EXPLORING THE RELATIONSHIP BETWEEN STAFFING AND LONG-TERM CARE WORKER MENTAL HEALTH

by

Matthew Trombley

Liberty University

A Dissertation Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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Abstract

This research delves into the relationship between staffing levels during a crisis in the healthcare workforce and the mental well-being of long-term care workers, with a specific focus on variables such as burnout, compassion fatigue, and compassion satisfaction. With increasing workforce shortages, the attention to providing quality care during this tumultuous period has become increasingly urgent. There has been scarce empirical research that has explicitly sought to comprehend the connection between staffing levels and the mental health of long-term care professionals. This study was designed as a non-experimental, quantitative correlational investigation, aiming to understand the intricate dynamics between patient-to-staff ratios in long-term care and the mental well-being of direct care healthcare workers. 86 participants completed an online survey via SurveyMonkey with the use of the assessment, the ProQOL V. A Spearman Correlation was utilized to analyze the data. This study found no significant relationship between patient-to-staff ratios and healthcare worker burnout. Additionally, no significant relationship was identified between patient-to-staff ratios and compassion satisfaction nor patient-to-staff ratios and compassion fatigue. While no significant outcomes can be drawn from the data, this study underscores the need for further research to gain a deeper understanding of how the ongoing staffing crisis in long-term care affects the mental health and overall well-being of healthcare workers. It is hoped that this research will serve as a foundation for future investigations, offering valuable insights and support for addressing the challenges faced in long-term care settings.

Keywords: MBI, Burnout, ProQOL V, Compassion Fatigue, Long-Term Care, Healthcare, Healthcare workers, Nurses, Nursing

Dedication

To my loving family,

Your unwavering support and understanding have been a cornerstone in my life. Through the early years of making education a vital focus and all the late nights and missed moments. Your encouragement and belief in my abilities have fueled my determination. This dissertation is dedicated to each one of you, for being the wind beneath my wings.

With heartfelt gratitude,

Matthew Trombley

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I am grateful for the collective wisdom, encouragement, and countless hours invested by both Dr. Green and Dr. Spiridigliozzi to help me reach this important milestone. Their guidance and support have been indispensable, and I am truly fortunate to have had the opportunity to work with such dedicated and knowledgeable individuals.

Sincerely,

Matthew Trombley

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CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

The long-term healthcare sector has faced several obstacles, ranging from over-regulation to restricted resources (Centers for Medicare and Medicaid Services, 2022). While many of these issues have passed, one that has upset much of the sector and resulted in multiple site closures in recent years is staffing. With the last of the baby-boomer generation nearing retirement age by 2030, the United States' long-term care industry was already under strain and under-resourced without the added exacerbation of the COVID-19 pandemic (America Counts Staff, 2022a; Knickman & Snell, 2002). This unprecedented situation has placed enormous pressure on the long-term care industry, resulting in lower quality care, high turnover rates, and even facility closures (Centers for Medicare and Medicaid Services, 2022). This study examines the importance of addressing staffing shortages in the long-term care sector and provides recommendations for improving the quality of care provided to vulnerable populations in these settings.

Background

This research study focuses on the long-term care industry, which has recently faced several challenges, such as the COVID-19 pandemic and a staffing crisis in the United States (AHCA NCAL, 2022). The industry provides care to some of the nation's most vulnerable individuals, including those who require round-the-clock care from a direct-care provider (National Institute of Aging, 2019). The long-term care industry presents a unique care structure unseen in many of the nation's healthcare settings, including acute care, in which care is only provided for a few hours to a few weeks; in long-term care, care can be provided for years, even decades. This type of care provides a unique opportunity for direct care providers to connect with

those they care for and learn their personal preferences and choices. The connection that develops over the years has lasting and impacting effects on those providing the care.

Long-Term Care Industry – Nursing Homes

In the long-term care industry, there is a wide range of individuals who receive care, including those with severe dementia, physical disabilities, and even mobility and speech challenges, as noted by the Federal Centers for Disease Control and Prevention (CDC) (Centers for Disease Control and Prevention, 2022). There were over 1.7 million licensed long-term care beds in the United States, serving nearly 10 million people in 2017 and 2018, expecting to grow drastically by 2050. Additionally noted by the CDC, there were over 660,000 full-time equivalents (FTEs) of staff providing care in the long-term care nursing home industry at the time of their study. These staff members provided, on average, 2.85 hours of care per patient/resident per day, with numbers varying dramatically depending on the resident's care needs and the comorbidities they may have.

Nursing homes are home to a diverse group of individuals in the long-term care industry who require diverse types of care, each presenting a wide range of potential diagnoses and various combinations of comorbidities (Centers for Disease Control and Prevention, 2022). Between 2017 and 2018, the CDC reported that 49.1 percent of individuals in nursing homes have a diagnosis of Alzheimer’s or dementia with an additional primary or secondary diagnosis of arthritis, chronic kidney disease, chronic obstructive pulmonary disorder (COPD), depression, diabetes, heart disease, hypertension, and even osteoporosis to name some of the leading diagnosis.

Numerous services are provided to residents in these settings and can range from basic reminding or cueing to total care, including feeding assistance and physical movement (Centers

for Disease Control and Prevention, 2022). Some of the services provided in the nursing home setting are social worker services, mental health and counseling, therapeutic and skilled nursing, pharmacy, and even hospice services. Non-clinical services are also provided, including maintenance, housekeeping, laundry, and food and dining services. As noted above, the residents of nursing home facilities may need some or all these services being provided. However, one thing is sure, the individuals receiving care can no longer maintain their care or needs at home.

United States Healthcare

The long-term care industry has been noted to have extreme fluctuations in their staffing levels, short staffing on the weekends, and often below the standards that are set forth by the Centers for Medicare and Medicaid Services, putting patients at risk of harm and poor-quality care (Geng et al., 2019). According to a report by the National Institute on Aging (2017), the number of Americans aged 65 and older is expected to double to nearly 100 million by 2060, representing approximately 24% of the total population. This demographic shift will pressure the healthcare system significantly, particularly in the long-term care industry. In recent years it has been shown that there is a higher risk of burnout, emotional exhaustion, and even detrimental effects on physical health in the long-term care industry for staff when compared to other industries (Costello et al., 2019; Rapp et al., 2021).

The United States healthcare system is primarily funded by private insurance, public insurance programs like Medicare and Medicaid, and out-of-pocket payments (Genworth Cost of Care Survey, 2022). The cost of long-term care can be high, with the average cost of a nursing home exceeding $100,000 per year. These excessive costs, coupled with the staffing crisis, have decreased the quality of care and negatively impacted patient outcomes.

The COVID-19 pandemic has further highlighted the healthcare system's challenges, particularly in the long-term care industry (America Counts Staff, 2022b; Centers for Disease Control and Prevention, 2022; Knickman & Snell, 2002; Liu & McGinnis, 2021). The pandemic has increased demand for long-term care services, worsened staffing shortages, and highlighted the need for improved infection control measures in long-term care facilities (Centers for Disease Control and Prevention, 2022; Knickman & Snell, 2002; Liu & McGinnis, 2021). As the healthcare system continues to evolve, it is essential to address these challenges and work towards supplying quality, accessible, and affordable care for all Americans, including those in long-term care.

Nursing Home Demand Statistics

Nursing homes struggle to attract and retain enough personnel to satisfy demand due to the low quality of Certified Nursing Assistant (CNA) positions (PHI National, 2019). Continued shifts in demography may worsen these staffing issues as limited requirements of formal education and regulation varying from state to state on CNA training and certification programs provide an attractive avenue for individuals with diverse cultural backgrounds and language barriers. Even with the expectation from their recent study that nursing homes are predicted to add 59,000 CNA positions between 2014 and 2024, there still may not be enough.

The rapidly expanding number of older adults will drive demand even higher in the future years: by 2050, the population of individuals over the age of 65, who account for 85 percent of nursing home residents, is expected to double, from 47.8 million to 88 million (PHI National, 2019). Over the same period, the number of people over 85, who account for nearly half (42 percent) of nursing home patients, is predicted to more than triple, from 6.3 million to 19 million, only adding to the ever-growing staffing shortages.

Problem Statement

The staffing crisis in the long-term care industry is a significant concern, particularly for registered nurses (RN) and CNAs, who constitute a substantial proportion of nursing home workers (America Counts Staff, 2022b; Centers for Disease Control and Prevention, 2022; Knickman & Snell, 2002). The crisis has been exacerbated by the aging baby boomer population and the recent pandemic, leading to poor working conditions, high stress levels, considerable risk, and little rest for healthcare workers. These conditions are associated with potential mental health challenges such as burnout, exhaustion, and compassion fatigue (Shanafelt et al., 2015; Shanafelt & Boone, 2016). A review of 1,400 articles with 335 articles that met the appropriate criteria was completed. This review identified limited representation of empirical research that has explored the relationship between the staffing crisis and the mental health of long-term care healthcare workers leaving a gap within the current research (Towers et al., 2019).

This study aimed to fill this gap by examining the relationship between the current staffing crisis on the mental health of long-term care healthcare workers in the United States. This study intended to identify the needs of healthcare workers affected by the staffing crisis and potentially required necessary support to enable them to continue performing their duties safely and effectively. It also explored the barriers to resolving the staffing crisis, such as access to college and schooling resources and mental health services (PHI National, 2019).

The study's findings will provide insight and clarity on the mental health concerns of long-term care healthcare workers and guide future research to address these concerns. Furthermore, the study's outcomes expect to provide direction for federal grants and resources to support long-term care workers and nursing homes in enhancing mental healthcare and resources (PHI National, 2019).

Purpose of the Study

The purpose of this non-experimental, correlational quantitative study was to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction.

Research Question and Hypotheses

Research Questions

RQ1: What is the relationship between staffing ratios and long-term care healthcare worker compassion fatigue?

RQ2: What is the relationship between staffing ratios and long-term care healthcare worker burnout?

RQ3: What is the relationship between staffing ratios and long-term care healthcare worker compassion satisfaction?

Hypotheses

Hypothesis 1: There is a negative relationship between staffing ratios and healthcare worker compassion fatigue.

Hypothesis 2: There is a negative relationship between staffing ratios and healthcare worker burnout.

Hypothesis 3: There is a positive relationship between staffing ratios and healthcare worker compassion satisfaction.

Assumptions and Limitations of the Study

Assumptions

This study assumed that the participants in the study provided truthful and comprehensive responses to each question. The study also assumed the existence of a causal relationship

between the independent variable and the dependent variables. The measures used in this study are assumed to be reliable and valid, as they have an established history of use in similar studies and have demonstrated appropriate psychometric properties (Stamm, 2010). These assumptions formed the foundation of the study and informed the research design and data analysis, and their accuracy was carefully monitored throughout the study.

Limitations

Quantitative research can only take a singular view of phenomena and does not consider the variances between thoughts, feelings, and emotions as they change throughout time (Rahman, 2016). Further adding to this are the limitations of the self-reported data; this study was self-reported data and may be subject to biases (Mullinix, 2015). It is noted that the data may not be generalizable to other similar populations. Furthermore, due to the access of potential populations for sampling, sampling convenience was a limitation of this study (Emerson, 2015; Mullinix, 2015). Further discussion of confirmed limitations is discussed in Chapter 5.

Theoretical Foundations of the Study

The theoretical foundation for this study to review healthcare workers' mental health in long-term care settings during a staffing crisis is Stamm's (2010) Theory of Compassion Satisfaction and Fatigue. According to Stamm's theory on compassion fatigue and satisfaction, people who work in professions that require frequent interactions with people who have experienced trauma or frequently deal with stressful situations may experience psychological exhaustion and a decreased ability to empathize with others, a condition known as secondary traumatic stress also known as compassion fatigue. Many professionals that indicated to be affected by these concerns are healthcare professionals or first responders, as they often deal with trauma situations, individuals, and stressful environments. Stamm's findings indicate that

individuals with high levels of compassion fatigue may also have low work satisfaction, burnout, and secondary traumatic stress. However, according to Stamm's idea, these people may also experience high amounts of compassion satisfaction or the happy emotions and experiences that arise from helping others.

Many institutions have been forced to expand resident care assignments for direct care personnel to provide essential care without adding more personnel (Abelson & Creswell, 2021). As of a recent survey conducted by the American Health Care Association and National Centers for Assisted Living (2021), 75% of long-term care institutions are in severe staffing scenarios because of the pandemic, with nearly 80% stating that their current staffing is less than pre-pandemic levels. In acute care settings, nurses who are burned out, weary, and exhausted have shown to provide poor-quality treatment, abuse, and neglect (Kakeman, 2021). Previous research has shown no indication of a connection in the long-term care context. This study aims to provide substantiating results to help provide immediate assistance to the residents and patients being cared for. Employees could also benefit from developing an awareness of the consequences of short staffing for their mental health.

Individuals working in healthcare, are doing the work of God as they provide compassion and care to those less fortunate during that time of need (*New International Bible*, 1978/2011, Matthew 14:14). The consistent acts of kindness, empathy, and caring that is provided by long-term care healthcare workers undeniably exemplifies those teachings in Matthew 14:14, Mark 1:40-41, and Luke 7:12-15 (*English Standard Version Bible*, 2001). While the Bible does not explicitly utilize the terminology for compassion fatigue, compassion satisfaction, and burnout there are several mentions of these themes throughout. Furthermore, scripture also provides guidance and direction on how to address or overcome some of these challenges and provides a

focus on understanding, self-reflection, and self-healing (*English Standard Version Bible*, 2001, 1 Kings 19:1-21). These foundational themes provide guidance and direction for this study and its focus on the mental health and well-being of long-term care healthcare workers. Recognizing that maintaining well-being is imperative to effectively caring for others.

Definition of Terms

The following is a list of definitions of terms that are used in this study:

Burnout – A state of physical, emotional, and mental exhaustion caused by prolonged exposure to chronic stress and work-related demands (Stamm, 2010).

Compassion Fatigue – Emotional exhaustion and physical and emotional symptoms that may result from providing care to suffering patients, such as patients in long-term care facilities (Stamm, 2010).

Compassion Satisfaction – The positive emotional and psychological effects of providing care to others, such as a sense of accomplishment, personal reward, and fulfillment (Stamm, 2010).

COVID-19 Pandemic – A global outbreak of a novel coronavirus strain first identified in Wuhan, China, in December 2019, which caused a widespread pandemic, and most health systems have since been overwhelmed (Centers for Disease Control and Prevention, 2022).

Direct Care – The direct hands-on patient care, such as bathing, feeding, and dressing, provided to individuals (Centers for Medicare and Medicaid Services, 2022).

Direct Care Provider – The designations of the individuals providing direct patient care. This includes Registered Nurses (RN), Licensed Practical Nurses (LPN), Licensed Vocational Nurses (LVN), and Certified Nursing Assistants (CNA); Centers for Medicare and Medicaid Services, 2022).

