5-2024

Going, Going, Gone: The Influence of Job and Home Demands and Resources on Emergency Department Nurse Turnover

Jordan Gail Smith
Clemson University, jgs4@g.clemson.edu

GOING, GOING, GONE: THE INFLUENCE OF JOB AND HOME DEMANDS AND RESOURCES ON EMERGENCY DEPARTMENT NURSE TURNOVER

A Dissertation
Proposed to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy
Industrial/Organizational Psychology

---

by
Jordan Smith
May 2024

Accepted by:
Marissa L. Shuffler, Committee Chair
Thomas W. Britt
Patrick Rosopa
Nathan Hudepohl

ABSTRACT

Nurse turnover, which challenged healthcare organizations even before the pandemic, reached alarming rates across hospitals worldwide during COVID-19. Due to the unprecedented and stressful nature of the pandemic, recent investigations have focused primarily on exploring job demands and nurse turnover intentions. While job demands are critical to understanding turnover, this narrow scope ignores the possible influence of other factors such as job resources and demands and resources external to the work domain. This study utilized archival qualitative data from a longitudinal survey of Emergency Department clinicians to analyze research questions and hypotheses. The first aim of this study was to provide an understanding of the job and home demands faced by and resources available to emergency department nurses. Thematic analysis performed on responses from survey questions revealed 23 unique themes. Job demands were most prevalent, with the greatest number of comments (35% of total comments) and 11 themes. *Needed Organizational Support* was the most common job demand, and results highlighted that the most prevalent and valued resources pertained to support from, or interactions with, others. The second aim of this study was to determine the relationships between job and home demands/resources and emergency department turnover. Correlation and regression analyses revealed that job and home demands and resources were neither significantly related to, nor predictive of, turnover. The overall study results are discussed, along with theoretical and practical implications and opportunities for future research. Results suggest that emergency medicine nurse burnout is positively related to departmental turnover and negatively related to job resources.

DEDICATION

I dedicate this dissertation to my parents, Tom and Melissa Smith. I am eternally grateful for their unwavering support, love, confidence, and patience throughout my graduate school career. My dissertation, and completion of my PhD, would not have been possible without them. They believed in me when I did not believe in myself, and always provided me with ears to listen and shoulders to cry on. Words cannot express how thankful I am for the sacrifices they made in the last 6 years. The successes I have had are just as much due to my efforts as they are the efforts of my parents. I could not have asked for a better support system, or two better people to walk beside me during this journey. All the hugs, words of encouragement, and resources they provided were critical to getting me through the dissertation process. They have always been my champions, and I will continue to be theirs. I hope to always make them proud and shout my appreciation for them from the rooftops.

ACKNOWLEDGEMENTS

This dissertation would not have been possible without the support of many people. First, I want to extend gratitude to my advisor, Dr. Marissa Shuffler. Her guidance, mentorship, and belief in my abilities propelled me through graduate school and the dissertation process. I am blessed to have had Dr. Shuffler as my advisor, and her efforts shaped me into the Industrial/Organizational Psychology practitioner I am today. I also want to extend appreciation to my dissertation committee—Dr. Thomas Britt, Dr. Patrick Rosopa, and Dr. Nathan Hudepohl. Their expertise, advice, and feedback were imperative to the development and shaping of this dissertation.

Lastly, I want to express my deepest appreciation to my family and friends, and all of whom stood by me throughout my time in graduate school at Clemson University. I want to extend a special shoutout to my parents Tom and Melissa Smith; my brother Connor Smith; and my dear friends Kathryn Omole, Rae Sterk, Johan Lee, Matt Leistra, Kara Fadanelli, Kayla Gercak, and Sara Krivacek. Each one of them provided immense support that helped me push through classes, comprehensive exams, and my dissertation.

TABLE OF CONTENTS

LIST OF TABLES

Table Page

LIST OF FIGURES

Figure Page

CHAPTER ONE

INTRODUCTION

Turnover is a complex issue faced by all organizations. Not only is turnover associated with significant financial costs that affect profitability, but it can also lead to other negative outcomes such as reduced productivity and performance, operational disruption, customer dissatisfaction, and increased workloads for remaining employees (Hurley & Estelami, 2005; Shaw, 2011; Staw, 1980). In an effort to reduce turnover—and in turn, its negative effects—researchers have sought to better understand the factors that lead to turnover. Job satisfaction, organizational commitment, supervisor and organizational support, role ambiguity, role conflict, and family work conflict are just some of the factors that influence an employee's intention or decision to separate from their employer (Cheng et al., 2013; Erkmen & Esen, 2014; Harrison et al., 2006; Podsakoff et al., 2007). Although turnover research is vast and has provided many insights on the process, there is a need to further the research to better understand what matters to employees and how turnover unfolds in specific contexts.

While turnover has always been an organizational challenge, it became nearly insurmountable in 2020 due to the global COVID-19 pandemic. The rate of employee departure during COVID-19 was so extreme that it was famously coined "The Great Resignation" by Anthony Klotz in a 2021 interview with Bloomberg. The Bureau of Labor Statistics (BLS), the primary provider of labor statistics in the United States, reported that the 2021 rate of quitting in the United States was the highest it had been since the inception of the BLS *Job Openings and Labor Turnover Survey (JOLTS)* in December 2000. This trend continued into 2022, as more than 50 million employees in the U.S. workforce quit their jobs, which surpassed the 2021 total of 47.5 million (BLS, 2023). Although the total separation rate (i.e., quits, layoffs, and

discharges) and quit rate are trending back to pre-pandemic rates, turnover remains a major concern of organizations, especially in the healthcare field. Not only are healthcare organizations still feeling the effects of COVID-19, but they have historically dealt with unfavorable turnover patterns, especially with registered nurses (RNs).

During the COVID-19 pandemic, the rate of turnover among RNs skyrocketed. According to the latest NSI National Health Care Retention and RN Staffing Report (March 2023), the RN turnover rate reached 27.1% in 2021, which was an 8.4% increase from 2020 and an 11.2% increase from 2019. In 2022, the turnover rate decreased by 4.6% to a rate of 22.5%, which is still higher than the pre-pandemic rate. This trend of RN turnover has led to profound costs for hospitals. The 2023 NSI National Health Care Retention and RN Staffing Report found that the average turnover cost for a bedside RN is $52,350, which has resulted in a yearly average cost of $6.6 million - $10.5 million for hospitals. In addition to increased turnover rates and their associated costs, COVID-19 also spurred a change in the reasons for RN turnover due to the unique stressors and nature of working the frontlines during a global pandemic (Falatah, 2021). Changes in both the rate of and reasons for RN turnover has given rise to the importance of studying RN turnover during and after the COVID-19 pandemic.

Research has shown, through the Job Demands-Resources (JD-R) model, that turnover is influenced by both negative (i.e., job demands/stressors) and positive (i.e., job resources) factors. The JD-R model incorporates both the *stress process,* influenced by excessive job demands and low resources, and *motivational process*, which leads to positive organizational outcomes through an increase in work engagement. The primary argument made by Demerouti et al. (2001) is that job demands lead to exhaustion, while a lack of resources leads to disengagement. Furthermore, Bakker et al. (2004) posit that the presence of job resources is also very impactful,

as they can buffer the effect of job demands on burnout. In this case, job resources essentially combat the negative effects of job demands and leave employees less susceptible to burnout. Due to the JD-R model's implications for burnout, researchers have used the JD-R model to test the relationship between job demands and resources and nurse turnover. In accordance with the JD-R model, Kaiser et al. (2020) found that the relationship between job demands and turnover intention is mediated through burnout and engagement. Researchers have also used the JD-R model as more of a broad framework to investigate the relationship between job demands/resources and turnover. For example, Van der Heijden et al. (2018) used the JD-R model as a framework to test direct relationships between job demands and resources and nurse turnover as well as the mediating role of turnover intent in the relationship between job demands and resources and nurse turnover. This dissertation follows the latter approach by using the JD-R model broadly to provide support for the role of job demands and resources on nurse turnover behavior.

While the JD-R model helps provide some theoretical support for this dissertation, it falls short due to its emphasis on workplace-specific demands and resources. Although the JD-R model includes personal resources, which are characteristics typically associated with resilience and pertain to an individuals' perception of their capacity to effectively influence and manage their surroundings, it doesn't include demands and resources that stem from the home domain (Xanthopouou et al., 2007). Theories such as spillover, which will be discussed in the following paragraphs, explain the interconnectedness of the work and non-work domains, providing evidence for why non-work aspects should be considered when attempting to predict employee outcomes. Even with the theoretical and empirical support that exists regarding the influence of the non-work domain on the work domain, many studies that test antecedents of employee

outcomes only include work-related constructs. To address this gap, this study will use both the JD-R model and spillover theory as general frameworks to investigate the relationships between work and home (i.e., non-work) demands and resources and turnover.

To fully understand how turnover can progress, it is essential to consider the home domain in addition to the work domain. Often, what happens at work does not stay at work and what happens at home does not stay at home. In this dissertation, the word "home" is used to encompass not only the physical home space and those within it, but also other non-work related factors (i.e., friends, hobbies). Consistent with the literature, any reference of the words "life" and "family" are interchangeable with the meaning of "home". The lack of rigidity between work and home is evidenced by the concept of spillover, which indicates that experiences in one domain carry into the other (Zedeck, 1992). Spillover can be positive or negative, although literature predominantly focuses on the negative effects. Recuperation, social support from family and friends, and other non-job-related resources provide benefits to one's work domain (Fritz & Sonnentag, 2005), while non-work stressors (i.e., child care, conflicts with family members) have negative effects on the work domain. These effects ultimately influence turnover intentions, such that negative work-home spillover is positively related to turnover intention and positive work-home spillover is negatively related to turnover intention (Kopperud et al., 2020). Due to the recency of the pandemic, very few studies exist on the work-home spillover of nurses in the context of COVID-19. Thus, there is a need for further research to better understand how stressors and resources in both the home and work domains affect employee behavior.

This study addresses several gaps in the literature, and in doing so, makes key contributions. First, this study used both quantitative and qualitative data. The inclusion of qualitative data is beneficial because it provides a higher level of detail and insight into what

someone is experiencing at home and at work than is often captured by quantitative data alone. Second, this study used turnover behavior data, instead of turnover intention data, as an outcome variable. Although some studies have found turnover intention to be an antecedent of turnover, Cohen et al. (2016) posit that turnover intention and turnover behavior are distinct and predicted by different variables. Thus, in order to deepen the understanding of turnover behaviors and the variables that predict those behaviors, studies with employee departure as an outcome variable, rather than intention of turnover, are needed. Third, this study used the JD-R model as a framework to explain and predict the relationship between job and home demands and resources and turnover. No previous study exists, to the best of the author's knowledge, that uses job and home demands and resources to predict turnover of nurses during the COVID-19 pandemic.

CHAPTER TWO

TURNOVER

Turnover has long been an interest of both researchers and practitioners alike due to its prevalence and costliness to organizations. However, its definition has remained inconsistent due to differences in turnover criterion and measurement. Factors such as hours (i.e., full time or part time), reason for departure (i.e., voluntary or involuntary), and type of job move (i.e., leaving the unit/department, leaving the organization, leaving the profession) have all led to various operationalizations of turnover (Cavanagh, 1989; O'Brien-Pallas et al., 2006). In this study, turnover refers to movement of emergency department nurses out of both the emergency department and the hospital.

Often, the main concern regarding turnover is cost. The costs of turnover can be either direct or indirect. Financial costs, which are commonly cited as one of the most extreme and negative consequences of turnover, are considered direct costs. When turnover occurs, organizations incur replacement costs that come from outreach and recruitment efforts, selection, training, and offboarding (Al-Emadi et al., 2015). Research from academia and professional organizations estimate the direct cost of replacing an employee to be 50% to 250% of the departing employee's annual salary (McFeely & Wigert, 2019). Indirect turnover costs include factors such as work overload, inefficiencies, low morale, and low productivity (O'Connell & Kung, 2007). Although less quantifiable and obvious, these costs are still harmful to organizations. The combined impact of both direct and indirect turnover costs on organizations has led to research on theories, determinants, and outcomes, which attempt to explain how turnover happens, why it happens, and how it affects organizations and their human capital.

Turnover has been classified into two different types—voluntary and involuntary. Involuntary, or dismissal, is when an employer decides to terminate the relationship with their employee. This type of turnover often occurs when an organization lets an employee go because they are a bad fit or poor performer (Batt & Colvin, 2011; Shaw et al., 1998). Involuntary turnover can also happen when an organization cuts costs through mechanisms such as downsizing, mass layoffs, and restructuring. Voluntary turnover, or a quit, is when an employee decides to leave an organization (Shaw et al., 1998). Both research studies and organizations focus more on voluntary turnover because it is often not necessary or beneficial to the functioning and overall performance of an organization. By understanding the reasons behind employee departures, organizations can prepare for turnover by minimizing the negative impacts and even make efforts to minimize turnover. In this study, voluntary employee turnover is unable to be distinguished between involuntary. The data is extracted from an online human resources system, which does not include the reason for departure. In the next paragraph, the most common determinants of turnover that have been identified throughout decades of research will be reviewed.

There is not a single framework for turnover, or a standard account of why employees leave an organization (Lee & Mitchell, 1994; Morrell et al., 2004). Attitudinal mechanisms (i.e., job satisfaction, organizational commitment), behavioral intentions (i.e., intention to quit/stay), and job search mechanisms have all received extensive conceptual and empirical support in the literature as predictors of turnover (Griffeth et al., 2000; Steel & Lounsbury, 2009). Although these mechanisms are considered to be the backbone of turnover, they do not paint a full picture of the turnover process. The literature has found support for many other determinants, which build upon core mechanisms to give a more robust and nuanced explanation of turnover. Some of

the more common determinants include perceived supervisor and organizational support, work group cohesion and quality, autonomy, HR policies and practices, job stress, and costs of quitting (Alkahtani, 2015; Heavey et al., 2013; Steel & Lounsbury, 2009).

This study focuses on nurse turnover, which is relevant and important for multiple reasons. First, the nurse turnover rate is particularly high and is a persistent challenge for healthcare organizations. Second, COVID-19 exacerbated the pre-existing nurse turnover problem by sparking a mass exit of nurses, which has had a long-lasting effect on the healthcare industry. Lastly, the implications of nurse turnover are particularly high. Not only does nurse turnover heavily impact the financial state of healthcare organizations, but it can also influence the safety and satisfaction of patients as well as negatively impact the work environment and well-being of nurses who stay. The remainder of this section will review the nursing literature, which covers models and theories, determinants, and consequences of nurse turnover.

Although turnover occurs in every industry, the nursing field has received a lot of attention in the academic literature. For decades, nursing has battled staffing shortages and volatile turnover rates. These patterns have led to negative outcomes for healthcare organizations, their staff, and their patients. Researchers have conducted a multitude of studies to better understand the complexities of the nurse turnover problem. Factors such as psychological distress, work schedule, career advancements, management, and organizational climate are just some of the determinants of turnover that have been identified by reviews and empirical studies (Hayes et al., 2006; Hayes et al., 2012). The rest of this section contains a review of the literature, which summarizes studies on models and theories, determinants, and consequences of nurse turnover.

Models and Theories of Nurse Turnover

In the 1980s and 1990s, researchers took an interest in the nursing field and started testing models of turnover. Price and Mueller (1981) estimated a causal model of turnover among hospital nurses using 11 determinants (i.e., opportunity, routinization, participation, instrumental communication, integration, pay, distributive justice, promotional opportunity, professionalism, generalized training, kinship responsibility) and 2 mediating variables (i.e., job satisfaction, intent to stay). Only three variables—intent to stay, opportunity, and general training—had a significant direct effect on turnover, while job satisfaction had a significant indirect effect. Parasuraman (1989) tested an integrated model of voluntary turnover and confirmed the hypothesis that intention to leave was the most immediate determinant of turnover. Organizational, personal, and job experience variables only influenced voluntary turnover indirectly through effects on the following attitudinal variables: felt stress, intention to leave, satisfaction, and organizational commitment. Krausz et al. (1995) examined the intent to withdraw at three different levels—ward (better known in current times as unit or department), hospital, and profession—to address the lack of studies on within-organization turnover. Their hypothesis that turnover would be progressive, such that nurses would first leave the ward, then the hospital, and then the profession, was supported.

More recent research has examined determinants and psychological processes to posit theories that aim to explain the turnover process for nurses. A concept analysis done by Takase (2010) revealed that turnover intention is a multi-stage process. This process starts with an appraisal of work factors. If that appraisal is negative, it can trigger a psychological response which can then lead to thoughts of withdrawal, and in some cases, actual turnover. Work factors that trigger negative appraisal were identified as organizational factors (e.g., climate/culture),

work-related factors (e.g., workload), employee factors (e.g., attitudinal responses), and external factors (e.g., work-life balance). Mayes and Cochran (2023) conducted a grounded theory study on perioperative nurses to explore their decision-making process related to turnover. They found that physical well-being, emotional well-being, career development, work-life balance, compensation, and workplace culture influence nurses' decision to turnover. The next subsection will go into more detail about determinants of nurse turnover in order to provide a better understanding of how certain variables are related to turnover, the nuances of these relationships, and the potential impacts they have on patient care, nurse workforce well-being, and organizational health and performance.

Nurse Turnover Determinants

Nurse turnover is a global issue that continues to negatively impact healthcare organizations, including their patients and staff. For decades, researchers have sought to better understand the turnover process by conducting studies to identify the factors that are related to, and even predict, turnover intention and turnover behavior. For the purposes of this study, I will be reviewing the literature on some of the more common and empirically supported turnover contexts and determinants, which include job satisfaction and organizational commitment, stress and burnout, work environment, and demographic factors. Since the data for this study was gathered during the pandemic, I will also review the literature on the effect of COVID-19 on nurse turnover.

Job Satisfaction and Organizational Commitment

While many variables are related to turnover, job satisfaction and organizational commitment are core determinants of turnover that continue to be supported by research. Both job satisfaction and organizational commitment are negatively related to turnover, such that

nurses who are more satisfied with their jobs and have a greater level of commitment to their organization are less likely to turnover or intend to turnover. It is important to note, however, that job satisfaction and organizational commitment are often indirectly related to turnover, serving as mediating variables between a determinant and turnover. Price and Mueller (1981) found a weak direct effect between job satisfaction and turnover, but a large total effect with job satisfaction as a mediator. This is consistent with other studies, which have shown that job satisfaction mediates the effects of variables such as job stress (Kuo et al., 2014), hope and career identity (Hu et al., 2022), and leader-member exchange (Han & Jekel, 2011) on turnover intention. Similarly, Wagner (2007) conducted a literature review in which only 5 of the 23 studies included found support for a direct relationship between organizational commitment and turnover. When used as a mediator, however, organizational commitment was a desirable component of predictive models. Organizational commitment has been found to mediate the effects of factors such as role stress (Han et al., 2016), motivation (Astiti & Surya, 2020), and social capital (Han et al., 2013) on turnover intention. These studies emphasize that, overall, job satisfaction and organizational commitment are reliable predictors of turnover, but they fail to capture the entire story.

Stress and Burnout

Burnout is a psychological concept that has gained a lot of attention due to its prevalence in the workplace and its employee- and organizational-level effects. While burnout started to emerge in research in the 1970s, it wasn't clearly conceptualized for another decade. Maslach and Jackson (1981, p. 99) initially defined burnout—specific to human service workers—as a "syndrome of emotional exhaustion and cynicism that occur frequently among individuals who do 'people work' of some kind." To quantify this concept, Maslach, Jackson, and Leiter (1997)

created the Maslach Burnout Inventory (MBI), which has been validated by over 35 years of research and prevails as the most widely used measure of burnout. This measure is broken down into three dimensions, which are commonly referred to as symptoms of burnout—emotional exhaustion, depersonalization, and reduced personal accomplishment. Since its inception, burnout and its dimensions have been explored as antecedents, mediators, and moderators for many workplace outcomes and theoretical models, one of which being the JD-R model.

Nursing is known to be a high stress occupation, with nurses facing job demands such as dealing with death and dying, high workloads, negative interactions with staff and faculty, and shift work (Labrague et al., 2016; McVicar, 2003). These job demands cause high levels of stress and can lead to burnout, especially when nurses do not have the resources to combat work demands and their effects. Many studies have found job stress and burnout to be positively related to and predictive of turnover intention. Inadequate pay, workload, lack of promotion and managerial support, and inequality at work were all found to be major stressors in a study conducted by Mosadeghrad (2013). In this study, one third of the hospital nurses perceived their occupational stress to be high and 35% considered leaving. The results showed that there was a positive relationship between occupational stress and turnover intention. Labrague et al. (2020) looked at predictors of turnover intentions among nurses at one-year and five-year timepoints. Results showed that job burnout predicted turnover intentions at both time points, while job stress predicted turnover intentions at year 5. In addition to having a direct relationship with turnover intention, burnout also mediates relationships between other turnover determinants and turnover. In a sample of Canadian nurses, areas of worklife (e.g., value conflicts, inadequate rewards) predicted burnout, which then predicted turnover intentions (Leiter & Maslach, 2009).

Work Environment

The work environment of nurses has a profound impact on many organizational outcomes, and turnover is no exception. Work overload, which can result from insufficient staffing levels, undone tasks, and workflow interruptions, is a very common occurrence in the nursing field (MacPhee et al., 2017). These heavy workloads can be very stressful and affect the health and well-being of nurses, resulting in lower job satisfaction and higher turnover intent (Zeytinoglu et al., 2007). The effectiveness of nursing management is also highly influential on the work environment. In their review of the nursing turnover literature, Hayes et al. (2012) found that managers and supervisors may have more influence on turnover intentions compared to co-workers. Transformational leadership is a style in which "leaders uplift the morale, motivation, and morals of their followers" (Bass, 1999; p. 9). Studies have shown that transformational leadership is negatively associated with both turnover intention (Naseer et al., 2017; Suliman et al., 2020) and actual turnover behavior (Raup, 2008). Other factors that have been found to negatively relate to turnover include high quality nurse-physician relationships, participative governance, role clarity, and nurses' perceptions of empowerment (Hayes et al., 2012).

Demographic Factors

Age has drawn a lot of attention in the nursing literature due to the alarming trends of new nurse turnover. According to Larrabee et al. (2010), nurses over the age of 30 were much more likely to stay in their position compared to nurses under 30. Furthermore, Dewanto and Wardhani (2018) found that being under the age of thirty was a significant risk factor for nurse turnover. These results parallel research that has continued to support the inverse relationship between age and turnover, such that younger nurses are more likely to intend to leave their jobs. There are many factors that could be driving the elevated turnover rate among new younger

nurses and new graduates. The younger generations value variety and economic returns significantly more than their counterparts, suggesting that they are more likely to leave their organization in pursuit of opportunities that offer greater economic benefits and task variety (McNeese-Smith & Crook, 2003). Some studies suggest that younger nurses have lower levels of job satisfaction and organizational commitment, which is a combination that is ripe for risk of turnover (De Gieter et al., 2011; Ingersoll et al., 2002). Older nurses are more likely to be settled in both their work and home lives, suggesting that they may be more resistant to change. For example, having dependents, which is more common among older nurses, is negatively related to turnover (Mazurenko et al., 2015).

Level of nursing experience, which is often correlated with age, also has an inverse relationship with turnover. New graduates are particularly prone to turnover, with rates estimated from 35% to 60% (Beecroft et al., 2001). The switch from an academic setting to a healthcare setting can result in a shock to new graduate nurses. Casey et al. (2004) found that newly graduated nurses did not feel confident and comfortable in their position and working environment until they had been on the job for 12 months. A study by Kramer (1974) revealed that new graduates often face role conflict, which takes approximately 18 months to resolve. These findings shed light on the stressors of being a new nurse, which result in elevated turnover levels compared to nurses with more experience. Factors such as job satisfaction and pay, however, can mediate the relationship between experience and turnover such that when new nurses are satisfied with their job and pay, their likelihood of turnover decreases (Beecroft et al., 2008).

