19 worldwide. There have been over 13.2 billion vaccine doses administered worldwide (WHO, 2023). Healthcare workers were designated as a level 1a essential employee who had the potential for direct or indirect exposure to patients while working in a healthcare setting (CDC, 2021).

The purpose of this quantitative, cross-sectional study was to identify the extent to which perceived stress among long-term care nursing staff is associated with nursing stress, nursing discipline (position title), nursing unit, and demographic factors during the COVID-19 pandemic. Studies have shown nursing staff experiencing high levels of stress in acute care settings during the COVID-19 pandemic, but little studies have documented nursing staff working in long-term care staff during the COVID-19 pandemic. Occupational stress is common among long-term care nursing staff that has been characterized by staff burnout, high turnover, high absenteeism, and high levels of nursing stress (Harrad & Sulla, 2018; White et al., 2019). The current research adds to the body of knowledge regarding perceived stress and nursing stress experienced by long-term care nursing staff during the COVID-19 pandemic.

Even though the COVID-19 pandemic has been in existence for over three years, the WHO Director-General states that COVID-19 remains a global emergency, however, the pandemic could end in 2023 (Kimball, 2023). The WHO Director-General has requested that governments review and strengthen their policies for future viruses and to continue to promote vaccines for high-risk and vulnerable populations (Mishra, 2022). The United States government is making plans to end the COVID-19 national emergency in the late spring of 2023; however, healthcare workers remain essential employees (Miller & Seitz, 2023). Healthcare workers may continue to endure occupational stress related to the COVID-19 pandemic. With the development of stress management strategies and interventions, long-term care nursing staff will be capable of managing their perception of stress, and decreasing their level of nursing stress during emergencies such as the COVID-19 pandemic.

References

Administration of Community Living. (2021, May). 2020 profile of older Americans. *U. S. Department of Health and Human Services.* https://acl.gov/sites/default/files/Aging%20and%20Disability%20in%20America/2020ProfileOlderAmericans.Final_.pdf

Agency for Healthcare Research and Quality. (2021, June). Artifacts of culture change self-assessment tool. https://www.ahrq.gov/nursing-home/resources/artifacts-of-culture-change.html

Alanazi, A. E., Mohamed, A. E., Hammad, S. M., & Alanazi, A. E. (2019). Job-related stress among nurses in primary healthcare centers in Arar city, Saudi Arabia. *Electronic Physician*, *11*(3), 7594–7601. https://doi.org/10.19082/7594

American Council on Aging. (2022, March 15). *What defines long term care? Which types of care are included?* Medicaid Planning Assistance. https://www.medicaidplanningassistance.org/what-defines-long-term-care/

Amin, S. (2020). The psychology of coronavirus fear: Are healthcare professionals suffering from corona-phobia? *International Journal of Healthcare Management. 13*(3), 249–256. https://doi.org/10.1080/20479700.2020.1765119

Andela, M., Truchot, D., & Huguenotte, V. (2021). Work environment and elderly abuse in nursing homes: The mediating role of burnout. *Journal of Interpersonal Violence*, *36*(11–12), 5709–5729. https://doi.org/10.1177/0886260518803606

Azoulay, E., De Waele, J., Ferrer, R., Staudinger, T., Borkowska, M., Povoa, P., Iliopoulou, K., Artigas, A., Schaller, S. J., Hari, M. S., Pellegrini, M., Darmon,

M., Kesecioglu, J., & Cecconi, M. (2020). Symptoms of burnout in intensive care unit specialists facing the COVID-19 outbreak. *Annals of Intensive Care*, *10*(110), 1-8. https://doi.org/10.1186/s13613-020-00722-3

Backman, A., Sjögren, K., Lövheim, H., & Edvardsson, D. (2018). Job strain in nursing homes-Exploring the impact of leadership. *Journal of Clinical Nursing*, *27*(7–8), 1552–1560. https://doi.org/10.1111/jocn.14180

Bagheri Hossein Abadi, M., Taban, E., Khanjani, N., Naghavi Konjin, Z., Khajehnasiri, F., & Samaei, S. E. (2020). Relationships between job satisfaction and job demand, job control, social support, and depression in Iranian nurses. *The Journal of Nursing Research: JNR*, *29*(2), 1–8. https://doi.org/10.1097/jnr.0000000000000410

Bamonti, P., Conti, E., Cavanagh, C., Gerolimatos, L., Gregg, J., Goulet, C., Pifer, M., & Edelstein, B. (2019). Coping, cognitive emotion regulation, and burnout in long-term care nursing staff: A preliminary study. *Journal of Applied Gerontology*, *38*(1), 92–111. https://doi.org/10.1177/0733464817716970

Berger, F. K. (2022, April 30). *Stress and your health.* National Library of Medicine. https://medlineplus.gov/ency/article/003211.htm

Bloomfield, J., & Fisher, M. J. (2019). Quantitative research design. *Journal of the Australasian Rehabilitation Nurses Association (JARNA)*, *22*(2), 27–30. https://doi.org/10.33235/jarna.22.2.27-30

Botngård, A., Eide, A. H., Mosqueda, L., & Malmedal, W. (2020). Resident-to-resident aggression in Norwegian nursing homes: A cross-sectional exploratory study. *BMC Geriatrics, 20*(222), 1–10. https://doi.org/10.1186/s12877-020-01623-7

Cai, Q., Feng, H., Huang, J., Wang, M., Wang, Q., Lu, X., Xie, Y., Wang, X., Liu, Z., Hou, B., Ouyang, K., Pan, J., Li, Q., Fu, B., Deng, Y., & Liu, Y. (2020). The mental health of frontline and non-frontline medical workers during the coronavirus disease of 2019 (COVID-19) outbreak in China: A case-control study. *Journal of Affective Disorders, 275*, 210–215. https://doi.org/10.1016/j.jad.2020.06.031

Campbell, K. A., Van Borek, N., Marcellus, L., Landy, C. K., Jack, S. M., & British Columbia Healthy Connections Project Process Evaluation Research Team (2020). "The hardest job you will ever love": Nurse recruitment, retention, and turnover in the nurse-family partnership program in British Columbia, Canada. *PloS ONE*, *15*(9), 1–22. https://doi.org/10.1371/journal.pone.0237028

Cañadas-De la Fuente, G. A., Gómez-Urquiza, J. L., Ortega-Campos, E. M., Cañadas, G. R., Albendín-Garcia, L., & De la Fuente-Solana, E. I. (2018). Prevalence of burnout syndrome in oncology nursing: A meta-analytic study. *Psycho-Oncology*, *27*(5), 1426–1433. https://doi.org/10.1002/pon.4632

Cen, X., Li, Y., Hasselberg, M., Caprio, T., Conwell, Y., & Temkin-Greener, H. (2018). Aggressive behaviors among nursing home residents: Association with dementia and behavioral health disorders. *Journal of the American Medical Directors Association, 19*(12), 1104-1109. https://doi.org/10.1016/j.jamda.2018.09.010

Centers for Disease Control and Prevention. (2021, April 12). National vital statistics system. *National Center for Health Statistics.* https://www.cdc.gov/nchs/about/factsheets/factsheet_nvss.htm

Centers for Disease Control and Prevention. (2022, September 6). Older persons' health. https://www.cdc.gov/nchs/fastats/older-american-health.htm

Centers for Disease Control and Prevention. (2022, September 23). Coping with stress. https://www.cdc.gov/mentalhealth/stress-coping/cope-with-stress/index.html

Centers for Disease Control and Prevention. (2021, March 29). Interim list of categories of essential workers mapped to standardized industry codes and titles. https://www.cdc.gov/vaccines/covid-19/categories-essential-workers.html