Long-Term Care – The provision of extended personal care that includes support with everyday tasks, such as bathing, dressing, grooming, and eating, for individuals who have a chronic or ongoing health condition or impairment that cannot be cared for at home or is not appropriate to be treated at a higher level of care (Centers for Medicare and Medicaid Services, 2018).

Staffing Crisis – The inability of a long-term care organization to meet the demands for optimal staffing levels based on evidence-based practices (U.S. Department of Health and Human Services, 2019).

Significance of the Study

This study explored the possible negative implications of staffing shortages in the long-term care market. While this study does not agree with Stamm's Theory of Compassion Fatigue and Satisfaction (2010), the study does provide information and understanding of the current null results and provides a basis for future studies for revising hypotheses, reviewing sample populations, or geographical locations to identify a few areas of opportunity. This study intends to assist long-term care organizations, state and federal agencies and programs, in developing better insight into the intricacies of long-term care and beginning conversations around mental wellness for long-term care healthcare workers. Additionally, to assist in access to information for these stakeholders to develop potential resources that can be provided to address potential negative impacts such as increased short staffing, lowered patient care quality metrics and the increased costs associated with these challenges such as training programs and mental health and well-being resources. Furthermore, to pave the way for future empirical research in critical areas of the limitedly known long-term care industry and nursing homes.

Other potential outcomes include using the results from this study to aid mental health organizations in procuring grants and government funding to improve their long-term care

initiatives. Grants are currently not available that provide mental health or staffing resources to support long-term care staff. Recommendations are made for future research opportunities and implications.

Summary

The present constraints that the pandemic has imposed on the long-term care industry have worsened the pre-pandemic difficulties of managing nursing facilities (Abelson & Creswell, 2021). With an increasing number of individuals retiring over the next decade, the long-term care healthcare system is under pressure to provide adequate staffing levels, quality treatment, and access to enough physical infrastructure to house individuals needing care (Abelson & Creswell, 2021; Centers for Disease Control and Prevention, 2022; U.S. Department of Health and Human Services, 2019).

In addition to the staffing challenges faced in the long-term care industry, a unique care structure is provided in this environment (AHCA NCAL, 2022; National Institute of Aging, 2019). Residents are cared for, at times, for years and even decades with potentially severe disabilities and diagnoses that can result in the total care of a resident. With this unique care structure coupled with high demands, high-stress situations, and the staffing crisis, mental health difficulties such as compassion fatigue, compassion satisfaction, exhaustion, and burnout could occur, as have been identified in acute care settings. At the same time, little empirical research has been conducted in the long-term care sector. Outcomes have been identified in other healthcare sectors that indicate a potential correlation between poor working conditions, high stress levels, and considerable risk to healthcare workers' mental and physical health. This study seeks to examine the current staffing shortage's effects on long-term care staff members' mental health and their quality of life due to potential mental health challenges.

The next chapter will focus on the current information and outcomes that are known about each of the variables addressed in this study. Chapter 2 will review the critical topics, including compassion fatigue, compassion satisfaction, and burnout. An additional review will be included to further an understanding of the climate and environment, including topics of the roles associated with long-term care workers, the long-term care industry, and reflection of findings in the acute care sector of the United States healthcare system.

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CHAPTER 2: LITERATURE REVIEW

Overview

The procedures employed to carry out the literature review for this research were defined, along with the pertinent data that was discerned. Moreover, this chapter provides an overview of the contemporary knowledge that exists, ascertained through a comprehensive literature review. Additionally, a detailed rationale is provided for the biblical understanding of this study through a Christian worldview.

Description of Search Strategy

The process of identifying the literature was characterized by a rigorous and thorough approach underpinned by a set of carefully crafted selection criteria. The online search tool provided by the Jerry Farwell Library at Liberty University exposes a search user to numerous databases while applying search criteria. To retrieve relevant peer-reviewed articles, the search strategy focused on keywords deemed most likely to yield relevant results. Specifically, the search terms were burnout, compassion fatigue, compassion satisfaction, long-term care, and nursing home*, as seen in Appendix A.

This search strategy aimed to retrieve articles published in English in 2018 or later that met the inclusion criteria in the study. The initial search generated several articles, with over 1,400 articles identified. However, the search was further refined by applying strict evaluation criteria utilizing proximity search techniques to include AND, OR, and NOT to ensure only articles that addressed burnout, compassion fatigue, or compassion satisfaction among direct care providers (RN, LPN, CNA) in long-term care organizations was included. Results that included acute or hospital in the article title were excluded from the results. This secondary evaluative criterion resulted in 335 articles that met all the above criteria.

To conduct a biblical review, the search strategy employed a word study that sought to identify articles on burnout, compassion, care, and fatigue. A similar process to the literature review was utilized with the incorporation of the operators such as AND, OR, and NOT. Each theme was reviewed with the AND operator with Bible as well as Bible perspective. Identified articles and scripture with appropriate themes were reviewed with any potential relation to compassion fatigue, compassion satisfaction, and burnout. This approach ensured that the review was comprehensive and that all relevant articles were considered, thus enhancing the study's overall quality and rigor.

Review of Literature

Staffing shortages and attrition increased nursing facility staffing difficulties during the pandemic, particularly for those providing direct care, those as RNs, LPNs, LVNs, and CNAs (Denny-Brown, 2021). Some nurses and CNAs resigned due to historically low pay, poor working conditions, and the considerable danger of COVID-19 exposure. During the pandemic, the nursing home workforce experienced extra challenges due to a lack of critical services, such as childcare coverage and mental health support, which compounded staff shortages. The need for standardized national testing strategies, test kit supply, and cost-coverage regulations slowed the early testing of residents and nursing care personnel, further adding to the burden of the long-term care workers. This delay suppressed the awareness of the hazards of COVID-19 transmission in the most fragile and potentially affected population of patients.

A healthcare staffing crisis occurs when an organization cannot satisfy the demands for optimal staffing levels based on evidence-based practices (Minnesota Department of Health, 2022). The precise definition of a staffing crisis varies by industry and even by state within the same sector, as the Centers for Medicare and Medicaid Services only specifies that the amount of

staffing required should satisfy the demands of the patients (Centers for Medicare and Medicaid Services, 2008). Many states have stricter standards than this definition, putting an extra burden on medical institutions to satisfy the criteria of minimum staffing ratios.

According to Hegarty et al. (2022), the suggested staffing ratios for acute care settings are 1:6; however, the State of Maine classifies staffing levels as 1:5 in the long-term care context (Maine Department of Health and Human Services, 2022). The staffing ratios are calculated based on the number of direct-care staff and the resident census at midnight. To fulfill these ratios with a limited candidate pool, many nurses, CNAs, and other long-term care workers have had to work multiple shifts, overtime, and nonstop for extended periods (Abelson & Creswell, 2021).

Direct Care Providers in the United States

Direct care providers, such as nurses, CNAs, and personal care aides, play a vital role in the long-term care workforce in the United States (Reichel, 2020). They provide care for older adults and individuals with disabilities who require assistance with activities of daily living. According to a report by the Harvard Kennedy School, there were approximately 4.4 million direct care workers in the United States in 2016, projected to increase by 41% by 2026 (2019).

According to a report by the National Institute for Occupational Safety and Health (2018), direct care workers have higher injury and illness rates than workers in other industries and experience a higher turnover rate. In addition, caring for individuals with complex medical needs and comorbidities, uniquely for extended periods, can take a psychological toll on direct care providers, which is suggested to lead to stress, burnout, and compassion fatigue.

A study published in the Journal of Gerontological Nursing found that nursing home staff who reported higher stress levels had higher rates of burnout and lower job satisfaction (Brownie

et al., 2014). Low wages and limited opportunities for career advancement can also contribute to job dissatisfaction and turnover among direct care providers (Kaiser Family Foundation, 2019). The Kaiser Family Foundation's recent report found that in 2019, the median hourly wage for CNAs in long-term care facilities was $13.38, and 47% of nursing assistants worked part-time.

Addressing the challenges faced by direct care providers is crucial for ensuring high-quality care for older adults and individuals with disabilities in long-term care settings (National Academies of Science, Engineering, and Medicine, 2016). Efforts to improve working conditions, increase wages and benefits, and provide career advancement and continuing education opportunities are essential. In addition, policy changes supporting the long-term care workforce can help address direct care providers' challenges.

RNs in The United States

In a review of the staff in the long-term care industry, the American Association of Nursing noted that there are 4.2 million RNs in the United States, making up the most extensive group of healthcare workers (2022). Furthermore, the American Association of Nursing notes a projected increase in demand of 203,000 new nurses annually from 2021 through 2031 to keep up with the growing needs of the ever-aging population, as noted above. The current and future demands outweigh the projected supply of nurses in the coming years.

Several challenges have been noted in this supply shortage, from ability-tenured nurses retiring to colleges not having enough resources, teachers, or facilities to enroll new students in programs for developing new nurses (Massey, 2019). As Massey noted in a recent study, 80,000 applicants to college nursing programs needed to be turned away due to these challenges. These may not be the only challenges to providing nurses to the long-term care industry though they have drastically impacted the number of resources available.

The role of nurses in the long-term industry varies drastically from management and operations to direct patient care and specialty services such as respiratory, restorative, infection prevention and control, or even staffing education (Kovner et al., 2020). While these roles vary drastically, each requires an individual to work with a large population of patients under elevated levels of stress and high regulation and is currently challenged by minimal staffing levels where many of these roles remain empty with job postings advertised for months on end.

Many studies have investigated the prevalence and negative consequences of burnout and compassion fatigue among RNs in acute care settings (Lombardo & Eyre, 2011; Shanafelt et al., 2015; Zang et al., 2018). According to Shanafelt et al. (2015), burnout is a widespread problem among RNs, with 39% expressing significant burnout. Another study discovered that compassion fatigue is frequent among nurses in acute care settings, with 86% reporting moderate to high levels (Lombardo & Eyre, 2011). Burnout and compassion fatigue have detrimental consequences for the nurse and the patient.

Burnout, for example, has been related to increased medical mistakes and poor patient care quality (Shanafelt et al., 2015). Compassion fatigue has been related to lower job satisfaction and greater turnover risk among nurses (Lombardo & Eyre, 2011).
Various circumstances cause burnout and compassion fatigue among RNs in acute care settings. Long work hours, a heavy workload, insufficient personnel, exposure to traumatic situations, and a lack of support from coworkers and superiors are examples of these though short staffing was a common theme among the findings (Lombardo & Eyre, 2011; Shanafelt et al., 2015).

CNAs in The United States

The number of CNAs needed to meet the demands of 1.7 million patients who need care in over 15,600 nursing homes throughout the United States far outweighs the total number of

CNAs available (Centers for Disease Control and Prevention, 2022). The most recent numbers identified that roughly 612,000 CNAs are working in long-term care facilities (PHI National, 2019). A study by the National Association of Health Care Assistants (2022) found that nearly all CNAs surveyed identified that the lack of staffing is their greatest challenge, and that burnout and exhaustion are the second and third most significant challenges. Many of these individuals note that there are not adequate staffing levels within the nursing homes they are working in, with many of them having to take care of nearly 25 patients each, notably higher than the recommended staffing ratios.

According to Pisanti et al. (2016), burnout is frequent among CNAs, in acute care settings, with half expressing significant burnout and compassion fatigue. Another study discovered that compassion fatigue is common among CNAs, with 41% reporting moderate to high levels (Hooper et al., 2010). Burnout and compassion fatigue are linked to poor provider and patient results. Burnout, for example, has been related to lower work satisfaction and an increased risk of adverse patient outcomes. Compassion fatigue has been associated with worse patient care quality and an increased likelihood of adverse patient events (Hooper et al., 2010).

Heavy workloads, insufficient staffing, and exposure to traumatic events are all factors that lead to burnout and compassion fatigue among CNAs in acute care settings (Hooper et al., 2010; Pisanti et al., 2016). Many strategies have been discovered to help prevent or lessen burnout and compassion fatigue among CNAs in acute care settings. These treatments include stress management programs, coping skills education and training, and support from supervisors and peers. Burnout and compassion fatigue are significant challenges among CNAs in hospitals and medical centers, and addressing these issues is critical for enhancing well-being and patient

care quality. Further studies are needed to uncover other ways of preventing and treating burnout and compassion fatigue in this population of healthcare workers.

The typical demographics in a recent report by PHI National (2019) indicated that more than 90% of CNAs are female, under the age of 45, with a median age of 36, and more than half have not completed any formal education beyond high school. With many of these CNAs having limited personal and professional experience, there has been a significant impact on the individuals and the industry.

Typical duties that CNAs complete include, but are not limited to, aiding with daily activities of living, providing transportation throughout the nursing facilities, providing personal care such as dental, peri, or bathing care, providing skin protection, toileting programs, and even assisting with feeding during meals (Centers for Medicare and Medicaid Services, 2018).

United States Healthcare Staffing Crisis

A healthcare staffing crisis occurs when an organization cannot satisfy the demands for optimal staffing levels based on evidence-based practices (Minnesota Department of Health, 2022). The precise definition of a staffing crisis varies by industry and even by state within the same business, as the Centers for Medicare and Medicaid Services only outlines the necessary amount of personnel very broadly and subjectively to satisfy the demands of the residents (2008). Many states have stricter standards than this definition, putting an extra burden on medical institutions to satisfy the criteria of minimum staffing ratios.

While Hegarty et al. (2022) states that 1:6 staffing ratios are suitable for healthcare settings, the State of Maine, as an example, designates 1:5 staffing levels for long-term care settings (Maine Department of Health and Human Services, 2022). Many nurses, CNAs, and other long-term healthcare workers have been forced to work multiple shifts, overtime, and

nonstop for extended periods of time to meet these ratios with a limited pool of candidates (Abelson & Creswell, 2021; Rochefort et al., 2020; Turan et al., 2021). This has resulted in several staffing-related problems in acute care settings, including patient care and quality. A study by Van Bogaert et al., (2014) found that poor hospital staffing levels were linked to greater rates of burnout among nurses, including CNAs. In nursing homes, hospitals, and other healthcare institutions, staffing numbers are important.

The Centers for Medicare and Medicaid Services oversees the long-term and acute care industries and provides regulations and guidance to the industries to set care standards (Harrington et al., 2020). The Centers for Medicare and Medicaid Services do not clearly distinguish staffing ratios for long-term facilities. As noted in the State Operations Manual for Long-Term Care Facilities provided by the Centers for Medicare and Medicaid Services (2018) notes:

> The facility must have sufficient nursing staff with the appropriate competencies and skills sets to provide nursing and related services to assure resident safety and attain or maintain the highest practicable physical, mental, and psychosocial well-being of each resident, as determined by resident assessments and individual plans of care and considering the number, acuity and diagnoses of the facility's resident population in accordance with the facility assessment required at § 483.70(e).

With this broad and unclear distinction of what appropriate staffing levels should be in long-term care, many states have adopted internal guidance and regulations around staffing minimums and requirements (Bowblis, 2022; Harrington et al., 2020).