COVID-19

COVID-19 brought increased attention to nurse turnover—and healthcare workers in general—due to the toll of working on the frontlines and the drastic increase in turnover rates. According to the 2023 NSI National Health Care Retention and RN Staffing Report, the staff RN turnover rate increased by 8.4% from 2020 to 2021. Additionally, more than 60% of survey respondents reported that their hospital had over a 15% vacancy rate. The average cost of RN turnover also increased after the COVID outbreak, with the average cost of turnover increasing from $40,038 in 2020 to $46,100 in 2021. With clinicians having to endure heavy workloads, moral injury, fear of infection, powerlessness, and psychological and physical strain, it is no surprise that there was a spike in employee departures throughout hospital systems (Buchan & Catton, 2020; Liu et al., 2020). Of all clinician types, nurses seemed to be most affected by the COVID-19 pandemic. Prior to the outbreak of the global pandemic, there was a shortage of 5.9 million nurses, occurring primarily in low- and middle-class countries (Buchan & Catton, 2020). This shortage, which now exists in all countries, was made worse by the increase in voluntary turnover and leaves of absence that occurred during the pandemic.

The heightened turnover rates that occurred during COVID-19, in addition to the new stressors brought upon by the nature of the pandemic, led researchers to study the determinants of turnover intentions among COVID-19 nurses. An integrative literature review by Falatah (2021) examined the impact of COVID-19 on nurses' turnover intention by comparing predictors of turnover intention in studies conducted before and after COVD-19. Studies that were conducted during COVID-19 focused more on the role of psychological and physical distress and social support in nurse turnover intentions while studies conducted before COVID-19 looked at a wider variety of factors such as job satisfaction, burnout, work climate, and leadership style. Additionally, Falatah (2021) found that caring for COVID-19 patients, working in COVID-19

divisions, and fear of contracting COVID-19 were all positively related to turnover intention. Lavoie-Tremblay et al. (2021) compared outcomes of nurses who did and did not provide care for patients with COVID-19, finding that nurses who cared for COVID-19 patients had more chronic fatigue, lower levels of job satisfaction, and greater turnover intentions. Other studies support these findings, with many researchers uncovering positive relationships between COVID-19 related job stress and turnover intentions (Cole et al., 2021; Nashwan et al., 2021; Tolksdorf et al., 2022).

Studies published after 2021 have found results consistent with Fatalah's (2021) review on nurse turnover intention. Psychological strain—including depressive symptoms, work stress, anxiety, and burnout—have all garnered empirical support as predictors of nurse turnover during COVID-19 (Guastello, 2022; Shah et al., 2022; Tabur et al., 2022). Researchers have also investigated the role that resources play in turnover intentions among nurses working during COVID-19. Resiliency, social support, organizational support, organizational commitment, and sense of security were all found to be negatively related to nurse turnover intent (Abou Hashish, 2015; Piotrowski et al., 2022; Tabur et al., 2022; Tang et al., 2022). These findings highlight that both stressors and resources of nurses working during COVID-19 have important implications for turnover intentions.

Downshifting

There has been movement into considering ways in which employees aren't completely turning over but engaging in behaviors such as voluntarily reducing hours. This reduction in hours, often done in an effort to reduce strain and have more time for leisure, is known as downshifting (Drake, 2000). Although understudied, this pattern has been seen in healthcare, and particularly among nurses. Due to the lack of research, the reasons for downshifting are

unknown. However, it is possible that downshifting is either an alternative, or a precursor, to nurse turnover.

Summary

Research has evidenced that job satisfaction and organizational commitment, stress and burnout, working environments, demographic factors, and COVID-19—while not an exhaustive list—all influence nurse turnover and have implications for employee, organizational, and patient health. The nuances of these relationships identified by various research studies help explain how various aspects of employees and their work environments influence turnover. Using this existing knowledge of turnover determinants as a foundation, this study aims to dig deeper into existing determinants and what may be feeding into them by exploring the role of demands and resources in the nurse turnover process. This study adds to the current nurse turnover determinant literature as it not only explores demands and resources in the work domain, but also demands and resources that come from the home domain and their potential influence on turnover. The consequences of turnover, which underlie the importance of studying the phenomenon, are reviewed in the paragraphs to follow.

Consequences of Nurse Turnover

While consequences of turnover are studied to a much lesser extent than determinants of turnover, they are still very important to know and understand (Staw, 1980; Takase et al. 2005). Research findings on turnover consequences often highlight the breadth and severity that turnover can have, making a case for why organizations should care about turnover and take actions to plan for or reduce it. In the nursing field, patients, nurses, and organizations are all impacted by the costs of turnover.

Economic costs are a widely known and empirically supported consequence of turnover. Many studies have sought to find the cost of turnover, with estimates such as $22,000 to $64,000 and 0.5 to 1.30 times a departing nurse's salary (Jones, 2004). More recently, the 2022 NSI National Health Care Retention & RN Staffing Report indicated that the average hospital loses $5.9 to $9 million annually on RN turnover and could save $262,300 yearly for each percent decrease in RN turnover rate. The Nursing Turnover Calculation Methodology (NTCCM), created by Jones (1990), states that nurse turnover costs can be separated into two categories: direct and indirect costs. Unfilled positions, advertising and recruiting, and hiring costs are all direct costs, while newly hired nurse productivity, orientation, and training are indirect costs. In the update of the NTCCM, Jones (2005) changed the categories of turnover cost to be prehire (i.e., advertising/recruiting, vacancy, hiring) and post hire (i.e., orientation/training, newly hired RN productivity, pre-turnover productivity, termination). This categorization emphasizes the complexity and difficulty of calculating the true, total cost of nurse turnover. At the end of the day, however, it is clear that the monetary costs of nurse turnover are alarming and could be detrimental to the financial and overall success of an organization.

In addition to healthcare organizations, the negative consequences of turnover also extend to patients. RN staffing levels and turnover are inversely related, such that when turnover rates are higher, staffing levels are lower and nurse-to-patient ratios are more imbalanced (Kash et al., 2006). Research has shown that the risk of adverse patient events (e.g., mortality, medication errors, accidental falls, hospital-acquired infections) is greater when RN staffing is poor (Liu et al., 2012). The relationship between staffing and patient mortality rates is particularly concerning. A systematic review by Driscoll et al. (2018) revealed that the risk of mortality is related to the number of patients per nurse. Shockingly, Aiken et al. (2002) found that for each

additional patient a nurse was responsible for, there was a 7% increase in likelihood of patient death within 30 days after admission. A later study conducted by Aiken et al. (2009) also supported the relationship between staffing levels and mortality, such that hospitals with poor staffing and patient care environments had over a 60% higher surgical mortality rate compared to hospitals with better care environments. Turnover also has an impact on the satisfaction of patients, which is commonly used in healthcare organizations as a measure of service quality and performance (Al-Abri & Al-Balushi, 2014). When RN turnover is higher, the satisfaction of patients is lower. This can be attributed to the lower quality of care that occurs when high nurse turnover rates cause nurses to give patients less time and attention than they require (Antwi & Bowblis, 2018; Peršolja, 2018).

Although many studies have been conducted on the impacts of the work environment and what leads to nurse turnover, there is a lack of research on how turnover affects the remaining nurses who do not turnover. It has been found, however, that turnover has implications for the physical and mental well-being and satisfaction of remaining nurses. When turnover occurs, morale in hospital units can dip, which leaves remaining nurses susceptible to elevated levels of stress (Peng et al., 2023). In turn, those high stress levels can result in more serious outcomes among nurses, such as burnout (Garrett, 2009). Turnover can also occur when there are fewer nurses who are required to perform more jobs, which results in increased workloads. For nurses, heavy workloads are associated with emotional exhaustion, musculoskeletal issues, and higher rates of absenteeism (O'Brien-Pallas et al., 2006).

As evidenced by the research, nurse turnover can have severe consequences on patient care quality, finances, workforce morale and satisfaction, staffing levels, workload, well-being and patient safety. In order to reduce turnover, and in turn, its consequences, it is necessary to

understand how turnover occurs. Thus, this study aims to comprehend how to be more proactive in preventing nurse turnover by understanding the influence of job and home demands and resources on turnover.

CHAPTER THREE

JOB DEMANDS-RESOURCES (JD-R) MODEL

To further understand how nurse turnover can occur, this chapter—which adds to the discussion in the previous chapter on turnover and its determinants—provides a more fine-grained focus on the factors that feed into determinants like burnout, and eventually, turnover. This dissertation utilizes the Job Demands-Resources (JD-R) model as a framework, which allows for a more in-depth investigation into particular job demands and resources that could be related to turnover among emergency department nurses during COVID-19. The JD-R model posits that there are two general categories of working conditions (i.e., job demands and job resources) that are distinctively related to employee outcomes (Demerouti et al., 2001). Job demands are defined as "physical, social or organizational aspects of the job that require sustained physical or mental effort and are therefore associated with certain physiological or psychological costs" (Demerouti et al., 2001; p. 501). Examples of job demands include—but are not limited to—work overload, conflict with co-workers, and role ambiguity (Bakker & Demerouti, 2007). Job resources are defined as "physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals, (b) reduce job demands and the associated physiological and psychological costs; (c) stimulate personal growth and development" (Demerouti et al., 2001; p. 501). The authors operationalize job resources as external resources, which fall into the following two categories: organizational resources (i.e., job control, task variety, inclusion in decision making) and social support (i.e., support from colleagues, leadership).

Research has shown that the JD-R model can be used as a framework to predict organizational outcomes. One study conducted by some of the thought leaders of the JD-R model

examined the relationship between job characteristics, burnout, and performance. Bakker et al. (2004) discovered that job demands predict performance, while job resources predict extra-role behavior. When job demands are higher, employees often experience higher levels of emotional exhaustion, which negatively impacts their performance. Job resources, on the other hand, were predictive of extra-role behavior, which is beneficial to the overall performance of an organization. Hoonakker et al. (2013) examined the relationship between job demands and job resources, job satisfaction/commitment, emotional exhaustion, and turnover intention. The authors discovered that job demands and job resources were both related to turnover intentions; however, each relationship was mediated by a different variable. Consistent with the JD-R model, emotional exhaustion mediated the relationship between job demands and turnover intention, and job satisfaction mediated the relationship between job resources and turnover intention (Hoonakker et al., 2013). In their study on nurses, Viotti et al. (2015) found that verbal aggression positively predicted burnout. Out of the nine job resources included in the study, only four moderated the effect of verbal aggression on burnout (i.e., meaningful work, skill discretion, support from superior, fairness). Viotti et al. (2015) concluded that while their study supports the buffering theory overall, the ability for a job resource to buffer may depend on the job demand being faced. These studies highlight how the JD-R model can be utilized as a framework to predict organizational outcomes, including turnover.

The JD-R model itself has roots in healthcare as it was developed from a participant sample that included nurses. Since the JD-R model was first introduced, researchers have used it as a framework in an attempt to explain the nurse turnover process. Van der Heijden et al. (2018) used the JD-R model as a framework to determine exit behavior in nurses. As predicted, job demands were positively related to turnover intention, while job resources were negatively

related to turnover intention. In a study of new graduate nurses, Laschinger et al. (2012) found that job demands (e.g., bullying and workload) predicted poor health and burnout, resulting in greater turnover intent. Job resources, on the other hand, predicted work engagement, and therefore, lower turnover intent. Moloney et al. (2018) sought to develop a model of nursing turnover using job demands, job resources, personal demands, and personal resources. Their research revealed that almost all the demand and resource variables used in their study had an effect on intentions to leave. The strongest predictors of intent to leave were workload and work-life interference, both of which were associated with higher levels of nurse burnout. Based on the results of these studies, it can be surmised that job demands, and job resources play an integral role in the nurse turnover process. To fully comprehend the link between job demands and resources and turnover, it is important to first understand what demands and resources exist in the nursing profession. Thus, the forthcoming sections will review the literature on some of the most common, and influential, nursing job demands and resources.

Nurse Job Demands

The nursing profession can be very demanding due to unfavorable work environments and roles and responsibilities that are physically and emotionally taxing. Heavy workloads, shift work, and emotional strain from providing patient care are all examples of job demands that nurses face, which often result in high levels of stress (Broetje et al., 2020). In a 2022 survey conducted by the American Nurses Foundation, 62% of all respondents and 69% of respondents under the age of 25 reported experiencing burnout symptoms. Alarming trends in nurse burnout and turnover—among other outcomes—have spurred researchers to conduct studies on job demands to determine their negative impacts on both the nursing workforce and healthcare

organizations. The remainder of this section will feature reviews of that literature, offering a more in-depth examination of the job demands frequently encountered by nurses.

Workload, which is a major cause of distress in nurses, is one of the most common job demands among clinicians and is influenced by factors such as complexity of care, staff shortages, and work interruptions (MacPhee et al., 2017). Studies have revealed that nurses with heavy workloads have higher levels of job dissatisfaction, fatigue, and burnout. MacPhee et al. (2017) found that nurses who faced heavy workloads on a daily basis were 3.5 times more likely than nurses who reported less heavy workloads to be high on emotional exhaustion, which is a component of burnout. Similarly, a study in the United Kingdom revealed that when patient-to-nurse ratios increased, nurses had higher levels of job dissatisfaction and emotional exhaustion (Sheward et al., 2005). There is also overwhelming evidence that nurse workload is related to poor patient outcomes. Although support has not been found for all adverse patient outcomes, studies have consistently shown that greater patient-to-nurse ratios are associated with patient falls, pressure ulcers, and hospital-acquired urinary tract infections (Al-Kandari & Thomas, 2009; Liu et al., 2012; Magalhaes et al., 2017). Based on these findings, it is not surprising that patients report higher satisfaction in hospitals with favorable patient-to-nurse ratios and positive work environments (Kutney-Lee et al., 2009).

The literature has consistently shown that shift work, although foundational to the nursing profession, is a top stressor of hospital nurses. Shift work disrupts the psychophysical homeostasis of the body through desynchronization of circadian rhythms, which has implications for physical and psychological health. Shift work interferes with nurses' sleeping rhythms and leads to poor sleep quality, fatigue and even sleep disorders (Rosa et al., 2019). The fatigue that results from shift work negatively affects nurses' abilities to focus and pay attention to detail.

This can lead to low quality patient care and adverse patient safety incidents, such as medication administration errors (Di Muzio et al., 2019). Nurses who work night shift are particularly susceptible to the effects that shift work has on physical health. Compared to daytime nurses, night shift nurses are at greater risk of developing cardiovascular and metabolic diseases (Rosa et al., 2019). Additionally, Bazrafshan et al. (2019) found that the number of night shifts per week is positively related to severity of insomnia in nurses. In some cases, the demands of shift work can be so great that nurses can develop shift work disorder (SWD), which is a "clinically recognized condition that develops in some individuals who work at night, start work early in the morning (4-7 AM), or work according to a rotating-shift schedule" (Culpepper, 2010, p. 3). SWD has been linked to a plethora of undesirable health and organizational outcomes such as excessive fatigue and insomnia (Eldevik et al., 2013), gastrointestinal symptoms (Kim et al., 2005), greater rates of near misses and actual accidents/errors (Asaoka et al., 2013), and higher turnover intent (Blytt et al., 2022).

Work-family conflict is an interrole conflict that nurses experience when they have incompatible work demands and family responsibilities. A substantial number of studies have shown that work hours and shift work are primary antecedents of work-family conflict. The work hours and schedules of nurses lead to time-based conflict, which occurs when the time spent at work reduces the amount of time that one can devote to home responsibilities (Barnes-Farrell et al., 2008). Yildirim and Aycan (2008) provided support for this concept, finding that irregular work schedules and work overload significantly predicted work-family conflict, which is associated with life and job dissatisfaction. Additionally, time-based conflict is a consequence of overtime work, which has been shown to lead to work-family conflict (Lembrechts et al., 2015; Simon et al., 2004). Šimunić and Gregov (2012) compared the types of nursing shifts and found

that work-life conflict was lowest among nurses who only worked morning shifts compared to those who worked rotating shifts. Furthermore, nurses who worked rotating shifts also had the lowest levels of life satisfaction. In addition to job and life dissatisfaction, work-family conflict is predictive of outcomes such as job stress, perceived quality of care, and intent to leave the organization (Labrague et al., 2020).

Similar to other professions, nurses face demands related to pay such as unfairness of and change to pay. Unfair pay has adverse effects on nurses, particularly among nurses who have higher levels of education and workloads (Coomber & Barriball, 2007). A review conducted by Afzali et al. (2017) revealed that nurses who perceived their pay to be unjust cited reasons such as discrimination between physician and nurse pay and discrepancies between workload and pay. Perceptions of unjust or inequitable pay can strongly influence perceptions of the organization and are associated with lower levels of organizational commitment and job satisfaction (Eldin et al., 2013). Both organizational commitment and job satisfaction are directly related to turnover intention, suggesting that unjust pay could result in turnover behavior. Greenberg (2006) compared nurses who experienced reduced pay due to a change in pay policy to nurses whose pay remained unchanged. Those who worked at the hospitals that changed their pay policy experienced higher levels of insomnia and stress related to being underpaid.

Workplace violence, although not studied to the same extent as other job demands, is an unavoidable stressor in the nursing profession. Aggression, intimidation, harassment, bullying, and assault are all forms of workplace violence, with the most common being patient aggression (Martinez, 2016). Park et al. (2015) conducted a study to identify the prevalence and perpetrators of nurse workplace violence. The authors found that over a 12-month period, verbal abuse (63.8%) was the most common, followed by threats of violence (41.6%), physical violence

(22.3%), sexual harassment (19.7%), and bullying (9.7%). Patients were the most common perpetrators, followed by physicians and families of patients. Among all specialties, emergency medicine nurses seem to experience the greatest amount of workplace violence. In their study on workplace violence against nurses, Speroni et al. (2014) found that 76% of nurses overall experienced workplace violence over the last year, while 96.7% of emergency medicine nurses experienced workplace violence. Studies have found that workplace violence against nurses often goes unreported; thus, the data on prevalence is likely to be an underestimation (Spencer et al., 2023). Nurses who experience workplace violence often face negative psychological consequences such as depression and burnout as well as negative work-related outcomes such as job dissatisfaction, intent to leave, and low levels of organizational commitment (Chang & Cho, 2016; Jang et al., 2022).

COVID-19-Related Nurse Job Demands

During COVID-19, nurses had to deal with higher levels of pre-existing job demands and the emergence of new demands that were unique to the pandemic. One of the biggest stressors that all frontline clinicians faced was exposure to the COVID-19 virus. In a comparison of healthcare workers and non-healthcare workers, Barrett et al. (2020) found that the prevalence of COVID-19 in healthcare workers was much higher, putting them at a seven percent higher risk of contracting the virus compared to non-healthcare workers. Among the different types of healthcare workers, nurses were most likely to contract COVID-19. Fear of exposure was particularly salient at the beginning of the pandemic due to uncertainty about how the virus spread and what preventative measures were most effective. Additionally, people infected with COVID-19 are not always symptomatic. This was an added stressor as nurses had to be cautious when dealing with patients whose COVID-19 status was unknown. The extreme nature of this

demand was captured by Guttormson et al. (2022) who reported that 55.6% of the nurses that responded to their survey felt that their life was threatened or that they may die as a result of caring for COVID-19 patients. Furthermore, it was found that almost a third of respondents met the criteria for moderate to severe anxiety, 44.6% for moderate to severe depression, and 46.7% were at risk of developing PTSD. In addition to fearing for their own lives and well-being, nurses also feared infecting others. Similar to the consequences of fearing their own exposure, fear of unknowingly infecting others led to symptoms of depression, anxiety, and stress in nurses (Sampaio et al., 2021).

A demand unique to COVID-19 that is directly related to the fear of exposure is the availability of personal protective equipment (PPE). At the outset of COVID-19, the trajectory and graveness of the virus was unknown, leaving virtually all healthcare organizations unprepared. As the number of cases started to skyrocket, so did the demand for PPE. The mismatch of supply and demand, supply chain issues, and the misuse and hoarding of supplies all contributed to a global PPE shortage (Cohen & van der Meulen Rodgers, 2020). As a result of the shortage, clinicians had to engage in unsafe practices, such as reuse of PPE and wearing cloth masks. These concerns were echoed in a qualitative study conducted by Arnetz et al. (2020), who identified PPE as one of the major stressful situations faced by nurses during COVID-19. Nurses expressed frustrations with rationing of PPE, having to wear the same mask for an entire 12-hour shift, and not being able to bring PPE from home. In May 2020, National Nurses United reported that 87% of nurses had reworn a single use mask and 27% of nurses were exposed to COVID-19 positive patients while wearing inadequate PPE (Cohen & van der Meulen Rodgers, 2020). The unsafe PPE practices due to shortages put nurses at a higher risk of COVID-19 exposure, which

made them more susceptible to burnout, moral distress, and PTSD symptoms (Guttormson et al., 2022).

Providing patient care during COVID-19 was psychologically demanding for nurses, as they experienced unprecedented levels of severe illness, quick declines, and death in patients. According to the World Health Organization (WHO), there were 14.9 million deaths in 2020 and 2021 that were directly or indirectly related to the COVID-19 pandemic, which classifies as "excess mortality." For nurses on the frontlines—especially those in critical and intensive care units, COVID-19 units, and the emergency department—witnessing death and patients sick enough to be on ventilators became a new normal. In a survey conducted by the American Nurses Association (2021), 42% of nurses responded "yes" when asked if they had "an extremely stressful, disturbing, or traumatic experience due to COVID-19." The continuous exposure to very ill and dying patients, compounded with other demands of being a frontline nurse during the pandemic, led to mental distress even in highly resilient nurses (Leng et al., 2021). The severity of this demand is apparent as studies have shown that depression, anxiety, exhaustion, burnout, sleep issues, moral distress, and PTSD symptoms were all found to be outcomes of frontline COVID-19 nurses (Al Maqbali et al., 2021; Silverman & Kheirbek, 2021).

Nurse Job Resources

Both the presence and lack of job resources have implications for employee and organizational outcomes. When an employee has inadequate resources, they are less equipped to cope with and combat the effects of job demands. According to the JD-R model (Demerouti et al., 2001), a lack of resources can lead to employee disengagement, and eventually, burnout. Sufficient resources, however, can buffer the effects of job demands, and sometimes reduce the job demands themselves, which results in improved performance, engagement, and retention

(Bhatti et al., 2018; Scanlan & Still, 2019). The demanding nature of the nursing profession has led to increased interest in the role that job resources play in the relationship between nurse job demands and outcomes. Social support, job control/autonomy, and professional development are just some of the job resources possessed by nurses that have been identified in the literature, which will be reviewed in the following paragraphs (Bhatti et al., 2017; Broetje et al., 2020).

Social Support

Social support is one of the most widely studied job resources because of its relationship to psychological and physical health. Those with social support are better able to handle the harmful effects of job demands and experience more positive outcomes such as recognition of self-worth, lower levels of anxiety and depression, perceived control, and positive affect (Langford et al., 1997). Although friends and family can provide social support, research has shown that coworker and supervisor support is more effective in diminishing the adverse effects of job demands (Ellis & Miller, 1994). Workplace social support is especially important for nurses, as they experience highly emotional job demands that have been linked to severe anxiety, frustration, depression, and sense of failure (Drury et al., 2014).

Supervisors play an integral role in the success and overall functioning of teams and individual contributors such that their support of employees can facilitate psychological well-being as well as buffer the impact of job demands. Management literature has shown that employees who perceive their supervisor as supportive can better tolerate exhaustion and are less likely to turnover, even when experiencing symptoms of burnout (Poulsen et al., 2016). Co-worker support, which is often more informal and frequent compared to supervisor support, is also beneficial to nurses. Nurses who perceive their colleagues as supportive have greater self-efficacy and experience lower levels of job stress and burnout (Liu & Aungsuroch, 2019). Both

supervisor and co-worker support serve as buffers, moderating the relationship between nurse job demands and organizational outcomes such as job satisfaction, job performance, and burnout (Willemse et al., 2012; Wang & Tsai, 2014; Duan et al., 2019). There are some instances, however, when social support has the opposite effect of what is expected. This phenomenon is known as the *reverse buffering effect*, which suggests that instead of buffering, social support can exacerbate the strain that results from job demands (Beehr, 1995). While there is not an agreed upon explanation for this effect, Kickul and Posig (2001) suggest that the reverse buffering effect may occur when social support is viewed as inauthentic or is incongruent with the actions of a co-worker or supervisor.