Centers for Medicare and Medicaid Services. (2005). 8th round SOW contract. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityImprovementOrgs/downloads/8thSOW.pdf

Centers for Medicare and Medicaid Services. (2021, December 1). Past work. https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/QualityImprovementOrgs/Past

Centre for Studies on Human Stress. (2019). *Stressors*. https://humanstress.ca/stress/what-is-stress/stressors/

Chang, H., Gil, C., Kim, H., & Bea, H. (2020). Person-centered care, job stress, and quality of life among long-term care nursing staff. *The Journal of Nursing Research: JNR*, *28*(5), 1-9. https://doi.org/10.1097/JNR.0000000000000398

Chao, S., & Lu, P. (2020). Differences in determinants of intention to stay and retention between younger and older nursing assistants in long-term care facilities: A longitudinal perspective. *Journal of Nursing Management*, *28*(3), 522–531. https://doi.org/10.1111/jonm.12952

Chaudhury, H., Cooke, H. A., Cowie, H., & Razaghi, L. (2018). The influence of the physical environment on residents with dementia in long-term care settings: A review of the empirical literature. *The Gerontologist, 58*(5), e325-e337. https://doi.org/10.1093/geront/gnw259

Chaudhury, S., & Mujawar, S. (2018). Stress and burnout in nursing profession. *JOJ Nurse Health Care, 6*(3), 001-002. https://doi.org/10.19080/JOJNHC.2018.06.555690

Chen, H., Sun, L., Du, Z., Zhao, L., & Wang, L. (2020). A cross-sectional study of mental health status and self-psychological adjustment in nurses who supported Wuhan for fighting against the COVID-19. *Journal of Clinical Nursing*, *29*(21–22), 4161–4170. https://doi.org/10.1111/jocn.15444

Chetty, K. (2021). The cost of caring: ICU workload stressors and the Saudi Arabian nurse. *Health Science Journal, 15*(2), 1-7.

Chisholm, L., Zhang, N. J., Hyer, K., Pradhan, R., Unruh, L., & Lin, F. C. (2018). Culture change in nursing homes: What is the role of nursing home resources? *Inquiry: A Journal of Medical Care Organization, Provision and Financing*, *55*, 1-6. https://doi.org/10.1177/0046958018787043

Choi, S., Cho, E., Kim, E., Lee, K., & Chang, S. J. (2021). Effects of registered nurse staffing levels, work environment, and education levels on adverse events in nursing homes. *Scientific Reports*, *11*(1), 1–8. https://doi.org/10.1038/s41598-021-00946-8

Chon, Y., & Kim, Y. (2020). Reasons for turnover intention among direct care workers in Korea's long-term care insurance. *Healthcare*, *8*(4), 1-11. https://doi.org/10.3390/healthcare8040395

Chong, T. W. H., & Chiu, E. (2020). Researchers, please take due care of the formal caregivers in nursing homes. *International Psychogeriatrics*, *32*(3), 311-313. https://doi.org/10.1017/S1041610220000290

Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*(4), 385-396.

Corcorran, M. A., Olin, S., Rani, G., Nasenbeny, K., Constantino-Shor, C., Holmes, C., Quinnan-Hostein, L., Solan, W., Snoeyenbos Newman, G., Roxby, A. C., Greninger, A. L., Jerome, K. R., Neme, S., Lynch, J. B., Dellit, T. H., & Cohen, S. A. (2021). Prolonged persistence of PCR-detectable virus during an outbreak of SARS-CoV-2 in an inpatient geriatric psychiatry unit in King County, Washington. *American Journal of Infection Control*, *49*(3), 293–298. https://doi.org/10.1016/j.ajic.2020.08.025

Costello, H., Walsh, S., Cooper, C., & Livingston, G. (2018). A systemic review and meta-analysis of the prevalence and associations of stress and burnout among

staff in long-term care facilities for people with dementia. *International Psychogeriatrics*, *31*(8), 1203-1216. https://doi.org/10.1017/S1041610218001606

Coy, M. J. (2019). Research methodologies: Increasing understanding of the world. *International Journal of Scientific and Research Publications*, *9*(1), 71-77. http://dx.doi.org/10.29322/IJSRP.9.01.2019.p8511

Cumyn, A., Ouellet, K., Côté, A.-M., Francoeur, C., & St-Onge, C. (2019). Role of researchers in the ethical conduct of research: A discourse analysis from different stakeholder perspectives. *Ethics & Behavior*, *29*(8), 621–636. https://doi.org/10.1080/10508422.2018.1539671

Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health*, *18*(41), 1-17. https://doi.org/10.1186/s12960-020-00469-9

Damiani, C., Mangone, M., Paoloni, M., Goffredo, M., Franceschini, M., Servidio, M., Pournajaf, S., Santilli, V., Agostini, F., & Bernetti, A. (2020). Trade-offs with rehabilitation effectiveness (REs) and efficiency (REy) in a sample of Italian disabled persons in a in post-acuity rehabilitation unit. *Annali Di Igiene: Medicina Preventiva e Di Comunita*, *32*(4), 327–335. https://doi.org/10.7416/ai.2020.2356

Deng, H., Zhuo, Y., Qi, X., Wu, H., Liu, Y., Li, J., & Jin, C. (2021). The role of personal biological resource in the job demands-control-support model: Evidence from stress reactivity. *Frontiers in Psychology*, *12*(658180), 1-13. https://doi.org/10.3389/fpsyg.2021.658180

Devers, K. J. & Frankel, R. M. (2000). Study design in qualitative research--2: Sampling and data collection strategies. *Education for Health, 13*(2), 263-271. https://doi.org/10.1080/13576280050074543

Dilig-Ruiz, A., MacDonald, I., Demery Varin, M., Vandyk, A., Graham, I. D., & Squires, J. E. (2018). Job satisfaction among critical care nurses: A systematic review. *International Journal of Nursing Studies*, *88*, 123-134. https://doi.org/10.1016/j.ijnurstu.2018.08.014

Duan, Y., Mueller, C. A., Yu, F., & Talley, K. M. (2020). The effects of nursing home culture change on resident quality of life in U. S. nursing homes: An integrative review. *Research in Gerontological Nursing*, *13*(4), 201-224. https://doi.org/10.3928/19404921-20200115-02

Ecker, S., Pinto, S., Sterling, M., Wiggins, F., & Ma, C. (2021). Working experience of certified nursing assistants in the greater New York City area during the COVID-19 pandemic: Results from a survey study. *Geriatric Nursing*, *42*(6), 1556–1561. https://doi.org/10.1016/j.gerinurse.2021.10.007

El Haj, M., Allain, P., Annweiler, C., Boutoleau-Bretonnière, C., Chapelet, G., Gallouj, K., Kapogiannis, D., Jean, R., & Boudoukha, A. H. (2020). Burnout of healthcare workers in acute care geriatric facilities during the COVID-19 crisis: An online based study. *Journal of Alzheimer's Disease*, *78*(2), 847-852. https://doi.org/10.3233/JAD-201029

Eltaybani, S., Noguchi-Watanabe, M., Igarashi, A., Saito, Y., & Yamamoto-Mitani, N. (2018). Factors related to intention to stay in the current workplace among long-

term care nurses: A nationwide survey. *International Journal of Nursing Studies, 80,* 118–127. https://doi.org/10.1016/j.ijnurstu.2018.01.008

Erdoğan, C., Doğan, S., Çakmak, R., Kizilaslan, D., Hizarci, B., Karaaslan, P., & Öz, H. (2020). Assessment of job satisfaction, work-related strain, and perceived stress in nurses working in different departments in the same hospital: A survey study. *Ain-Shams Journal of Anesthesiology*, *12*(1), 1–10. https://doi.org/10.1186/s42077-020-00084-9