Mental Health Challenges for Healthcare Providers

Burnout, detachment, emotional exhaustion, compassion fatigue, alarm fatigue, stress, anxiety, and other physiological and psychological issues have been seen in healthcare settings, as have declining patient care scores (Kakeman et al., 2021; Maslach et al., 2001; Mbanga et al., 2018; Molero Jurado et al., 2018; Pinho et al., 2021). Mental health issues among healthcare employees are hazardous to the health and well-being of patients and healthcare professionals, resulting in diminished professional effectiveness, cynicism, and exhaustion (World Health Organization, 2019). In their meta-analysis, Garcia et al. (2019) observed that increasing mental health difficulties among healthcare workers led to worse patient care, more turnover, and decreased job satisfaction. Because of the dramatic shift caused by the pandemic, the focus of staffing has shifted to acute care settings, leaving long-term care vulnerable (Keeley et al., 2020; McCay, 2022).

Mental Health Availability of Resources

The primary accessible alternative for mental health support for nursing home employees is often an employee assistance program (EAP) which may not be suited to the unique demands and problems of working in long-term care settings (Gross et al., 2020). Another research study published in the Journal of the American Medical Directors Association discovered that long-term care staff members frequently suffer high levels of stress and burnout, which can severely influence their mental health and job performance (Gillespie et al., 2018). The study also found that few long-term care facilities have the appropriate programs to address these issues, and those that do often lack the resources to provide comprehensive support.

Mental Health - Burnout

Burnout is a psychological illness produced by professional stress that manifests as emotional exhaustion, depersonalization, and a lack of personal achievement or success (Maslach et al., 2001). Burnout is a long-term and persistent reaction to prolonged emotional and interpersonal job stress and trauma, which can affect personal and organizational outcomes (Mbanga et al., 2018; Molero Jurado et al., 2018). Emotional exhaustion within burnout is created by a person's stress levels (Maslach et al., 2001). It leads to a decline in emotional and physical resources to accomplish one's job or even engage in family-driven activities (Maslach et al., 2001). Depersonalization is defined as a strategy of regulating burnout or fatigue in which the individual dissociates emotionally from the job that they are accomplishing and becomes more task-oriented, resulting in lost passion and love for one's vocation.

Burned-out healthcare personnel may have less empathy and compassion for their patients, which can harm patient outcomes (Shanafelt et al., 2016). Moreover, burnout can lead to more significant medical mistakes, lower work satisfaction, and higher turnover rates among healthcare personnel. It is also crucial to remember that burnout is not only caused by human variables such as resilience or coping abilities. Workload, staffing numbers, and workplace culture, on the other hand, can also be critical in developing burnout.

According to Maslach's hypothesis, burnout is caused by an imbalance between job expectations and the resources available to meet those needs (Maslach et al., 2001) the more continuous and intense the pressures, the more likely burnout. The stresses might include a heavy workload, a lack of control over one's employment and social support as well as competing expectations. The theory also highlights the necessity of tackling burnout at the organizational

level, which includes improving working conditions and giving employees social support and tools to help them cope with stress.

As identified in a recent study, mindfulness-based therapies have been proven to reduce burnout among healthcare professionals and are one possible way to tackle burnout (Burton et al., 2017). Through mindfulness-based therapies, individuals are trained to be more aware of their thoughts, emotions, and physiological sensations in the present moment without judgment. This can assist healthcare personnel in managing stress and enhance their emotional regulation abilities, resulting in fewer burnout symptoms.

Burnout in Registered and Vocational Nurses. Burnout is a condition marked by emotional weariness, depersonalization, and decreased personal accomplishment caused by continuous job stressors (Maslach et al., 2001). Burnout is a prevalent concern among nurses finding that one out of every three nurses is impacted by burnout in the United States healthcare system (Muir et al., 2020). Studies show that burnout can harm the individual nurse and the quality of patient care (Dall'Ora et al., 2020; Halbesleben et al., 2008; Muir et al., 2020). Nurse burnout and staffing levels in acute healthcare settings have been connected; insufficient personnel levels can increase workloads and stress, raising the risk of burnout (Van Bogaert et al., 2013). Higher patient-to-nurse ratios were linked to higher levels of nurse burnout, according to a comprehensive review by Khamisa et al. (2016).

According to a study by Dall'Ora et al. (2020), staffing levels significantly predict nurse burnout. The study found that nurses who worked in units with low staffing levels were more likely to experience burnout than those who worked in units with adequate staffing. Additional predictors identified included long shifts of more than 12 hours, time pressures, schedule inflexibility, low autonomy, poor leadership or relationship with leadership, and negative team

relationships. The study also found that burnout can lead to severe adverse outcomes such as job dissatisfaction, turnover, and decreased quality of patient care, including increased medication errors, patient falls, and infections. In addition to quality care concerns, there is a substantial financial impact on hospitals and organizations regarding burnout (Muir et al., 2022). A recent study by Muir et al. identified that the associated costs attributable to burnout for hospitals equate to nearly $17,000 per nurse per year.

A study completed by White et al. (2019) found that RNs working in long-term care settings reported higher levels of burnout than in any other care environment, including acute care within hospitals. The authors also noted that in acute care settings, nurses subjected to high-stress environments and lacking appropriate resources such as staffing had higher instances of missed care, also known as unfinished nursing care. Furthermore, the researchers discovered that burnout is linked to various negative consequences, including lower work satisfaction, a greater desire to quit the profession, and lower quality of patient care. The study's findings indicated that across all RNs, 72% reported missing at least one task during their last shift due to a lack of time and/or staffing resources. The same study noted that 83% of RNs with job dissatisfaction and 95% of RNs with burnout reported missing care during the same period.

Numerous factors can lead to nursing burnout, such as the demanding nature of their profession, which can entail long hours, large workloads, and exposure to traumatic situations, one of the biggest drivers of stress for nurses (Hamaideh, 2017; Khamisa et al., 2016). Moreover, nurses, like other healthcare providers, may face disagreements with coworkers, a lack of support from managers, short-staffing, and insufficient resources, all of which can lead to burnout (Shanafelt et al., 2016). Additionally, with the onslaught of changes and challenges brought on by the pandemic, many nurses have been put in positions that require them to make moral

decisions, and nurses who suffer moral discomfort, or a conflict between their personal beliefs and their professional responsibilities, may be more vulnerable to burnout (McAndrew et al., 2018).

Managing nurse burnout is crucial for increasing nurse well-being and patient care quality (Hamaideh, 2017). Burnout is a significant issue among nurses that may severely impact individual nurses and the quality of patient care (Dall'Ora et al., 2020; Halbesleben et al., 2008; Muir et al., 2020). Nurses are subjected to various stresses that lead to burnout, such as the demanding nature of their profession, disagreements with coworkers, and insufficient resources (Dall'Ora et al., 2020; Hamaideh, 2017; Khamisa et al., 2016). Burnout in nurses must be addressed through various interventions and tactics to promote nurse well-being and sustain high-quality patient care.

Stress management programs, mindfulness-based therapies, and organizational interventions such as improving working conditions, hiring more staff, and providing social support have all been used to reduce burnout in nurses (Hamaideh, 2017; Khamisa et al., 2016; Shanafelt et al., 2016). Moreover, encouraging resilience and self-care methods among nurses may contribute to preventing or reducing burnout (Hamaideh, 2017).

Burnout in CNAs. Goff et al. (2016) identified that due to the physical demands of the job of CNAs, such as lifting and transferring patients and their exposure to disease and infection, this population experiences elevated stress levels. Burnout can also be exacerbated by the mental strain of caring for patients who are ill, injured, or dying and by conflicts with patients or family members (Jones & Hwang, 2018). CNAs frequently put in long hours; some may do so in facilities with insufficient personnel, leading to stress and burnout (Goff et al., 2016).

According to projections, up to 50% of CNAs experience burnout (Jones & Hwang, 2018). Burnout among CNAs has severe repercussions for organizations, patients, and individuals. Lower work satisfaction, increased turnover, absenteeism, and lower-quality care, including patient adverse events like falls and medication mistakes, can be made more likely by burnout (Goff et al., 2016; Jones & Hwang, 2018).

Burnout among CNAs is significantly impacted by staffing levels in various care environments (Rogers et al., 2016). Insufficient staffing can increase workload and stress, raising the risk of burnout. High patient-to-staff ratios are also connected to lowered treatment quality and elevated patient mortality (Needleman et al., 2011). Healthcare organizations must ensure proper staffing levels for CNAs. Suggested interventions by the authors included adding more personnel, changing the patient-to-staff ratios, and supporting the staff with more resources and training.

According to research done on nursing homes, CNAs who work in places with low staffing levels are more likely to become burned out than those who work in places with higher staffing levels (Bowers et al., 2000). In contrast to CNAs working in long-term care facilities with lower patient-to-staff ratios, those with greater patient-to-staff ratios reported higher burnout levels and lower job satisfaction.

Mitigation or reduction interventions have been utilized to reduce overall burnout in CNAs, including patient care related education and training, self-care practices such as exercise and healthy eating, and other self-care techniques (Goff et al., 2016). Organizational initiatives to enhance working circumstances and environments have also successfully lowered CNA burnout. Research has shown that boosting social support, enhancing work-life harmony, and easing workloads can help CNAs avoid burnout (Jones & Hwang, 2018). CNA burnout is a substantial

concern among healthcare organizations as it can affect the individual CNA and the quality of service they deliver (Goff et al., 2016; Jones & Hwang, 2018).

Mental Health - Compassion Fatigue

In their recent meta-analysis, Xie et al. (2021) noted compassion fatigue, or secondary traumatic stress, as a widespread issue in acute care settings, specifically in higher acuity settings such as Intermediate Care Units (ICU). Also identified within their meta-analysis was a trend of increasing levels of compassion fatigue over time, with a recently noted high in 2019. There are various reports of compassion fatigue among various departments in nursing and even healthcare settings such as acute, step-down, or urgent care settings. One thing that remains in common is that compassion fatigue is prominent in these care settings.

Long-term care settings face many of the same challenges as those in acute care and, in some instances, can be exposed to repeat stressors due to long-term care patients remaining under the same care for extended periods (Lin et al., 2021). There is currently some empirical research that has been conducted on compassion fatigue in the long-term care sector that has begun to shed some light on the potential outcomes expected for those individuals who work in long-term care settings. However, these studies have limited generalizability due to many of them being completed in other nations with different regulations and care practices, as well as educational requirements and training programs (Ministry of Health, 2023).

Pinho et al. (2021) discovered in their latest study that because of the COVID-19 pandemic, health professionals are more sensitive to developing mental illnesses and reported a higher incidence of sleep disorders, dread, worry, melancholy, post-traumatic stress, and obsessive-compulsive symptoms. Nursing professionals and CNAs are particularly prone to difficulties with mental health since they are on the front lines of providing care during and after

the pandemic. Tokac and Razon (2021) found that nurses were subjected to and faced more elevated psychological stresses than others, which resulted in substantial results of anxiety, distress, and job impairment, the same as Pinho et al. (2021) did.

Dealing with patients who have chronic health disorders and require continuing care may be emotionally draining, and the lack of progress or improvement in these patients' situations can be discouraging for healthcare providers (Lin et al., 2021). Moreover, long-term care facilities frequently have limited resources and personnel shortages, raising caregivers' workload and stress levels (Lin et al., 2021; Ministry of Health, 2023). Healthcare professionals, including RNs and CNAs, have been particularly impacted by the pandemic and are at a higher risk of developing mental health concerns such as anxiety, depression, and post-traumatic stress disorder, as noted by Pinho et al. (2021) and Tokac and Razon (2021). The epidemic has also emphasized the significance of treating mental health issues among healthcare personnel and providing enough support and tools to avoid burnout and compassion fatigue.

Compassion fatigue and other mental health disorders pose obstacles and hazards in acute and long-term care settings (Lin et al., 2021; Pinho et al., 2021; Tokac & Razon, 2021). While research on compassion fatigue in long-term care settings is scarce, the current literature shows that healthcare practitioners are at risk of developing compassion fatigue and other mental health issues.

Compassion Fatigue in Registered and Vocational Nurses. Nurses are the most prevalent healthcare professionals providing necessary care in hospitals and healthcare environments (Arsenault et al., 2018). Nurses are exposed in healthcare facilities to several job hazards that constitute a danger to nurses' health, safety, and performance and, in turn, pose threats to patient safety. Compassion fatigue is a type of burnout that affects healthcare

professionals who work with patients who have experienced trauma or suffer from chronic conditions (Smart et al., 2014).

Professionals may experience high levels of compassion fatigue in particular healthcare environments, such as critical care services and emergency rooms, as well as during health crises or stress (Ruiz-Fernandez et al., 2020). In some instances, healthcare providers' motivation to help ease the pain or burden of others may outweigh their capacity to deliver, causing them emotional discomfort, which can lead to compassion fatigue. While engaging with the patients they care for, healthcare workers suffering from compassion fatigue may experience feelings of anxiety or dread, which may lead to avoidance behaviors in their professional-patient relationships lowering the quality of care they give (Ruiz-Fernandez et al., 2020; Sabo, 2011).

Studies have found that inadequate staffing levels in healthcare settings can contribute to compassion fatigue among nurses (Smart et al., 2014). In addition to patient-to-nurse ratios, other staffing-related factors, such as working overtime, lack of support from management, and high turnover rates, have also been linked to compassion fatigue among nurses. Nurses who work in settings with high patient-to-nurse ratios may be more likely to experience compassion fatigue due to the increased workload and stress (Sabo, 2006). This can lead to emotional exhaustion and decreased empathy for patients, which are common symptoms of compassion fatigue (Smart et al., 2014).

Nurses experiencing compassion fatigue may make errors, experience decreased productivity, and provide lower-quality care (Arsenault et al., 2018). They may also experience a decrease in job satisfaction and may be more likely to leave their job, worsening staffing shortages. Other psychological challenges can arise for nurses experiencing moderate to high

levels of compassion fatigue, such as anxiety, depression, and even withdrawal (Arsenault et al., 2018; Sabo, 2006).

Compassion Fatigue in CNAs. Compassion fatigue is a well-documented phenomenon among healthcare professionals and CNAs (Thapa et al., 2021). CNAs face various stressors in their career, including time constraints, inadequate support, trauma exposure, illness, death, and a considerable risk of burnout. The recent pandemic and national staffing shortages have exacerbated many of these stressors, increasing the risk of compassion fatigue among CNAs. Studies have shown that between 40% and 85% of all individuals in helping professions develop compassion fatigue and may develop traumatic stress symptoms (Dreher et al., 2019). With repeated exposure to traumatic events and high workloads, CNAs can experience both mental and physical fatigue, reducing job satisfaction, burnout, compassion fatigue, and poor patient quality outcomes.