Job Control/Autonomy

Karasek's (1979) job demands-control (JD-C) model is an organizational stress model that explains how different levels of both job demands and decision latitude (i.e., job control) interact to affect employee stress levels. The JD-C model posits that when a job is demanding but has a high level of control, employees experience less stress. However, when a job is demanding and has low levels of control, it is considered to be high strain. Employees who experience high demands on the job are motivated to learn when they also have decision latitude (*active learning* hypothesis). When employees have little to no decision latitude in a highly demanding environment, however, they are at risk for psychological and physical stress (*strain* hypothesis*)*. Job control is measured by decision latitude, which is a composite measure of an employee's decision-making autonomy. Although not explicitly stated in the JD-C model, job control—often used interchangeably with autonomy—is a job resource. The JD-C model provides support for autonomy as a buffer for job demands and is complementary to other models that explain how autonomy can function as a job resource.

The job characteristics theory (Hackman & Oldham, 1976) suggests there are five core job elements (i.e., skill variety, task variety, task significance, autonomy, feedback) that give rise to three critical psychological states associated with outcomes such as employee satisfaction, effectiveness, and internal work motivation. Autonomy is motivating for employees as it gives them a sense of control, fuels initiative, psychological empowerment, and generates a sense of responsibility over work outcomes (Liu et al., 2011). Although there is variation in individual need, the nursing literature has shown that, overall, nurses value and desire autonomy. Nurse managers play a critical role in empowering staff nurses and giving them autonomy. When nurse managers promote and foster autonomy, they are communicating to their staff that they acknowledge their clinical abilities and trust them to make the right decision. This creates a positive working environment, which has implications for patient outcomes. Rao et al. (2017) investigated the relationship between autonomy and patient outcomes and found greater levels of autonomy in nurses to be associated with lower odds of failure to rescue and 30-day patient mortality. A work environment that has low autonomy, however, affects the contentment level of nurses and is associated with job dissatisfaction, intent to leave, and low organizational commitment and work motivation (McCloskey, 1990).

Professional Development

Professional development opportunities are beneficial to employees as it gives them an opportunity to gain new skills or build upon an existing skill, which could open the door for career advancement. Employees' desire for professional development can be explained by the concept of mastery. According to Daniel Pink (2011), mastery—in addition to autonomy and purpose—is a core component of intrinsic motivation. Put simply, mastery is the desire for improvement. Innately, humans want to get better at doing certain things and are prone to lose

motivation when they do not see improvement. Professional development opportunities (i.e., workshops, training, mentorship) aid in job mastery and perceived professional competence, which are associated with job satisfaction and employee retention (Zeytinoglu & Denton, 2006). When organizations do not offer ample development opportunities, it sends a message that they are not invested in their employees' professional growth. Employees who do not feel supported are less committed to their organization and are more likely to turnover (Hussain & Asif, 2012).

The nursing literature has shown that professional development is needed and expected by nurses. Price and Reichert (2017) conducted a focus group of nurses in three different career stages (i.e., students, early-career, mid-to-late career) to determine the influence of professional development on career satisfaction and patient care. All nurses identified the necessity of professional development—early career nurses expected education and training to assist with workplace transition and career laddering and mid-to-late career nurses desiring continuous learning to enhance career opportunities, preserve job competencies, and provide quality patient care. In their study of new career graduate and mid-career nurses, Yarbrough et al. (2017) looked at the outcomes of career development climates and found that for both new career graduate and mid-career nurses, professional development was positively associated with years intended to stay and job satisfaction.

Nurse Job Resources During COVID-19

Health care systems were put under tremendous pressure during COVID-19, leading nurses to face unprecedented challenges that affected their health and work-related outcomes. The continuous exposure to emotional and traumatic situations led to heightened levels of stress, making job resources critical for nurses' well-being during the pandemic. Nurses who worked during COVID-19 faced very unique experiences that only other healthcare workers could truly

understand; thus, social support from supervisors and co-workers became an integral job resource. Social support from co-workers and supervisors created a sense of camaraderie and gave nurses a space to vent and receive advice and emotional support. For some, COVID-19 was an impetus for support and fostered higher levels of team spirit, which led to feelings of deep appreciation among nurses for those they worked closely with (Häussl et al., 2021). Social support through constant communication and information sharing was also very helpful to nurses, especially in the wake of uncertainty. Consistent team meetings as well as updates on the current COVID-19 situation and patient care protocols are supervisory and organizational practices that allowed nurses to feel more prepared and confident in their ability to properly and safely do their job (Häussl et al., 2012).

Social support was not the only nurse resource to be deemed impactful during the COVID-19 pandemic. Al Sabei et al. (2022) aimed to gauge the impact of empowerment, perceived work environment, and stress on burnout of nurses working during the COVID-19 pandemic. Results showed that staffing, resource adequacy, and positive perceptions of manager ability were associated with lower burnout and a positive work environment, which generated nurse retention. Cho et al. (2021) conducted a study that looked at the hospital nurse perceptions of resources provided by their organization during the COVID-19 pandemic. In addition to managerial support, nurses identified resources such as basic needs (i.e., food on-site, childcare, groceries), mental health support, and paid time off. Although the resources given were often helpful, many participants indicated that not all resources benefited nurses equally. Additionally, the amount of resources provided by hospitals was noticeably lower once the pandemic started. The research by Cho et al. (2021) emphasized that nurses needed more resources and were dissatisfied with the availability and distribution of resources during COVID-19.

CHAPTER FOUR

WORK-HOME INTERFACE

Employee outcomes—including turnover—are influenced by more than just demands and resources that come from the work domain. Predominantly due to the changing composition of the workforce, the lines between the work and home (i.e., non-work) domains continue to be blurred. Previously, these domains were looked at as largely separate; however, demographic shifts such as the increase of dual-income families, married women joining the workforce, and single-parent households spurred research that supports the highly interrelated nature of the work and home domains (Geurts & Demerouti, 2003; Frone et al., 1996). Scholars have taken a key interest in the work/non-work interface as it has implications for employee and organizational well-being and performance. This interest has led to the development of various constructs, many of which overlap with one another. Role strain, role enrichment, role stress, work-family conflict, work-family enrichment, crossover, spillover, and work-home interference are just some of the constructs that have emerged from the work-home interface literature.

Work-family conflict, which suggests that role pressures of the family and work domains are incompatible such that participation in one can make the other more difficult, is the predominant construct in the work-home literature (Greenhaus & Buetell, 1985). While there is a lot of empirical support for work-family conflict and its impact on employee outcomes, it ignores the aspects of non-work life external to family, which also have the ability to interfere with or enrich one's work experiences. For example, friendships are a critical resource that provide emotional support and aid in self-esteem. The benefits that stem from friendships can extend into the work environment, with studies having found that friendships contribute to work-related well-being (Craig & Kuykendall, 2019) and play an important role in alleviating the stress of

work demands (Parris et al., 2008). Having an active role in one's community can also lead to positive organizational outcomes, as participation in non-work activities can improve job attitudes and strengthen job performance (Kirchmeyer, 1992a).

One of the only studies to use non-work roles instead of explicitly family roles was Sieber's (1974) theoretical model of spillover from non-work roles (i.e., community, recreation, parenting) to work. The model states that there are four benefits of spillover from non-work to work: gaining privileges, status enhancement, status security, and personality enrichment. Although the majority of the spillover research has been confined to the work-family interface, Sieber's (1974) inclusion of non-work sets spillover apart from the other concepts in the work/non-work interface. In order to encompass all aspects of non-work life and its positive and negative influences on work, this study focuses on spillover to justify why demands and resources from both home and work should be considered when studying turnover behavior. Furthermore, spillover is particularly relevant in the context of nurses during COVID-19, as the stress and uncertainty of the pandemic led to more permeable boundaries between the work and home domain, which has implications for work outcomes such as turnover.

Spillover

Spillover, which can be negative or positive, is the idea that attitudes, behaviors, values, skills, and feelings from the work domain can carry over into the home domain and vice versa (Edwards & Rothbard, 2000; Googins, 1991). When negative attitudes, behaviors, values, skills, and feelings are carried over from one domain to the other, it is referred to as negative spillover. Conversely, when positive behaviors, values, skills, and feelings carry over, it is referred to as positive spillover. Often, negative spillover occurs when demands from one domain are consequential to an individual's experience or role in the other domain, while positive spillover

occurs when resources from one domain enhance the other. Research on spillover, which the following paragraphs will review, emphasizes the interconnectedness of work and home and provides support for the inclusion of non-work factors when studying work-related outcomes and vice versa.

Negative Spillover

Negative spillover has been studied to a much greater extent than positive spillover due to trends such as the breakdown of work and non-work boundaries, increasing demands at work and home, and the changing nature of work. The concept of negative spillover stems from the scarcity hypothesis, which posits that energy and time are fixed, and thus, those who hold more than one role often experience role overload and conflict (Marks, 1977; Sieber, 1974). Role overload is characterized as not having enough time to fulfill the demands of multiple roles (Coverman, 1989). In a similar vein, role conflict is defined as "the extent to which a person experiences pressures within one role that are incompatible with the pressures that arise within another role" (Kopelman et al, 1983, p. 201). Both role conflict and overload lead to role strain, which is strain felt from satisfying more than one role obligation (Goode, 1960).

The two main stressors that underpin role strain are time- and strain-based demands (Voyandoff, 2005). Time-based demands, which usually stem from the work domain and result in role overload, include factors such as time spent in the role and predictability. One of the most common examples of a time demand is overtime work, which lessens the amount of time that one can spend with their family or engaging in non-work-related activities they enjoy. Strain-based demands are simply demands faced in one domain that result in strain, which affect role performance and overall well-being and satisfaction in the other domain. Examples of strain-based demands include job insecurity, work overload, caring for a sick parent or child, and

conflict with family members—all of which can negatively interfere with the work-home interface due to their ability to deplete energy and influence overall well-being (Steiber, 2009).

While negative spillover can occur from the work domain to the home domain and vice versa, research predominantly focuses on spillover from work to home. This could be due to the fact that work-to-home spillover occurs more frequently than home-to-work spillover and underlies a multitude of negative outcomes related to psychological and physiological health (Byron, 2005). Although home-to-work spillover may be less prevalent, it is still important to consider the role of home demands and how they can impact work experiences and outcomes. The literature that does exist has found home-to-work spillover to be positively associated with interpersonal conflicts and turnover intentions and negatively associated with job and family satisfaction (Karatepe & Baddar, 2006). While negative work-to-home and home-to-work spillover is important to study due to its extensive impacts on employees' work and non-work lives, it is also necessary to consider the complementary and beneficial nature of the work and home domains.

Positive Spillover

Historically, the predominant focus of the work-home interface literature has been on conflict and interference; however, the growing interest in positive psychology has led to an increase in research on the positive influence of holding multiple roles across the work and home domains. The benefits of participating in cross-domain roles is highlighted by the expansion hypothesis (Marks, 1977; Sieber, 1974), which is the idea that instead of being finite, as posited by the scarcity hypothesis, resources are expansive and can be gained through participation in multiple roles. The increased pool of resources and skills that result from participating in home

and work roles have implications for psychological well-being, quality of life, and satisfaction (Allen, 2013).

Contrary to negative spillover, positive spillover highlights the positive influences that the work domain has on the home domain and vice versa. Hanson et al. (2006), based on the theoretical framework of Edwards and Rothbard (2000), proposed a four-factor model (i.e., affective positive spillover and instrumental positive spillover from both work-to-family and family-to-work) and a six-factor model (i.e., behavior-based instrumental, value-based instrumental, and affective positive spillover from both work-to-family and family-to-work). When compared, the six-factor model was found to be a better fit to the data. Correlation analysis revealed that work-to-family value- and behavior-based instrumental positive spillover was positively associated with family and job satisfaction and mental health. Furthermore, in the family-to-work direction, value-based positive spillover was positively associated with job and family satisfaction, while behavior-based was positively associated with job satisfaction and mental health (Hanson et al., 2006).

Other common constructs that describe positive effects within the work-family interface are facilitation and enrichment. *Facilitation* (i.e., *work-family facilitation* or *family-work facilitation*) is "the extent to which participation at work (or home) is made easier by the virtue of the experiences, skills, and opportunities gained at home (or work)" (Frone, 2003, p. 145). *Enrichment* is "the extent to which experiences in one role improve the quality of life in another role" (Greenhaus & Powell, 2006). While still not clear, researchers have attempted to explain the distinction between positive spillover, facilitation, and enrichment. Wayne (2009) proposed that all three concepts are distinct as they follow a temporal order. First, positive spillover occurs when an experience or resource is transferred from one domain to another. Enrichment only

happens, however, when the positive spillover results in better quality of life or performance. Similarly, facilitation only happens when a skill that is carried over from one domain to the other i.e., positive spillover) results in role improvement in the other domain.

Masuda et al. (2012) tested the distinction between positive spillover and enrichment by testing mediating effects. It was found that the relationship between positive work-family spillover and job satisfaction was mediated by work-family enrichment. However, positive work-family spillover did not mediate the relationship between work-family enrichment and job satisfaction. In their meta-analysis, McNall et al. (2010) found the effect sizes of enrichment and spillover to be stronger than facilitation. They suggest, in concert with Wayne's (2009) distinction, that this may be due to enrichment and spillover being more proximal predictors compared to facilitation. Overall, positive spillover, enrichment, and enhancement all have implications for well-being, satisfaction, and success.

Research has shown that positive spillover provides benefits for individuals and organizations. Greenhaus and Powell's (2006) theoretical work summarized the research on relationships between work- and family-related variables. Work-related resources such as income, networking activities, flexible working environments, and job content all had positive effects on different aspects of the home domain, such as marriage quality, positive child-related outcomes, and positive family behaviors. Positive spillover also aids in nurse well-being as it is associated with mood improvement and stress reduction, which enhances job satisfaction, thereby lowering the risk of turnover (Russo & Buonocore, 2012). Kinnunen et al. (2006) studied positive spillover from both work-to-family and family-to-work, but only found work-to-family spillover to be positively related to general and work-related wellbeing.

Findings from other studies, in contrast with that of Kinnunen et al. (2006), support the existence of positive family-to-work spillover. Research suggests that positive family-to-work spillover is negatively associated with psychological distress and positively associated with family and life satisfaction (Haar & Bardoel, 2012; Wolfram & Gratton, 2012). Participation in non-work activities outside of the family (i.e., positive home-to-work spillover) is also beneficial to both the work and home domains. Hecht and Boies (2006) found that volunteering and participation in physical activity both had positive effects on the work domain. Volunteering was positively associated with well-being and satisfaction, while participation in sports, recreation, and fitness was related to positive emotional spillover and well-being.

Nurse Spillover During COVID-19

Spillover is important to consider in light of nurses working during COVID-19. Studies have reported that frontline nurses faced a magnitude of stressors during the pandemic, including high risk of infection, fatigue, exposure to death, and loneliness (Said & El-Shafei, 2021). The demands of working during the pandemic, in addition to the uncertainty surrounding COVID-19, led to a greater degree of permeability between the work and home domains of nurses (Sahay & Wei, 2023). Vulnerability to COVID-19 and fear of infecting others were common stressors of nurses during the pandemic, which contributed to negative work-family spillover. Mo et al. (2020) found that being an only child was a source of stress for nurses due to fears that if they die from COVID-19, their parent(s) would be childless. In an attempt to reduce the risk of infecting their loved ones with COVID-19, many nurses isolated themselves from family members, even within their own homes. Nurses who worked in high-risk units (i.e., COVID, ICU, ED) felt especially ostracized as their family, friends, and even other hospital staff were afraid to be in close contact with them (Levi & Moss, 2022). In Sahay and Wei's (2023)

qualitative study, nurses expressed that the demands they faced during COVID-19 were more extreme than usual, and often spilled over into the home domain. For example, one nurse stated how difficult it was to go home and not think about the number of patients who were dying due to COVID-19, which resulted in lack of focus at home and negative emotions.

Due to the overwhelmingly negative nature of the pandemic and the influences it had on the work and home lives of nurses, little attention has been given to positive spillover of nurses during COVID-19. However, even in crisis situations, research has suggested that resources, experiences, and skills from the work and home domains can be beneficial to healthcare workers. The positive spillover between work and home can be highly influenced by those in leadership positions. Nurses who have family supportive supervisors experience less work-to-family conflict and more enrichment. A study on nurses in China found job support to be predictive of work-to-family enrichment, family boundary flexibility to be predictive of family-to-work enrichment, and family support and prosocial support to be predictive of bi-directional enrichment (Zhang et al., 2021). Nurses who had higher levels of enrichment were more likely to help with anti-pandemic efforts in Wuhan, China, which was where the first case of COVID-19 was discovered. This research emphasizes the influence of enrichment and how it may keep nurses engaged and passionate about their work, even under extremely demanding circumstances. Consistent with the social support literature, family support was found to be an important resource to nurses. According to a study by Tselebis (2020), family support moderated the relationship between working with COVID-19 patients and stress, such that when family support was higher, the relationship between caring for COVID-19 patients and stress levels was weaker.

Summary

The spillover theory stresses the permeability of the work and non-work domains, such that stressors experienced in one domain led to negative effects in the other, while resources generated in one domain can lead to positive effects in the other. These cross-domain effects emphasize the importance of looking at both work- and non-work related factors when studying employee and organizational outcomes. Studies on turnover—a very impactful and greatly studied organizational phenomenon—primarily focus on determinants that stem from the work domain. This study aims to address that gap by combining the basic premise of the JD-R model (i.e., demands lead to strain and other negative employee outcomes while resources buffer the negative effects of demands) with the spillover theory to investigate the role of demands and resources from both the work and home domains on nurse turnover behavior.

CHAPTER FIVE

RESEARCH QUESTIONS AND HYPOTHESES

The aim of this study is to better understand the job and home demands and resources of nurses during COVID-19 and how they relate to turnover behavior. Previous research has used the JD-R model as a framework to investigate the role of job demands and resources on turnover intentions. Bakker et al. (2003) focused on job resources and found that they were predictive of organizational commitment and dedication, both of which were related to turnover. Knudsen et al. (2009) examined both job demands and resources, and the results of their study supported the partial mediation of emotional exhaustion on the relationship between job demands and resources and turnover intention. While the literature has established the association between job demands and resources and turnover intention, it has largely ignored the influence of demands and resources that come from the home domain. Based on cross-domain concepts such as spillover, it can be surmised that stressors and resources from the home domain may influence employee turnover behavior. Using the JD-R model and spillover theory, this study explores the relationships between job and home demands and resources and nurse turnover behavior. The overarching framework of this study is shown in Figure 1. Using the JD-R model and spillover theory, this framework posits that job and home demands are positively related to turnover while job and home resources are negatively related to turnover. Additionally, there is an interaction effect between resources and demands, such that job and home resources weaken the relationship between job and home demands and turnover. Lastly, due to the research on burnout's involvement in the turnover process, this study furthers the existing literature by testing burnout as a mediator between demands and emergency department nurse turnover. The lack of exploratory qualitative studies has led to a limited understanding of what demands and resources

actually exist in the home and work domains of nurses. This changed slightly in response to COVID-19, with researchers conducting more qualitative studies to examine the experiences of nurses working during COVID-19. These studies largely focused on job demands, however, as the predominant interest of both researchers and healthcare organizations was on the stressors faced by nurses and their effects on nurse outcomes. To get an understanding of the types of demands and resources that exist for emergency department nurses in both the work and home domains in the context of COVID-19, this study proposes the following research question:

Research Question 1 (RQ1)*: What are the key emerging themes for job and home demands and resources for emergency department nurses?*

Demands faced at home and work have been associated with a variety of negative outcomes for nurses, one of which being turnover intention. The literature reviews on nurse turnover by Hayes et al. (2006, 2012) emphasize the role of job demands. Although not explicitly stated as such, many of the determinants of turnover intention identified by the authors are job demands, including poor work environment and organizational climate, work schedules, lack of empowerment and autonomy, workload, stress, burnout, bad management, role ambiguity, and role conflict (Hayes et al. 2006, 2012). While these reviews provide support for the role of job demands in the turnover process, they highlight that a majority of the nurse turnover literature uses turnover intention as an outcome rather than actual turnover behavior. Additionally, home demands—which are studied to a much lesser extent than job demands—are noticeably absent from the nurse turnover literature. The spillover theory supports the idea that home demands may play a role in the turnover process due to their influence on the job domain, and thus, they should not be ignored when studying determinants of turnover. Based on these gaps, the following research questions are proposed:

Research Question 2 (RQ2): *What is the nature of the relationship between job and home demands and resources and emergency department nursing turnover?*

Research Question 3 (RQ3)*: Is one type of demand (i.e., job or home) more predictive of emergency department nursing turnover than the other?*

Although turnover has been widely studied, the literature is largely focused on organizational-level (i.e., external) turnover. Not much is known about other types of turnover such as departmental- or unit-level turnover. Looking at different levels of turnover allows for a more holistic perspective of turnover. It is possible that nurses who leave their organization have different turnover determinants than nurses who leave their department or unit, which can help inform retention strategies, training needs, and change management efforts. Additionally, internal turnover could be an indicator of future organizational turnover. Although not classified as turnover, another possible indicator of future turnover is downshifting, which occurs when employees voluntarily decrease their hours, often in an effort to reduce strain and increase leisure (Drake, 2000). In order to better understand the differences in turnover types and how they may come to fruition, the following research question is posed:

Research Question 4 (RQ4)*: Do job and home demands and resources differ between turnover types (i.e., departmental, organizational, downshifting) for emergency department nurses?*

The literature on job demands and resources has shown that job demands are positively related to turnover intention and job resources are negatively related to turnover intention. Job demands are job-related stressors that are associated with negative outcomes, which, when experienced to a certain degree, leads to turnover intent. Job resources on the other hand, are coping mechanisms that reduce the negative effects of the job demands, which reduces turnover intent. While the relationship between turnover and demands and resources from the home

domain is understudied, it is likely that home demands and resources behave similarly to job demands and resources due to the spillover theory. Thus, the following hypotheses are posed:

Hypothesis 1 (H1)*: There will significant positive relationships between job and home demands and emergency department nursing turnover.*

Hypothesis 2 (H2)*: There will be significant negative relationships between job and home resources and emergency department nursing turnover.*

Research has consistently shown that employees are not equally impacted by job demands, primarily due to the resources they possess. Bakker et al. (2005) argue that job resources have a buffering effect on job demands, such that job resources can lessen the negative impact of job demands, resulting in lower levels of burnout. Considering that job resources and demands are related to turnover intentions, it can be surmised that job resources could buffer the relationship between job demands and turnover intention. This was tested in a theoretical paper by Riberio et al. (2016), who used the JD-R framework to investigate the influence of job demands and job resources (i.e., growth opportunities, social support, prestige, team climate, advancement) on turnover intention. All job resources except advancement were found to moderate the relationship between work-family conflict and turnover intentions and all job resources except growth opportunity moderated the relationship between job insecurity and turnover intentions. No moderation effects were found, however, for the relationship between job overload and turnover intentions. Social support has also been tested as a moderator and studies have shown that it moderates the relationship between turnover and job demands such as workload, family work interference, and work family interference (Hamid & Ahmad, 2014; Yunita & Kismono, 2014). Not only is there a need for further research to better understand the buffering effect, there is also a need to explore demands and resources from the home domain as

well as turnover behavior as an outcome variable rather than turnover intention. Taking these needs into consideration, the following hypothesis is proposed:

Hypothesis 3 (H3): *Job and home resources will moderate the relationship between job and home demands and emergency department nursing turnover, such that when resources are higher, the relationship between turnover and demands will be weaker.*

The theoretical support for the link between job demands, job resources, and burnout was established by the theoretical JD-R model of burnout. Empirical studies, including those conducted in healthcare settings, have tested and found evidence in favor of this model. Research on nurses in a variety of settings (e.g., hospitals, home care) have found positive associations between job demands (e.g., workload, shift work, emotional exhaustion, role stress, work interference, hostility from patients and physicians), symptoms of burnout (i.e., emotional exhaustion, cynicism), and burnout (Jourdain & Chenevert, 2010; Elst et al., 2016; Xian et al., 2020). Studies have also found negative associations between job resources (e.g., social support, task autonomy, learning opportunities, meaningful work), burnout symptoms (e.g., disengagement), and burnout (Elst et al., 2016; Van der Heijden et al., 2019). The literature on home demands, home resources, and burnout, however, is sparse. This study aims to both further the literature on job demands and resources and burnout while addressing the gap in the home domain of the literature. To achieve this, the following hypotheses are proposed:

Hypothesis 4 (H4): *There will be significant positive relationships between job and home demands and burnout.*

Hypothesis 5 (H5): *There will be significant negative relationships between job and home resources and burnout.*

Meta analyses and literature reviews have evidenced that existing research has found ample support for the positive relationship between job demands and burnout, aligning with the theoretical JD-R model of burnout which states that job demands lead to emotional exhaustion, which results in burnout (Bakker et al., 2023). The negative effects of both job demands and burnout have led researchers to explore their relationships to various organizational outcomes, including turnover intention. These studies have been particularly prevalent in the nursing literature as healthcare systems around the world continue to battle with elevated rates of nurse burnout and turnover. While empirical evidence supports the positive relationship between job demands and turnover intention and burnout and turnover intention, studies have also shown that burnout can play a mediating role in the relationship between job demands and nurse turnover intention (Leiter & Maslach, 2009; Shemueli et al., 2015; Van der Heijden et al., 2019). The literature has yet to explore this mediating relationship using actual turnover behavior and home demands outside of work-family conflict. To address these gaps in the literature, the following hypothesis is proposed:

Hypothesis 6 (H6): *Burnout will mediate the relationship between job and home demands and turnover.*

CHAPTER SIX

METHOD

Participants and Procedure

An ongoing survey of emergency medicine clinicians employed at a hospital system in the southeastern United States was used as the data source for this study. The survey was first launched in March 2020 with the purpose of gauging levels of burnout and wellbeing and collecting data on stressors, resources, and needed support of emergency medicine clinicians during COVID-19. The survey was sent to emergency medicine clinicians on a weekly basis from mid-March 2020 to April 2020, monthly from May 2020 to March 2023, and every other month from April 2023 to current day. Every time they fill out a survey, respondents are given the choice of receiving a $5 Amazon or Starbucks gift card or donating their gift card to another hospital employee.