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics, 5*(1), 1-4. https://doi.org/10.11648/j.ajtas.20160501.11

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analysis using G*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods, 41*(4), 1149-1160. https://doi.org/10.3758/BRM.41.4.1149

Fawaz, M., Anshasi, H., & Samaha, A. (2020). Nurses at the front line of COVID-19: Roles, responsibilities, risks, and rights. *The American Journal of Tropical Medicine and Hygiene (ASTMH), 103*(4), 1341-1342. https://doi.org/10.4269/ajtmh.20-0650

Funk, C., & Tyson, A. (2020, December 3). Intent to get a COVID-19 vaccine rises to 60% as confidence in research and development process increase. https://www.pewresearch.org/science/2020/12/03/intent-to-get-a-covid-19-vaccine-rises-to-60-as-confidence-in-research-and-development-process-increases/

Galdas, P. (2017). Revisiting bias in qualitative research: Reflections on its relationship with funding and impact. *International Journal of Qualitative Methods, 16*, 1-2. https://doi.org/10.1177/1609406917748992

Gaudenz, C., De Geest, S., Schwendimann, R., & Zúñiga, F. (2019). Factors associated with care workers' intention to leave employment in nursing homes: A secondary data analysis of the Swiss nursing homes human resources project. *Journal of Applied Gerontology*, *38*(11), 1537–1563. https://doi.org/10.1177/0733464817721111

Georgia Department of Public Health. (2023, February 22). GA DPH vaccine distribution dashboard. https://experience.arcgis.com/experience/3d8eea39f5c1443db1743a4cb8948a9c

George, D. & Mallery, P. (2022). *IBM SPSS statistics 27 step by step: A simple guide and reference* (17th ed.). Routledge.

Gibson, D. M., & Greene, J. (2020). State actions and shortages of personal protective equipment and staff in U. S. nursing homes. *Journal of the American Geriatrics Society*, *68*(12), 2721–2726. https://doi.org/10.1111/jgs.16883

Halperin, D. (2020). The association between work stressors, knowledge about aging, burnout, and job satisfaction among nursing home activity directors. *Activities, Adaptation & Aging*, *44*(1), 42–60. https://doi.org/10.1080/01924788.2019.1581023

Harrad, R., & Sulla, F. (2018). Factors associated with and impact of burnout in nursing and residential home care workers for the elderly. *Acta Biomedica, 89*(Suppl 7), 60-69. https://doi.org/10.23750/abm.v89i7-S.7830

Hassankhani, H., Parizad, N., Gacki-Smith, J., Rahmani, A., & Mohammadi, E. (2018). The consequences of violence against nurses working in the emergency department: A qualitative study. *International Emergency Nursing*, *39*, 20–25. https://doi.org/10.1016/j.ienj.2017.07.007

Hricová, M. (2020). The mediating role of self-care activities in the stress-burnout relationship. *Health Psychology Report*, *8*(1), 1–9. https://doi.org/10.5114/hpr.2019.89988

Hu, D., Kong, Y., Li, W., Han, Q., Zhang, X., Zhu, L. X., Wan, S. W., Liu, Z., Shen, Q., Yang, J., He, H.-G., & Zhu, J. (2020). Frontline nurses' burnout, anxiety, depression, and fear statuses and their associated factors during the COVID-19 outbreak in Wuhan, China: A large-scale cross-sectional study. *EClinicalMedicine*, *24*, 1-10. https://doi.org/10.1016/j.eclinm.2020.100424

Iftikhar, S. (2020). Comparison of perceived stress between nurses working in medical and psychiatric wards. *JPMA. The Journal of the Pakistan Medical Association*, *70*(11), 1952–1955. https://doi.org/10.5455/JPMA.25596

Jalilian, H., Shouroki, F. K., Azmoon, H., Rostamabadi, A., & Choobineh, A. (2019). Relationship between job stress and fatigue based on job demand-control-support model in hospital nurses. *International Journal of Preventive Medicine, 10*(56), 1–6. https://doi.org/10.4103/ijpvm.IJPVM_178_17

Junakovic, I. T., & Macuka, I. (2021). Job demands, job control, and social support as predictors of job satisfaction and burnout in Croatian palliative care nurses. *Archives of Industrial Hygiene and Toxicology*, *72*(3), 225-231. https://doi.org/10.2478/aiht-2021-72-3556

Kader, N., Elhusein, B., Chandrappa, N., Nashwan, A. J., Chandra, P., Khan, A. W., & Alabdulla, M. (2021). Perceived stress and post-traumatic stress disorder symptoms among intensive care unit staff caring for severely ill coronavirus disease 2019 patients during the pandemic: A national study. *Annals of General Psychiatry*, *20*(1), 1–8. https://doi.org/10.1186/s12991-021-00363-1

Kandelman, N., Mazars, T., & Levy, A. (2018). Risk factors for burnout among caregivers working in nursing homes. *Journal of Clinical Nursing*, *27*(1–2), e147–e153. https://doi.org/10.1111/jocn.13891

Karasek, R. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, *24*(2), 285-308. https://doi.org/10.2307/2392498

Karasek, R. A., Triantis, K. P., & Chaudhry, S. S. (1982). Coworker and supervisor support as moderators of associations between task characteristics and mental strain. *Journal of Occupational Behavior*, *3*(2), 181-200. https://doi.org/10.1002/job.4030030205

Kimball, S. (2023, January 30). WHO says COVID remains a global emergency but pandemic could near end in 2023. https://www.cnbc.com/2023/01/30/who-says-

covid-remains-a-global-emergency-but-pandemic-could-near-its-end-in-2023.html

Leontjevas, R., Knippenberg, I. A. H., Smalbrugge, M., Plouvier, A. O. A., Teunisse, S., Bakker, C., Koopmans, R. T. C. M., & Gerritsen, D. L. (2020). Challenging behavior of nursing home residents during covid-19 measures in the Netherlands. *Aging & Mental Health*, 25(7), 1314-1319. https://doi.org/10.1080/13607863.2020.1857695

Lin, L.-C., Huang, Y.-C., Carter, P., & Zuniga, J. (2021). Resilience among nurses in long term care and rehabilitation settings. *Applied Nursing Research, 62,* 1-6. https://doi.org/10.1016/j.apnr.2021.151518

Little, N., Welsh, P., & Sholar, A. (2021). Developing future public health leaders trained in long-term care administration. *Journal of Public Health Management and Practice: JPHMP*, *27*(2), E79–E86. https://doi.org/10.1097/PHH.0000000000001188

Liu, X., Zheng, J., Liu, K., Baggs, J. G., Liu, J., Wu, Y., & You, L. (2018). Hospital nursing organizational factors, nursing care left undone, and nurse burnout as predictors of patient safety: A structural equation modeling analysis. *International Journal of Nursing Studies*, *86*, 82–89. https://doi.org/10.1016/j.ijnurstu.2018.05.005

Maneschiold, P.-O. & Lucaci-Maneschiold, D. (2020). Nursing assistant's perceptions of the good work environment in municipal elderly care in Sweden- A focus group

study. *Journal of Health Organization and Management*, *35*(9), 163-177. https://doi.org/10.1108/JHOM-07-2020-0290

Mao, A., Cheong, P. L., Van, I. K., & Tam, H. L. (2021). "I am called girl, but that doesn't matter" -perspectives of male nurses regarding gender-related advantages and disadvantages in professional development. *BMC Nursing*, *20*(1), 24. https://doi.org/10.1186/s12912-021-00539-w

Marshall, A. (2022, April 4). Nursing continues to be a female-dominated field despite changes of gender norms. http://www.nicholsonstudentmedia.com/life/nursing-continues-to-be-a-female-dominated-field-despite-changes-of-gender-norms/article_8e9920e6-a542-11ec-a717-3fe50b06e14e.html