Dreher et al. (2019) specifically found that CNAs working in long-term care nursing homes focused on veterans were at risk of compassion fatigue due to continued exposure to individuals with severe behavioral and physical conditions. These findings highlight the importance of providing support and resources to CNAs to mitigate the risk of compassion fatigue and promote their well-being. Additionally, labor shortages and high turnover rates among CNAs further exacerbate the challenges of providing safe and effective care to residents in long-term care facilities (NASEM, 2016). These staffing and resource issues can also contribute to compassion fatigue among CNAs, who struggle to complete their jobs effectively and safely (Dreher et al., 2019; Thapa et al., 2021).

Mental Health - Compassion Satisfaction

Compassion satisfaction is described as the good emotional experience that occurs because of assisting those in need, and it has been linked to greater levels of job satisfaction, work engagement, and general well-being (Stamm, 2010; Zhang et al., 2018). According to Zhang et al.'s recent meta-analysis, compassion satisfaction offers a unique viewpoint on the challenges of experiencing compassion fatigue in high-stress work environments (Ruiz-Fernández et al., 2020; Zhang et al., 2018). Specifically, compassion satisfaction can be viewed as a positive outcome of continued exposure to distressing situations in which an individual feels a sense of self-fulfillment and appreciation for the meaningful work they are doing to help others (Ruiz-Fernández et al., 2020; Stamm, 2010; Zhang et al., 2018).

Compassion satisfaction has been identified in various caregiver situations, including acute care nursing, specialty nursing, palliative, and even long-term care settings (Ruiz-Fernández et al., 2020; Shahar et al., 2019; Zhang et al., 2018). Although there may be variations in the specific responses and levels of compassion satisfaction experienced by professionals in different fields, research suggests that those working in nursing settings tend to share a common trend: Individuals who provide care in high-stress environments providing direct care are more likely to experience compassion satisfaction.

According to research, compassion satisfaction is not restricted to acute care settings but may also be felt by workers in long-term care settings (Zhang et al., 2018). Though there may be limited empirical research data in long-term care settings, the data available from a recent study conducted in a long-term care setting in Israel by Shahar et

al. (2019) discovered that nurses working in long-term care settings had greater amounts of compassion satisfaction despite having higher qualifications, such as a higher degree of schooling and more years of experience.

According to research, nurses with higher levels of compassion satisfaction are less likely to experience burnout and compassion fatigue (Lang et al., 2015; Stamm, 2010). Furthermore, nurses with higher levels of compassion satisfaction may be more resilient to stress and better able to cope with the demands of their jobs (Lang et al., 2015).

Factors contributing to compassion satisfaction among direct care workers include having a supportive work environment, opportunities for professional growth and development, and positive relationships with patients and families (Lang et al., 2015; Stamm, 2010). Healthcare organizations can promote compassion satisfaction among nurses and CNAs by supporting continuing education and professional development, promoting a positive work culture, and recognizing and rewarding staff for their contributions (Lin et al., 2021).

United States Healthcare Industries

According to the National Institute on Aging (2017), long-term care is described as extended personal care, which includes support with everyday tasks, also known as activities of daily life. Bathing, the act of getting dressed, grooming, such as hair and proper nail care, using the restroom, eating, and moving around, such as ambulating/locomotion in a room or corridor or simply getting out of bed, are examples of everyday life activities. Long-term care usually includes meals, housekeeping, laundry, transportation, activities, spiritual services, and adult day care.

Long-Term Care Industry

Many individuals are placed in long-term care because they have chronic health conditions, complex comorbidities, or impairment that cannot be cared for at home or is not appropriate to be treated at a higher level of care (National Institute on Aging, 2017). Long-term care may be organized by a family member, power of attorney, guardian, a person's doctor, or provider. Still, it may also be necessary suddenly, such as following a fall, myocardial infarction, or stroke; it usually emerges gradually as individuals mature.

Long-term care includes home health care delivered by a loved one or a friend, home health care supplied by a professional for a few hours per day up to full-day coverage, assisted living or residential care facilities, and, most often, nursing homes (National Institute on Aging, 2017). It is vital to note that the degree of care delivered, and the focus of the services varies significantly throughout the categories mentioned. While many who are evaluated for long-term care eventually reside in a nursing home, this is not always the case for all patients seeking long-term care. Many people frequently move along the continuum of care between home health, residential care, skilled nursing facilities, and nursing homes to meet their changing care needs.

Acute Care Industries

Little empirical research has been conducted on the impact of current short staffing in the long-term care sector, while a considerable amount of research has been done in acute care (Ely, 2019; Shahar et al., 2019). Several issues have been observed in the acute care environment that are directly connected to the present staffing constraints. The mentioned issues have been found to impact patient care and acute care personnel's longevity and stress levels, including nurses and providers.

According to Ely's (2019) research, several themes were discovered connected to limited staffing and breaks, such as low care delivery and burnout. Similarly, Kakeman et al. (2021) cross-sectional research discovered a significant burnout rate among over 1,000 nurses polled, with 31.5% responding. There was a positive relationship between emotional exhaustion and depersonalization scores and patient quality of care but a negative relationship between performance scores and all substandard care item scores (Kakeman et al., 2021).

Nursing Homes

Nursing homes are one of the most regulated industries in the United States (Bowblis, 2022). There is a considerable amount of change among those regulations, along with many impactful changes during the pandemic (Bowblis, 2022; Eskildsen, 2009). They are a constant spotlight focus of politicians, lobbyists, and lawmakers (Bowblis, 2022). The breadth of the regulations ranges from water temperatures to assistance with daily living activities and the ability to provide care (Centers for Medicare and Medicaid Services, 2018). The certifying agency, Centers for Medicare and Medicaid Services, does not provide a precise numerical ratio of hours of care per patient day or a quantifiable ratio of direct care providers to patients (Bowblis, 2022; Centers for Medicare and Medicaid Services, 2018).

Nursing Home Regulations

Without clear guidance from the certifying federal agency, many states have adopted regulations to identify the appropriate patient care ratios or care minutes per patient day (Bowblis, 2022). However, the challenge associated with this scenario is a substantial difference between each state on what are considered appropriate staffing numbers. Bowblis also identifies that according to studies, when states establish new minimum nursing staff requirements or increase the minimum needed by the existing standards, nurse staff levels at most nursing

facilities increase slightly above the minimum. Minimum nurse staff laws frequently compel the facility's quality of care to become the state's minimum staffing level. Some state regulations still include language that affirms these bare minimums as the nursing home's standard of care.

Patients and Residents of Long-Term Care

Several factors dictate who needs long-term care services, especially in a nursing home (National Institute on Aging, 2017). However, in an article by the National Institute on Aging, it is noted that women, individuals that are at higher ages, single individuals, individuals with limited families, individuals with poor lifestyle choices or poor health choices, as well as those individuals that have comorbidities such as mental health issues or behavioral health issues are at higher risk for needing long-term care services. While these noted risks are broad views of individuals in potential need of long-term care services, they are remarkably close to the demographics of the residents living in long-term care nursing facilities throughout the United States. It is important to note that various options are available to individuals regarding their choice of long-term care services, most often nursing homes followed closely by residential care facilities.

Biblical Foundations of the Study

The phrases "compassion fatigue," "compassion satisfaction," and "burnout" are not directly mentioned in the Bible, although it does give knowledge and counsel on themes connected to these notions. Jesus is described as a compassionate figure, and his actions and teachings provide an example for Christians to follow (*New International Bible*, 1978/2011, Matthew 14:14). For example, in Matthew 25:35-40, Jesus says that when we feed the hungry, clothe the naked, and care for the sick and imprisoned, we do so for him. However, the Bible also recognizes the need for self-care and rest, as seen in Mark 6:31; Jesus advises his disciples

to "come away by yourselves to a desolate place and rest a while". Suggesting that taking breaks and setting boundaries are essential for maintaining well-being, even while caring for others.

Burnout Described in The Bible

The account of Elijah in 1 Kings 19 depicts his triumph over the prophets of Baal (*English Standard Bible*, 2001/2016, 1 Kings 19:1-21). Despite his success, Elijah was depleted and dejected, beset by burnout. Elijah sought refuge in the wilderness and petitioned God to relieve him of his anguish by taking his life. Though God did not respond directly to Elijah's demands, divine intervention was forthcoming in the form of an angel dispatched to provide sustenance and repose. This narrative illustrates the criticality of acknowledging the symptoms of burnout and availing oneself of rest and support from others.

Burnout is recognized to impact individuals, as evidenced by the account of Elijah, yet the Bible elucidates the negative repercussions of burnout on both individuals and groups (*English Standard Bible*, 2001/2016, 1 Kings 19:1-21; Numbers 11:1-34). Numbers 11:1-34 elucidate this phenomenon through the narrative of the Israelites in the wilderness after their liberation from Egyptian slavery. Despite their newfound freedom, the Israelites expressed dissatisfaction with their circumstances, complaining about their manna consumption and desire for meat. God responded by providing quail, but even with this deliverance, their dissatisfaction persisted. This narrative exemplifies how burnout can foster discontentment and an inability to see hope when experiencing burnout.

Compassion Fatigue Described in The Bible

In Galatians 6:9, Paul encourages his readers not to grow weary in doing good, for in due season, they will reap a harvest if they do not give up (*New International Bible*, 1978/2011). This suggests that perseverance is essential. However, it also acknowledges that doing good can be

challenging and tiring. Similarly, in 2 Corinthians 9:7, Paul advises his readers to give "not reluctantly or under compulsion, for God loves a cheerful giver". Believing that helping others should not be a burden but a joy and privilege.

In the story of Jesus in the Garden of Gethsemane, Jesus was about to face his crucifixion, feeling overwhelmed and exhausted. He prayed to God, "My Father, if it is possible, let this cup pass from me; nevertheless, not as I will, but as you will" (*English Standard Bible*, 2001/2016, Matthew 26:39). This is an example of how compassion fatigue can lead to feelings of hopelessness and despair. When constantly exposed to suffering, such as in healthcare environments, it can be challenging to maintain compassion, empathy, and hope.

Ecclesiastes recognizes the cyclical nature of life, with seasons of pleasure and sorrow (*New International Bible*, 1978/2011, Ecclesiastes 3:1-8). Ecclesiastes 3:1-8 tells us that there is a season for everything, including weeping and laughing, mourning, and dancing. It implies that it is natural to feel various emotions, including compassion fatigue and even burnout, as we interact with the world around us.

Compassion Satisfaction Described in The Bible

Compassion satisfaction is a common theme throughout the Bible when telling the stories of Jesus, such as in Matthew 14:14, Mark 1:40-41, and Luke 7:12-15, where Jesus consistently shows compassion for those suffering (*English Standard Bible*, 2001/2016). Jesus was often surrounded by suffering people but never grew tired or weary. Jesus always had compassion for those around him and always took the time to help them. Compassion satisfaction can lead to a sense of fulfillment and purpose, and it can also give us a sense of meaning and purpose, as noted by the actions and outcomes of Jesus.

The Bible teaches us to take care of others while also taking care of ourselves (*New International Bible*, 1978/2011, Matthew 7:12). Scripture commands us to love our neighbors as ourselves, which implies that our well-being is essential to care for others successfully. Healthcare workers may avoid burning out and build a feeling of compassion and fulfillment that allows us to continue helping others with joy and love by setting limits, pausing, and getting assistance from others.

Summary

The current literature identifies themes of burnout, compassion fatigue, and compassion satisfaction among healthcare professionals, even when reviewed in various settings. With little research on the long-term care industry, the literature review shows that through similar roles and experiences, there are significant findings of burnout, compassion fatigue, and compassion satisfaction among healthcare providers. The effects of compassion fatigue and burnout have the potential to have substantial negative repercussions for healthcare professionals and patients.

Burnout is defined in the literature review and research cited as a psychological disorder that happens because of extended occupational stress, resulting in emotional exhaustion, depersonalization, and a loss of personal fulfillment (Maslach et al., 2001; Mbanga et al., 2018; Molero Jurado et al., 2018; Shanafelt et al., 2016; Stamm, 2010). It can lead to reduced job satisfaction, higher turnover rates among healthcare workers, and increased medical errors, among other things (Dall'Ora et al., 2020; Halbesleben et al., 2008; Mbanga et al., 2018; Molero Jurado et al., 2018; Shanafelt et al., 2016). Workload, personnel levels, and workplace culture are just a few elements that lead to burnout (Van Bogaert et al., 2013).

Compassion fatigue occurs when healthcare personnel suffer emotional tiredness, depersonalization, and/or decreased empathy and compassion for their patients because of

delivering treatment in high-stress workplace environments (Lin et al., 2021; Smart et al., 2014; Xie et al., 2021). Compassion fatigue is a common finding and concern in acute care settings, but long-term care facilities can also confront similar issues, with staff subjected to recurrent traumas (Lin et al., 2021). Compassion satisfaction is the favorable emotional response that care providers have through helping others and is typically observed in healthcare professionals such as nurses, CNAs, and even doctors and first responders, regardless of the number of times of experiencing severe burnout and/or compassion fatigue (Ruiz-Fernández et al., 2020; Shahar et al., 2019; Stamm, 2010; Zhang et al., 2018). The prevalence within the literature view of mental health challenges among healthcare workers suggests that they are more likely to acquire mental health disorders such as anxiety, depression, and post-traumatic stress disorder. The methodologies used in this study and a summary of the study's design, including participant eligibility requirements and the techniques and metrics utilized, will be addressed in Chapter 3. This section will also recognize any limitations and assumptions explored during the study.

CHAPTER 3: RESEARCH METHOD

Overview

This non-experimental, correlational quantitative study aimed to explore the relationship or lack thereof between long-term care staffing ratios within long-term care nursing home facilities and long-term care healthcare worker mental health, including compassion fatigue, burnout, and compassion satisfaction. The focus of the study was to identify if there is an effect of various staffing levels on the mental health of long-term care workers. The following chapter provides a comprehensive overview of the research design, including the population and selection of the sample, the study methods utilized, the instruments and measurements employed, the operationalization of variables, the actions of data analysis, assumptions, and the presentation of limitations of the study.

Research Questions and Hypotheses

Research Questions

RQ1: What is the relationship between staffing ratios and long-term care healthcare worker compassion fatigue?

RQ2: What is the relationship between staffing ratios and long-term care healthcare worker burnout?

RQ3: What is the relationship between staffing ratios and long-term care healthcare worker compassion satisfaction?

Hypotheses

Hypothesis 1: There is a negative relationship between staffing ratios and healthcare worker compassion fatigue.

Hypothesis 2: There is a negative relationship between staffing ratios and healthcare worker burnout.

Hypothesis 3: There is a positive relationship between staffing ratios and healthcare worker compassion satisfaction.

Research Design

This study expected to generate insights into staffing levels' effects on long-term care healthcare workers' mental health, including compassion fatigue, compassion satisfaction, and burnout. This study employed a non-experimental, quantitative research design as the study sought to understand if there was a correlation between the independent and dependent variables. Because the unit of analysis for the current study was at the person level, a quantitative approach was applicable, and following data analysis, new conclusions may be formed from existing theories (Gavin, 2008).