The qualitative data that is used in this study comes from 4 different months of the survey, all during the COVID-19 pandemic—July 2021, August 2021, September 2021, and October 2021. These time points were chosen because of the high response rates compared to other months. Although the respondents of this survey included different types of clinicians—RNs, Attending Physicians, Resident Physicians, and Advanced Practice Clinicians (APC)—this study only uses data from RNs. The quantitative data (i.e., turnover) that will be used in this study comes from a Human Resources Information Technology (HRIT) system that is updated on a monthly basis. The turnover data was pulled from November 2021, December 2021, January 2022, and February 2022. Only one month of data was used for each participant. If a participant responded to more than one survey, the most recent survey was used. The turnover data used for each participant was pulled four months after the survey they responded to that was

used as data in this study. For example, if a participant's data was from the October 2021 survey, their turnover status was pulled from February 2022. Thus, the turnover data reflected respondents' turnover status four months after their survey response.

To be included in the study, survey respondents had to 1) be an RN and 2) have responded to at least one of the three qualitative measures used in this dissertation. 170 RNs responded to at least one of the four surveys; however, 27 RNs did not respond to at least one of the three qualitative measures. One respondent's comments were unable to be used for analysis. Thus, this brought the eligible number of participants in this study to 142. All demographic data was self-reported. RNs were largely female (n = 123, 86.6%) and White (87.3%; Two or More Races, 4.9%, Black or African American, 3.5%; Hispanic/Latino, 2.8%; Asian, 0.7%.). There was one individual in the sample who declined to disclose their race. The average age of participants was 38.9 (*Range* = 21 - 70, *SD* = 11.6) and the average tenure was 7.5 years (*Range* = 0 - 40, *SD* = 8.1). The majority of RNs were full-time employees (81.7%). The full breakdown of demographic data for all eligible participants is presented in Table 1.

Measures

Job and Home Demands and Resources

This study used three open-ended qualitative survey questions to measure job and home demands and resources. The question, "Is there anything else that you are finding especially difficult right now at work?" was aimed to get at job demands. Response examples of job demands include insufficient supplies and lack of organizational support. The question, "What, if anything, are you finding especially difficult right now outside of work?" was aimed to get at home demands. Relationship issues and financial strain are two examples of home demands. Conversely, "What is one thing at work or home right now that is going really well or feels

supportive?" was aimed to get at job and home resources. Response examples include support from co-workers (job resource) and family support (home resource). These questions were developed by a research team, which was composed of Emergency Medicine Clinicians who served as subject matter experts (SMEs) and Assistant Professors employed at a large Carnegie R1-distinguished university and their graduate students. It is important to note that responses did not always fall within the intended subject matter elicited by the question. For example, not all of the responses to "What, if anything, are you finding especially difficult right now outside of work" qualified as home demands.

Turnover

The turnover data for this study is an objective measure pulled from hospital HR records and includes organizational turnover and departmental turnover (i.e., employees who leave the emergency department for another department within the hospital). This data is updated once a month by hospital staff and is shared with the Principal Investigator of the research study that leads the Department of Emergency Medicine (DEM) Clinician Wellbeing Survey. Included in this data is each employee's full-time equivalent (FTE). According to the Society for Human Resource Management (SHRM), FTE is "an employee's scheduled hours divided by the employer's hours for a full-time work week". For the purposes of this dissertation, all employees who have decreased their FTE have been identified. The decrease can be classified as downshifting, which happens when individuals voluntarily choose to reduce work hours in order to decrease stress and have more time for leisure, leading to better quality of life (Kennedy et al., 2013). Downshifting could be an indicator of future turnover, and thus is addressed in *Research Question 4.*

Burnout

Burnout was measured using a single-item, self-defined measure taken from the "Mini Z Survey", which is a survey tool that measures burnout, satisfaction, and stress (Linzer et al., 2016). The Mini Z burnout item has been validated, using a hospital physician sample, against the Maslach Burnout Inventory (Olson et al., 2019). The burnout measure asks the following: "Using your own definition of "burnout", please select one of the answers below". There are five response options, which range from, "I enjoy work. I have no symptoms of burnout." to "I feel completely burned out. I am at the point where I need to seek help." For the purposes of this study, response options were converted into numeric values ranging from 1-5.

Qualitative Analytic Procedure

The fully qualitative portion of this study consisted of two parts, both of which use an abductive approach. Abduction, defined by Timmermans and Tavoy (2012, p. 167) as "a creative inferential process aimed at producing new hypotheses and theories based on surprising research evidence", combines the deductive and inductive approaches. Deductive analysis uses existing literature, supported by research aims and questions, to test a theory (Bradley et al., 2007). When a deductive approach to coding is taken, codes are pre-determined based on existing research and the data are fit into these codes. Codes are not adjusted during the process based on any nuances or abnormalities in the data. Inductive analysis, which is the opposite of deductive analysis, is an emergent approach that involves making inferences solely from the observed data. Thomas (2006, p. 238) describes *inductive analysis* as "approaches that primarily use detailed readings of raw data to derive concepts, themes, or a model through interpretations made from raw data by an evaluator or researcher". Abductive analysis involves making inferences from both theory and empirical observations, which creates a methodologically sound approach that allows for nuances and abnormalities in data to be recognized. This study takes an abductive approach to

coding and thematic analysis, both of which are described in the following paragraphs. The JD-R model serves as the main theoretical foundation for both processes, complemented by this study's research questions in addition to the work-home interface literature reviewed earlier in the paper, which acknowledges the existence of stressors and resources in the non-work domain.

Abductive Coding

Code Development. The first iteration of codes, which I conducted independently, was developed using a deductive approach, pulling from the research aims of this study along with the JD-R model and work-home interface literature. The initial pre-determined codes were as follows: job demand, job resource, home demand, home resource. To begin the process, a codebook was developed that contained the code definitions, instances of when and when not to use each code, and text examples. The familiarization process was then employed by reading over the qualitative data without assigning codes. Once familiarized, the first pass was taken to code all of the qualitative data. During this process, I determined that there were some data that did not cleanly fit into any of the four original codes. The biggest anomaly that was identified was seen in the responses to the question, "What, if anything, are you finding especially difficult right now outside of work?". Considering the question alone, the responses should have all fallen under the "home demand" code. However, there were several comments that were not demands at all, but rather responses that indicated a lack or absence of resources, such as lack of sleep or difficulty sleeping. Some comments included mentions of psychological distress (e.g., "overwhelming exhaustion to participate in daily functions"), indicating a lack of resources which are needed to properly cope with stressors. None of the comments mentioned the job domain, nor demands that led to the experiences they were reporting. Although the data could suggest that the reported effects came from demands, it was important that assumptions were not

made about the source. For example, it could not be assumed that sleep issues reported by respondents were job-related, as that context was not mentioned in the comments. Given this information, the codes were adjusted. To account for non-work resources that are lacking or absent, the “home resource” code was split into two—"positive home resource” and “negative home resource”. The “positive home resource” code was used for comments that indicated the presence of a non-work resource, while the “negative home resource” code was used for comments that mentioned psychological or physical distress, indicating a lack of non-work resources necessary for successful coping. This modification to the predetermined list of codes, which consisted of adding a code that emerged solely from the observed data, turned this coding process from deductive to abductive. An “un-codeable” code was also added for comments that either did not have enough context or were not relevant to any of the 5 codes. The codebook was updated accordingly (see Appendix D).

Training and Coding Processes. I coded the full dataset, with an additional doctoral student selected and trained to code a subset of the data in order to lessen subjectivity and improve data quality. First, the additional coder was given a sample of the data and the codebook to read through and familiarize themselves with. I then met with the coder and conducted training on the coding process. The training consisted of background information on the study, a walkthrough of the codebook, and instructions on how to code using an Excel spreadsheet. Once the training was conducted, the doctoral student was asked to use the codebook to independently code a sample of the data, which was broken up into two parts. The initial data sample given to the coder contained short, simple comments with the goal of getting the coder comfortable with the process. I was sent the completed codes, and determined there was 100% consensus. A second subset, which included more complex qualitative data, was then sent to the coder. Once

the second subset was coded, I compared the two sets of codes. I conducted a meeting with the coder to discuss differences in codes until 100% consensus was met. In total, slightly over a quarter of the full data set was double-coded (n = 92). Even though full consensus was reached, Cohen's kappa (Cohen, 1960), which is a frequently used statistic to measure interrelated reliability, was calculated using Excel (see Table 2). Cohen's kappa was found to be .80 for the entire subset of double-coded data, which is considered a 'substantial' strength of agreement as it falls in the range of .61-.80 (Landis & Koch, 1977). Out of the 337 total comments, only 6 were deemed un-codeable and left out of the remaining analysis. One RN was removed from the study as all of their comments were deemed un-codeable. Thus, 142 RNs—all of whom responded to at least one of the three survey questions used for analysis—were retained as eligible for this study.

Binary Coding. To conduct statistical analysis, all of the variables were coded as binary values, such that all participants were given a value of 0 or 1 for each variable. A 0 value represents the absence of a variable, either due to the participant not having a comment for a given variable or providing a comment such as "nothing", "n/a", "none", etc. All other comments were converted to a value of 1, which indicates the variable is present by way of the participant providing a comment other than "none". Thus, all participants had either a value of 0 or 1 for each variable.

Abductive Thematic Analysis

The goal of thematic analysis is to identify meaningful patterns in data that address research interests. In this study, thematic analysis was conducted to determine what types (i.e., themes) of job demands, job resources, home demands, and home resources exist for emergency department nurses during COVID-19. Thematic analysis is defined as a "method for identifying,

analyzing, and reporting patterns (themes) within data" (Braun & Clarke, 2006, p. 79). The process for conducting thematic analysis in this study, which is detailed below, utilized the methodology of Braun & Clarke (2006). Thematic analysis can be inductive or abductive. Regarding inductive analysis, Thomas (2006, p. 239) stated, "although the findings are influenced by the evaluation objectives or questions outlined by the researcher, the findings arise directly from the analysis of the raw data, not from *a priori* expectations or models". Under this distinction, the thematic analysis process implemented in this study is ultimately abductive as the themes and subthemes were loosely influenced by the JD-R model and the overall concept of demands and resources.

Rather than considering all the qualitative data together, thematic analysis was conducted for each variable—a process that lends itself to the abductive distinction. The first step for each variable was to become familiar with the data. Due to the abductive coding process, there was already a high level of familiarization with the data. However, multiple read throughs of the comments were still conducted to get initial impressions about content and patterns. Next, initial codes were generated for each comment. A code is defined as, "a word or short phrase that symbolically assigns a summative, salient essence-capturing and/or evocative attribute for a portion of language-based or visual data" (Saldana, 2014, p. 304). Essentially, the initial codes are summaries of the main point being communicated by the comment. In some cases, with extremely short comments such as "staffing shortages", the initial code was identical to the comment provided. Once all comments were coded, they were reviewed, and themes were searched for. Braun and Clarke (2006, p. 87) describe the process of "searching for themes" as "collating codes into potential themes, gathering all data relevant to each potential theme". Codes that spoke to the same overarching topics were grouped together, which formed the

creation of themes. These themes represented patterns and groupings that existed among the codes. The initial themes were all identified solely by the author. To reduce the subjectivity and increase the reliability of the thematic analysis process, the themes—along with their associated comments—were reviewed and verified by a subject matter expert in Industrial/Organizational Psychology with extensive organizational research experience in the healthcare sector.

Quantitative Analytic Procedure

This dissertation included five different analyses: descriptive statistics (i.e., frequencies), correlational analysis, logistic regression, moderation, and mediation—all of which were conducted in RStudio 4.3.2. First, descriptive statistics were run to gather frequency counts and proportions for all of the study variables as well as demographic information (i.e, gender, race, age, tenure). Additionally, a correlation matrix (see Table 6) was created to both examine the associations between all study variables and address some of the study's hypotheses. To address *Research Question 2*, I conducted a logistic regression to test whether job demands, home demands, job resources, and positive and negative home resources (IVs) are related to, and predictive of, emergency department nurse turnover (DV). *Hypothesis 1*, which proposed significant positive relationships between job and home demands and emergency medicine nursing turnover, and *Hypothesis 2*, which proposed significant negative relationships between job and home resources and emergency medicine turnover, were addressed using both correlation and logistic regression. Due to the results of the aforementioned logistic regression, *Research Question 3*, which aimed to determine if one type of demand (i.e., job or home) was more predictive of emergency department nursing turnover than the other, was nullified and thus, not analyzed. *Research Question 4,* which sought to determine differences in job and home demands and resources between turnover types (i.e., departmental turnover, organizational

turnover, reduced FTE), was unable to be analyzed due to the insufficient sample sizes among the turnover types. *Hypothesis 4*, which proposed significant positive relationships between job and home demands and burnout, and *Hypothesis 5*, which proposed significant negative relationships between job and home resources and burnout, were tested using correlation and linear regression. Finally, for *Hypothesis 6*, burnout was tested as a mediator in both the relationship between job demands and turnover and home demands and turnover. All of this information is summarized in Table 4, which includes the method of analysis for each hypothesis and research question in this study.

CHAPTER SEVEN

RESULTS

Thematic Analysis

Thematic analysis was conducted to answer *Research Question 1*, which asked what the key emerging themes were for job and home demands and resources among emergency department nurses. From the 331 total comments, 22 themes were identified—ten for job demands, four for home demands, two for job resources, three for positive home resources, and three for negative home resources. 13% of the 331 comments ($n = 44$) were those such as "n/a", "none", etc., which were excluded from thematic analysis. Thus, the final comment count—excluding those that indicated no home and job demands and resources—was 287. The full list of themes, along with definitions and examples, are presented in Table 5. Information over and above that which is provided in the table, such as the explanation of certain patterns that emerged within themes, as well as the percent of prevalence of each theme for each variable, are discussed in the following paragraphs. The theme prevalence adds up to over 100% for each variable, due to some comments which fell under more than one theme.

Job Demands

Job demands had the highest number of comments at 35%, and subsequently, the greatest number of themes. The sheer number of themes that emerged from the qualitative data on job demands indicates that there is both a variety and volume of emergency department nursing job demands. From the survey comments provided by emergency department nurses, the following were the ten job demand themes, including the percent of job demand comments that fell under each: *COVID-19* (2%), *Compassion Fatigue* (3%), *Needed Organizational Support* (34%), *Negative Attitudes Toward Work* (6%), *Negative Work-to-Home Spillover* (19%), *Patient*

Aggression and Violence (5%), *Personnel Concerns* (10%), *Staffing and Scheduling* (26%), *Supply Shortages* (4%), and *Work Overload* (24%). The total percent for all comments is over 100, as there were some comments that fell under more than one theme.

The most prevalent job demand theme was *Needed Organizational Support*. A few comments noted a general need for support, however, a majority of comments noted specific areas of support. A lot of the disgruntlement with pay was due to the difference in pay between staff nurses and travel nurses. This discrepancy led to RNs feeling unsupported and unappreciated by the hospital system. In a similar vein, there were also comments noting the general lack of care and appreciation shown by the organization toward their employees. Some comments mentioned that they did not feel the organization was listening to, or taking action to address, concerns of employees. Other patterns that emerged were low morale among individuals and staff, lack of motivation due to inaction by the organization, and the need for additional knowledge, training, and education. Although different types emerged, there was an overwhelming sense of the need for additional organizational support. This finding has practical implications, which will be talked about further in the discussion section.

Staffing and Scheduling was the second most prevalent theme. Most comments within this theme pertained to lack of staffing, including positions such as RNs, physicians, techs, and sitters. Concerns surrounding staffing were often mentioned in addition to concerns surrounding *Work Overload*, which was also a prevalent theme. This combination emphasized that inadequate staffing led to difficulties in managing high patient volumes and acuity. Turnover was also mentioned, although to a much lesser degree than staffing. Although not mentioned as much as staffing, turnover was also a pattern that emerged. Respondents spoke to the amount of people leaving, as well as people leaving to pursue travel nursing for better pay.

Work Overload was the third most prevalent theme, which included comments pertaining to bed holds and patient volume acuity, and safety. Bed holds occur when patients must wait to be admitted due to the lack of available beds. Holding patients backs up the emergency room, which respondents conveyed is often overwhelmed, which was reflected by all the comments that spoke to concerns about patient volume. Bed holds and high patient volume led to longer wait times, and sometimes, disgruntled patients. Patient acuity is defined as the individual patient need for nursing care, which often indicates more critical injuries and illnesses. Comments that cited patient acuity commonly cited volume. The combination of high patient volume and acuity resulted in an overwhelming work environment and clinical load. Lastly, related to patient volume, there were concerns about high patient ratios. RNs noted that when patient ratios are high, the work environment is challenging, which can negatively impact the quality of care and safety of patients.

Negative Work-to-Home Spillover, which referred to the concern regarding the impact of work demands and/or stress on one's home life, was the fourth most prevalent theme. Almost half of the comments that fit this theme spoke to concerns about disconnecting and recovering from work. RNs noted difficulties leaving work at work, stress over going back to work while they are off of work, and not having time for hobbies or home responsibilities due to the time spent recovering from work. Exhaustion also came up in the comments, with RNs noting that they have difficulty completing tasks at home due to the exhaustion they experience after a work shift. Similarly, a few comments also mentioned the difficulties surrounding working night shift, such as its negative impacts on family, sleep, and overall quality of life.

Personnel Concerns, *Negative Attitudes Toward Work*, *Patient Aggression and Violence*, *Supply Shortage*, *Compassion Fatigue*, and *COVID-19* were all themes that existed among the

comments but were much less prevalent than those listed above. *Personnel Concerns* encompassed comments about poor attitudes, poor work ethic, and issues with the quality of staff. *Negative Attitudes Toward Work* mostly included covered comments that spoke to the difficulty of showing up to work/the thought of going back to work. Three of the themes deal with patient-RN interactions, in terms of being the victim of aggression/violence from patients and RNs experiencing exhaustion and emotional withdrawal due to caring for patients, with the third theme specific to RNs not having enough supplies to properly treat patients. The *COVID-19* theme dealt specifically with vaccines, covering concerns about mandates and frustration with patients and staff who weren't vaccinated.

Home Demands

Home demand comments were much less prevalent than job demands. A little under half of the comments indicated no home demands, which included comments such as "none" and "n/a". The four remaining themes identified for home demands were *Family* (47%), *General Home Stressors* (28%), *COVID-19* (28%), and *Marital/Relationship Stress* (16%).

The *Family* theme covered concerns regarding family and family-related stressors. Some comments were general, just citing "family" or "kids". However, two more specific patterns emerged. One pattern was caretaking, household, and parental responsibilities. RNs reported difficulty performing or stress due to household and/or parental responsibilities, such as chores and childcare. These comments were similar to those that fell under the *Negative Work-to-Home Spillover* theme; however, they did not mention work as the reason for home responsibilities being difficult to complete. Additionally, some comments mentioned stress due to the responsibility of caring for other family members (e.g., parents). Health of family members was the second comment pattern that emerged within the *Family* home demand theme. These

comments encompassed concerns regarding both physical and psychological health of family members.

In addition to job demands, *COVID-19* also emerged as a theme for home demands. *COVID-19*-related home demands included social isolation, staying safe, politics surrounding the pandemic, death of loved ones, and frustration with the public for not taking COVID-19 seriously. COVID-19 was a more prominent theme among home demands compared to job demands, which could indicate that COVID-19 had a more negative impact on the home domain compared to the job domain.

General Home Stressors served as a catch-all theme for comments that mentioned general life stress and other non-work demands. Some of the comments that fit under this theme include stress due to pursuing a college/graduate degree, financial stress, bad weather, and major life changes (i.e., moving). The last theme identified was *Marital/Relationship Stress,* which encompassed concerns regarding the health and stability of spousal and other personal relationships.

Job Resources

The job resources comments did not have a great degree of variety, and thus, only two themes were identified: *Organizational Support* (76%) and *Positive Attitude Toward Staff* (27%). Most of the comments in the *Organizational Support* theme pertained to leadership/management, co-worker, and team support. This emphasizes that the support from other staff members is both a common, and critical, job resource of RNs at the health system that was surveyed. Other forms of support included COVID shift pay (CSP), approval of vacation time, and help from staff in other departments.

Positive Home Resources

Opposite of the pattern seen with demands, more participants responded having home resources than job resources. The caveat to this, however, is that job and home resources were pulled from the same question. This could indicate that participants either value home resources more than job resources, or they only have home resources. The following three themes were identified for home resources: *Engagement in Non-Work Activities* (16%), *Family and Friend Support* (81%), and *Recovery from Work* (8%). *Family and Friend Support* was overwhelmingly the most prevalent theme. This theme combined family and friends as a lot of comments cited both family and friends as sources of support. *Engagement in Non-Work Activities* was more of a catch-all category and included comments such as exercise, involvement in kids' activities, spending time with family and friends, and buying a house. Lastly, *Recovery from Work* encompassed comments that mentioned time spent away from work and vacation, which assisted in recovering from stress associated with work.

Negative Home Resources

Negative home resources emerged during the abductive coding process and captured comments that indicated psychological distress, likely exacerbated by inadequate resources. Since this study variable was not directly asked by a survey question, the *Nonexistent* theme did not apply. The three themes that were identified include: *Difficulty Fulfilling Responsibilities/Completing Tasks*, *Mental Health*, and *Sleep and Relaxation*. The *Difficulty Fulfilling Responsibilities/Completing Tasks* theme is very similar to the comments under the *Family* home demand theme which pertain to difficulties completing home responsibilities. The distinction between the two is that the negative home resource comments cite psychological or physical distress (i.e., exhaustion, joy, energy) as reasons why life responsibilities are difficult to complete. The home demand comments, on the other hand, generally state difficulty keeping up

with home demands. The *Mental Health* theme covered all comments of self-reported mental health concerns, including—but not limited to—anxiety, difficulty staying positive, and lack of energy and happiness. Lastly, *Sleep and Relaxation* encompassed participants who reported either not getting enough sleep or relaxation or had difficulty sleeping or finding time to relax.