McCusker, K., & Gunaydin, S. (2015). Research using qualitative, quantitative or mixed methods and choice based on the research. *Perfusion*, *30*(7), 537-542. https://doi.org/10.1177/0267659114559116

McGarry, B. E., Grabowski, D. C., & Barnett, M. L. (2020). Severe staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic. *Health Affairs*, *39*(10), 1812-1821. https://doi.org/10.1377/hlthaff.2020.01269

McGilton, K. S., Stewart, S., Bethell, J., Chu, C. H., Mateos, J. T., Pastells-Peiró, R., Blanco-Blanco, J., Rodriguez-Monforte, M., Escrig-Pinol, A., & Gea-Sánchez, M. (2022). Factors influencing nurse assistants' job satisfaction in nursing homes in Canada and Spain: A comparison of two cross-sectional observational

studies. *Journal of Applied Gerontology: The Official Journal of the Southern Gerontological Society, 41*(1), 235–244. https://doi.org/10.1177/0733464820980567

Middleton, F. (2022, October 10). Reliability vs validity in research. Differences, types and examples. *Scribbr*. https://www.scribbr.com/methodology/reliability-vs-validity/

Miller, Z., & Seitz, A. (2023, January 30). President Biden to end COVID-19 emergencies on May 11. https://apnews.com/article/biden-united-states-government-district-of-columbia-covid-public-health-2a80b547f6d55706a6986debc343b9fe

Mishra, M. (2022, September 14). End of COVID pandemic is “in sight”- WHO chief. https://www.reuters.com/business/healthcare-pharmaceuticals/who-chief-says-end-sight-covid-19-pandemic-2022-09-14/

Molero Jurado, M., Pérez-Fuentes, M., Oropesa Ruiz, N. F., Simón Márquez, M., & Gázquez Linares, J. J. (2019). Self-efficacy and emotional intelligence as predictors of perceived stress in nursing professionals. *Medicina, 55*(6), 1-14. https://doi.org/10.3390/medicina55060237

Momentive. (2022). Survey monkey enterprise. *Survey Monkey*. https://www.surveymonkey.com/mp/enterprise/

Muhamad Robat, R., Mohd Fauzi, M., Mat Saruan, N., Yusoff, H. M. (2021). Why so stressed? A comparative study on stressors and stress between hospital and non-

hospital nurses. *BMC Nursing*, *20*(2), 1-10. https://doi.org/10.1186/s12912-020-00511-0

Muhawish, H., Salem, O. A., & Baker, O. G. (2019). Job related stressors and job satisfaction among multicultural nursing workforce. *Middle East Journal of Nursing*, *13*(2), 3-16. https://doi.org/10.5742MEJN.2019.93635

Najafi, F., Fallahi-Khoshknab, M., Ahmadi, F., Dalvandi, A., & Rahgozar, M. (2018). Antecedents and consequences of workplace violence against nurses: A qualitative study. *Journal of Clinical Nursing*, *27*(1–2), e116–e128. https://doi.org/10.1111/jocn.13884

National Institute for Occupational Safety and Health. (2014, June 6). *STRESS…At work.* Centers for Disease Control and Prevention. https://www.cdc.gov/niosh/docs/99-101/default.html

National Institute on Aging. (2017, May 1). *What is long-term care*? U. S. Department of Health and Human Services. https://www.nia.nih.gov/health/what-long-term-care

Navajas-Romero, V., Ariza-Montes, A., & Hernández-Perlines, F. (2020). Analyzing the job demands-control-support model in work-life balance: A study among nurses in the European context. *International Journal of Environmental Research and Public Health*, *17*(8), 1-17. https://doi.org/10.3390/ijerph17082847

Norful, A. A., Rosenfeld, A., Schroeder, K., Travers, J. L., & Aliyu, S. (2021). Primary drivers and psychological manifestations of stress in frontline healthcare workforce during the initial COVID-19 outbreak in the United States. *General*

Hospital Psychiatry, *69*, 20–26. https://doi.org/10.1016/j.genhosppsych.2021.01.001

Occupational Safety and Health Administration. (2016). *Guidelines for preventing workplace violence for healthcare and social service workers.* https://www.osha.gov/sites/default/files/publications/osha3148.pdf

Parse, R. R. (1999). Nursing: The discipline and the profession. *Nursing Science Quarterly, 12*(4), 275-276.

Pélissier, C., Charbotel, B., Fassier, J. B., Fort, E., & Fontana, L. (2018). Nurses' occupational and medical risks factors of leaving the profession in nursing homes. *International Journal of Environmental Research and Public Health, 15*(9), 1-14. https://doi.org/10.3390/ijerph15091850

Peter, K. A., Schols, J. M. G. A., Halfens, R. J. G., & Hahn, S. (2020). Investigating work-related stress among health professionals at different hierarchical levels: A cross-sectional study. *Nursing Open*, *7*(4), 969–979. https://doi.org/10.1002/nop2.469

Pioneer Network. (2011). Creating home: A guide to better care options for an aging America. https://www.pioneernetwork.net/wp-content/uploads/2016/10/Creating-Home-Consumer-Guide.pdf

Poey, J. L., Hermer, L., Cornelison, L., Kaup, M. L., Drake, P., Stone, R. I., Gayle, D. (2017). Does person-centered care improve residents' satisfaction with nursing home quality? *Journal of the American Medical Directors Association, 18(*11), 974-979. https://doi.org/10.1016/j.jamda.2017.06.007

Porcel-Galvez, A. M., Barrientos-Trigo, S., Bermudez-Garcia, S., Fernandez-Garcia, E., Bueno-Ferran, M., & Bandanta, B. (2020). The nursing stress scale-Spanish version: An update to its psychometric properties and validation of a short-form version in acute care hospital setting. *International Journal of Environmental Research and Public Health, 17*(22), 1-13. https://doi.org/10.3390/ijerph17228456

Portero de la Cruz, S., Cebrino, J., Herruzo, J., & Vaquero-Abellán, M. (2020). A multicenter study into burnout, perceived stress, job Satisfaction, coping strategies, and general health among emergency department nursing staff. *Journal of Clinical Medicine, 9*(4), 1-16. https://doi.org/10.3390/jcm9041007

Portoghese, I., Galletta, M., Leiter, M. P., Finco, G., d'Aloja, E., & Campagna, M. (2020). Job demand-control-support latent profiles and their relationships with interpersonal stressors, job burnout, and intrinsic work motivation. *International Journal of Environmental Research and Public Health, 17*(24), 1-21. https://doi.org/10.3390/ijerph17249430

Rahman, A. N., & Schnelle, J. F. (2008). The nursing home culture-change movement: Recent past, present, and future directions for research. *The Gerontologist, 48*(2), 142-148. https://doi.org/10.1093/geront/48.2.142

Rajamohan, S., Porock, D., & Chang, Y.-P. (2019). Understanding the relationship between staff and Job Satisfaction, Stress, Turnover, and Staff Outcomes in the Person-Centered Care Nursing Home Arena. *Journal of Nursing Scholarship, 51*(5), 560. https://doi.org/10.1111/jnu.12488

Rebekić, A. E., Lončarić, Z., Petrović, S., & Marić, S. (2016). Pearson's or Spearman's correlation coefficient- Which one to use? *Poljoprivreda, 21*(2), 47-54. http://dx.doi.org/10.18047/poljo.21.2.8

Rinaldi, E. A., & Riyanto, S. (2021). The effect of work motivation, work environment, and job satisfaction on organizational citizenship behavior and their impact on employee's performance of RSU Menteng Mitra Afia during the Covid-19 pandemic. *International Journal of Research in Business & Social Science, 10*(6), 101-110. https://doi.org/10.20525/ijrbs.v10i6.1293