As Curtis et al. (2016) noted, correlational research designs are a valuable tool for determining the prevalence and relationships among variables and forecasting events from current data and knowledge. With the generated data, the intent was to be able to inform and provide a foundation for potential decision-making and identifying any new significant relationships. A non-parametric Spearman Rank Correlation test was utilized to evaluate the data due to the nature of the variables being ordinal. All data was compiled and analyzed using the International Business Machine (IBM) Statistical Package for Social Sciences (SPSS) Version 28.0.0.0 (190).

Participants

Participants were accessed locally by the American College of Health Care Administrators, Maine Chapter. An additional source included the Administrator's Forum, a

collection of over 5,000 long-term care administrators. The authorization was acquired by the overseeing facility healthcare administrators. Participants were to take part in the study independently in nongroup settings. Participants were kept anonymous with no identifying information. Specifically, this study sought individuals 18 years or older who must have been working in the long-term care industry for 2+ years, were currently and actively working in the long-term care industry, and must have an education or certification in CNA, CNA-M, LPN, LVN, or RN. Utilizing GPower 3.1, as seen in Appendix B, a two-tailed bivariate normal model a priori test for correlation was utilized with an alpha of .05 and a power of 0.8 with a medium effect size as suggested by Kang (2021). The necessary sample size was found to be a sample size of 84. With the noted sample size of 84, there was a 20% chance of inaccurately rejecting H0. Therefore, a target sample size of 101 was utilized to accommodate incomplete surveys or unusable data.

Inclusionary and Exclusionary Criteria

For this study, an online survey process with current, experienced long-term care staff members was conducted. Staff members needed to meet the following criteria to be able to be included as a candidate for the study.

Inclusion Criteria

- The staff member must currently work in a long-term care setting.
- The staff member must have a direct care role within a long-term care setting.
- The staff member must be 18 years of age or older.
- The staff member must have at least two years of working experience in the long-term care industry.

- Must be a staff member in a Centers for Medicare and Medicaid certified and licensed facility to care for long-term care patients.
- Staff members must have been in a certified/licensed capacity for at least two years in long-term care.
- Staff members must be able to participate in the time demands of the study.
- Staff members only work at one facility.

Exclusions Criteria

- Staff members that work remotely, in administration, or not directly within a long-term care facility.
- Staff members that have less than two years of working experience.
- Staff members with less than two years of continuous work experience in long-term care.
- Staff members under the age of 18.
- Staff members must not be private pay-only facility staff members.
- Staff must not be staff members of a federally resourced facility such as the Veteran's Affairs facilities.
- Staff members working in assisted living or residential care facilities.
- Staff members working in a facility connected to a hospital.
- Staff members must not be contracted/temporary staff members.

Study Procedures

This study utilized an online application to survey individuals who met the screening inclusionary and exclusionary qualifications noted above. Responses from participants were collected from an online survey application, Survey Monkey, with initial communications sent

via email or social media posts. This format allowed individuals to complete all necessary items via a computer, tablet, or mobile device, increasing access to the study.

Initial contact with study details, inclusion, and exclusionary criteria to potential participants included contacting local resources with the Maine Chapter of the American College of Health Care Administrators, the leading national organization for long-term care administrators. Additional outreach included the Long-Term Care Administrators Forum via social media and Facebook groups, representing 10,000 administrators nationwide. Initial outreach to these facilities was via direct communication, email, private message, or phone call to the facility's administrator to obtain initial authorization to communicate to the facility's staff in participation of the study. Interested administrators and organizations communicated via email for more details of the study and a link for distribution to their staff for completion of the survey. The email provided to each administrator contained directions for distributing the survey participation link via direct weblink, QR code, or direct forwarding via email to direct care staff for the completion of the survey; an example is provided in Appendix C. The participants were then able to complete the survey via the various links and options made available, directing them to the online survey.

The initial questions presented to participants included such questions as to exclude individuals that were inappropriate for the study. These questions relate similarly to the inclusion and exclusionary criteria noted above, explicitly asking the individual if they are 18 years or older, working in a long-term care facility as an employee and non-temp or agency staff, as well as if the individual currently fulfills the duties of an individual that provides direct patient/resident care. The following questions inquired about the individual's demographics, as noted in Appendix D. Once individuals had completed the initial screening and demographic

questions, the participants were directed to complete the Professional Quality of Life assessment as outlined in Appendix D. Participants were required to complete all the questions as part of the survey for the completion and submission of their responses. All participants' responses were kept anonymous, as no identifiable information was requested from the individuals.

Instrumentation and Measurement

Overview

This study used the Professional Quality of Life V (ProQOL V). The ProQOL V is a 30-question assessment with a 5-point Likert-style scale, producing a raw score between 10-50 for each subscale (Stamm, 2010). The subscales review three areas: compassion satisfaction, burnout, and secondary trauma, also known as compassion fatigue. Combining the subscales from burnout and secondary trauma provides total compassion fatigue scoring. Permission and authorization were granted to utilize this assessment, as seen in Appendix E. The initial demographic screening questions utilized for this study allow for the proper inclusion and exclusion of participants based on the criteria noted above. Furthermore, additional information was collected in the demographics section to provide better insight into each participant's educational and social elements.

Professional Quality of Life V

The Professional Quality of Life (ProQOL) is a widely used tool for measuring the impact of working in a helping profession on one's well-being (Stamm, 2010). Stamm developed it to assess the risk of burnout, compassion fatigue, and secondary traumatic stress, often experienced by individuals in high-stress jobs, such as healthcare professionals, social workers, and first responders. The ProQOL V assessment comprises three subscales: compassion satisfaction, burnout, and secondary traumatic stress. The compassion satisfaction subscale

measures the positive aspects of working in a helping profession, such as a sense of accomplishment and fulfillment from helping others. The burnout subscale evaluates the negative aspects of work, including emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment. The secondary traumatic stress, also known as compassion fatigue, subscale, assesses the impact of exposure to trauma and suffering in others on one's mental health.

As part of the ProQOL, nine closed-ended questions are related to compassion satisfaction, specifically questions 3, 6, 12, 16, 18, 22, 24, 27, and 30 (Stamm, 2010). The scoring system indicates that scores of 42 or above suggest high levels of compassion satisfaction, scores between 23 and 41 suggest moderate levels and scores of 22 or below suggest low levels. Burnout is measured using ten questions, specifically questions 1, 4, 8, 10, 15, 17, 19, 21, 26, and 29, with questions 1, 4, 15, 17, and 29 being reverse scored. The high, moderate, and low criteria for burnout are associated with the same ranges as compassion satisfaction. Secondary traumatic stress, or compassion fatigue, is assessed using questions 2, 5, 7, 9, 11, 13, 13, 14, 23, 25, and 28. As with compassion satisfaction, the criteria for distinguishing high, moderate, and low levels of burnout, as well as compassion fatigue or secondary traumatic stress, remain consistent with the underlying construct. Precisely, the ProQOL measures three distinct constructs--compassion satisfaction, burnout, and secondary traumatic stress--and uses the same ranges to define high, moderate, and low levels for each construct.

Several studies, according to Stamm (2010), have demonstrated the reliability and validity of the ProQOL V. Cronbach's alpha scale reliability values for the three dimensions are compassion satisfaction $\sigma = .88$, burnout $\sigma = .75$, and compassion fatigue $\sigma = .81$, indicating that the assessment has good internal consistency. Correlations ranging from .68 to .92 have also

been demonstrated for test-retest reliability. In terms of validity, Stamm points out that the ProQOL V has been shown to have good construct validity, which means it measures what it is supposed to measure. The tool's three dimensions have been discovered to be distinct but related. Inter-scale correlations show that only 2% of the variance is shared with Compassion Fatigue (r= -.23; co-σ = .05; n = 1187) and 5% with Burnout (r= -.14; co-σ = .02; n=1187). While there is some overlap between burnout and compassion fatigue, the overlap is largely due to similar discomfort experienced. The proportion of variation shared by these two measures is 34% (r=.58; co-σ = 34%; n=1187). Although both scales examine negative emotion, they differ in that the Burnout scale does not address fear, whereas the Compassion Fatigue scale does. Compassion satisfaction is negatively correlated with burnout and compassion fatigue, whereas burnout and compassion fatigue are positively correlated.

The questionnaire has 30 items and can be self-administered by the participants. The questions are answered on a Likert scale ranging from 1 (never) to 5 (very often), with higher scores on the compassion satisfaction subscale indicating greater levels of job satisfaction and higher scores on the burnout and secondary traumatic stress subscales indicating greater levels of distress. The tool provides a valuable means of assessing the impact of work on personal well-being, which can inform interventions to support workers in these fields and reduce the risk of burnout and other adverse outcomes.

Demographics and Screening Questions

Screening questions that were utilized in this study. Participants were required to answer yes to all the following five questions to proceed with the demographics portion of the survey:

1. Are you presently 18 years of age or older?

2. Do you currently work in a direct care position that includes any of the following designations: CNA, CNA-M, LPN, LVN, RN?
3. Are you currently employed as house staff in a long-term care facility?
4. Do you have two or more years of experience working in long-term care?
5. Do you only work at one long-term care facility?

These screening questions have been designed to ensure that the study targets individuals working in long-term care with sufficient experience and qualifications to provide valuable insights on the topic studied.

To capture a comprehensive understanding of the diverse group of individuals who may be participating in this survey, the demographics portion consisted of ten closed-ended multiple-choice questions. These questions explored age, biological sex, race/ethnicity, marital status, the highest level of education achieved, current direct care licensure/certification level, years of experience in long-term care, average hours worked per week, the average number of patients/residents assigned to the direct care provider during their last completed shift, and if the participant has thought of or planned to leave their role in the last 6 months due to burnout.

Participants had the option to select male or female for the biological sex question. The race and ethnicity responses were based on the U.S. Office of Management and Budget (OMB) standards of 1997, which are currently utilized by the U.S. Census Bureau (Jensen, 2022). Participants also had the option to select 'other race or ethnicity not listed,' as suggested by the OMB.

Standard response options were provided for marital status (single, married, divorced, and widowed) and the highest level of education achieved (high school, some college, undergraduate, graduate, postgraduate/doctoral). Licensure levels were listed for the appropriate

titles, including Certified Nursing Assistant (CNA), Certified Nursing Assistant Medication Tech (CNA-M), Licensed Vocational Nurse (LVN), Licensed Practical Nurse (LPN), Registered Nurse (RN), and the option of 'other' was available.

Years of experience were presented with response options of 0-1 years, 1-2 years, 3-4 years, 5-10 years, 11-20 years, 5-10 years, and 20+ years. Similarly, average hours worked each week provided various options, including 0-10 hours, 10-15 hours, 15-20 hours, 20-30 hours, 30-40 hours, and 40+ hours. Additionally, participants were asked to select the number of patients/residents assigned on their most recently completed shift, with options ranging from 0 to 30.

Operationalization of Variables

Burnout – The ProQOL V manual identifies this variable as an interval variable. It is measured by a t score converted from the raw score on the ProQOL V (Stamm, 2010). Operationally defined, Burnout is characterized by hopelessness and difficulty in performing work effectively, often resulting from a high workload or an unsupportive work environment.

Compassion Fatigue – The ProQOL V manual identifies this variable as an interval variable. It is measured by a t score converted from the raw score on the ProQOL V (Stamm, 2010). Compassion Fatigue is secondary traumatic stress from work-related exposure to traumatic events and can result in fear, difficulty sleeping, and avoidance.

Compassion Satisfaction – The ProQOL V manual identifies this variable as an interval variable. It is measured by a t score converted from the raw score on the ProQOL V (Stamm, 2010). Operationally defined, Compassion is the positive pleasure derived from doing one's job well, which can be related to helping others, contributing to the work setting/environment, or the greater good of society.

Staffing Ratio – This variable will be an interval variable. Operationally defined as the self-reported counts of certified staff, including CNAs, CNA-Ms, and vocational and RNs, while working on their shift compared to the total count of residents/patients on their assigned unit on their most recent shift. High staffing 1:5, Medium staffing 1:10, Low staffing 1:15+ (Harrington, 2008)

Data Analysis

This quantitative study utilized IBM SPSS Version 28.0.0.0 (190) for data compilation and analysis. Items were scored as the ProQOL Manual indicates for each of the three categories (Stamm, 2010). This study operationalized the variables as ordinal variables to review various relationships and strengths or lack thereof with staffing ratios (American Psychological Association, 2023; Kaur & Singh, 2019). A Spearman's rank correlation test measured the strength and direction of the association between two variables (American Psychological Association, 2023). This statistical method is non-parametric and does not require normal data distribution, relying on data ranking rather than the actual numerical values. The test yields a coefficient known as Spearman's rank correlation coefficient, ranging from -1 to +1, with a value of +1 indicating a perfect positive correlation, -1 indicating a perfect negative correlation, and 0 indicating no correlation between the two variables.

Delimitations, Assumptions, and Limitations

This study had several limitations, assumptions, and delimitations that must be considered. This study’s goal was to generate insights into the effects of staffing levels on long-term care healthcare workers’ mental health, including compassion fatigue, compassion satisfaction, and burnout. Therefore, the study did not intend to present causations or reason for potentially identified relationships (Kaur & Singh, 2019). Additionally, the study employs a non-

experimental, quantitative research design to determine if there is a correlation between the independent and dependent variables limiting the comparison of a control group for this setting (Curtis et al., 2016). The study assumed that participants would answer the survey questions honestly and accurately (Mullinix, 2015). When identifying a potential sampling population convenience sampling was utilized (Emerson, 2015).

The study was limited to participants who were 18 years or older, had been working in the long-term care industry for 2+ years, and were currently actively working in the long-term care industry. Access to participants through the American College of Health Care Administrators Maine Chapter, and the Administrator's Forum may introduce a potential selection bias (Emerson, 2015). Furthermore, the study utilized a non-parametric Spearman Rank Correlation test to evaluate the data, which may not be as robust as other statistical methods (American Psychological Association, 2023; Kaur & Singh, 2019). Additional limitations of the Spearman Rank Correlation are that the test is limited to monotonic relationships, it is sensitive to outliers, it must assume ordinal data, and it requires a larger sample size in comparison to other statistical tests. The test cannot determine the causality of a relationship between two variables, it can only measure the strength and direction of the relationship. Lastly, the minimum required sample size of 84 may not represent the entire long-term care industry, limiting the generalizability of the study's findings (Mullinix, 2015).

Summary

This study aimed to investigate the relationship between long-term care staffing ratios and the mental health of long-term care healthcare workers, explicitly focusing on compassion fatigue, burnout, and compassion satisfaction. The assumptions and hypotheses propose a

potential relationship between staffing ratios and healthcare worker compassion fatigue, burnout, and compassion satisfaction; the research question investigates this potential relationship.

A non-experimental, quantitative research design was utilized to determine whether variables correlate to generate insights into staffing levels' effects on long-term care healthcare workers' mental health. The non-parametric Spearman Rank Correlation test was utilized to evaluate the data, once compiled, and analyzed. Findings may provide further decision-making information and potentially identify new significant relationships. The following chapter will review the results of the data collection and analysis. The presentation of the data includes pertinent data, tables, and graphs and for each hypothesis, Chapter 4 includes the results of the data and discusses significance.