Quantitative Analysis

Results from the correlation analysis, logistic regression, moderation, mediation, and linear regression are shown below. The binary variables in this study had variability, thus, the results of statistical analysis were not due to lack of variability in the binary data. All analyses were conducted in R Studio 4.3.2.

Correlation Analysis

Correlations, which can be found on Table 6, were used to show associations between study variables as well as address some of the hypotheses in this study. The sample size for all correlations was 142. Correlation results revealed significant relationships. One of the significant relationships were due to the nature of the data. Surprisingly, positive home resources were negatively correlated with job resources (r = -.64, p < .01). In the survey, there was a single question that solicited responses regarding job and home resources. With this question, most participants responded with either a job resource or a home resource. Thus, it is understandable that these variables were negatively associated, as participants who reported a job resource often did not report a home resource and vice-versa. Additionally, burnout was found to have a significant positive correlation to turnover (r = .26, p < .01) and departmental turnover (r = .26, p < .01). The last significant correlation directly addresses a study hypothesis and thus, will be discussed later in this section.

Additional correlations were run on select demographics to determine the need for control variables. Tenure and age were of particular interest as the nursing literature has shown that age and tenure are predictive of nurse turnover intentions (Hayes et al., 2006). Results indicated that turnover status was not significantly correlated with age (r = .05, p = .54) nor tenure (r = -.09, p = .27). Thus, it was determined that tenure and age did not need to be controlled for in any of the analyses.

Research Question 2 and Hypotheses 1-2

Before conducting logistic regression, I first set out to determine if there were significant positive relationships between job and home demands and turnover and significant negative relationships between job and home resources and turnover, which address *Hypothesis 1* and *Hypothesis 2*, respectively. Turnover had a non-significant correlation with job demands (r = .06, p = .50), home demands (r = .04, p = .62), job resources (r = .08, p = .35), and negative home resources (r = .09, p = .28). Turnover had a non-significant correlation with positive home resources (r = -.04, p = .61). To address *Research Question 2* and further examine *Hypotheses 1-2*, logistic regression was performed to determine the effects of job demands, home demands, job resources, positive home resources, and negative home resources on the likelihood that emergency nurses will turnover. The overall logistic regression model was not statistically significant X^2 (5, N = 142) = 3.23, p = .66, *adj.* R^2 = .02. Job demands (b = .39, p = .46), job resources (b = .42, p = .47), home demands (b = .33, p = .50), positive home resources (b = -.07, p = .90), and negative home resources (b = .68, p = .20) were not significant predictors of turnover. Taking into consideration the correlations and the logistic regression results, both *Hypothesis 1* and *Hypothesis 2* were not supported. *Research Question 2* asks the following: *What is the nature of the relationship between job and home demands and resources and*

emergency department nursing turnover? This question aimed to determine if job and home demands and resources were predictive of turnover. Based on the logistic regression, it can be concluded that job and home demands and resources are not significantly related to, or predictive of, emergency department nursing turnover.

Research Questions 3-4

Research Question 3 asked if one type of demand (i.e., job or home) was more predictive of emergency department nursing turnover than the other. Since the logistic regression model revealed that neither job nor home demands and resources were predictive of emergency department nursing turnover, this question was nullified, and no analysis was performed. *Research Question 4* aimed to determine if the proportions of job and home demands and resources reported by emergency department nurses differed between turnover types (i.e., departmental turnover, organizational turnover, reduced in FTE). Out of the 142 participants, 22 participants left the department, 9 participants left the organization, and 12 participants reduced their hours. Due to the low sample size in each turnover category—particularly organizational turnover and FTE reduction—*Research Question 4* was unable to be analyzed.

Hypothesis 3

Moderated logistic regression was conducted to test *Hypothesis 3,* which states that "job and home resources will moderate the relationship between job and home demands and emergency department turnover, such that when resources are higher, the relationship between turnover and demands will be weaker." Two different logistic regression models were tested—one for the job domain and one for the home domain. The first logistic regression model tested whether job resources moderated the relationship between job demands and turnover. The overall regression model, which included the interaction term between job demands and job

resources, was not statistically significant, X^2 (3, N = 142) = 1.81, p = .61, *adj*. R^2 = .01. The interaction term, which tested the moderating effect of job resources, was also not statistically significant (b = .66, p = .54). Thus, it was concluded that job resources do not moderate the relationship between job demands and turnover of emergency department nurses.

The second logistic regression model tested whether home resources moderated the relationship between job demands and turnover. Only positive home resources were included in the model, as negative home resources indicate an absence of resources. The overall regression model, which included the interaction term between home demands and positive resources, was not statistically significant, X^2 (3, N = 142) = 1.47, p = .69, *adj*. R^2 = .01. The interaction term, which tested the moderating effect of positive home resources, was also not statistically significant (b = .95, p = .32). Thus, it was concluded that home resources do not moderate the relationship between home demands and turnover of emergency department nurses. *Hypothesis 3* was unsupported based on the results of both moderated regression models.

Hypotheses 4-5

Correlation was the main method of analysis used to test *Hypothesis 4* and *Hypothesis 5*. *Hypothesis 4* proposed that there would be significant positive relationships between job and home demands and burnout. Job demands and burnout had a non-significant correlation at the $p < .05$ level, but nearing significance (r = .16, p = .06). The correlation between home demands and burnout was non-significant (r = -.06, p = .45). Given these results, *Hypothesis 4* was unsupported. *Hypothesis 5* proposed that there would be significant negative relationships between job and home resources and burnout. Job resources were significantly and negatively related to burnout (r = -.19, p = .02). The correlation between burnout and positive home resources (r = .11, p = .18) and negative home resources (r = .10, p = .24) were both non-

significant. *Hypothesis 5* was partially supported as a significant negative relationship between job resources and burnout was found.

To further explore these hypotheses, a linear regression was conducted to determine if job demands, job resources, home demands, positive home resources, or negative home resources were predictive of burnout. The overall linear regression model was not statistically significant, $F(5, 136) = 1.90$, $p = .10$, $R^2 = .07$. Home demands ($b = -.03$, $p = .86$), positive home resources ($b = -.09$, $p = .65$), and negative home resources ($b = .17$, $p = .43$) were not significant predictors of turnover. While not considered significant predictors when compared against a value of $p < .05$, job demands ($b = .33$, $p = .08$) and job resources ($b = -.41$, $p = .06$) were approaching significance and both had coefficients in the expected directions.

Hypothesis 6

Regression analysis was used to address *Hypothesis 6,* which proposed that burnout will mediate the relationship between job and home demands and turnover. Mediation was tested through two regression models. The first regression model was the full model, which included job demands, home demands, and burnout as predictor variables and turnover as the outcome. The second model included job and home demands as predictors and burnout as the outcome. Causal mediation was tested twice—once with job demands as the treatment condition and another with home demands as the treatment condition, both with 1,000 simulations and a sample size of 142. The indirect effect of job demands on turnover through burnout was approaching significance, but was not significant at the $p < .05$ level ($b = .03$, 95% CI [-0.002, 0.08], $p = .06$). The indirect effect of home demands on turnover through burnout was non-significant ($b = -.01$, 95% CI [-0.06, 0.04], $p = .61$), indicating that burnout does not mediate the relationship between home demands and turnover. Based on the mediation results, *Hypothesis 6*

was rejected as burnout does not mediate the relationship between job and home demands and emergency department nursing turnover.

CHAPTER EIGHT

DISCUSSION

Nursing turnover has continued to be a major challenge among healthcare organizations around the globe. This continuing trend, which was exasperated by COVID-19, has led to research that aims to determine the predictors of turnover among nurses. Since the nursing profession is inherently challenging and often high-stress, studies have honed in on the relationship between job demands and nurse turnover. Due to the focus on job demands, less is known about the role that job resources may play in the nurse turnover process. Additionally, the current nurse turnover research largely focuses on the job domain. Thus, the aim of this study was to take a more holistic approach by determining how demands and resources in both the job and home domains influence nurse turnover behaviors.

Results indicated a high prevalence of job demands among emergency medicine nurses. Among all the study variables, support only existed for the role of burnout in emergency medicine nurse turnover. Lastly, no evidence was found to suggest that home demands and resources were related to burnout or predictive of emergency medicine nurse turnover. A summary of results, theoretical and practical implications, study limitations, opportunities for future research, and overall takeaways will all be discussed in this section.

Summary of Findings

Research Question 1, which elicited a fully qualitative approach, sought to identify the key emerging themes for job and home demands and resources for emergency department nurses. In order to prepare the data for the thematic analysis that was used to address *Research Question 1*, comments were categorized into—or coded as—one of the four study variables (i.e., job demand, job resource, home demand, home resource). During this process, I discovered a

small subset of similar comments that didn't fit into any of the four variables. Most of these comments were in response to the survey question, "What, if anything, are you finding especially difficult right now outside of work?". This question was intended to elicit home demands such as financial stress or relationship strain, however, some respondents provided comments that spoke to psychological distress and health concerns (e.g., anxiety, trouble sleeping, lack of energy and motivation). These comments led to an emergence of the variable I referred to as "Negative Home Resources", which encompassed qualitative data that indicated a lack, or absence of, non-work resources needed to deal with demands. This finding highlights that there are individuals who don't have resources or don't have enough resources, as well as the negative impacts that insufficient or absent resources can have on an individual.

Qualitative Data

The thematic analysis resulted in a total of 22 themes—*COVID-19, Compassion Fatigue, Needed Organizational Support, Negative Attitudes Toward Work, Negative Work-to-Home Spillover, Patient Aggression and Violence*, *Personnel Concerns*, *Staffing and Scheduling*, *Supply Shortages,* and *Work Overload* (Job Demands); *Family*, *General Home Stressors*, *COVID-19,* and *Marital/Relationship Stress* (Home Demands); *Organizational Support* and *Positive Attitude Toward Staff* (Job Resources); *Engagement in Non-Work Activities, Family and Friend Support,* and *Recovery from Work* (Positive Home Resources); *Difficulty Fulfilling Responsibilities/Completing Tasks*, *Mental Health,* and *Sleep and Relaxation* (Negative Home Resources). Although no formal analyses were conducted regarding the themes, insights can still be made based on differences and patterns in frequency counts.

One of the insights taken from the thematic analysis was that job demands overwhelmingly had the greatest number of comments (35% of total comments) and themes.

This could indicate that, out of all 5 independent variables, job demands are the most prevalent and have the greatest variety. Job resources had less than half the number of comments compared to job demands. The caveat to this is that there was a single question that addressed job resources and positive home resources, and most respondents only reported one type of resource. If the data is truly reflective of the ratio of demands to resources, it indicates that the healthcare organization likely needs to provide more resources to help nurses cope with the job demands they are facing. This postulation is supported by the thematic analysis, which found that *Needed Organizational Support* was the most prevalent job demand theme. One surprising finding was the lack of COVID-19-related job demand comments, especially due to the Delta variant surge that was occurring during the same timeframe that the surveys were being completed. This can likely be attributed to the fact that there was an open-ended response question in the survey that asked about COVID-19, which was not included in this study.

The most prevalent theme for Job Resources was *Organizational Support*. Overwhelmingly, the comments spoke to support from co-workers, managers, and work teams. There were only a couple comments that mentioned benefits provided by the organization (i.e., COVID shift pay, approved vacation time) and no comments that mentioned support from the healthcare organization. This indicates that nurses highly value their co-workers and direct leadership and view them as integral resources. However, this also indicates that there could be a lack of support/resources from the organization and Executive-level staff. Furthering this insight is the fact that the only other job resources theme identified was *Positive Attitude Toward Staff*. Thus, the job resources that nurses report are not resources that are provided by the organization, but rather, the people they work with. This could mean that the organization is either not providing resources, providing insufficient resources, or not providing the appropriate resources

to fit the needs of its nurses. Some of the job resources that are prevalent in the literature, such as job control, autonomy, and professional development, were not found in this study's data. This is consistent with studies that have examined job resources during COVID-19 and found the most salient and impactful resource to be social support.

Another interesting insight was that the most prevalent of comments such as "n/a" and "none" within the home demand theme. It is possible that this result is due to individuals not wanting to share about their non-work life, particularly, what they are finding difficult. Alternatively, home demands could just be less prevalent than job demands. If that is the case, it may be more appropriate for research to focus more heavily on job demands compared to home demands on their relationship to various organizational outcomes.

Positive home resources were consistent with job resources in that the most prevalent resource was people (i.e., family and friends). This suggests that social support is an important and critical resource for emergency department nurses in both the home and job domains. Finally, negative home resources indicated the prevalence of difficulty sleeping or relaxing, difficulty completing home responsibilities and tasks due to exhaustion and lack of motivation, and mental health challenges. This highlights that there are emergency department nurses who are experiencing more extreme distress and disruption and could be in need of extra support and monitoring.

Quantitative Data

The correlation analysis revealed significant positive relationships between burnout and both turnover status and departmental turnover. There was not a significant relationship, however, between burnout and organizational turnover. The turnover variable was a combination of departmental and organizational turnover. Thus, it is likely that the significant positive

relationship between burnout and turnover status was driven by burnout's relationship to departmental emergency department nurse turnover. No causal implications can be made; however, the correlation between burnout and departmental turnover suggests that nurses who feel burned out may switch departments—rather than leave the organization—in an attempt to reduce burnout.

Correlation and logistic regression revealed that job demands, job resources, home demands, and home resources were not associated with, nor predictive of, emergency department nursing turnover. One surprising finding was that, although non-significant, the correlation coefficient between job resources and turnover was positive. Moderated logistic regression was also conducted, and it was found that neither job nor home resources moderated the relationship between job and home demands and emergency department nursing turnover.

Burnout is an element of the JD-R model and is commonly included in research related to turnover, thus, the three hypotheses included burnout. A significant negative correlation was found between job resources and burnout, which supports that job resources are negatively related to burnout. The correlation between burnout and job demands, which was negative, had a *p*-value of .06. This is very close to the significance value of $p < .05$, and, due to low sample size, it is possible that a positive relationship exists between job demands and burnout. The correlation between burnout and all of the home domain variables were clearly non-significant, and thus, it was determined burnout is not related to home demands, positive home resources, or negative home resources. Lastly, regression analysis revealed that job demands did not predict turnover through burnout as a mediating variable. The indirect effect—which tests burnout as a mediator—had a *p* value of .06. The direct and total effects were non-significant, however, which could indicate that the sample size was too small. It is possible that, with a larger sample

size, mediation would have been supported. Lastly, support was not found for burnout as a mediator between home demands and turnover.

Theoretical Implications

Most studies that have found job demands and resources to be related to, and/or predictive of turnover, used turnover intention as an outcome. The results of this study revealed that job and home demands and resources were not predictive of turnover behavior. This implies that demands and resources may be predictive of turnover intention, but not turnover behavior, which furthers the research conducted by Cohen et al. (2016) who found that turnover behavior has different determinants than turnover intention.

One of the unique aspects of this study was the inclusion of the home domain. The qualitative data suggested that job demands were much more prevalent among emergency medicine nurses than home demands. Additionally, there was no support for the home domain being related to turnover or burnout. Thus, results indicate that the job domain may have more influence over organizational outcomes than the home domain. The research that does exist on the home domain, while not nearly as robust as the job domain, is mixed. Studies like that done by Hanson et al. (2006), who found that positive work-to-home spillover was related to job satisfaction and mental health, and Karatepe & Baddar (2006), who found a negative relationship between negative home-to-work spillover and turnover intention, support the influence of the home domain on organizational outcomes. Other studies have not found effects, such as that by Kinnunen et al. (2006), who found that work-related well-being was positively related to work-to-family spillover, but not significantly related to positive family-to-work spillover. This study adds to the body of literature that has not found support for the relationship between home-to-work spillover and organizational outcomes.

Lastly, this study provides theoretical implications for the relationship of job resources and demands to burnout. Job resources had a significant negative relationship to burnout, while the relationship between job demands and burnout was not significant. Although the relationship between job demands and burnout was not significant, the *p* value was approaching significance at $p = .06$. The results align with the research that has found significant negative associations between job resources and burnout, such as that by Al Sabei et al., 2022, Elst et al., 2016, and Jourdain and Chenevart, 2010. Results do not align with the literature that has found strong support for the positive association between job demands and burnout, such as that by Elst et al., 2016 and Van der Heijden et al., 2019. The limitations of this study are likely the reason for the non-significant finding between job demands and burnout. However, results do further the literature and support that job resources are an important factor in the prevention of nurse burnout.

Practical Implications

In addition to theoretical implications, this study also has practical implications, particularly for healthcare organizations. The results suggest that burnout, at minimum, is related to departmental turnover of emergency department nurses (i.e., switching from the emergency department to another department within the same healthcare system). Thus, to help reduce the number of nurses who switch departments, it is essential that departmental and organizational leadership focus on the reduction and prevention of burnout. One approach to reducing/preventing burnout, based on the finding that job resources are negatively related to burnout, is to provide nurses with more resources. This should not be done haphazardly. Leaders should take a targeted approach by having conversations with their staff to get a better perspective on what resources are needed and valued. The qualitative portion of this study

provides great insight into the knowledge that can be gleaned from gathering employee input. For example, one of the most prevalent job demand themes was “Needed Organizational Support”. This provides insight into the resources that organizations could provide that align with the needs of employees, such as equitable compensation.

Limitations

This study was not without limitations. One challenge faced in this study was the lack of complete data. Three open-ended questions from an ongoing survey on emergency department clinician wellbeing, which aimed to solicit information about job and home demands and resources, were used as the data for this study. A majority of nurses did not respond to all three questions; thus, they did not have values for all variables. This provided an incomplete picture of the job and home demands and resources that likely exist for each nurse. Furthermore, it is possible that even if someone was experiencing demands or resources, they did not answer as such in the survey. Due to incomplete data, I had to treat each variable as binary (i.e., absent or present). The binary nature of the variables was limiting, as all comments were valued the same, regardless of their severity. The comments themselves provided insight into the type(s) of demands and resources employees were experiencing, as well as the intensity. In this study, comments that were low in severity were treated the same as those high in severity (i.e., both had a value of “1”, meaning the variable was present). The lack of nuance that was able to be accounted for could have been factored into the non-significant findings.

Although the data utilized in this survey was taken from four different time points, each participant’s data was reflective of a single survey response. For those who took the survey multiple times, only their most recent response was used for analysis. The survey asks respondents to report on what they have experienced over the past month, which may not have

captured all of the demands they faced and the resources they had. This impacts the ability of the data to predict turnover, which is a decision that is likely considered based on experiences that occur over an extended period of time. This is particularly applicable for demands, as demands that are consistent over multiple months would be a more accurate predictor compared to a snapshot of demands experienced over the period of one month. The non-significant results found in this study related to demands could be reflective of this limitation.

Lastly, sample size was likely a limitation in this study. It is possible that, due to sample size and missing data (i.e., non-responses to study measures), relationships that actually exist were not detected. This is especially relevant for the analyses that had *p* values closely approaching significance.

Future Research Opportunities

The results and limitations of this study provide several opportunities for further research. First, there is a need for more longitudinal studies to examine the relationships between demands and resources and turnover. A longitudinal design accounts for changes in demands and resources over time, giving a holistic picture of what employees are experiencing that may contribute to turnover. Using data that reflects more than just a snapshot in time is likely to result in stronger relationships and more accurate analysis of turnover predictors. This approach is especially helpful when capturing the relationships to and effects of job demands, as they are less stable than job resources (Seppälä et al., 2015).

Second, whether using quantitative or qualitative data, future studies should implement a measure of intensity or severity when studying demands and resources. Presence or absence of a variable alone, while important, does not account for nuances. Due to individual differences, employees can face the exact same demands and resources, but appraise them differently. In

terms of demands, some are inherently more stressful or taxing than others. The challenge-hindrance stress model (CHM; Cavanaugh et al., 2000) provides further support for this approach to research, positing that stressors can either be hindrances (i.e., stressors that are difficult to overcome, threaten goals, and are negative and strain-inducing) or challenges (i.e., stressors that foster opportunity and are related to positive work-related outcomes). These nuances emphasize the importance of using more than just binary or frequency measures to capture demands and resources.

Third, there is an opportunity, which addresses a gap in the literature, to examine within-organization (i.e., departmental/unit) turnover. Most of the current literature focuses on organizational turnover. The results of this study showed that burnout is related to departmental turnover, but not organizational turnover. This indicates that employees who are burned out may switch departments rather than leaving the organization. Future studies could determine if switching departments results in significantly lower burnout scores. Additionally, these employees could be tracked using a longitudinal study to determine if departmental turnover is an indicator of eventual organizational turnover. Qualitative data could be used as a supplement to gather more information about why employees made the decision to switch departments. This would assist in determining whether burnout truly is the main motivator, or if there are other factors at play.

Fourth, researchers should continue to examine burnout as a mediating factor of turnover. Over the last decade, researchers have begun investigating the mediating role of burnout on turnover intention. To my knowledge, a very limited number of studies—if any—have looked at turnover behavior, which this study addresses. Although both tests of mediation were non-significant, burnout as a mediator between job demands and turnover was very close to

significance. This relationship should be tested to see if it exists in other datasets. Lastly, although no significant results were found, there is still a need to conduct additional research on the home domain to determine if non-work demands and resources impact employee outcomes such as burnout and turnover.

Conclusion

In conclusion, this study did not find support for any of the home domain variables regarding emergency nurse turnover and burnout. Additionally, no significant predictors of emergency department nurse turnover were identified. The significant relationships between burnout, job resources, departmental turnover, and turnover status highlight that burnout is an influential factor in nurse turnover. This study presents many opportunities for future research, including the exploration of burnout's relationship to different types of turnover, such as departmental and organizational turnover.

REFERENCES

Abou Hashish, E. A. (2017). Relationship between ethical work climate and nurses' perception of organizational support, commitment, job satisfaction and turnover intent. *Nursing Ethics*, *24*(2), 151-166.

Afzali, M., Nouri, J. M., Ebadi, A., Khademolhoseyni, S. M., & Rejeh, N. (2017). Perceived distributive injustice, the key factor in nurse's disruptive behaviors: a qualitative study. *Journal of Caring Sciences*, *6*(3), 237. https://doi.org/10.15171/jcs.2017.023

Aiken, L. H., Clarke, S. P., Sloane, D. M., Sochalski, J., Silber, J. H. (2002). Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. *JAMA*, *288*(16), 1987-1993. https://doi.org/10.1001/jama.288.16.1987

Aiken, L. H., Clarke, S. P., Sloane, D. M., Lake, E. T., & Cheney, T. (2009). Effects of hospital care environment on patient mortality and nurse outcomes. *JONA: The Journal of Nursing Administration*, *39*(7/8), S45-S51.

Alazzam, M., Abualrub, R. F., & Nazzal, A. H. (2017). The relationship between work–family conflict and job satisfaction among hospital nurses. *Nursing Forum, 52*,(4), 278-288.

Al-Abri, R., & Al-Balushi, A. (2014). Patient satisfaction survey as a tool toward quality improvement. *Oman Medical Journal, 29*(1), 3-7. https://doi.org/10.5001/omj.2014.02

Al-Emadi, A. A. Q., Schwabenland, C., & Wei, Q. (2015). The vital role of employee retention in human resource management: A literature review. *IUP Journal of Organizational Behavior*, *14*(3), 7.