Rosenman, R., Tennekoon, V., & Hill, L. G. (2011). Measuring bias in self-reported data. *International Journal of Behavioural & Healthcare Research, 2*(4), 320–332. https://doi.org/10.1504/IJBHR.2011.043414

Rostamabadi, A., Kargar Shouroki, F., Jalilian, H., Choobineh, A., Azmoon, H., & Shakerian, M. (2019). The relationship between work-related psychosocial factors and burnout among Iranian nurses: Job demand-control-support model. *La Medicina del Lavoro, 110*(4), 312-320. https://doi.org/10.23749/mdl.v110i4.8025

Şanlıtürk, D. (2021). Perceived and sources of occupational stress in intensive care nurses during the COVID-19 pandemic. *Intensive & Critical Care Nursing, 67,* 1-7. https://doi.org/10.1016/j.iccn.2021.103107

Safarpour, H, Sabzevari, S., & Delpisheh, A. (2018). A study on the occupational stress, job satisfaction and job performance among hospital nurses in Ilam, Iran. *Journal of Clinical and Diagnostic Research*, *12*(6), 1–5. https://doi.org/10.7860/JCDR/2018/27410.11573

Sarabia-Cobo, C., Pérez, V., de Lorena, P., Fernández-Rodríguez, Á., González-López, J. R., & González-Vaca, J. (2021). Burnout, Compassion Fatigue and Psychological Flexibility among Geriatric Nurses: A Multicenter Study in Spain. *International Journal of Environmental Research and Public Health*, *18*(14). https://doi.org/10.3390/ijerph18147560

Schlick, C. J. & Bentrem, D. J. (2019). Timing of palliative care: When to call for a palliative care consult. *Journal of Surgical Oncology*, *120*(1), 30-34. https://doi.org/10.1002/jso.25499

Sedgwick, P. (2013). Convenience sampling. *BMJ*, *347*, 1-2. https://doi.org/10.1136/bmj.f6304

Setia M. S. (2016). Methodology Series Module 3: Cross-sectional Studies. *Indian Journal of Dermatology*, *61*(3), 261–264. https://doi.org/10.4103/0019-5154.182410

Shanafelt, T., Ripp, J., & Trockel, M. (2020). Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic. *JAMA*, *323*(21), 2133–2134. https://doi.org/10.1001/jama.2020.5893

Shiri, S., Wexler, I., Marmor, A., Meiner, Z., Schwartz, I., Levzion Korach, O., & Azoulay, D. (2020). Hospice Care: Hope and Meaning in Life Mediate Subjective Well-Being of Staff. *American Journal of Hospice & Palliative Medicine*, *37*(10), 785–790. https://doi.org/10.1177/1049909120905261

Sierakowska, M.& Doroszkiewicz, H. (2022). Stress coping strategies used by nurses during the COVID-19 pandemic. *PeerJ, 10*, 1-19. https://doi.org/10.7717/peerj.13288

Snyder, R. L., Anderson, L. E., White, K. A., Tavitian, S., Fike, L. V., Jones, H. N., Jacobs-Slifka, K. M., Stone, N. D., & Sinkowitz-Cochran, R. L. (2021). A qualitative assessment of factors affecting nursing home caregiving staff experiences during the COVID-19 pandemic. *PloS One*, *16*(11), 1-15. https://doi.org/10.1371/journal.pone.0260055

Song, Y. Hoben, M., Norton, P., & Estabrooks, C. (2019). Association of work environment with missed and rushed care tasks among care aids in nursing home. *JAMA Network Open*, *3*(1), 1-13. https://doi.org/10.1001/jamanetworkopen.2019.20092

Sovold, L. E., Naslund, J. A., Kousoulis, A. A., Saxena, S., Qoronfleh, M. W., Grobler, C., & Munter, L. (2021). Prioritizing the mental health and well-being of healthcare workers: An urgent global public health priority. *Frontiers in Public Health, 9*(679397)1-12. https://doi.org/10.3389/fpubh.2021.679397

Sullivan, J. L., Engle, R. L., Tyler, D., Afable, M. K., Gormley, K., Schwartz, M., Adjognon, O., & Parker, V. A. (2018). Is variation in resident-centered care and quality performance related to health system factors in veterans health administration nursing homes. *The Journal of Health Care Organization, Provision, and Financing*, *55*, 1-11. https://doi.org/10.1177/0046958018787031

Sun, M., Mainland, B. J., Ornstein, T. J., Sin, G. L., & Herrmann, N. (2018). Correlates of nursing care burden among institutionalized patients with dementia. *International Psychogeriatrics*, *30*(10), 1549–1555. https://doi.org/10.1017/S104161021800025X

Surucu, L., & Maslakci, A. (2020). Validity and reliability in quantitative research. *Business & Management Studies: An International Journal (BMIJ)*, *8*(3), 2694-2726. http://dx.doi.org/10.15295/bmij.v8i3.1540

Sutharshan, N., Nufais, M. B., Shrirajanie, N., Abdul Munaff, M. H., & Kisokanth, G. (2021). Perceived work-related stress and coping strategies among critical care nurses – A preliminary study from Sri Lanka. *International Journal of Occupational Safety and Health*, *11*(2), 95-99. https://doi.org/10.3126/ijosh.v11i2.36139

Taylor, S., Landry, C. A., Paluszek, M. M., Fergus, T. A., McKay, D. & Asmundson, G. J. G. (2020). Development and initial validation of the COVID stress scales. *Journal of Anxiety Disorders*, *72*, 1-7. https://doi.org/10.1016/j.janxdis.2020.102232

The American Institute of Stress. (2019, September 25). 42 worrying workplace stress statistics. https://www.stress.org/42-worrying-workplace-stress-statistics

Theofanidis, D. & Fountouki, A. (2018). Limitations and delimitations in the research process. *Perioperative Nursing*, *7*(3), 155-162. https://doi.org/10.5281/zenodo.2552022

Thomas, K. S., Cote, D., Makineni, R., Intrator, O., Kinosian, B., Phibbs, C. S., & Allen, S. M. (2018). Change in VA community living centers 2004-2011: Shifting long-term care to the community. *Journal of Aging & Social Policy*, *30*(2), 93–108. https://doi.org/10.1080/08959420.2017.1414538

Trumello, C., Bramanti, S. M., Ballarotto, G., Candelori, C., Cerniglia, L., Cimino, S., Crudele, M., Lombardi, L., Pignataro, S., viceconti, M. L., & Babore, A. (2020). Psychological adjustment of healthcare workers in Italy during the COVID-19 pandemic: Differences in stress, anxiety, depression, burnout, secondary trauma, and compassion satisfaction between frontline and non-frontline professionals. *International Journal of Environmental Research and Public Health*, *17*(22), 1-13. https://doi.org/10.3390/ijerph17228358

Tselebis, A., Lekka, D., Sikaras, C., Tsomaka, E., Tassopoulos, A., Ilias, I., Bratis, D., & Pachi, A. (2020). Insomnia, perceived stress, and family support among nursing staff during the pandemic crisis. *Healthcare*, *8*(4), 1-9. https://doi.org/10.3390/healthcare8040434

U. S. Bureau of Labor Statistics. (2022, September 8a). *Occupational outlook handbook,* licensed practical and licensed vocational nurses. U. S. Department of Labor. https://www.bls.gov/ooh/healthcare/licensed-practical-and-licensed-vocational-nurses.htm

U. S. Bureau of Labor Statistics. (2022, September 8b). *Occupational outlook handbook,* nursing assistant. U. S. Department of Labor. https://www.bls.gov/ooh/healthcare/nursing-assistants.htm