CHAPTER 4: RESULTS

Overview

This study was designed as a non-experimental, quantitative correlational study aimed at investigating the intricate interplay between long-term care patient-to-staff ratios and the mental health well-being of long-term care health professionals, particularly focusing on compassion satisfaction, compassion fatigue, and burnout. This endeavor was undertaken against the backdrop of unprecedented challenges stemming from a national staffing shortage, a critical issue that required careful exploration (Denny-Brown, 2021). This study specifically homed in on the experiences of direct care health workers in the long-term care sector, who navigate the complex terrain of long-term care in the United States. In this chapter an overview of the methodology employed, collected data, and conducted scoring and analysis necessary is provided to unearth meaningful insights. In review of the literature, it was evident that there were several studies conducted in acute care settings regarding compassion fatigue, compassion satisfaction, and burnout though a gap was noted in the long-term care industry: specifically, those providing direct patient care. This aligns with the chosen research questions below. This chapter will conclude by presenting a summary of the research outcomes, illuminating the key findings. A review of the research design as well as the potential future implications will also be presented.

Research Questions

RQ1: What is the relationship between staffing ratios and long-term care healthcare worker compassion fatigue?

RQ2: What is the relationship between staffing ratios and long-term care healthcare worker burnout?

RQ3: What is the relationship between staffing ratios and long-term care healthcare worker compassion satisfaction?

Null Hypothesis

Hypothesis 1: There is a negative relationship between staffing ratios and healthcare worker compassion fatigue.

Hypothesis 2: There is a negative relationship between staffing ratios and healthcare worker burnout.

Hypothesis 3: There is a positive relationship between staffing ratios and healthcare worker compassion satisfaction.

Process

For this survey, the ProQOL V assessment tool was utilized. The assessment was transferred to an online survey platform, SurveyMonkey for participant engagement and data collection. At the conclusion of data collection, the data was then transferred to IBM's statistical software SPSS Version 28.0.0.0 (190) for data compilation, manipulation, and scoring. The ProQOL V provides clarification on scoring for each of the three subsets compassion fatigue, compassion satisfaction, and burnout.

Descriptive Results

The data collection process for this study commenced with widespread outreach on a national scale, employing social media posts and electronic communications. Leveraging the extensive reach of these social media platforms and the diverse composition of their user base, allowing the study to potentially draw participants from various regions across the United States.

Initially, 225 individuals engaged with the study; however, after applying the participation agreement and the relevant criteria, 86 individuals completed the survey, resulting

in a completion rate of 38%. In the subsequent sections, a comprehensive overview of the characteristics of these 86 survey participants. It is worth noting that all survey participants were required to be currently employed in a direct care capacity within a long-term care facility. Table 1 provides a detailed breakdown of the credentials held by these participants in their direct care roles. The majority, 67.4% of participants, were in the role of a CNA or CNA-M while the next largest grouping was LPN, LVN, and RN making up 32.6% of participants.

Table 1

Position Title by Participants

Title	Frequency	Percent
CNA	51	59.3%
CNA-M	7	8.1%
LPN	11	12.8%
LVN	3	3.5%
RN	14	16.3%

All the participants who completed the survey had two or more years of experience, worked at only one CMS-certified long-term care facility, and were employed by that facility in the capacity of a house staff member. Table 2 shows the responses collected by participants for their associated age group which were presented in each of the age groups. Reviewing the demographics further there was representation from each age group though the 31-35 years of age group was the largest at 20.9% and the 51-55 age group was the least represented at 2.3%.

Table 2

Age of Participants

Age	Frequency	Percent
18-24	13	15.1%
25-30	16	18.6%
31-35	18	20.9%
36-40	11	12.8%
41-45	12	14.0%
46-50	6	7.0%
51-55	2	2.3%
55 and up	8	9.3%

Among the participants, the demographic distribution revealed a notable gender disparity, with females constituting a majority at 80.2%, while males constituted a minor proportion, accounting for only 19.8%. A thorough examination of racial and ethnic composition, as delineated in Table 3 and Table 4, respectively, illuminated that most participants self-identified as white and non-Hispanic or Latino, representing 69.8% and 88.4% of the sample, respectively.

Table 3

Participant Race

Race	Frequency	Percent
American Indian or Alaska Native	1	1.2%
Asian	6	7.0%
Black or African American	15	17.4%
Other race or race not listed	4	4.7%
White	60	69.8%

Table 4

Participant Ethnicity

Ethnicity	Frequency	Percent
Hispanic or Latino	6	7.0%
Non-Hispanic or Latino	76	88.4%

Other ethnicity or ethnicity not listed	4	4.7%

Marital status, married, constituted the largest grouping, accounting for 48.8% of the sample while single individuals were the second largest group, representing 40.7% as shown in Table 5. Table 6 notes that most participants had some college education, 41.9% or at a minimum 38.4%.

Table 5

Marital Status of Participants

Status	Frequency	Percent
Divorced	7	8.1%
Married	42	48.8%
Single	35	40.7%
Widowed	2	2.3%

Table 6

Education Level of Participants

Education	Frequency	Percent
Graduate	5	5.8%
High School Graduate	33	38.4%
Some College	36	41.9%
Undergraduate	12	14.0%

This study focused particularly on understanding the impact that the current staffing shortages have on the mental health of long-term care healthcare workers. Participants were asked in the last 6 months if they had planned to leave their current role with the results of this showing that 57% of participants had thought of leaving their current role in the last 6 months.

Study Findings

An examination of variables and an analysis were completed of the survey participant's responses to determine if there is a relationship between the three indicated areas burnout,

compassion fatigue, and compassion satisfaction in relation to patient-to-staff ratios (No_patients). To do this a *Spearman's* rank correlation was completed for each of the noted research questions. The *Spearman's* rank correlation was utilized due to the nature of the data in that the data was ordinal and from a Likert scale. The outcomes of the raw data from the facets of the ProQOL V were converted into t scores and presented as compassion satisfaction (tCS), burnout (tBO), and compassion fatigue (tSTS). Each of these facets was scored and converted in SPSS based on the recommendations of the ProQOL V manual (Stamm, 2010).

The Relationship Between Long-Term Care Healthcare Worker Compassion Fatigue and Staffing Ratio

The first hypothesis sought to examine if there was a relationship between compassion fatigue and the patient-to-staff ratio. A Spearman's rank correlation was completed to analyze the relationship between compassion fatigue and the patient-to-staff ratio. The correlation between No_patients and tSTS was not statistically significant $r(86) = 0$, $p = .498$ seen in Table 7 and Figure 1. The analysis did not find sufficient evidence to reject the null hypothesis (H01), suggesting that there is no statistically significant negative relationship between staffing ratios and healthcare worker compassion fatigue.

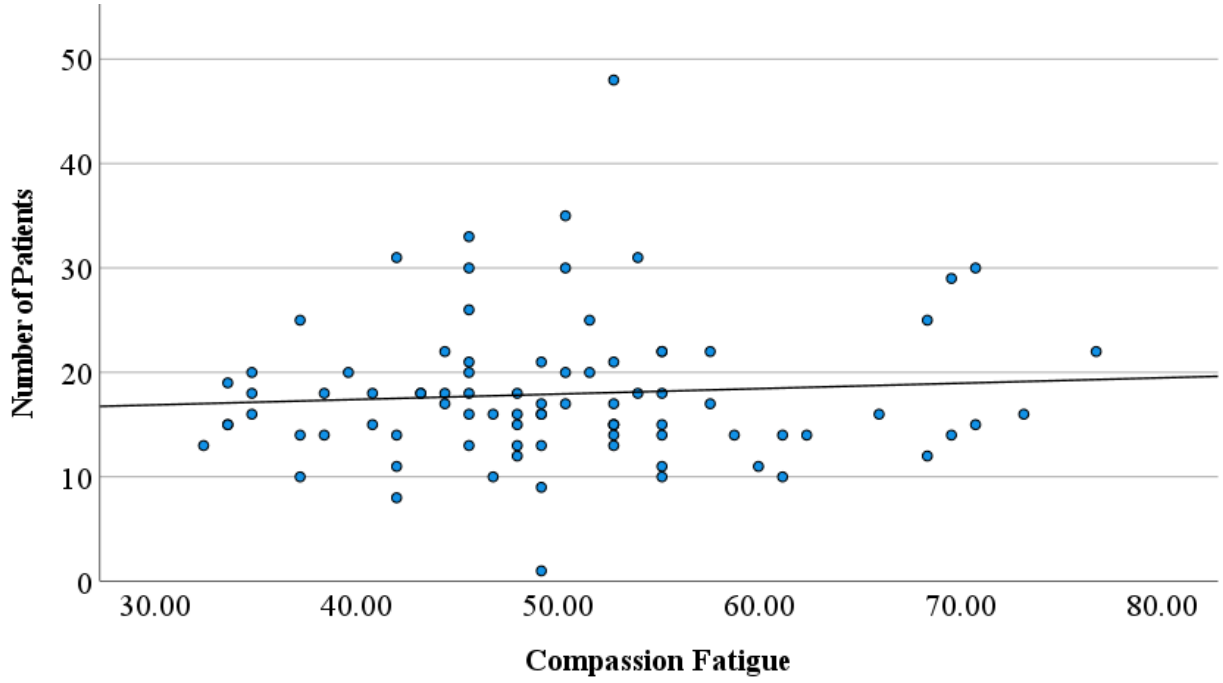
Table 7

Correlations for Number of Patients and Compassion Fatigue

Test	Variable		No_patients	tSTS
Spearman's rho	No_patients	Correlation Coefficient	1.000	.000
		Sig. (1-tailed)	.	.498
		N	85	85
	tSTS	Correlation Coefficient	.000	1.000
		Sig. (1-tailed)	.498	.
		N	85	86

Figure 1

Scatter Plot for Compassion Fatigue and Number of Patients



The Relationship Between Long-Term Care Healthcare Worker Burnout and Staffing Ratio

The second hypothesis sought to examine if there was a relationship between burnout and the patient-to-staff ratio. A Spearman's rank correlation was completed to analyze the relationship between burnout and the patient-to-staff ratio. Table 8 shows the correlation between No_patients and tBO was not statistically significant $r(86) = .176$, $p = .054$, see also Figure 2. The analysis did not find sufficient evidence to reject the null hypothesis (H02), suggesting that there is no statistically significant negative relationship between staffing ratios and healthcare worker burnout.

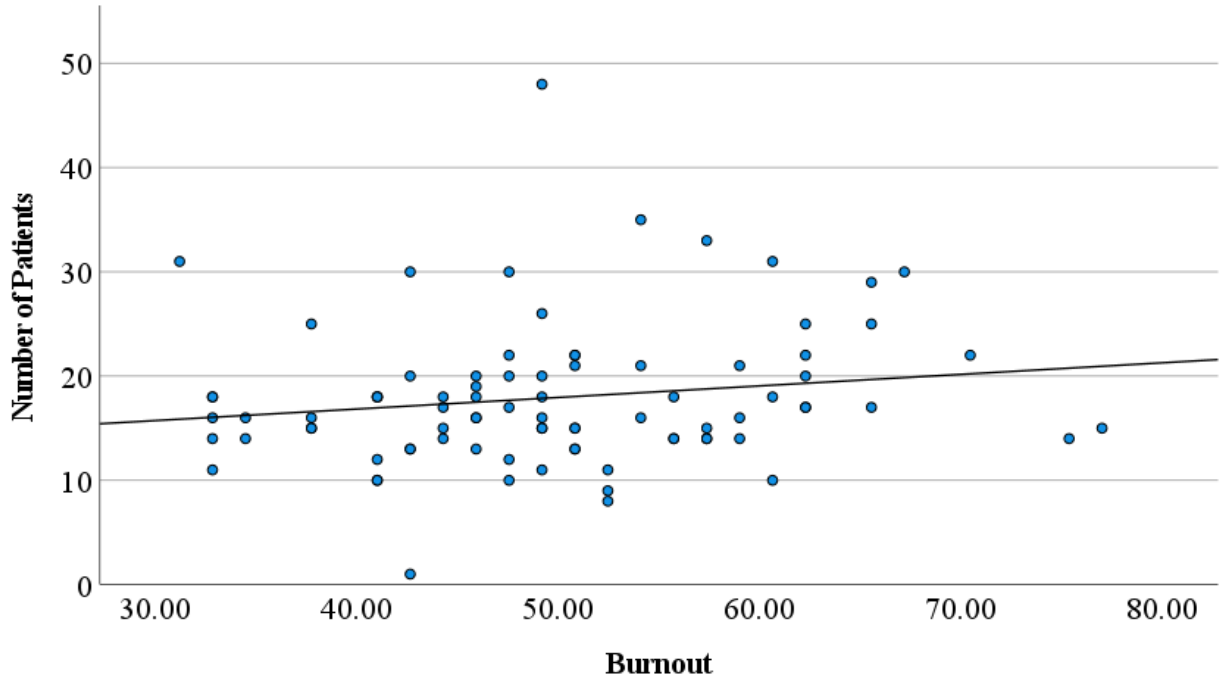
Table 8

Correlations for Number of Patients and Burnout

Test	Variable		No_patients	tBO
Spearman's rho	No_patients	Correlation Coefficient	1.000	.176
		Sig. (1-tailed)	.	.054
		N	85	85
	BO t score	Correlation Coefficient	.176	1.000
		Sig. (1-tailed)	.054	.
		N	85	86

Figure 2

Scatter Plot for Burnout and Number of Patients



The Relationship Between Long-Term Care Healthcare Worker Compassion Satisfaction and Staffing Ratio

The third hypothesis sought to examine if there was a relationship between compassion satisfaction and the patient-to-staff ratio. A Spearman's rank correlation was completed to analyze the relationship between compassion satisfaction and patient-to-staff ratio. Table 9

shows the correlation between No_patients and tCS was not statistically significant r(86) = .118, p = .140. Figure 3 shows this representation as a scatter plot of No_patients and tCS. The analysis did not find sufficient evidence to reject the null hypothesis (H03), suggesting that there is no statistically significant positive relationship between staffing ratios and healthcare worker compassion satisfaction.