Al-Kandari, F., & Thomas, D. (2009). Perceived adverse patient outcomes correlated to nurses' workload in medical and surgical wards of selected hospitals in Kuwait. *Journal of Clinical Nursing*, *18*(4), 581-590. https://doi.org/10.1111/j.1365-2702.2008.02369.x

Alkahtani, A. H. (2015). Investigating factors that influence employees' turnover intention: A review of existing empirical works. *International Journal of Business and Management*, *10*(12), 152. doi: 10.5539/IJBM.V10N12P152

Allen, T. D. (2013). The work-family role interface: A synthesis of the research from industrial and organizational psychology. In N. W. Schmitt, S. Highhouse, & I. B. Weiner (Eds.), *Handbook of psychology: Industrial and organizational psychology* (pp. 698–718). John Wiley & Sons, Inc.

Allen, T. D., Herst, D. E., Bruck, C. S., & Sutton, M. (2000). Consequences associated with work-to-family conflict: a review and agenda for future research. *Journal of Occupational Health Psychology*, *5*(2), 278. https://doi.org/10.1037/1076-8998.5.2.278

Al Maqbali, M., Al Sinani, M., & Al-Lenjawi, B. (2021). Prevalence of stress, depression, anxiety and sleep disturbance among nurses during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of psychosomatic research*, *141*, 110343. https://doi.org/10.1016/j.jpsychores.2020.110343

Al Sabei, S. D., Al-Rawajfah, O., AbuAlRub, R., Labrague, L. J., & Burney, I. A. (2022). Nurses' job burnout and its association with work environment, empowerment and psychological stress during COVID-19 pandemic. *International Journal of Nursing Practice*, *28*(5). https://doi.org/10.1111/ijn.13077

Antwi, Y. A., & Bowblis, J. R. (2018). The impact of nurse turnover on quality of care and mortality in nursing homes: Evidence from the great recession. *American Journal of Health Economics, 4*(2), 131-163. doi:10.1162/ajhe_a_00096

Arnetz, J. E., Goetz, C. M., Arnetz, B. B., & Arble, E. (2020). Nurse reports of stressful situations during the COVID-19 pandemic: Qualitative analysis of survey responses.

International Journal of Environmental Research and Public Health, 17(21), 8126. https://doi.org/10.3390/ijerph17218126

Asaoka, S., Aritake, S., Komada, Y., Ozaki, A., Odagiri, Y., Inoue, S., Shimomitsu, T., & Inoue, Y. (2013). Factors associated with shift work disorder in nurses working with rapid-rotation schedules in Japan: the nurses' sleep health project. *Chronobiology International*, *30*(4), 628-636. https://doi.org/10.3109/07420528.2012.762010

Astiti, M. W., & Surya, I. B. K. (2020). The role of organizational commitments in mediating the effect of work motivation and job satisfaction towards turnover intention on nurses private hospital. *International Research Journal of Management, IT and Social Sciences*, *8*(1), 25-34. https://doi.org10.21744/irjmis.v8n1.1101

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior*, *62*(2), 341-356.

Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, *22*(3), 309-328. https://doi.org/10.1108/02683940710733115

Bakker, A. B., Demerouti, E., & Sanz-Vergel, A. (2023). Job demands–resources theory: Ten years later. *Annual Review of Organizational Psychology and Organizational Behavior*, *10*, 25-53.

Bakker, A.B., Demerouti, E., & Verbeke, W. (2004). Using the job demands-resources model to predict burnout and performance. *Human Resource Management*, *43*(1), 83-104. https://doi.org/10.1002/hrm.20004

Barnes-Farrell, J. L., Davies-Schrils, K., McGonagle, A., Walsh, B., Di Milia, L., Fischer, F. M., Hobbs, B.B., Kaliterna, L., & Tepas, D. (2008). What aspects of shiftwork influence off-shift well-being of healthcare workers?. *Applied Ergonomics*, *39*(5), 589-596. https://doi.org/10.1016/j.apergo.2008.02.019

Barrett, E.S., Horton, D.B., Roy, J., Gennaro, M. L., Brooks., A., Tischfield, J., Greenberg, P., Andrews, T., Jagpal, S., Reilly, N., Carson. J. L., Blaser, M. J., & Panettieri, Jr., R. A. (2020). Prevalence of SARS-CoV-2 infection in previously undiagnosed health care workers in New Jersey, at the onset of the U.S. COVID-19 pandemic. *BMC Infectious Diseases, 20*, 853 (2020). https://doi.org/10.1186/s12879-020-05587-2

Bass, B. M. (1999). Two decades of research and development in transformational leadership. *European Journal of Work and Organizational Psychology*, *8*(1), 9-32. https://doi.org/10.1080/135943299398410

Batt, R., & Colvin, A. J. (2011). An employment systems approach to turnover: Human resources practices, quits, dismissals, and performance. *Academy of Management Journal*, *54*(4), 695-717. https://doi.org/10.5465/amj.2011.64869448

Bazrafshan, M. R., Rahimpoor, R., Moravveji, F., Soleymaninejad, N., Kavi, E., Sookhak, F., & Zolghadr, R. (2019). Prevalence and effects of sleep disorders among shift work nurses. *Jundishapur Journal of Chronic Disease Care*, *8*(1). https://doi.org/10.5812/jjcdc.81185

Beecroft, P., Kunzman, L., & Krozek, C. (2001). RN internship: Outcomes of a one-year pilot program. *Journal of Nursing Administration, 31*(12), 575-582.

Beecroft, P. C., Dorey, F., & Wenten, M. (2008). Turnover intention in new graduate nurses: a multivariate analysis. *Journal of Advanced Nursing*, *62*(1), 41-52. https://doi.org/10.1111/j.1365-2648.2007.04570.x

Beehr, T. A. (1995). *Psychological Stress in the Workplace*, Routledge, London.

Bhatti, M. A., Hussain, M. S., & Al Doghan, M. A. (2018). The role of personal and job resources in boosting nurses' work engagement and performance. *Global Business and Organizational Excellence*, *37*(2), 32-40. https://doi.org/10.1002/joe.21840

Blytt, K. M., Bjorvatn, B., Moen, B. E., Pallesen, S., Harris, A., & Waage, S. (2022). The association between shift work disorder and turnover intention among nurses. *BMC Nursing*, *21*(1), 1-8. https://doi.org/10.1186/s12912-022-00928-9

Bradley, E. H., Curry, L. A., & Devers, K. J. (2007). Qualitative data analysis for health services research: developing taxonomy, themes, and theory. *Health Services Research*, *42*(4), 1758-1772. https://doi.org/10.1111/j.1475-6773.2006.00684.x

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101. https://doi.org/10.1191/1478088706qp063oa

Broetje, S., Jenny, G. J., & Bauer, G. F. (2020). The key job demands and resources of nursing staff: An integrative review of reviews. *Frontiers in Psychology*, *11*, 84. https://doi.org/10.3389/fpsyg.2020.00084

Buchan, J. & Catton, H. (2020). COVID-19 and the international supply of nurses. I*nternational Council of Nurses.* https://www.icn.ch/system/files/documents/2020-07/COVID19_internationalsupplyofnurses_Report_FINAL.pdf

Buchan, J., Catton, H. , & Shaffer, F. (2022) The global nursing workforce and the COVID-19 pandemic. *International Center on Nurse Migration*.

Byron, K. (2005). A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior, 67*, 169-198. https://doi.org/10.1016/j.jvb.2004.08.009

Casey, K., Fink, R. R., Krugman, A. M., & Propst, F. J. (2004). The graduate nurse experience. *JONA: The Journal of Nursing Administration*, *34*(6), 303-311.

Cavanagh, S. J. (1989). Nursing turnover: literature review and methodological critique. *Journal of Advanced Nursing*, *14*(7), 587-596.

Cavanaugh, M. A., Boswell, W. R., Roehling, M. V., & Boudreau, J. W. (2000). An empirical examination of self-reported work stress among US managers. *Journal of Applied Psychology*, *85*(1), 65. https://doi.org/10.1037/0021-9010.85.1.65

Chang, H. E., & Cho, S. H. (2016). Workplace violence and job outcomes of newly licensed nurses. *Asian Nursing Research*, *10*(4), 271-276. https://doi.org/10.1016/j.anr.2016.09.001

Chenevert, D., Jourdain, G., & Tremblay, M. C. (2013). The citizenship behaviours of care givers: when meaning and trust are crucial/Les comportements de citoyennete du personnel soignant: lorsque le sens et la confiance deviennent incontournables/Los comportamientos de la ciudadania del personal tratante: cuando el sentido y la confianza se vuelven ineludibles. *Relations Industrielles/Industrial Relations*, *68*(2), 210-239.

Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to the top: evidence that dominance and prestige are distinct yet viable avenues to social rank and influence. *Journal of Personality and Social Psychology*, *104*(1), 103. https://doi.org/10.1037/a0030398

Cho, H., Sagherian, K., & Steege, L. M. (2021). Hospital nursing staff perceptions of resources provided by their organizations during the COVID-19 pandemic. *Workplace Health & Safety*, *69*(4), 174-181. https://doi.org/10.1177/2165079920987543

Cohen, G., Blake, R. S., & Goodman, D. (2016). Does turnover intention matter? Evaluating the usefulness of turnover intention rate as a predictor of actual turnover rate. *Review of Public Personnel Administration, 36*(3). https://doi.org/10.1177/0734371X155818

Cohen, J., & van der Meulen Rodgers, Y. (2020). Contributing factors to personal protective equipment shortages during the COVID-19 pandemic. *Preventive Medicine, 141*. https://doi.org/10.1016/j.ypmed.2020.106263

Cole, A., Ali, H., Ahmed, A., Hamasha, M., & Jordan, S. (2021). Identifying patterns of turnover intention among Alabama frontline nurses in hospital settings during the COVID-19 pandemic. *Journal of Multidisciplinary Healthcare*, 1783-1794. https://doi.org/10.2147/JMDH.S308397

Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International Journal of Nursing Studies*, *44*(2), 297-314. https://doi.org/10.1016/j.ijnurstu.2006.02.004

Coverman, S. (1989). Role overload, role conflict, and stress: Addressing consequences of multiple role demands. *Social forces*, *67*(4), 965-982. https://doi.org/10.1093/sf/67.4.965

Craig, L., & Kuykendall, L. (2019). Examining the role of friendship for employee well-being. *Journal of Vocational Behavior*, *115*, 103313. https://doi.org/10.1016/j.jvb.2019.06.001

Culpepper, L. (2010). The social and economic burden of shift-work disorder. *The Journal of Family Practice, 59*(1), S3-S11. link.gale.com/apps/doc/A218120438/AONE?u=anon~cb0c6f48&sid=googleScholar&xid=a746ed4f. Accessed 5 Nov. 2023.

De Gieter, S., Hofmans, J., & Pepermans, R. (2011). Revisiting the impact of job satisfaction and organizational commitment on nurse turnover intention: An individual differences analysis. *International Journal of Nursing Studies*, *48*(12), 1562-1569. https://doi.org/10.1016/j.ijnurstu.2011.06.007

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499. https://doi.org/10.1037/0021-9010.86.3.499

Dewanto, A., & Wardhani, V. (2018). Nurse turnover and perceived causes and consequences: a preliminary study at private hospitals in Indonesia. *BMC Nursing*, *17*, 1-7. https://doi.org/10.1186/s12912-018-0317-8

Di Muzio, M., Dionisi, S., Di Simone, E., Cianfrocca, C., Di Muzio, F., Fabbian, F., Barbeiro G., Tartaglini, D., & Giannetta, N. (2019). Can nurses' shift work jeopardize the patient safety? A systematic review. *European Review for Medical & Pharmacological Sciences*, *23*(10). https://doi.org/10.26355/eurrev_201905_17963

Dilworth, J. E. L. (2004). Predictors of negative spillover from family to work. *Journal of Family Issues*, *25*(2), 241-261. https://doi.org/10.1177/0192513X03257406

Drake, J. D. (2000). *Downshifting: How to work less and enjoy life more*. Berrett-Koehler Publishers.

Driscoll, A., Grant, M.J., Carroll, D., Dalton, S., Deaton, C., Jones, I., Lehwaldt, D., McKee, G., Munyombwe, T. & Astin, F., 2018. (2018). The effect of nurse-to-patient ratios on nurse-sensitive patient outcomes in acute specialist units: A systematic review and meta-analysis. *European Journal of Cardiovascular Nursing*, *17*(1), 6-22. https://doi.org/10.1177/1474515117721561

Drury, V., Craigie, M., Francis, K., Aoun, S., & Hegney, D. G. (2014). Compassion satisfaction, compassion fatigue, anxiety, depression and stress in registered nurses in A ustralia: Phase 2 results. *Journal of nursing management*, *22*(4), 519-531.

Duan, X., Ni, X., Shi, L., Zhang, L., Ye, Y., Mu, H., Li, Z., Liu, X., Fan, L. & Wang, Y., 2019 (2019). The impact of workplace violence on job satisfaction, job burnout, and turnover intention: the mediating role of social support. *Health and Quality of Life Outcomes*, *17*(1), 1-10. https://doi.org/10.1186/s12955-019-1164-3

Edwards, J. R., & Rothbard, N. P. (1999). Work and family stress and well-being: An examination of person-environment fit in the work and family domains. *Organizational behavior and human decision processes*, *77*(2), 85-129. https://doi.org/10.1006/obhd.1998.2813

Eldevik, M. F., Flo, E., Moen, B. E., Pallesen, S., & Bjorvatn, B. (2013). Insomnia, excessive sleepiness, excessive fatigue, anxiety, depression and shift work disorder in nurses having less than 11 hours in-between shifts. *PloS One*, *8*(8). https://doi.org/10.1371/journal.pone.0070882

Eldin, Y. K. Z., & Abd El Rahman, R. M. (2013). The relationship between nurses' perceived pay equity and organizational commitment. *Life Science Journal*, *10*(2), 889-896.

Ellis, B. H., & Miller, K. I. (1994). Supportive communication among nurses: Effects on commitment, burnout, and retention. *Health Communication*, *6*(2), 77-96. https://doi.org/10.1207/s15327027hc0602_1

Vander Elst, T., Cavents, C., Daneels, K., Johannik, K., Baillien, E., Van den Broeck, A., & Godderis, L. (2016). Job demands–resources predicting burnout and work engagement

among Belgian home health care nurses: A cross-sectional study. *Nursing outlook*, *64*(6), 542-556. https://doi.org/10.1016/j.outlook.2016.06.004

Erkmen, T., & Esen, E. (2014). The mediating role of trust to managers on the relationship between corporate reputation practices and employees' course of actions to customers. *Social Responsibility Journal*, *10*(2), 282-296. https://doi.org/10.1108/SRJ-08-2012-0100

Falatah, R. (2021). The impact of the coronavirus disease (COVID-19) pandemic on nurses' turnover intention: an integrative review. *Nursing Reports*, *11*(4), 787-810. https://doi.org/10.3390/nursrep11040075

Fritz, C., & Sonnentag, S. (2005). Recovery, health, and job performance: effects of weekend experiences. *Journal of Occupational Health Psychology*, *10*(3), 187.

Frone, M. R., Russell, M., & Barnes, G. M. (1996). Work–family conflict, gender, and health-related outcomes: A study of employed parents in two community samples. *Journal of Occupational HealthPpsychology*, *1*(1), 57.

Frone, M. R. (2003). Work-family balance. In J. C. Quick & L. E. Tetrick (Eds.), *Handbook of Occupational Health Psychology* (pp. 143–162). American Psychological Association. https://doi.org/10.1037/10474-007

Gabel Shemueli, R., Dolan, S. L., Suárez Ceretti, A., & Núñez del Prado, P. (2015). Burnout and engagement as mediators in the relationship between work characteristics and turnover intentions across two Ibero-American nations. *Stress and Health*, *32*(5), 597-606. https://doi.org/10.1002/smi.2667

Garcia, A. L. (2017). Variability in acuity in acute care. *The Journal of Nursing Administration*, *47*(10), 476-483. https://www.jstor.org/stable/26813880

Garrett, C. (2009). The effect of nurse staffing patterns on medical errors and nurse burnout. *AORN, 87,* 1191-1204. https://doi.org/10.1016/j.aorn.2008.01.022

Geurts, S.A.E., & Demerouti, E. (2003). Work/non-work interface: A review of theories and findings. In M.J. Schabracq, J.A.M.Winnubst, & C.L.Cooper(Eds.), *Handbook of work and health psychology* (pp.279–312). Chichester, England: Wiley.

Goode, W. J. (1960). A theory of role strain. *American Sociological Review*, *25*(4), 483-496. https://doi.org/10.2307/2092933

Googins, B.K. (1991). *Work/family conflicts: Private lives–public responses*. NewYork: Auburn House.

Greenberg, J. (2006) Losing sleep over organizational injustice: Attenuating insomniac reactions to underpayment inequity with supervisory training in interactional justice. *Journal of Applied Psychology*, *91*(1), 58-69. https://doi.org/10.1037/0021-9010.91.1.58

Greenhaus, J.H., & Beutell, N.J.(1985). Sources of conflict between work and family roles. *Academy of Management Review*, *10*, 76-88. https://doi.org/10.5465/amr.2006.19379625

Greenhaus, J. H., & Powell, G. N. (2006). When work and family are allies: A theory of work-family enrichment. *Academy of Management Review*, *31*, 72–92.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of management*, *26*(3), 463-488. https://doi.org/10.1177/014920630002600305

Guastello, A. D., Brunson, J. C., Sambuco, N., Dale, L. P., Tracy, N. A., Allen, B. R., & Mathews, C. A. (2022). Predictors of professional burnout and fulfilment in a

longitudinal analysis on nurses and healthcare workers in the COVID-19 pandemic. *Journal of Clinical Nursing*. https://doi.org/10.1111/jocn.16463

Guttormson, J. L., Calkins, K., McAndrew, N., Fitzgerald, J., Losurdo, H., & Loonsfoot, D. (2022). Critical care nurse burnout, moral distress, and mental health during the COVID-19 pandemic: A United States survey. *Heart & Lung*, *55*, 127-133. https://doi.org/10.1016/j.hrtlng.2022.04.015

Haar, J. M., & Bardoel, E. A. (2008). Positive spillover from the work—family interface: A study of Australian employees. *Asia Pacific Journal of Human Resources*, *46*(3), 275-287. https://doi.org/10.1177/1038411108095759.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational behavior and human performance*, *16*(2), 250-279.

Hamid, R. A., & Ahmad, U. N. K. U. (2014). Job-Demand Resources Model to explain the relationship among work-family conflict, burnout, social support and turnover intention: A conceptual review. *Journal of Advanced Research Design*, *1*(1), 42-53.

Han, J., Woo, H., Ju, E., Lim, S., & Han, S. (2013). Effects of nurses' social capital on turnover intention: focused on the mediating effects organizational commitment and organizational cynicism. *Journal of Korean Academy of Nursing*, *43*(4), 517-525.

Han, G., & Jekel, M. (2011). The mediating role of job satisfaction between leader-member exchange and turnover intentions. *Journal of Nursing Management*, *19*(1), 41-49. https://doi.org/10.1111/j.1365-2834.2010.01184.x

Han, J., Woo, H., Ju, E., Lim, S., & Han, S. (2013). Effects of nurses' social capital on turnover intention: focused on the mediating effects organizational commitment and

organizational cynicism. *Journal of Korean Academy of Nursing*, *43*(4), 517-525. https://doi.org/10.4040/jkan.2013.43.4.517

Han, S. S., Han, J. W., An, Y. S., & Lim, S. H. (2015). Effects of role stress on nurses' turnover intentions: The mediating effects of organizational commitment and burnout. *Japan Journal of Nursing Science*, *12*(4), 287-296. https://doi.org/10.1111/jjns.12067

Han, S. H., Seo, G., Li, J., & Yoon, S. W. (2016). The mediating effect of organizational commitment and employee empowerment: How transformational leadership impacts employee knowledge sharing intention. *Human Resource Development International*, *19*(2), 98-115. https://doi.org/10.1080/13678868.2015.1099357

Hanson, G. C., Hammer, L. B., & Colton, C. L. (2006). Development and validation of a multidimensional scale of perceived work-family positive spillover. *Journal of Occupational Health Psychology*, *11*(3), 249. https://doi.org/10.1037/1076-8998.11.3.249

Harrison, D. A., Newman, D. A., & Roth, P. L. (2006). How important are job attitudes? Meta-analytic comparisons of integrative behavioral outcomes and time sequences. *Academy of Management Journal*, *49*(2), 305-325. https://doi.org/10.5465/amj.2006.20786077

Häussl, A., Ehmann, E., Pacher, A., Knödl, K., Huber, T., Neundlinger, L., Osmanovic, A., Plank-Straner, A., Walter, P., Schussler, S., & Schoberer, D. (2021). Psychological, physical, and social effects of the COVID-19 pandemic on hospital nurses. *International Nursing Review*, *68*(4), 482-492.

Hayes, L.J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H.K.S., North, N. & Stone, P.W. (2006). Nurse turnover: a literature review. *International Journal of Nursing Studies*, *43*(2), 237-263.

Hayes, L.J., O'Brien-Pallas, L., Duffield, C., Shamian, J., Buchan, J., Hughes, F., Laschinger, H.K.S. & North, N. (2012). Nurse turnover: a literature review–an update. *International journal of nursing studies*, *49*(7), 887-905.

Heavey, A. L., Holwerda, J. A., & Hausknecht, J. P. (2013). Causes and consequences of collective turnover: a meta-analytic review. *Journal of Applied Psychology*, *98*(3), 412.

Hecht, T. D., & Boies, K. (2009). Structure and correlates of spillover from nonwork to work: An examination of nonwork activities, well-being, and work outcomes. *Journal of Occupational Health Psychology*, *14*(4), 414. https://doi.org/10.1037/a0015981

Hoonakker, P., Carayon, P., & Korunka, C. (2013). Using the Job-Demands-Resources model to predict turnover in the information technology workforce–General effects and gender differences. *Horizons of Psychology*, *22*(1), 51-65. doi: 10.20419/2013.22.373

Hu, H., Wang, C., Lan, Y., & Wu, X. (2022). Nurses' turnover intention, hope and career identity: the mediating role of job satisfaction. *BMC Nursing*, *21*(1), 1-11. https://doi.org/10.1186/s12912-022-00821-5

Hurley, R. F., & Estelami, H. (1998). Alternative indexes for monitoring customer perceptions of service quality: A comparative evaluation in a retail context. *Journal of the Academy of Marketing Science*, *26*(3), 209-221. https://doi.org/10.1177/0092070398263003

Hussain, T., & Asif, S. (2012). Is employees' turnover intention driven by organizational commitment and perceived organizational support. *Journal of Quality and Technology Management*, *8*(2), 1-10.

Ingersoll, G. L., Olsan, T., Drew-Cates, J., DeVinney, B. C., & Davies, J. (2002). Nurses' job satisfaction, organizational commitment, and career intent. *The Journal of Nursing Administration*, *32*(5), 250-263.

Jang, S. J., Son, Y. J., & Lee, H. (2022). Prevalence, associated factors and adverse outcomes of workplace violence towards nurses in psychiatric settings: A systematic review. *International Journal of Mental Health Nursing, 31*(3), 450-468. https://doi.org/10.1111/inm.12951

Jones, C. B. (1990). Staff nurse turnover costs: Part I, a conceptual model. *The Journal of Nursing Administration, 20*(4), 18-23.

Jones, C. B. (2004). The costs of nurse turnover, part 1: An economic perspective. *The Journal of Nursing Administration, 34*(12), 562-570.

Jones, C. B (2005). The cost of nurse turnover, part 2: Application of the nursing turnover cost calculation methodology. *The Journal of Nursing Administration, 35*(1).

Kaiser, S., Patras, J., Adolfsen, F., Richardsen, A. M., & Martinussen, M. (2020). Using the job demands–resources model to evaluate work-related outcomes among Norwegian health care workers. *Sage Open, 10*(3). https://doi.org/10.1177/2158244020947436

Karatepe, O. M., & Baddar, L. (2006). An empirical study of the selected consequences of frontline employees' work–family conflict and family–work conflict. *Tourism management, 27*(5), 1017-1028. https://doi.org/10.1016/j.tourman.2005.10.024

Karasek Jr, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative science quarterly*, 285-308.