U. S. Bureau of Labor Statistics. (2022, September 8c). *Occupational outlook handbook,* registered nurses. U. S. Department of Labor. https://www.bls.gov/ooh/healthcare/registered-nurses.htm

Virginia Department of Health. (2023, February 21). COVID-19 vaccine summary. https://www.vdh.virginia.gov/coronavirus/see-the-numbers/covid-19-in-virginia/covid-19-vaccine-summary/

Vogel, B., De Geest, S., Fierz, K., Beckmann, S., & Zuniga, F. (2017). Dementia care worker stress associations with unit type, resident, and work environment characteristics: a cross-sectional secondary data analysis of the Swiss Nursing Homes Human Resources Project (SHURP). *International Psychogeriatrics*, *29*(3), 441–454. https://doi.org/10.1017/S1041610216002027

Werner, R. M., Coe, N. B., & Qi, M. (2019). Patient outcomes after hospital discharge to home with home health care vs to a skilled nursing facility. *JAMA Internal Medicine*, *179*(5), 617-623. https://doi.org/10.1001/jamainternmed.2018.7998

White, E. M., Aiken, L. H., & McHugh, M. D. (2019). Registered nurse burnout, job dissatisfaction, and missed care in nursing homes. *Journal of the American Geriatrics Society*, *67*(10), 2065–2071. https://doi.org/10.1111/jgs.16051

World Health Organization. (2020, March 11). WHO director-general's opening remarks at the media briefing on COVID-19- 11 March 2020. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020

World Health Organization. (2020, September 17). Keep health workers safe to keep patients safe: WHO. https://www.who.int/news/item/17-09-2020-keep-health-workers-safe-to-keep-patients-safe-who

World Health Organization. (2022, October 1). Ageing and health. https://www.who.int/news-room/fact-sheets/detail/ageing-and-health

World Health Organization. (2023, February 23). WHO coronavirus (COVID-19) dashboard. https://covid19.who.int/

Xie, H., Cheng, X., Song, X., Wu, W., Chen, J., Xi, Z., & Shou, K. (2020). Investigation of the psychological disorders in the healthcare nurses during a coronavirus disease 2019 outbreak in China. *Medicine*, *99*(34), 1-5. https://doi.org/10.1097/MD.0000000000021662

Yin, Q., Sun, Z., Liu, T., Ni, X., Deng, X., Jia, Y., Shang, Z., Zhou, Y., & Liu, W. (2020). Posttraumatic stress symptoms of health care workers during the corona virus disease 2019. *Clinical Psychology & Psychotherapy*, *27*(3), 384–395. https://doi.org/10.1002/cpp.2477

Yurkofsky, M. & Ouslander, J. G. (2022, September 8). COVID-19: Management in nursing homes. *Up to Date.* https://www.uptodate.com/contents/covid-19-management-in-nursing-homes

Zakeri, M. A., Rafsanjanipoor, S. M., Zakeri, M., & Dehghan, M. (2021). The relationship between frontline nurses' psychosocial status, satisfaction with life and resilience during the prevalence of COVID-19 disease. *Nursing Open*, *8*(4), 1829–1839. https://doi.org/10.1002/nop2.832

Zeike, S., Ansmann, L., Lindert, L., Samel, C., Kowalski, C., & Pfaff, H. (2018). Identifying cut-off scores for job demands and job control in nursing professionals: A cross-sectional survey in Germany. *BMJ Open*, *8*(12), 1-9. https://doi.org/10.1136/bmjopen-2017-021366

Zhao, S., Yin, P., Xiao, L. D., Wu, S., Li, M., Yang, X., Zhang, D., Liao, L., & Feng, H. (2021). Nursing home staff perceptions of challenges and coping strategies during COVID-19 pandemic in China. *Geriatric Nursing*, *42*(4), 887–893. https://doi.org/10.1016/j.gerinurse.2021.04.024

Zip Recruiter. (2022). What is a health technician and how to become one? https://www.ziprecruiter.com/Career/Health-Technician/What-Is-How-to-Become

Zwakhalen, S. M. G., Hamers, J. P. H., van Rossum, E., Ambergen, T., Kempen, G. I. J. M., & Verbeek, H. (2018). Working in small-scale, homelike dementia care: Effects on staff burnout symptoms and job characteristics A quasi-experimental, longitudinal study. *Journal of Research in Nursing*, *23*(2–3), 109–122. https://doi.org/10.1177/1744987118757838

Appendix A: Institutional Review Board (IRB) Approval

IRB Materials Approved - LaCountess Hooks

IRB [redacted]
Mon 8/22/2022 6:57 PM
To: Lacountess Hooks [redacted]
Cc: [redacted]

1 attachments (17 KB)
Hooks Consent Form.docx;

Dear LaCountess Hooks,

This email is to notify you that the Institutional Review Board (IRB) has approved your application for the study entitled, "Occupational Stress in Long Term Care in Georgia and Virginia During the COVID-19 Pandemic."

Your approval # is 08-22-22-0150341. You will need to reference this number in your dissertation and in any future funding or publication submissions. Also attached to this e-mail is the IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include the IRB approval number and expiration date.

Your IRB approval expires on August 21, 2023 (or when your student status ends, whichever occurs first). One month before this expiration date, you will be sent a Continuing Review Form, which must be submitted if you wish to collect data beyond the approval expiration date.

Your IRB approval is contingent upon your adherence to the exact procedures described in the final version of the IRB application document that has been submitted as of this date. This includes maintaining your current status with the university. Your IRB approval is only valid while you are an actively enrolled student at Walden University. If you need to take a leave of absence or are otherwise unable to remain actively enrolled, your IRB approval is suspended. Absolutely NO participant recruitment or data collection may occur while a student is not actively enrolled.

If you need to make any changes to your research staff or procedures, you must obtain IRB approval by submitting the IRB Request for Change in Procedures Form. You will receive confirmation with a status update of the request within 10 business days of submitting the change request form and are not permitted to implement changes prior to receiving approval. Please note that Walden University does not accept responsibility or liability for research activities conducted without the IRB's approval, and the University will not accept or grant credit for student work that fails to comply with the policies and procedures related to ethical standards in research.

When you submitted your IRB application, you made a commitment to communicate both discrete adverse events and general problems to the IRB within 1 week of their occurrence/realization. Failure to do so may result in invalidation of data, loss of academic credit, and/or loss of legal protections otherwise available to the researcher.

Both the Adverse Event Reporting form and Request for Change in Procedures form can be obtained on the Tools and Guides page of the Walden website: [redacted]
Doctoral researchers are required to fulfill all of the Student Handbook's Doctoral Student Responsibilities Regarding Research Data regarding raw data retention and dataset confidentiality, as well as logging of all recruitment, data collection, and data management steps. If, in the future, you require copies of the originally submitted IRB materials, you may request them from Institutional Review Board.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

Appendix B: Informed Consent

Informed Consent

You are invited to complete an anonymous research study by a Walden University student as a part of my Walden dissertation. The purpose of this study will be to identify perceived stress and nursing stress in nursing home staff during the COVID-19 pandemic. You will be asked a series of questions and asked to select the answers that are most appropriate for you. The entire survey should take around 10-15 minutes to complete.