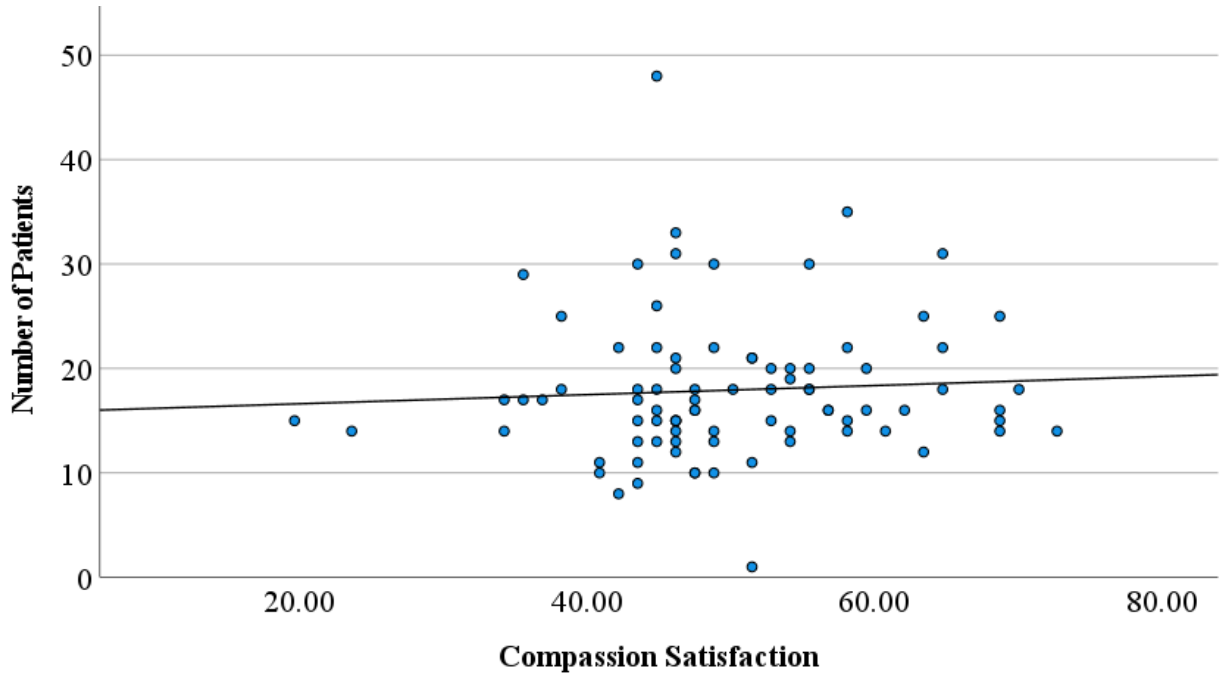
Table 9

Correlations for Number of Patients and Compassion Satisfaction

Test	Variable		No_patients	tCS
Spearman's rho	No_patients	Correlation Coefficient	1.000	.118
		Sig. (1-tailed)	.	.140
		N	85	85
	tCS	Correlation Coefficient	.118	1.000
		Sig. (1-tailed)	.140	.
		N	85	86

Figure 3

Scatter Plot for Compassion Satisfaction and Number of Patients



Summary

This chapter reviewed the findings of the analysis that was conducted on the patient-to-staff ratios with compassion fatigue, burnout, and compassion satisfaction of long-term care healthcare workers. Despite significant data collection and analysis, the study's findings did not yield any statistically significant results. The absence of statistically significant outcomes indicates the importance of further research in this area of study for a better understanding of the implications of patient-to-staff ratios and long-term care worker mental health.

The upcoming chapter will provide a summary of the study's outcomes, highlighting that no statistically significant findings emerged from the analysis. Subsequently, the chapter will discuss the implications of this lack of significance in relation to literature and previous research and its potential impact on the field. This discussion will also address the study's contributions or lack thereof to the theoretical framework of the constructs explored and the biblical foundations discussed in Chapter 2. Furthermore, the following chapter will explore the broader implications of the absence of statistically significant results for theory and practice, particularly focusing on their potential relevance to long-term care healthcare workers. To conclude, the following chapter will thoroughly examine the limitations of this research and offer recommendations for future studies that may explore the issues of burnout, compassion satisfaction, and compassion fatigue among long-term care healthcare workers in more depth.

CHAPTER 5: DISCUSSION

Overview

The purpose of this study was to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction. This chapter will discuss the findings of the study as well as any implications and limitations. This chapter further contributes to the broader body of knowledge by demonstrating the complexity of patient-to-staff ratios and long-term healthcare worker mental health and the need for continued exploration. The noted non-significant findings challenge existing assumptions and pave the way for future studies that may delve deeper into the intricacies of long-term care healthcare worker mental health with respect of patient to patient-to-patient-to-staff ratios. Finally, this chapter will cover suggestions and recommendations for future research in the realm of burnout, compassion fatigue, and compassion satisfaction within long-term care settings.

Summary of Findings

This study examined the potential relationship between long-term care healthcare worker mental health and patient-to-staff ratios in an unprecedented time of a nationwide staffing crisis. The objective was to determine whether the different patient-to-staff ratios had a significant impact on these indicators of direct care healthcare professionals' mental health. A Spearman rho test was performed to see if there was a statistically significant relationship between compassion satisfaction and staffing ratios; burnout and staffing ratios; compassion fatigue and staffing ratios. Prior to conducting this study, a review of the literature indicated that there were several studies conducted in the acute care realm of the healthcare industry, but no quantitative study had been identified for long-term care. This obvious gap in the research is what provided a focus for

this study. The analysis was to identify the relationship, if any, between long-term care healthcare worker mental health, specifically compassion fatigue, burnout, compassion satisfaction, and staffing ratios. There were 223 total participants, though only 86 participants made it through the completion of the full survey leaving the associated individuals as the sample size.

The outcome of the analysis conducted did not identify any significant relationships and therefore there was insufficient evidence to identify a relationship with any of the three research questions. This outcome was unable to identify that there was any significant correlation between long-term care healthcare worker mental health and staffing ratios in long-term care. Though no significant findings were revealed these non-significant results raise several important points for consideration.

Discussion of Findings

Staffing Ratio and Healthcare Worker Burnout

This question sought to review any potential relationship between long-term care staffing ratios and healthcare worker burnout. The results of this study did not identify a statistically significant relationship between varied staffing ratios and healthcare worker burnout. These results were not aligned and contrast with the findings of those identified in acute care settings that found higher staffing ratios had a negative correlation to healthcare worker burnout (Halbesleben et al., 2008; Khamisa et al., 2016; Muir et al., 2020). Additionally, according to two other studies by Dall'Ora (2020) and White et al. (2019) not only were staffing levels a significant predictor of healthcare worker burnout it was also reported that long-term care RNs reported higher levels of burnout than any other healthcare setting. Scripture identifies that burnout is a common theme through the Bible and one that is provided with reference for self-

care and reflection (*English Standard Version Bible*, 2001/2016, 1 Kings 19:1-21). Though this study's results did not indicate a significant correlation between burnout and staffing ratios it contributes to the broader discussion of the impact of staffing ratios and healthcare worker burnout by highlighting the need for further research. Healthcare organizations should continue to focus on optimizing staffing ratios to enhance patient care and worker well-being. This study reinforces the idea that nurse staffing remains a key factor in healthcare management, even if it may not be the sole determinant of burnout.

Staffing Ratio and Healthcare Worker Compassion Fatigue

This question endeavored to review any potential relationship between long-term care staffing ratios and healthcare worker compassion fatigue. No significant correlation was identified between healthcare worker compassion fatigue and staffing ratios. The results identified failed to reject the null hypothesis meaning there was no significant effect found of varied staffing ratios on health care worker compassion fatigue. The findings conflict with the literature as previous studies have identified a potential for a relationship between compassion fatigue and healthcare staffing ratios (Xie et al., 2021). Secondary traumatic stress, or compassion fatigue, is associated with increased exposure to stressors. Due to the nature and longevity of care, the long-term care environment creates an opportunistic environment for compassion fatigue (Lin et al., 2021). Feelings of hopelessness and despair can accompany compassion fatigue (*English Standard Version Bible*, 2001/2016, Matthew 26:39). Scripture identifies that these feelings should be cyclical in nature and should not beset our ability to care for others. It is important to recognize the complexities of compassion fatigue and the multifaceted environment that long-term care is which expresses the importance of further research and understanding of this topic.

Staffing Ratio and Healthcare Worker Compassion Satisfaction

This question sought to review whether any correlation relationship exists between staffing ratios and healthcare worker compassion satisfaction. The results of this analysis indicated that no significant relationship exists between staffing ratios and healthcare worker compassion satisfaction. The literature review noted that there was a significant relationship between staffing ratios and compassion satisfaction in various healthcare settings such as palliative, specialty, and even acute care (Ruiz-Fernández et al., 2020; Shahar et al., 2019; Zhang et al., 2018). The results of the analysis do not align with these findings nor with those identified in scripture as Matthew 7:12 sets a tone that it is important to be compassionate of others are we are compassionate of ourselves and through this, we will build fulfillment and joy (*New International Bible*, 1978/2011). Even in the absence of obvious connections with staffing ratios, the study's non-significant finding underscores the necessity for a complete approach to well-being that takes into consideration individual resilience, support systems, and self-care practices.

Implications

While this study found no significant relationships between the variables of compassion satisfaction, burnout, and compassion fatigue it is imperative to recognize that this inconclusive result can serve as a foundation for future research endeavors. Future investigations may consider allocating resources and efforts differently to delve deeper into the effects of the prevailing staffing crisis on specific groups, such as CNAs, LPNs, or RNs, aiming for a more comprehensive understanding of their unique experiences and challenges. In addition to focusing on a specific group, it may be advantageous for future research to also focus on a specific geographic location or a larger population size that may be more representative of the overall population.

This study utilized a quantitative approach though a qualitative approach may provide a more intimate understanding of the internal thoughts, feelings, and perspectives of individuals within the industry that may provide better insights and understanding of the effects of staffing on the mental health of long-term care healthcare workers (Gillespie, 2018). Additionally, a qualitative study would be able to include observations of participants throughout their shift as the workloads can vary minute by minute (Centers for Medicare and Medicaid, 2022; Gillespie et al., 2018).

The findings in this study do not support Stamm's Theory of compassion fatigue and satisfaction. Stamm's theory on compassion fatigue and satisfaction identifies that people who work in professions that require frequent interactions with people who have experienced trauma or frequently deal with stressful situations may experience psychological exhaustion and a decreased ability to empathize with others. It is critical to recognize that the absence of statistical significance does not always imply the absence of a real-world connection (Murphy 2019). The long-term care industry may be more complex than directly presented at face value due to the unique environment of the industry and the requirements of staff to provide care for extended periods (AHCA NCAL, 2022; National Institute of Aging, 2019). Additionally, with the different geographic locations, ownership structures, and leadership styles, long-term care facilities vary drastically with various degrees of patient acuity, levels of care, building layout, and staffing ratios. This complex environment may require a review and understanding of the impact on the person and their challenges and perspectives. With the expectation that the current staffing crisis may continue for years to come, it is evident that further research is necessary to garner a better understanding of the long-term care industry and the impacts that the staffing crisis has on the

staff (America Counts Staff, 2022a; Centers for Medicare and Medicaid Services, 2022; Knickman & Snell, 2002).

Limitations

The primary goal of this study was to gain valuable insights into the impact of staffing levels on the mental well-being of healthcare professionals working in the long-term care sector, with a particular emphasis on the dimensions of compassion fatigue, compassion satisfaction, and burnout (Gavin, 2008). However, it is critical to recognize that certain limitations were acknowledged before and while conducting this study.

The study's research approach is non-experimental and heavily based on quantitative techniques and tried to establish a relationship between the independent and dependent variables, which prevented the development of a control group in this context (Curtis et al., 2016). Furthermore, as argued by Mullinix (2015), an essential assumption behind this study was that the participants would offer true and correct replies to the survey questions. Aside from these constraints, the study assumed that staffing ratios had a detectable influence on the mental health of long-term care employees. Convenience sampling was used as a practical approach for selecting an appropriate sampling population which may add a potential selection bias to the study, necessitating more investigation (Emerson, 2015).

This study also encountered time restrictions which limited the capacity to reach a more diversified geographical population (Emerson, 2015). Given that the study was done at a single moment in time, it is vital to note that the data obtained can only provide a snapshot of the participants' mental health, with no ability to follow changes over time. For individuals to participate in this study participants needed to be 18 years of age or older, have at least two years of experience in the long-term care profession, and were presently working in the field as house

staff. Such specific criteria may have inherent limits, especially in terms of generalizability (Emerson, 2015).

Furthermore, the non-parametric Spearman Rank Correlation test, which was used in this study, deserves special notice (Kaur & Singh, 2019). The Spearman Rank Correlation test is limited to identifying monotonic connections and is susceptible to outliers. Furthermore, it requires the assumption of ordinal data and often requires a greater sample size than other statistical tests. It is critical to emphasize that this test cannot show causation; its usefulness is limited to quantifying the intensity and direction of the observed link. Finally, the sample size of 86, while carefully chosen, may not provide a thorough representative of the overall long-term care industry (Mullinix, 2015). These limitations are acknowledged, and they should be considered when evaluating this study's findings.

Recommendations for Future Research

With potentially limited empirical research conducted on the staffing crisis in long-term care, there is still much to be understood and uncovered. Future research plans that intend to follow a similar study design should seek out a larger sample size or focus on a specific geographic location to garner a higher potential for generalizability and reduction of regional confounding variables. The prevalence within the literature review of mental health challenges among healthcare workers suggests that they are more likely to acquire mental health disorders such as anxiety, depression, and post-traumatic stress disorder (Lin et al., 2021). In this case, elements not examined in this study may have a greater impact on compassion satisfaction, compassion fatigue, and burnout among healthcare workers.

Furthermore, it is important to note that the healthcare sector is extremely complex and staffing ratios represent only one element of the picture (Jamieson, 2021). Staffing ratio

variations may not fully portray the diverse dynamics of healthcare work settings. Also, the sample size and methodology of the study should be contemplated when interpreting these non-significant results (Wysocki, 2023). A greater or more varied sample, alternative study methodologies, or focus on specific positions among long-term care healthcare workers might provide different results.

Additional research is necessary to better understand the complex interactions of long-term care healthcare workers' lives and the nature of the long-term care industry. It may be more advantageous to concentrate on other parts of the workplace, such as improving support networks, stress management training, or creating policies that encourage a culture of well-being. A qualitative approach may provide insights that a quantitative study is not able to, particularly through the perspectives of the participants and the observations of the researchers (Gillespie, 2018). Considering the complexity of the long-term care industry, future research may also consider utilizing a longitudinal study design as opposed to a cross-sectional design to better understand how staff are impacted while working in the environment for extended periods (Kakeman et al., 2021).

Summary

This study explored the potential relationship between compassion satisfaction, burnout, and compassion fatigue, with a specific focus on their potential correlation, if any, with staffing ratios in long-term care healthcare settings. The objective was to determine whether the different patient-to-staff ratios had a significant impact on these indicators of direct care healthcare professionals' mental health. This study found no significant findings from the data analysis. While no significant findings were identified, this study highlights the complexities of the long-term care environment. Additionally, the non-significant findings provide guidance and support

for future research to better understand the effects of the current staffing crisis in the long-term care environment regarding staff mental health and well-being. Continued research during this staffing crisis is imperative to better understand how staffing ratios affect the mental health of long-term care healthcare workers as the nation will continue to rely on their dedicated efforts to provide care to some of the country's most vulnerable individuals.