Kash, B. A., Castle, N. G., Naufal, G. S., & Hawes, C. (2006). Effect of staff turnover on staffing: A closer look at registered nurses, licensed vocational nurses, and certified nursing assistants. *The Gerontologist, 46*(5), 609-619. https://doi.org/10.1093/geront/46.5.609

Kash, B. A., Naufal, G. S., Cortés, L., & Johnson, C. E. (2010). Exploring factors associated with turnover among registered nurse (RN) supervisors in nursing homes. *Journal of Applied Gerontology*, *29*(1), 107-127. https://doi.org/10.1177/0733464809335243

Kickul, J., & Posig, M. (2001). Supervisory emotional support and burnout: An explanation of reverse buffering effects. *Journal of Managerial Issues*, 328-344.

Kim, J. Y., Kim, J. H., Lee, H. W., & Choi, K. G. (2005). Prevalence of Shift work sleep disorder and its impact on health and working. *Journal of Korean Sleep Research Society*, *2*(1), 39-46. https://doi.org/10.13078/jksrs.05007

Kinnunen, U., Feldt, T., Geurts, S., & Pulkkinen, L. (2006). Types of work-family interface: Well-being correlates of negative and positive spillover between work and family. *Scandinavian Journal of Psychology*, *47*(2), 149-162. https://doi.org/10.1111/j.1467-9450.2006.00502.x

Kirchmeyer, C. (1992). Perceptions of nonwork-to-work spillover: Challenging the common view of conflict-ridden domain relationships. *Basic and Applied Social Psychology*, *13*(2), 231-249. https://doi.org/10.1207/s15324834basp1302_7

Knudsen, H. K., Ducharme, L. J., & Roman, P. M. (2009). Turnover intention and emotional exhaustion" at the top": adapting the job demands-resources model to leaders of addiction treatment organizations. *Journal of Occupational Health Psychology*, *14*(1), 84. https://doi.org/10.1037/a0013822

Kopelman, R. E., Greenhaus, J. H., & Connolly, T. F. (1983). A model of work, family, and interrole conflict: A construct validation study. *Organizational Behavior and Human Performance*, *32*(2), 198-215. https://doi.org/10.1016/0030-5073(83)90147-2

Kopperud, K. H., Nerstad, C. G., & Dysvik, A. (2020). Should i stay or should i go? The role of motivational climate and work–home spillover for turnover intentions. *Frontiers in Psychology*, *11*, 1107. https://doi.org/10.3389/fpsyg.2020.01107

Kramer, M. (1974). *Reality shock; Why nurses leave nursing.* C.V. Mosby Company.

Krausz, M., Koslowsky, M., Shalom, N., & Elyakim, N. (1995). Predictors of intentions to leave the ward, the hospital, and the nursing profession: A longitudinal study. *Journal of Organizational Behavior*, *16*(3), 277-288. https://doi.org/10.1002/job.4030160308

Kuo, H. T., Lin, K. C., & Li, I. C. (2014). The mediating effects of job satisfaction on turnover intention for long-term care nurses in Taiwan. *Journal of Nursing Management*, *22*(2), 225-233. https://doi.org/10.1111/jonm.12044

Kutney-Lee, A., McHugh, M. D., Sloane, D. M., Cimiotti, J. P., Flynn, L., Neff, D. F., & Aiken, L. H. (2009). Nursing: A key to patient satisfaction: Patients' reports of satisfaction are higher in hospitals where nurses practice in better work environments or with more favorable patient-to-nurse ratios. *Health Affairs*, *28*(3), 669-677.

Labrague, L. J., McEnroe-Petitte D. M., Gloe, D., Thomas, L., Papathanasiou, I. V., & Tsaras, K. (2016). A literature review on stress and coping strategies in nursing students. *Journal of Mental Health*, *26*(5), 471-480. https://doi.org/10.1080/09638237.2016.1244721

Labrague, L. J., De los Santos, J. A. A., Falguera, C. C., Nwafor, C. E., Galabay, J. R., Rosales, R. A., & Firmo, C. N. (2020). Predictors of nurses' turnover intention at one and five years' time. *International Nursing Review, 67,* 191-198. https://doi.org/10.1111/inr.12581

Labrague, L. J., Ballad, C. A., & Fronda, D. C. (2021). Predictors and outcomes of work–family conflict among nurses. *International Nursing Review*, *68*(3), 349-357. https://doi.org/10.1111/inr.12642

Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *biometrics,* 159-174. https://doi.org/10.2307/2529310

Langford, C. P. H., Bowsher, J., Maloney, J. P., & Lillis, P. P. (1997). Social support: a conceptual analysis. *Journal of Advanced Nursing*, *25*(1), 95-100. https://doi.org/10.1046/j.1365-2648.1997.1997025095.x

Larrabee, J. H., Wu, Y., Persily, C. A., Simoni, P. S., Johnston, P. A., Marcischak, T. L., Mott, C. L., & Gladden, S. D. (2010). Influence of stress resiliency on RN job satisfaction and intent to stay. *Western Journal of Nursing Research*, *32*(1), 81-102. https://doi.org/10.1177/0193945909343293

Laschinger, H. K. S., Wong, C. A., & Grau, A. L. (2012). The influence of authentic leadership on newly graduated nurses' experiences of workplace bullying, burnout and retention outcomes: A cross-sectional study. *International Journal of Nursing Studies*, *49*(10), 1266-1276. https://doi.org/10.1016/j.ijnurstu.2012.05.012

Lavoie-Tremblay, M., Gelinas, C., Aube, T., Tchouaket, E., Tremblay, D., Gagnon, M., & Cote, J. (2021). Influence of caring for COVID-19 patients on nurse's turnover, work satisfaction and quality of care. *Journal of Nurse Management, 30,* 33-43. https://doi.org/10.1111/jonm.13462

Lee, T. W., & Mitchell, T. R. (1994). An alternative approach: The unfolding model of voluntary employee turnover. *Academy of Management Review*, *19*(1), 51-89.

Lee, T. W., & Mitchell, T. R. (2017). Control turnover by understanding its causes. *The Blackwell Handbook of Principles of Organizational Behaviour*, 93-107. https://doi.org/10.1002/9781405164047.ch7

Leiter, M. P., & Maslach, C. (2009). Nurse turnover: the mediating role of burnout. *Journal of Nursing Management, 17*(3), 331-339. https://doi.org/10.1111/j.1365-2834.2009.01004.x

Lembrechts, L., Dekocker, V., Zanoni, P., & Pulignano, V. (2015). A study of the determinants of work-to-family conflict among hospital nurses in Belgium. *Journal of Nursing Management, 23*(7), 898-909. https://doi.org/10.1111/jonm.12233

Leng, M., Wei, L., Shi, X., Cao, G., Wei, Y., Xu, H., Zhang, X., Zhang, W., Xing, S. & Wei, H (2021). Mental distress and influencing factors in nurses caring for patients with COVID-19. *Nursing in Critical Care, 26*(2), 94-101. https://doi.org/10.1111/nicc.12528

Levi, P. & Moss, J. (2022). Intensive care unit nurses' lived experiences of psychological stress and trauma caring for COVID-19 patients. *Workplace Health & Safety, 70*(8), 358-367. https://doi.org/10.1177/21650799211064262

Linzer, M., Poplau, S., Babbott, S., Collins, T., Guzman-Corrales, L., Menk, J., Murphy, M.L., & Ovington, K. (2016). Worklife and wellness in academic general internal medicine: results from a national survey. *Journal of General Internal Medicine, 31*, 1004-1010. https://doi.org/10.1007/s11606-016-3720-4

Liu, D., Zhang, S., Wang, L., & Lee, T. W. (2011). The effects of autonomy and empowerment on employee turnover: Test of a multilevel model in teams. *Journal of Applied Psychology*, *96*(6), 1305. https://doi.org/10.1037/a0024518

Liu, L. F., Lee, S., Chia, P. F., Chi, S. C., & Yin, Y. C. (2012). Exploring the association between nurse workload and nurse-sensitive patient safety outcome indicators. *Journal of Nursing Research*, *20*(4), 300-309. DOI: 10.1097/jnr.0b013e3182736363

Liu, Y., & Aungsuroch, Y. (2019). Work stress, perceived social support, self-efficacy and burnout among Chinese registered nurses. *Journal of Nursing Management*, *27*(7), 1445-1453. https://doi.org/10.1111/jonm.12828

Liu, B., Wang, Q., Wu, G., Zheng, J., & Li, L. (2020). How family-supportive supervisor affect Chinese construction workers' work-family conflict and turnover intention: Investigating the moderating role of work and family identity salience. *Construction Management and Economics*, *38*(9), 807-823.

Lowe, M. A., Prapanjaroensin, A., Bakitas, M. A., Hites, L., Loan, L. A., Raju, D., & Patrician, P. A. (2020). An exploratory study of the influence of perceived organizational support, coworker social support, the nursing practice environment, and nurse demographics on burnout in palliative care nurses. *Journal of Hospice & Palliative Nursing*, *22*(6), 465-472. https://doi.org10.1097/NJH.0000000000000686

Macphee, M., Dahinten, V. S., Havaei, F. (2017). The impact of heavy perceived nurse workloads on patient and nurse outcomes. *Administrative Sciences, 7*(1), 7. https://doi.org/10.3390/admsci7010007

Magalhães, A. M. M. D., Costa, D. G. D., Riboldi, C. D. O., Mergen, T., Barbosa, A. D. S., & Moura, G. M. S. S. D. (2017). Association between workload of the nursing staff and patient safety outcomes. *Revista da Escola de Enfermagem da USP*, *51*. https://doi.org/10.1590/S1980-220X2016021203255

Marks, S. R. (1977). Multiple roles and role strain: Some notes on human energy, time and commitment. *American Sociological Review*, 921-936. https://doi.org/10.2307/2094577

Martinez, A. J. S. (2016). Managing workplace violence with evidence-based interventions: A literature review. *Journal of Psychosocial Nursing and Mental Health Services*, *54*(9), 31-36. https://doi.org/10.3928/02793695-20160817-05

Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior, 2*(2), 99-113. https://doi.org/10.1002/job.4030020205

Maslach, C., Jackson, S. E., & Leiter, M. P. (1997). Maslach Burnout Inventory: Third edition.

Masuda, A. D., McNall, L. A., Allen, T. D., & Nicklin, J. M. (2012). Examining the constructs of work-to-family enrichment and positive spillover. *Journal of Vocational Behavior*, *80*(1), 197-210. https://doi.org/10.1016/j.jvb.2011.06.002

Mayes, C. & Cochran, K. (2023). Factors influencing perioperative nurse turnover: A classic grounded theory study. *AORN JOURNAL, 117*(3), 161-174. https://doi.org/10.1002/aorn.13880

Mazurenko, O., Gupte, G., & Shan, G. (2015). Analyzing US nurse turnover: Are nurses leaving their jobs or the profession itself. *Journal of Hospital Administration*, *4*(4), 48-56. http://dx.doi.org/10.5430/jha.v4n4p48

McCloskey, J. C. (1990). Two requirements for job contentment: Autonomy and social integration. *Image: The Journal of Nursing Scholarship*, *22*(3), 140-143. https://doi.org/10.1111/j.1547-5069.1990.tb00196.x

McFeely, S. & Wigert, B. (2019). *This fixable problem costs U.S. businesses $1 trillion.* Gallup. https://www.gallup.com/workplace/247391/fixable-problem-costs-businesses-trillion.aspx

McNall, L. A., Nicklin, J. M., & Masuda, A. D. (2010). A meta-analytic review of the consequences associated with work–family enrichment. *Journal of Business and Psychology, 25,* 381-396. https://doi.org/10.1007/s10869-009-9141-1

McNeese-Smith, D. K. & Crook, M. (2003). Nursing values and a changing nurse workforce: Values, age, and job stages. *The Journal of Nursing Administration. 33*(5), 260-270.

McVicar, A. (2003). Workplace stress in nursing: a literature review. *Journal of Advanced Nursing*, *44*(6), 633-642. https://doi.org/10.1046/j.0309-2402.2003.02853.x

Moloney, W., Gorman, D., Parsons, M., & Cheung, G. (2018). How to keep registered nurses working in New Zealand even as economic conditions improve. *Human Resources for Health*, *16*, 1-8. https://doi.org/10.1186/s12960-018-0312-x

Morrell, K. M., Loan-Clarke, J., & Wilkinson, A. J. (2004). Organisational change and employee turnover. *Personnel Review*, *33*(2), 161-173. https://doi.org/10.1108/00483480410518022

Mosadeghrad (2013). Occupational stress and turnover intention: Implications for nursing management. *International Journal of Health Policy and Managemen*t, *1*(2), 169-176.

Naseer, A., Perveen, K., Afzal, M., Waqas, A., Gillani, S. A. (2017). The impact of leadership styles on staff nurses' turnover intentions. *Saudi Journal of Medical and Pharmaceutical Sciences, 3*(10B), 1133-1138.

Nashwan, A. J., Abujaber, A. A., Villar, R. C., Nazarene, A., Al-Jabry, M. M., & Fradelos, E. C. (2021). Comparing the Impact of COVID-19 on Nurses' Turnover Intentions before and during the Pandemic in Qatar. *Journal of Personalized Medicine, 11*(6), 456. https://doi.org/10.3390/jpm11060456

Nena, E., Katsaouni, M., Steiropoulos, P., Theodorou, E., Constantinidis, T. C., & Tripsianis, G. (2018). Effect of shift work on sleep, health, and quality of life of health-care workers. *Indian Journal of Occupational and Environmental Medicine*, *22*(1), 29. DOI: 10.4103/ijoem.IJOEM_4_18

O'Brien-Pallas, L., Griffin, P., Shamian, J., Buchan, J., Duffield, C., Hughes, F., Laschinger, H.K.S, North, N., & Stone, P. W. (2006). The impact of nurse turnover on patient, nurse, and system outcomes: a pilot study and focus for a multicenter international study. *Policy, Politics, & Nursing Practice*, *7*(3), 169-179.

O'Connell, M., & Kung, M. C. (2007). The cost of employee turnover. *Industrial Management*, *49*(1).

Olson, K., Sinsky, C., Rinne, S. T., Long, T., Vender, R., Mukherjee, S., Bennick, M., & Linzer, M. (2019). Cross-sectional survey of workplace stressors associated with physician burnout measured by the Mini-Z and the Maslach Burnout Inventory. *Stress and Health*, *35*(2), 157-175.

Parasuraman, S. (1989). Nursing turnover: An integrated model. *Research in Nursing & Health*, *12*(4), 267-277. https://doi.org/10.1002/nur.4770120409

Park, M., Cho, S. H., & Hong, H. J. (2015). Prevalence and perpetrators of workplace violence by nursing unit and the relationship between violence and the perceived work environment. *Journal of Nursing Scholarship*, *47*(1), 87-95. https://doi.org/10.1111/jnu.12112

Parris, M. A., Vickers, M. H., & Wilkes, L. (2008). Friendships under strain: The work–personal life integration of middle managers. *Community, Work & Family*, *11*(4), 405-418. https://doi.org/10.1080/13668800802361831

Peng, X., Ye, Y., Ding, X., & Chandrasekaran, A. (2023). The impact of nurse staffing on turnover and quality: An empirical examination of nursing care within hospital units. *Journal of Operations Management, 69*(7)m 1124-1152. https://doi.org/10.1002/joom.1245

Peršolja, M. (2018). The effect of nurse staffing patterns on patient satisfaction and needs: A cross-sectional study. *Journal of Nursing Management, 26*(7), 858-865. https://doi.org/10.1111/jonm.12616

Pink, D. (2009). *Drive: The surprising truth about what motivates us.* Riverhead Hardcover.

Piotrowski, A., Sygit-Kowalkowska, E., Boe, O., & Rawat, S. (2022). Resilience, occupational stress, job satisfaction, and intention to leave the organization among nurses and midwives during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health, 19*(11). https://doi.org/10.3390/ijerph19116826

Pomaki, G., DeLongis, A., Frey, D., Short, K., & Woehrle, T. (2010). When the going gets tough: Direct, buffering and indirect effects of social support on turnover intention. *Teaching and Teacher Education, 26*(6), 1340-1346. https://doi.org/10.1016/j.tate.2010.03.007

Potter, P., Deshields, T., Divanbeigi, J., Berger, J., Cipriano, D., Norris, L., & Olsen, S. (2010). Compassion fatigue and burnout. *Clinical Journal of Oncology Nursing, 14*(5). https://doi.org/10.1188/10.CJON.E56-E62

Poulsen, M. G., Khan, A., Poulsen, E. E., Khan, S. R., & Poulsen, A. A. (2016). Work engagement in cancer care: The power of co-worker and supervisor support. *European Journal of Oncology Nursing, 21*, 134-138. https://doi.org/10.1016/j.ejon.2015.09.003

Podsakoff, N. P., LePine, J. A., & LePine, M. A. (2007). Differential challenge stressor-hindrance stressor relationships with job attitudes, turnover intentions, turnover, and withdrawal behavior: a meta-analysis. *Journal of Applied Psychology*, *92*(2), 438. https://doi.org/10.1037/0021-9010.92.2.438

Price, J. L., & Mueller, C. W. (1981). A causal model of turnover for nurses. *Academy of Management Journal*, *24*(3), 543-565.

Price, S., & Reichert, C. (2017). The importance of continuing professional development to career satisfaction and patient care: meeting the needs of novice to mid-to late-career nurses throughout their career span. *Administrative Sciences*, *7*(2), 17. https://doi.org/10.3390/admsci7020017

Rao, A. D., Kumar, A., & McHugh, M. (2017). Better nurse autonomy decreases the odds of 30-day mortality and failure to rescue. *Journal of Nursing Scholarship*, *49*(1), 73-79. https://doi.org/10.1111/jnu.12267

Raup, G. H. (2008). The impact of ED nurse manager leadership style on staff nurse turnover and patient satisfaction in academic health center hospitals. *Journal of Emergency Nursing*, *34*(5), 403-409. doi:10.1016/j.jen.2007.08.020

Ribeiro, S., Bosch, A., & Becker, J. (2016). Retention of women accountants: The interaction of job demands and job resources. *SA Journal of Human Resource Management, 14*(1), 1-11. https://hdl.handle.net/10520/EJC190029

Rosa, D., Terzoni, S., Dellafiore, F., & Destrebecq, A. (2019). Systematic review of shift work and nurses' health. *Occupational Medicine*, *69*(4), 237-243. https://doi.org/10.1093/occmed/kqz063

Russo, M., & Buonocore, F. (2012). The relationship between work-family enrichment and nurse turnover. *Journal of Managerial Psychology, 27*(3), 216-236.

Sahay, S., & Wei, W. (2023). Work-family balance and managing spillover effects communicatively during COVID-19: nurses' perspectives. *Health Communication*, *38*(1), 1-10. https://doi.org/10.1080/10410236.2021.1923155

Said, R. M., & El-Shafei, D. A. (2021). Occupational stress, job satisfaction, and intent to leave: nurses working on front lines during COVID-19 pandemic in Zagazig City, Egypt. *Environmental Science and Pollution Research, 28*(7), 8791-8801. https://doi.org/10.1007/s11356-020-11235-8

Saldana, J. (2014). *Thinking qualitatively: Methods of mind*. SAGE publications.

Sampaio, F., Sequeira, C., & Teixeira, L. (2021). Impact of COVID-19 outbreak on nurses' mental health: A prospective cohort study. *Environmental Research, 194*. https://doi.org/10.1016/j.envres.2020.110620

Scanlan, J. N., & Still, M. (2019). Relationships between burnout, turnover intention, job satisfaction, job demands and job resources for mental health personnel in an Australian mental health service. *BMC Health Services Research*, *19*(1), 1-11.

Seppälä, P., Hakanen, J., Mauno, S., Perhoniemi, R., Tolvanen, A., & Schaufeli, W. (2015). Stability and change model of job resources and work engagement: A seven-year three-wave follow-up study. *European Journal of Work and Organizational Psychology*, *24*(3), 360-375.

Shah, S. H. A., Haider, A., Jindong, J., Mumtaz, A., & Rafiq, N. (2022). The impact of job stress and state anger on turnover intention among nurses during COVID-19: the mediating role

of emotional exhaustion. *Frontiers in Psychology*, *12*. https://doi.org/10.3389/fpsyg.2021.810378

Shaw, J. D., Delery, J. E., Jenkins Jr, G. D., & Gupta, N. (1998). An organization-level analysis of voluntary and involuntary turnover. *Academy of Management Journal*, *41*(5), 511-525. https://doi.org/10.5465/256939

Shaw, J. D. (2011). Turnover rates and organizational performance: Review, critique, and research agenda. *Organizational Psychology Review*, *1*(3), 187-213. https://doi.org/10.1177/2041386610382152

Sheward, L., Hunt, J., Hagen, S., Macleod, M., & Ball, J. (2005). The relationship between UK hospital nurse staffing and emotional exhaustion and job dissatisfaction. *Journal of Nursing Management*, *13*(1), 51-60. https://doi.org/10.1111/j.1365-2834.2004.00460.x

Sieber, S. D. (1974). Toward a theory of role accumulation. *American sociological review*, 567-578. https://doi.org/10.2307/2094422

Silverman, H. J., Kheirbek, R. E., Moscou-Jackson, G., & Day, J. (2021). Moral distress in nurses caring for patients with Covid-19. *Nursing Ethics*, *28*(7-8), 1137-1164. https://doi.org/10.1177/09697330211003217

Simon, M., Kümmerling, A., & Hasselhorn, H. M. (2004). Work-home conflict in the European nursing profession. *International Journal of Occupational and Environmental Health*, *10*(4), 384-391. https://doi.org/10.1179/oeh.2004.10.4.384

Šimunić, A., & Gregov, L. (2012). Conflict between work and family roles and satisfaction among nurses in different shift systems in Croatia: a questionnaire survey. *Arhiv Za Higijenu Rada I Toksikologiju*, *63*(2), 189-196.

Shiffer, D., Minonzio, M., Dipaola, F., Bertola, M., Zamuner, A. R., Dalla Vecchia, L. A., Solbiati, M., Costantino, G., Furlan, R., & Barbic, F. (2018). Effects of clockwise and counterclockwise job shift work rotation on sleep and work-life balance on hospital nurses. *International Journal of Environmental Research and Public Health*, *15*(9). https://doi.org/10.3390/ijerph15092038

Sodeify, R., & Habibpour, Z. (2021). Nurses' perceptions of co-worker support in the workplace: Qualitative research. *Enfermeria Clinica (English Edition)*, *31*(6), 355-362. https://doi.org/10.1016/j.enfcle.2020.04.003

Spencer, C., Sitarz, J., Fouse, J., & DeSanto, K. (2023). Nurses' rationale for underreporting of patient and visitor perpetrated workplace violence: a systematic review. *BMC Nursing*, *22*(1), 134. https://doi.org/10.1186/s12912-023-01226-8

Speroni, K. G., Fitch, T., Dawson, E., Dugan, L., & Atherton, M. (2014). Incidence and cost of nurse workplace violence perpetrated by hospital patients or patient visitors. *Journal of emergency nursing*, *40*(3), 218-228. https://doi.org/10.1016/j.jen.2013.05.014

Staw, B. M. (1980). The consequences of turnover. *Journal of Occupational Behaviour*, 253-273.