Study title: Occupational Stress in Long Term Care in Georgia and Virginia During the COVID-19 Pandemic
Doctoral student name: LaCountess Hooks
Doctoral student contact information: [redacted]

Volunteers must be:

- Registered Nurses (RNs)
- Licensed Practical Nurses (LPNs)
- Nursing Assistants (NAs)

Your role:

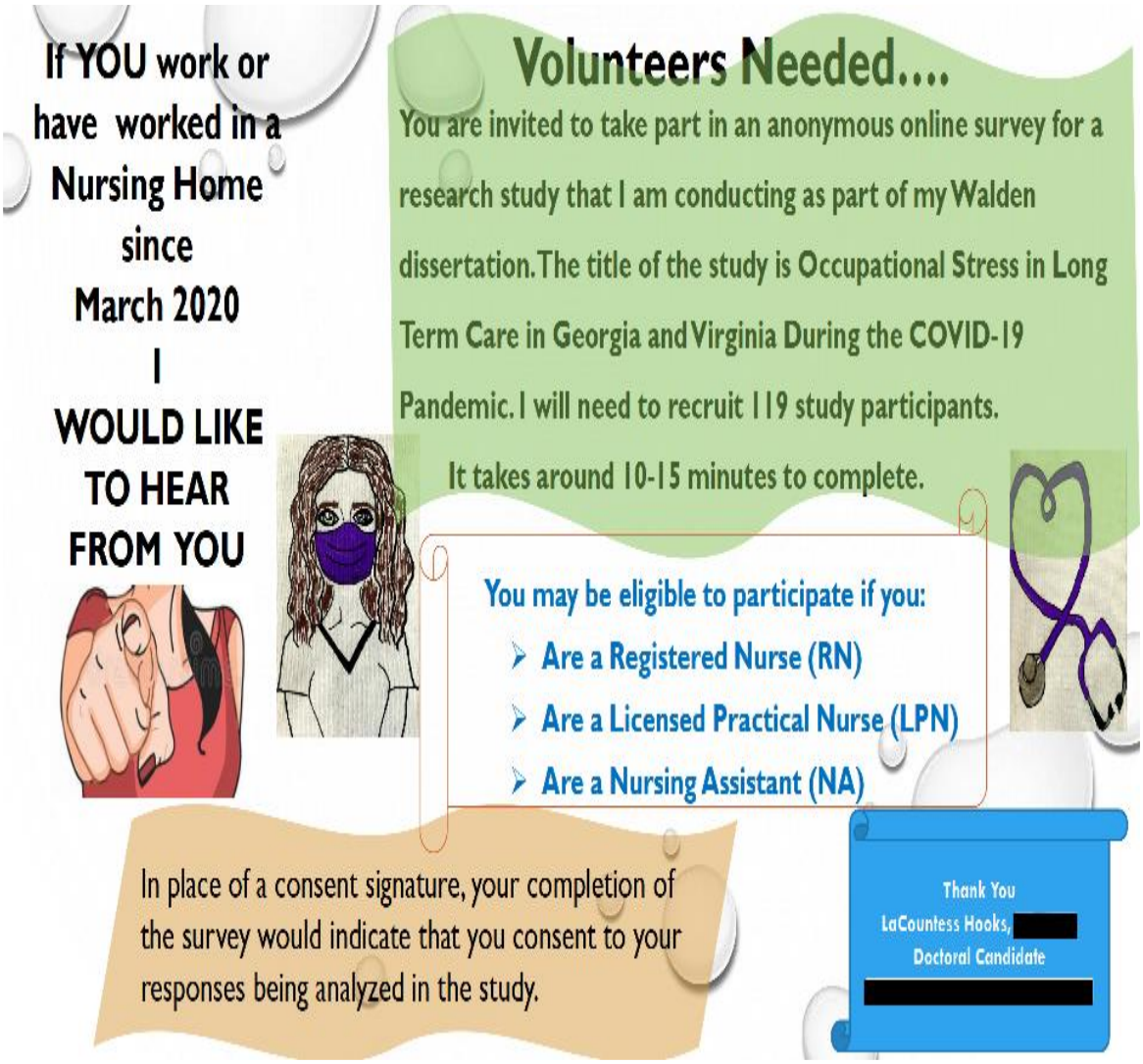
- You are not under any obligation to complete the survey
- You can end any time you wish
- Involves no more risk than daily life
- Involves no payment

Privacy and Data Storage:
To protect your privacy, the doctoral student will not collect, track, or store your identity or contact info. Your participation in the research study is completely anonymous. In place of a consent signature, your completion of the survey would indicate that you consent to your responses being analyzed in the study. Data will be kept secure by using password-protected devices and platforms. Data will be kept for a period of at least 5 years, as required by the university.

Use of your responses:
Your survey responses will be used for academic research purposes only. Once the doctoral student graduates, the study's results will be posted online in Scholarworks (a searchable publication of Walden University research).

Protecting You
[redacted] Walden University's approval number for this study is 08-22-22-0150341 and it expires on August 21, 2023.

Appendix C: Invitation



Appendix D: Permission to Use Perceived Stress Scale

PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS: If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

PERMISSION "FOR PROFIT" USE: If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

QUESTIONS ABOUT THE SCALE: Information concerning the PSS can be found at https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html **(click on scales on the front page)**. Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

TRANSLATIONS: The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.

Sheldon Cohen
Robert E. Doherty University Professor of Psychology
Department of Psychology
Baker Hall 335-D
Carnegie Mellon University
Pittsburgh, PA 15213

Appendix E: Permission to Use Nursing Stress Scale

RE: Permission to Use the Nursing Stress Scale

ANDERSON, JAMES [redacted]
Tue 7/12/2022 9:17 AM
To: Lacountess Hooks [redacted]

You have our permission to use the Nursing Stress Scale. It is available I the Journal of Behavioral Assessment, vol 3, no 1, 1981, pp. 11-23. Best wishes.
James G. Anderson, PhD

From: Lacountess Hooks [redacted]
Sent: Sunday, July 10, 2022 8:27 AM
To: [redacted]
Subject: Permission to Use the Nursing Stress Scale

Hello,
My name is LaCountess Hooks. I am currently a PhD student at Walden University. I am in the process of writing my dissertation proposal. The topic of my proposed study is *Occupational Stress in Long Term Care in Tennessee During the Pandemic*. Part of my study involves understanding nursing stress in nursing staff. I would like to use the Nursing Stress Scale in my study.
I am unable to locate a correspondence email for Ms. Gray-Toft and I am not sure if anything that I am seeing online is recent since the original article was published in 1981.

I want to make sure that I am taking the proper steps to gain permission from all owners and stakeholders of the scales that I would like to use in my study.

Please let me know if your permission is granted.

Thank you in advance,

LaCountess Hooks, [redacted]

Doctoral Candidate

Walden University

Appendix F: Permission to Use Nursing Stress Scale Short Version

MDPI Open Access Information and Policy

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Appendix G: Demographic Survey

Demographic Survey Inclusion Questions

1. **What is your discipline (position title)?**
    a) **Registered Nurse (RN)**
    b) **Licensed Practical Nurse (LPN)**
    c) **Nursing Assistant (NA)**
    d) **Other _____ (if the answer is other, then they are excluded from the survey, and do not continue)**
2. **Have you been working full time or part time in a nursing home setting (long term care) during the COVID-19 pandemic between March 2020 and now?**
    a) **Yes**
    b) **No (if the answer is no, then they are excluded from the survey, and do not continue)**
3. **What type of unit do you currently work on?**
    a) **Geriatric/psychiatric (geri-psych) Unit**
    b) **Dementia Unit**
    c) **Long-term Skilled Unit**
    d) **Rehabilitation (rehab) Unit**
    e) **Hospice Unit**
    f) **None of the Above**
4. **What state did you work in during the Pandemic?**
    a) **Georgia**
    b) **Virginia**
    c) **None of the above**

Demographic Survey (Continued)

The survey is anonymous and you do not have to fill in your name. Please answer the questions as honestly as you can. Some questions are multiple choice, please select only one answer to the multiple choice unless the question says to select more than one answer.