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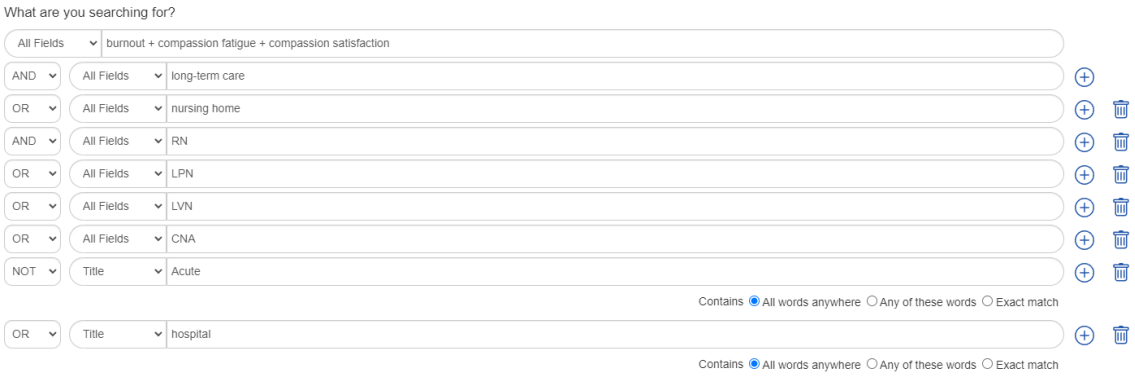
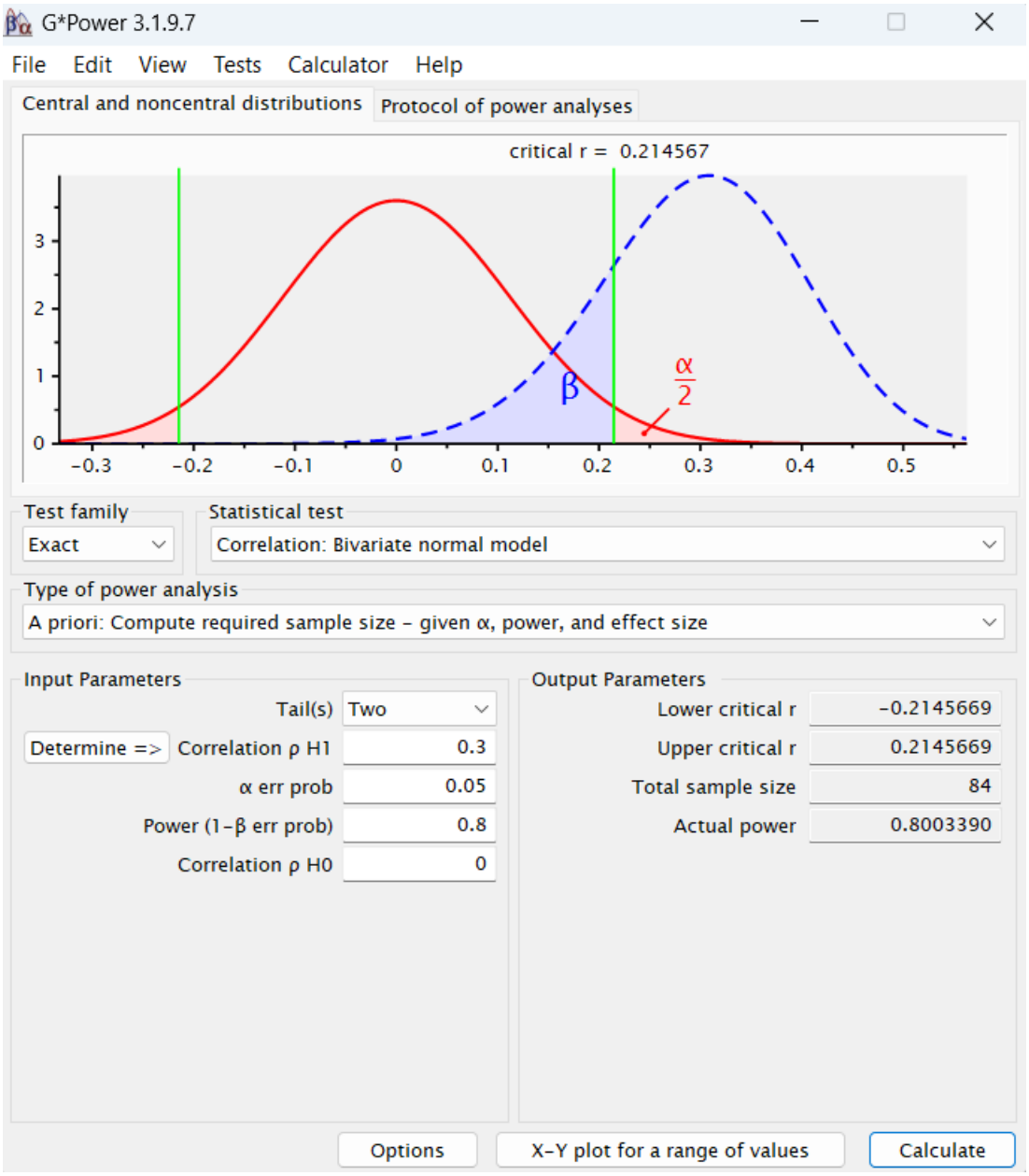
APPENDIX A: BOOLEAN OPERATORS AND DATABASE SEARCH



APPENDIX B: POWER ANALYSIS

*G*Power 3.1.9.7 Calculation for Sample Size*



APPENDIX C: COMMUNICATIONS

FACILITY ADMINISTRATOR EXECUTIVE DIRECTOR PERMISSION REQUEST

[Date]

[Recipient]
[Title]
[Company]
[Address 1]

Dear [Recipient],

As a graduate student in the Department of Psychology at Liberty University, I am conducting research as part of the requirements for a Doctoral degree. The title of my research project is exploring the relationship between staffing and Long-term Care work mental health and the purpose of my research is to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction.

I am writing to request your permission to contact members of your organization to invite them to participate in my research study.

Participants will be sent an email and asked to click on a Survey Monkey link to complete an anonymous survey. Participants will be presented with consent information before participating. Taking part in this study is voluntary, and participants are welcome to discontinue participation at any time. This survey is expected to take approximately 10 minutes to complete.

Thank you for considering my request. If you choose to grant permission, please respond by email to [redacted]

Sincerely,

[redacted]

FACEBOOK: ADMINISTRATOR'S FORUM

ATTENTION MEMBERS OF THE ADMINISTRATOR'S FORUM: I am conducting research as part of the requirements for a PhD. degree at Liberty University. The purpose of my research is to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction. For your staff to participate, they must be 18 years of age or older, must currently hold any of the following licensure levels or certifications (CNA, CNA-M, LPN, LVN, RN), must be currently employed as house staff with a long-term care facility, must have two or more years of experience working in a long-term care facility, and must only be employed at one long-term care facility. Taking part in this research project is voluntary.

Participants will be asked to complete a one-time anonymous survey including pertinent demographic information to assess compassion fatigue, compassion satisfaction, burnout, and staffing levels. This questionnaire should take less than 10 minutes to complete. If you would like your team members to participate, please share the following link with your team members [Survey Monkey Link]. A consent document is provided on the first page of the survey.

FACEBOOK: RN, LPN & CNA NETWORKING GROUP

ATTENTION MEMBERS OF THE ADMINISTRATOR'S FORUM: I am conducting research as part of the requirements for a PhD. degree at Liberty University. The purpose of my research is to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction. For you to participate, you must be 18 years of age or older, must currently hold any of the following licensure levels or certifications (CNA, CNA-M, LPN, LVN, RN), must be currently employed as house staff with a long-term care facility, must have two or more years of experience working in a long-term care facility, and must only be employed at one long-term care facility. Taking part in this research project is voluntary.

Participants will be asked to complete a one-time anonymous survey including pertinent demographic information to assess compassion fatigue, compassion satisfaction, burnout, and staffing levels. This questionnaire should take less than 10 minutes to complete. If you would like your team members to participate, please share the following link with your team members [Survey Monkey Link]. A consent document is provided on the first page of the survey.

APPENDIX D: MEASURES

DEMOGRAPHIC INFORMATION

Age
a. 18-24
b. 25-30
c. 31-35
d. 36-40
e. 41-45
f. 46-50
g. 51-55
h. 55 and up

Biological Sex
a. Male
b. Female

Race
a. White
b. Black or African American
c. American Indian or Alaska Native
d. Asian
e. Native Hawaiian or Other Pacific Islander
f. Other race or race not listed

Ethnicity
a. Hispanic or Latino
b. Non-Hispanic or Latino
c. Unknown
d. Other ethnicity or ethnicity not listed

Marital Status
a. Single
b. Married
c. Widowed
d. Divorced

Education
a. High School Graduate
b. Some College
c. Undergraduate
d. Graduate
e. Post-Graduate/Doctoral

Licensure/Certification
a. Registered Nurse
b. Licensed Practical Nurse
c. Licensed Vocational Nurse
d. Certified Nursing Assistant – Medication Tech
e. Certified Nursing Assistant

Years of Experience in Long-Term Care
a. Less than 1 year
b. 1-2 years
c. 3-4 years
d. 5-10 years
e. 11-20 years
f. 20+ year

Have you thought of or planned to leave your role in the last 6 months due to burnout?
a. Yes
b. No

PROFESSIONAL QUALITY OF LIFE SCALE (PROQOL)

Professional Quality of Life Scale (ProQOL) Version 5 [English]

When you provide care for people, you have direct contact with their lives. As you may have found, your compassion for those you provide care for can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a caretaker. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the last 30 days.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

1.I am happy.

2. I am preoccupied with more than one person I care for.

3. I get satisfaction from being able to provide care for people.

4. I feel connected to others.

5. I jump or am startled by unexpected sounds.

6. I feel invigorated after working with those I provide care to.

7. I find it difficult to separate my personal life from my life as a caregiver.

8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I care for.

9. I think that I might have been affected by the traumatic stress of those I care for.

10. I feel trapped by my job as a caretaker.

11. Because of my caregiving, I have felt "on edge" about various things.

12. I like my work as a caregiver.

13. I feel depressed because of the traumatic experiences of the people I provide to.

14. I feel as though I am experiencing the trauma of someone, I have provided care to.

15. I have beliefs that sustain me.

16. I am pleased with how I am able to keep up with caregiving techniques and protocols.

17. I am the person I always wanted to be.

18. My work makes me feel satisfied.

19. I feel worn out because of my work as a caregiver.

20. I have happy thoughts and feelings about those I provide care to and how I could help them.

21. I feel overwhelmed because my case/work load seems endless.

22. I believe I can make a difference through my work.

23. I avoid certain activities or situations because they remind me of frightening experiences of the people I provide care for.

24. I am proud of what I can do to provide care.

25. As a result of my caregiving, I have intrusive, frightening thoughts.

26. I feel "bogged down" by the system.

27. I have thoughts that I am a "success" as a caregiver.

28. I can't recall important parts of my work with trauma victims.

29. I am a very caring person.

30. I am happy that I chose to do this work.

APPENDIX E: PERMISSIONS

PERMISSION TO USE THE PROQOL V

Thank you for your interest in the ProQOL.

The ProQOL measure may be freely copied and used, without individualized permission from the ProQOL office, as long as:
(a) You credit The Center for Victims of Torture and provide a link to www.ProQOL.org;
(b) It is not sold; and
(c) No changes are made, other than creating or using a translation, and/or replacing "[helper]" with a more specific term such as "nurse."

Because you have agreed that your use of the ProQOL follows the above criteria, the ProQOL Office at the Center for Victims of Torture grants you permission to use the ProQOL. Your recorded request is attached here as a PDF.

If you have any questions or comments, you can contact us at proqol@cvt.org. Note that unfortunately our capacity is quite limited, as this is a volunteer-run effort, but we will do what we can to respond within a couple of weeks.

Thank you!

The ProQOL Office
at The Center for Victims of Torture
proqol@cvt.org

APPENDIX F: CONSENT

Consent

Title of the Project: Exploring the relationship between staffing and long-term care worker mental health.

Principal Investigator: Matthew Trombley MBA, Doctoral Student, Liberty University

Invitation to be Part of a Research Study

You are invited to participate in a research study. To participate, you must be 18 years of age or older, must currently hold any of the following licensure levels or certifications (CNA, CNA-M, LPN, LVN, RN), must be currently employed as house staff with a long-term care facility, must have two or more years of experience working in a long-term care facility, and must only be employed at one long-term care facility. Taking part in this research project is voluntary. Please take time to read this entire form and ask questions before deciding whether to take part in this research.

What is the study about and why is it being done?

The purpose of this non-experimental, correlational quantitative study is to investigate the staffing ratios in long-term care facilities and their relationship to long-term care healthcare workers' mental health, including burnout, compassion fatigue, and compassion satisfaction.

What will happen if you take part in this study?

If you agree to be in this study, I will ask you to do the following:

1. Complete a one-time anonymous survey including pertinent demographic information to assess compassion fatigue, compassion satisfaction, burnout, and staffing levels. This questionnaire should take less than 10 minutes to complete.

How could you or others benefit from this study?

Participants should not expect to receive a direct benefit from taking part in this study. Benefits to society may include increased knowledge and understanding of how compassion fatigue, compassion satisfaction and burnout affect long-term care healthcare workers with respect to staffing levels. Additional benefits may include information and evidence to support additional resources for the long-term care industry such as federal grants.

What risks might you experience from being in this study?

The expected risks from participating in this study are minimal, which means they are equal to the risks you would encounter in everyday life.

How will personal information be protected?

The records of this study will be kept private. Research records will be stored securely, and only the researcher will have access to the records.

- Participant responses will be anonymous.
- Data will be stored on a password-locked computer and may be used in future presentations. After three years, all electronic records will be deleted.

Is study participation voluntary?

Participation in this study is voluntary. Your decision whether to participate will not affect your current or future relations with Liberty University If you decide to participate, you are free to not answer any question or withdraw at any time prior to submitting the survey without affecting those relationships.

What should you do if you decide to withdraw from the study?

If you choose to withdraw from the study, please exit the survey and close your internet browser.

Whom do you contact if you have questions or concerns about the study?

The researcher conducting this study is Matthew Trombley MBA. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact him at [redacted]

Whom do you contact if you have questions about your rights as a research participant?

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the IRB. Physical address is Institutional Review Board, 1971 University Blvd., Green Hall Ste. 2845, Lynchburg, VA, 24515; Phone number is 434-592-5530, and email address is irb@liberty.edu.

Disclaimer: The Institutional Review Board (IRB) is tasked with ensuring that human subjects research will be conducted in an ethical manner as defined and required by federal regulations. The topics covered and viewpoints expressed or alluded to by student and faculty researchers are those of the researchers and do not necessarily reflect the official policies or positions of Liberty University.

Your Consent

Before agreeing to be part of the research, please be sure that you understand what the study is about. You can print a copy of the document for your records.] If you have any questions about the study later, you can contact the researcher using the information provided above.