5. **How many years have you worked in the role of a RN, LPN, or NA? (enter only a number) _____**
6. **What is your age? (enter only a number) _____**
7. **What gender are you?**
    a) **Male**
    b) **Female**
    c) **Prefer not to disclose**
8. **What is your race?**
    a) **White or Caucasian**
    b) **Black or African American**
    c) **Hispanic or Latino**
    d) **Asian or Asian American**
    e) **Mixed Race or Other**

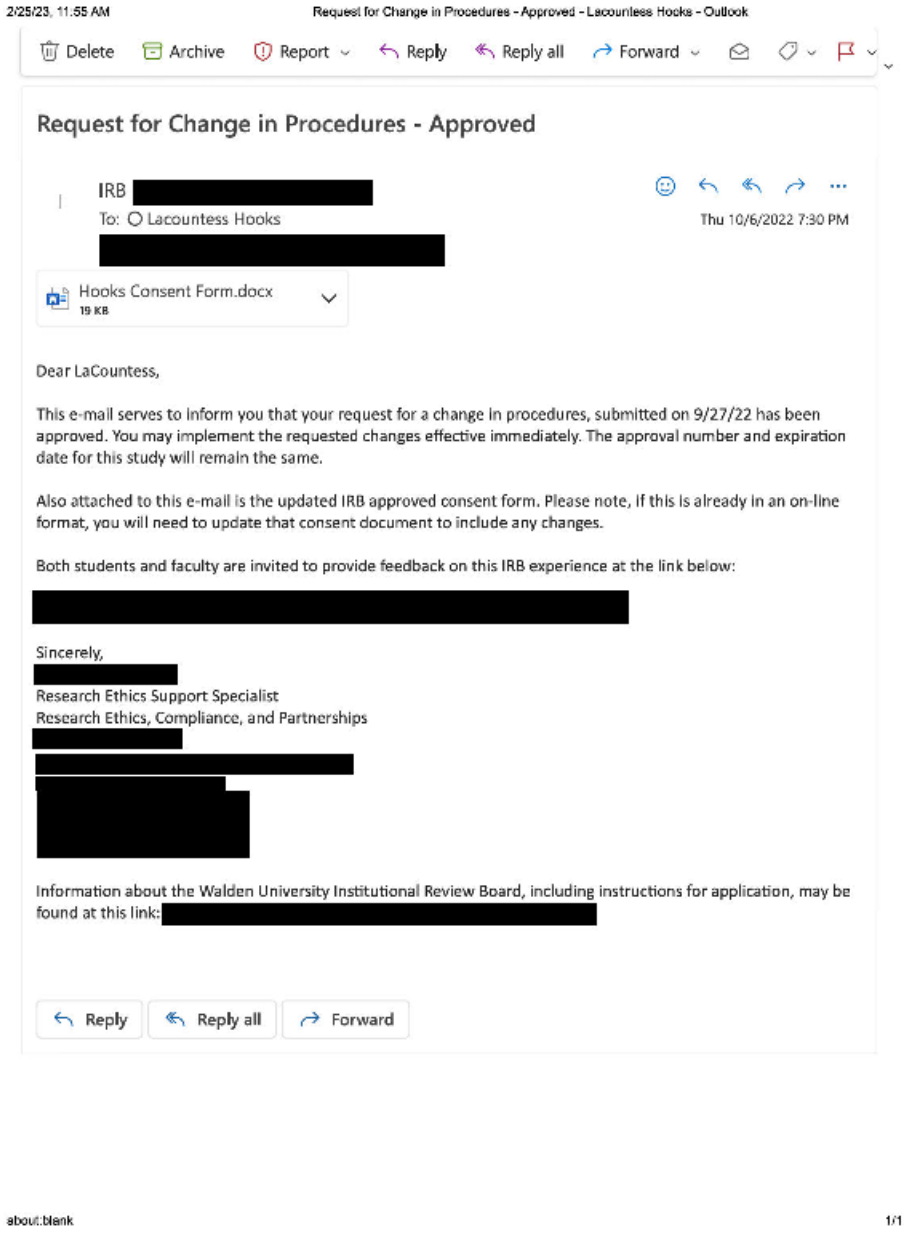
Appendix H: Perceived Stress Scale (PSS)

Perceived Stress Scale- 14-Item					
	Never	Almost Never	Sometimes	Fairly Often	Very Often
In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
In the last month, how often have you been angered because of things that were outside your control?	0	1	2	3	4
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4
In the last month, how often have you found yourself thinking about things that you have to accomplish?	0	1	2	3	4
	Never	Almost Never	Sometimes	Fairly Often	Very Often
In the last month, how often have you felt that you were on top of things?	4	3	2	1	0
In the last month, how often have you been able to control irritations in your life?	4	3	2	1	0
In the last month, how often have you felt that things were going your way?	4	3	2	1	0
In the last month, how often have you felt confident about your ability to handle your personal problems?	4	3	2	1	0
In the last month, how often have you dealt successfully with irritating life hassles?	4	3	2	1	0
In the last month, how often have you felt that you were effectively coping with important changes that were occurring in your life?	4	3	2	1	0
In the last month, how often have you been able to control the way you spend your time?	4	3	2	1	0

Appendix I: Short Form Nursing Stress Scale (NSS)

Nursing Stress Scale -11- Item				
Below is a list of situations that commonly occur on a hospital unit. For each item indicate how often, on your present unit, you have found the situations to be stressful. Your responses are strictly confidential (Gray and Toft, 1981).				
	Never	**Occasionally**	**Frequently**	**Very Frequently**
Lack of an opportunity to talk openly with other unit personnel about problems on the unit.	**0**	**1**	**2**	**3**
Lack of an opportunity to share experiences and feelings with other personnel in the ward/unit.	**0**	**1**	**2**	**3**
Disagreement concerning the treatment of a patient.	**0**	**1**	**2**	**3**
Feeling inadequately prepared to help with the emotional needs of a patient's family	**0**	**1**	**2**	**3**
Difficulty in working with a particular nurse (or nurses) on the unit.	**0**	**1**	**2**	**3**
Feeling inadequately prepared to help with the emotional needs of a patient	**0**	**1**	**2**	**3**
A physician ordering what appears to be inappropriate treatment for a patient.	**0**	**1**	**2**	**3**
Not enough time to provide emotional support to a patient.	**0**	**1**	**2**	**3**
Difficulty in working with a particular nurse (or nurses) within the ward.	**0**	**1**	**2**	**3**
Not enough time to complete all of my nursing tasks.	**0**	**1**	**2**	**3**
Not enough staff to adequately cover the unit.	**0**	**1**	**2**	**3**

Appendix J: IRB Approval for Change in Procedure



2/25/23, 11:55 AM Request for Change in Procedures - Approved - Lacountess Hooks - Outlook

Delete Archive Report Reply Reply all Forward

Request for Change in Procedures - Approved

IRB [redacted]
To: Lacountess Hooks
[redacted]
Thu 10/6/2022 7:30 PM

Hooks Consent Form.docx
19 KB

Dear LaCountess,

This e-mail serves to inform you that your request for a change in procedures, submitted on 9/27/22 has been approved. You may implement the requested changes effective immediately. The approval number and expiration date for this study will remain the same.

Also attached to this e-mail is the updated IRB approved consent form. Please note, if this is already in an on-line format, you will need to update that consent document to include any changes.

Both students and faculty are invited to provide feedback on this IRB experience at the link below:

[redacted]

Sincerely,
[redacted]
Research Ethics Support Specialist
Research Ethics, Compliance, and Partnerships
[redacted]

Information about the Walden University Institutional Review Board, including instructions for application, may be found at this link: [redacted]

Reply Reply all Forward

about:blank 1/1