Steel, R. P., & Lounsbury, J. W. (2009). Turnover process models: Review and synthesis of a conceptual literature. *Human Resource Management Review*, *19*(4), 271-282. https://doi.org/10.1016/j.hrmr.2009.04.002

Steiber, N. (2009). Reported levels of time-based and strain-based conflict between work and family roles in Europe: A multilevel approach. *Social Indicators Research*, *93*, 469-488. https://doi.org/10.1007/s11205-008-9436-z

Suliman, M., Almansi, S., Mrayyan, M., Albashtawy, M., & Aljezawi, M. (2020). *Nursing Management, 30*(5). doi: 10.7748/nm.2020.e1928

Tabur, A., Choudury, A., Emhan, A., Mengenci, C., & Asan, O. (2022). Clinicians' social support, job stress, and intent to leave healthcare during COVID-19. *Healthcare*, *10*(2), 229. https://doi.org/10.3390/healthcare10020229

Takase, M. (2010). A concept analysis of turnover intention: Implications for nursing management. *Collegian, 17*(1), 3-12. https://doi.org/10.1016/j.colegn.2009.05.001

Takase, M., Maude, P., & Manias, E. (2005). Nurses' job dissatisfaction and turnover intention: Methodological myths and an alternative approach. *Nursing & Health Sciences, 7*(3), 209-217. https://doi.org/10.1111/j.1442-2018.2005.00232.x

Tang, Y., Dias Martins, L. M., Wang, S., He, Q., Huang, H. (2022). The impact of nurses' sense of security on turnover intention during the normalization of the COVID-19 epidemic: The mediating role of work engagement. *Frontiers in Public Health, 10*. https://doi.org/10.3389/fpubh.2022.1051895

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. *American Journal of Evaluation*, *27*(2), 237-246. https://doi.org/10.1177/1098214005283748

Timmermans, S., & Tavory, I. (2012). Theory construction in qualitative research: From grounded theory to abductive analysis. *Sociological Theory*, *30*(3), 167-186. https://doi.org/10.1177/0735275112457914

Tolksdorf, K. H., Tischler, U., & Heinrichs, K. (2022). Correlates of turnover intention among nursing staff in the COVID-19 pandemic: a systematic review. *BMC nursing*, *21*(1), 174. https://doi.org/10.1186/s12912-022-00949-4

Tselebis, A., Lekka, D., Sikaras, C., Tsomaka, E., Tassopoulos, A., Ilias, I., Bratis, D., & Pachi, A. (2020, October). Insomnia, perceived stress, and family support among nursing staff during the pandemic crisis. MDPI *Healthcare, 8*(3), 434. https://doi.org/10.3390/healthcare8040434

Udo, K. (2006). Combining qualitative and quantitative methods in research practice: Purposes and advantages. *Qualitative Research in Psychology, 3*(4), 293-311. https://doi.org/10.1177/1478088706070839

Van der Heijden, B. I. J. M., Peeters, M. C. W., Le Blanc, P. M., & Van Breukelen, J. W. M. (2018). Job characteristics and experience as predictors of occupational turnover intention and occupation turnover in the European nursing sector. *Journal of Vocational Behavior, 108*, 108-120. https://doi.org/10.1016/j.jvb.2018.06.008

Van der Heijden, B., Brown Mahoney, C., & Xu, Y. (2019). Impact of job demands and resources on nurses' burnout and occupational turnover intention towards an age-moderated mediation model for the nursing profession. *International Journal of Environmental Research and Public Health*, *16*(11), 2011.

Viotti, S., Gilardi, S., Guglielmetti, C., & Converso, D. (2015). Verbal aggression from care recipients as a risk factor among nursing staff: a study on burnout in the JD-R model perspective. *BioMed Research International*, *2015*.

Voyandoff, P. (2005). Implications of Work and Community Resources and Demands for Marital Quality: Community Work and Family.

Wagner, C. M. (2007). Organizational commitment as a predictor variable in nursing turnover research: Literature review. *Journal of Advanced Nursing, 60*(3), 235-247. doi: 10.1111/j.1365-2648.2007.04421.x

Wang, M. L., & Tsai, L. J. (2014). Work–family conflict and job performance in nurses: The moderating effects of social support. *Journal of Nursing Research*, *22*(3), 200-207. doi: 10.1097/jnr.0000000000000040

Wayne, J. H. (2009). Reducing conceptual confusion: Clarifying the positive side of work and family. *Handbook of families and work: Interdisciplinary perspectives*, 105-140.

Willemse, B. M., de Jonge, J., Smit, D., Depla, M. F., & Pot, A. M. (2012). The moderating role of decision authority and coworker-and supervisor support on the impact of job demands in nursing homes: A cross-sectional study. *International Journal of Nursing Studies*, *49*(7), 822-833. https://doi.org/10.1016/j.ijnurstu.2012.02.003

Wolfram, H. J., & Gratton, L. (2014). Spillover between work and home, role importance and life satisfaction. *British Journal of Management*, *25*(1), 77-90.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2007). The role of personal resources in the job demands-resources model. *International journal of stress management*, *14*(2), 121. https://psycnet.apa.org/doi/10.1037/1072-5245.14.2.121

Xian, M., Zhai, H., Xiong, Y., & Han, Y. (2020). The role of work resources between job demands and burnout in male nurses. *Journal of Clinical Nursing*, *29*(3-4), 535-544.

Yarbrough, S., Martin, P., Alfred, D., & McNeill, C. (2017). Professional values, job satisfaction, career development, and intent to stay. *Nursing Ethics*, *24*(6), 675-685. https://doi.org/10.1177/0969733015623098

Yildirim, D., & Aycan, Z. (2008). Nurses' work demands and work–family conflict: A questionnaire survey. *International Journal of Nursing Studies*, *45*(9), 1366-1378. https://doi.org/10.1016/j.ijnurstu.2007.10.010

Yunita, P. I., & Kismono, G. (2014). Influence of work-family conflict and family-work conflict ON employees' turnover intentions with gender, social support and individual value as moderating effects. *Journal of Indonesian Economy & Business*, *29*(1). https://doi.org/10.22146/jieb.6210

Zedeck, S. E. (1992). *Work, families, and organizations*. Jossey-Bass.

Zeytinoglu, I. U., & Denton, M. (2006). *Satisfied workers, retained workers: Effects of work and work environment on homecare workers' job satisfaction, stress, physical health, and retention* (p. 117). Ottawa: Research Institute for Quantitative Studies in Economics and Population, McMaster University. http://chsrf.ca/final_research/ogc/index_e.php

Zeytinoglu, I. U., Denton, M., Davies, S., Baumann, A., Blythe, J., & Boos, L. (2007). Deteriorated external work environment, heavy workload and nurses' job satisfaction and turnover intention. *Canadian Public Policy*, *33*(Supplement 1), S31-S47.

Zhang, Y., Yang, M., & Wang, R. (2021). Factors associated with work–family enrichment among Chinese nurses assisting Wuhan's fight against the 2019 COVID-19 pandemic. *Journal of Clinical Nursing*. https://doi.org/10.1111/jocn.15677

APPENDICES

Appendix A

Hypothesized Framework

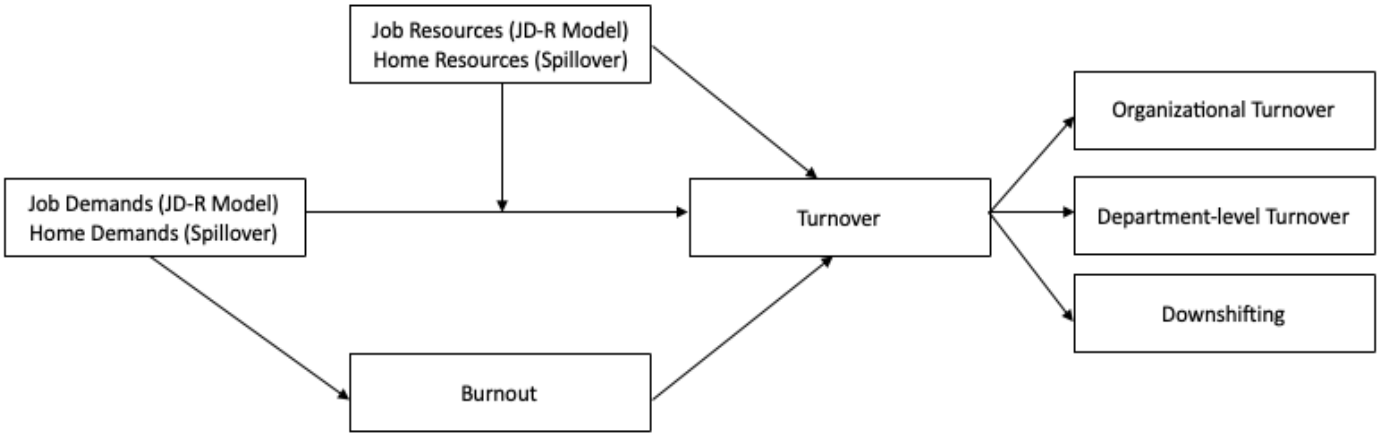

Figure 1. *Hypothesized Model*.

Appendix B

Survey Questions

Job Demands
"Is there anything else that you are finding especially difficult right now at work?"

Home Demands
"What, if anything, are you finding especially difficult right now outside of work?"

Job and Home Resources
"What is one thing at work or at home right now that is going really well or feels supportive?"

Appendix C

Mini Z (Burnout)

Using your own definition of "burnout", please select one of the answers below:

(1) I enjoy my work. I have no symptoms of burnout.
(2) I am under stress, and don't always have as much energy as I did, but I don't feel burned out.
(3) I am beginning to burn out and have one or more symptoms of burnout (e.g., emotional exhaustion).
(4) The symptoms of burnout that I am experiencing won't go away. I think about work frustrations a lot.
(5) I feel completely burned out. I am at the point where I may need to seek help.

Appendix D

Abductive Coding Instructions

Background

The qualitative data that I am using for my dissertation comes from three questions over four different iterations (i.e., July - October 2021) of the DEM Clinician Wellbeing Survey. The questions are as follows:

- "What is one thing at work or at home right now that is going really well or feels supportive?" (Worksheet Tab: GoingWell)
- "Is there anything else that you are finding especially difficult right now at work?" (Worksheet Tab: DiffWork)
- "What, if anything, are you finding especially difficult right now outside of work?" (Worksheet Tab: DiffOutsideWork)

The goal of my dissertation is to determine whether any of the following are predictive of nurse turnover: job demands, job resources, home (i.e., nonwork) demands, and home resources. The questions listed above were chosen for this dissertation because they address demands and resources at work and outside of work. The first step in my methodology is to code each comment as either a job demand, home demand, job resource, or home resource.

Instructions

- There are three sheets in the Excel workbook—one for each question. Each sheet will have three columns, one with Employee IDs (Column A), one with comments (Column B), and one for coding (Column C). Please place your codes in Column C. Each code should be directly to the right of the comment it is meant for.
    - Step 1: Go to the "GoingWell" tab and code the comments for the question, "What is one thing at work or home right now that is going really well or feels supportive?". Place your code in Column C ("Code.GoingWell").
    - Step 2: Go to the "DiffWork" tab and code the comments for the question, "Is there anything else that you are finding especially difficult right now at work?". Place your code in Column C ("Code.DiffWork").
    - Step 3: Go to the "DiffOutsideWork" tab and code the comments for the question, "What, if anything, are you finding especially difficult right now outside of work?". Place your code in Column C ("Code.DiffOutsideWork")

Code	Definition	When to use	Examples	When not to use
Job Demand	Text that mentions any physical, social, or organizational aspect of the job which requires	Apply this code to all comments that mention a stressor that comes from the work domain, which negatively	"Short staffed" "Working flip shifts"	Do not use this code for comments that mention non-work stressors which impact the work domain. Refer to

	sustained physical or mental effort, makes performing job tasks more difficult, and/or causes stress or negative psychological or physiological effects. (Bakker & Demerouti, 2007)	impacts the employees and their ability to perform their job well and properly. Also apply this code to any comment that mentions physical or psychological health issues due to work (i.e., stress, sleep).	"Healthcare staff's attitude and morale is low - as to be expected"	code: Home Demand. Do not use this code for comments that mention general physical or psychological health struggles. Refer to code: Negative Home Resource. Do not use this code for comments that do not reference some aspect of the work domain.
Job Resource	Text that mentions any physical, social, or organizational aspect of a job that may do any of the following: Help achieve work goals; reduce job demands and/or their associated negative effects; stimulate personal growth and development. (Demerouti et al., 2001; p. 501)	Apply this code to all comments that mention a positive aspect of the job which provides some level of job support or emotional support.	"My immediate supervisor supports me" "I love the people I'm working with & we all make a great team!!"	
Home Demand	Text that mentions any	Apply this code to all comments that	"An ill family member"	Do not use this code for comments that

	physical or social aspects outside of work which requires sustained physical or mental effort, makes performing nonwork tasks more difficult, and/or causes stress or negative psychological or physiological effects.	mention a stressor that occurs external to the work domain.	"Trying to finish moving is overwhelming"	discuss how work-related stressors impact the home domain. Refer to code: Job Demand.
Positive Home Resource	Text that mentions any physical or social aspect outside of the work domain that may do any of the following: Help achieve nonwork goals; reduce nonwork or work demands and/or their associated negative effects; stimulate personal growth and development. (Adapted from Demerouti et al., 2001; p. 501)	Apply this code to all comments that mention a positive aspect of the nonwork domain that provides some level of support or joy and can combat stress that occurs at work or outside of work. Also apply this code to all comments that address recovery outside of work or getting time away from work.	"Supportive family at home" "My family is healthy"	

Negative Home Resource	Text that indicates there is an absence/lack of nonwork resources or insufficient resources to deal with or offset the home and/or job demands that an individual is experiencing, leading to difficulties in coping with demands which often results in psychological distress.	Apply this code to all comments that either explicitly mention a lack of nonwork resources or mental or physical health struggles (e.g., lack of sleep) which could be tied to improper, insufficient, or absent nonwork resources.	"Having the motivation to complete daily tasks like laundry/housework etc. consistently" "Feeling drained"	Do not use this code for any comments that mention psychological or physical stress due to work or the inability to disconnect/recover from work. Refer to code: Job Demand.
Un-codeable	Text that does not apply or does not have enough context to be coded as, any of the above categories.	Apply this code when the comment doesn't fit in any of the categories above (i.e., job demand, job resource, home demand, positive home resource, negative home resource). Do not try to force a code. It could be totally irrelevant, or text that does not have enough information or context.		

Additional Information

- It is important to keep the question in mind that the comment is in response to.
    - The questions can help guide you with the coding, however, due to the nature of qualitative data, not all of the comments will be coded as what the question suggests. For example, the comments in response to the question, "What, if anything, are you finding especially difficult right now outside of work?", do not all fit the *Home Demand* category.
    - Some of the comments don't give context, and thus, you need to think about them in reference to the question they were in response to. For example, if someone responds "My spouse", it would be coded as a *Home Resource* if it was in response to the question, "What is one thing at work or at home right now that is going really well or feels supportive?" but it would be a *Home Demand* if it was in response to the question, "What, if anything, are you finding especially difficult right now outside of work?"
- The trickiest distinction is probably between job demands and negative home resources. Consider the following during your determination:
    - Does the comment mention anything related to work?
    - Where is the source of stress coming from?
    - Would the issue in the comment be fixed by having the job demand removed, or having proper resources?
- Assumptions cannot be made
    - Assumptions cannot be made about comments. We have to take the comments for exactly what they are and only consider the information that was provided. For example, we cannot assume that the comment "feeling drained" in response to "What, if anything, are you finding especially difficult right now outside of work?" has anything to do with work. It's possible that this could be a direct result of work stress carrying over into the home domain, but since it doesn't say, we cannot tie this comment to anything work-related.
- Uncertainty about codes
    - If there are any comments that you are really struggling to code or are unsure about, please highlight the cell yellow and add a comment with an explanation.

Appendix E

R Markdown Code

```
install.packages(c('dplyr','ggplot2','tidyr','apaTables','psych','sjPlot','interactions',
'foreign','tidyverse','forcats','patchwork','broom','mediation'))
data<-read.csv("~/Dropbox/Dissertation/Data/Dissertation for Analysis in R.csv")

library('dplyr')
library(ggplot2) # ggplot2
library(apaTables)
library(psych) # describe
library(sjPlot) # plotting models
library(interactions) # for interaction plot
library(foreign) # Data upload
library (tidyverse)
library(mediation)
library(jtools)

# Correlation
library(apaTables)
corr.test(data[,9:18])
apa.cor.table(data[,9:18],filename = "DissCorTableNew.doc")
cor.test(data$JD, data$Burnout)
cor.test(data$HD, data$Burnout)
cor.test(data$JR, data$Burnout)
cor.test(data$PHR, data$Burnout)
cor.test(data$NHR, data$Burnout)
cor.test(data$JD, data$TurnoverStatus)
cor.test(data$HD, data$TurnoverStatus)
cor.test(data$JR, data$TurnoverStatus)
cor.test(data$PHR, data$TurnoverStatus)
cor.test(data$NHR, data$TurnoverStatus)
cor.test(data$Burnout, data$TurnoverStatus)
cor.test(data$Burnout, data$DeptTurnover)


# Assigning values and labels to variables in regression model
data$JD<-factor(data$JD, levels = c(0,1),labels = c("No Job Demand","Job Demand"))
data$HD<-factor(data$HD, levels = c(0,1),labels = c("No Home Demand","Home Demand"))
data$JR<-factor(data$JR, levels = c(0,1),labels = c("No Job Resource","Job Resource"))
```

```
data$PHR<-factor(data$PHR, levels = c(0,1),labels = c("No Positive Home Resource","Positive Home Resource"))
data$NHR<-factor(data$NHR, levels = c(0,1),labels = c("No Negative Home Resource","Negative Home Resource"))
data$TurnoverStatus<-factor(data$TurnoverStatus, levels = c(0,1),labels = c("No Turnover","Turnover"))
str(data$TurnoverStatus)

# Descriptive Statistics
gender_table<-table(data$Gender)
gender_table
prop.table(gender_table)

hours_table<-table(data$Hours)
hours_table
prop.table(hours_table)

race_table<-table(data$Race)
race_table
prop.table(race_table)

mean(data$Age)
range(data$Age)
sd(data$Age)

mean(data$TenureYear)
range(data$TenureYear)
sd(data$TenureYear)

burnout_table<-table(data$Burnout)
burnout_table
prop.table(burnout_table)

turnoverstatus_table<-table(data$TurnoverStatus)
turnoverstatus_table
prop.table(turnoverstatus_table)

jd_table<-table(data$JD)
jd_table
prop.table(jd_table)
```

```
hd_table<-table(data$HD)
hd_table
prop.table(hd_table)

jr_table<-table(data$JR)
jr_table
prop.table(jr_table)

phr_table<-table(data$PHR)
phr_table
prop.table(phr_table)

nhr_table<-table(data$NHR)
nhr_table
prop.table(nhr_table)

#Check for NA
is.na(data)
colSums(is.na(data))

# Check for Distributions of Demands and Resources Across Turnover Status
xtabs(~ JD + TurnoverStatus, data=data)
xtabs(~ HD + TurnoverStatus, data=data)
xtabs(~ JR + TurnoverStatus, data=data)
xtabs(~ PHR + TurnoverStatus, data=data)
xtabs(~ NHR + TurnoverStatus, data=data)


# Check relationships between age and turnover and tenure and turnover
data$TurnoverStatus_num<-as.numeric(data$TurnoverStatus)
cor.test(data$TenureYear, data$TurnoverStatus_num)
cor.test(data$Age,data$TurnoverStatus_num)

# Chi Square Tests
JD_turn_data = data.frame(data$JD,data$TurnoverStatus)
JD_turn_data = table(data$JD,data$TurnoverStatus)
print(JD_turn_data)
print(chisq.test(JD_turn_data))
```

```
HD_turn_data = data.frame(data$HD,data$TurnoverStatus)
HD_turn_data = table(data$HD,data$TurnoverStatus)
print(HD_turn_data)
print(chisq.test(HD_turn_data))

JR_turn_data = data.frame(data$JR,data$TurnoverStatus)
JR_turn_data = table(data$JR,data$TurnoverStatus)
print(JR_turn_data)
print(chisq.test(JR_turn_data))

PHR_turn_data = data.frame(data$PHR,data$TurnoverStatus)
PHR_turn_data = table(data$PHR,data$TurnoverStatus)
print(PHR_turn_data)
print(chisq.test(PHR_turn_data))

NHR_turn_data = data.frame(data$NHR,data$TurnoverStatus)
NHR_turn_data = table(data$NHR,data$TurnoverStatus)
print(NHR_turn_data)
print(chisq.test(NHR_turn_data))

# Logistic Regression - Turnover
log.diss <- glm(TurnoverStatus ~ JD + JR + HD + PHR + NHR, data=data, family = "binomial")
summary(log.diss)
summ(log.diss)
exp(cbind(OR = coef(log.diss), confint(log.diss))) # results in ORs and their CIs
library(jtools)

# Job Demands/Resources Moderation
log.diss.job.mod <- glm(TurnoverStatus ~ JD + JR + JD:JR, data=data, family = "binomial")
summ(log.diss.job.mod)
exp(cbind(OR = coef(log.diss.job.mod), confint(log.diss.job.mod))) # results in ORs and their
CIs

# Home Demands/Resources Moderation
log.diss.home.mod <- glm(TurnoverStatus ~ HD + PHR + HD:PHR, data=data, family =
"binomial")
summ(log.diss.home.mod)
exp(cbind(OR = coef(log.diss.home.mod), confint(log.diss.home.mod))) # results in ORs and
their CIs
```

```
# Linear Regression - Burnout
lin.diss.burnout <- lm(Burnout ~ JD + JR + HD + PHR + NHR, data=data)
summ(lin.diss.burnout)

# Linear Regression APA Table
apa.reg.table(lin.diss.burnout, filename = "LinRegBurnout")

# Prep data for mediation
data$JD<-as.factor(data$JD)
data$TurnoverStatus<-as.factor(data$TurnoverStatus)
str(data$Burnout)

# Job Demand Mediated Regression
set.seed(123)
full_med_model<-glm(TurnoverStatus ~ JD + HD + Burnout, data = data, family = "binomial")
model_burn_predict<-lm(Burnout ~ JD + HD, data = data)
med_result<-mediate(model_burn_predict, full_med_model, treat = "JD", mediator = "Burnout")
summary(med_result)

# Home Demand Mediated Regression
set.seed(123)
full_med_model<-glm(TurnoverStatus ~ JD + HD + Burnout, data = data, family = "binomial")
model_burn_predict<-lm(Burnout ~ JD + HD, data = data)
med_result<-mediate(model_burn_predict, full_med_model, treat = "HD", mediator =
"Burnout")
summary(med_result)
```

Appendix F

Tables

Table 1

Participant Demographics

Variable	Frequency	Percent	*M*	*SD*	Range
Gender					
Female	123	86.6			
Male	19	13.4			
Race					
Asian	1	0.7			
African American	5	3.5			
Declined to Answer	1	0.7			
Hispanic or Latino	4	2.8			
Two or More Races	7	4.9			
White	124	87.3			
FTE					
.01	13	9.2			
.50	4	2.8			
.60	8	5.6			
.70	1	0.7			
.90	96	67.6			
1.00	20	14.0			
Hours					
FT	116	81.7			
PRN	13	9.2			
PT	13	9.2			
Age			38.9	11.6	21-70
Tenure Year			7.5	8	0 - 40

Note: FTE = Full-Time Equivalent, FT = Full-Time, PRN = Pro re nada, PT = Part-Time

Table 2

Cohen's Kappa

	JR	JD	PHR	NHR	HD	Un-codeable	Total
JR	11	0	1	0	0	0	12
JD	0	29	0	3	1	2	35
PHR	2	0	19	0	0	0	21
NHR	0	1	0	4	0	0	5
HD	0	0	0	0	13	0	13
Un-codeable	0	1	3	0	0	2	6
Total	13	31	23	7	14	4	92
Agreement	11	29	19	4	13	2	78
By Chance	1.695652174	11.79347826	4.336956522	0.217391304	1.97826087	0.26086957	20.2826087
Kappa	0.80478933						

Note: JD = Job Demands, JR = Job Resources, HD = Home Demands, PHR = Positive Home Resources, NHR = Negative Home Resources.

Table 3

Study Variable Frequencies

Variable	Frequency	Percent
Job Demands		
0	34	23.9
1	108	76.1
Home Demands		
0	110	77.5
1	32	22.5
Job Resources		
0	97	68.3
1	45	31.7
Positive Home Resources		
0	63	44.4
1	79	9.2
Negative Home Resources		
0	119	83.8
1	23	16.2
Turnover Status		
0	111	78.2
1	31	21.8
Departmental Turnover		
0	120	84.5
1	22	15.5
Organizational Turnover		
0	133	93.7
1	9	6.3
Reduced FTE		
0	130	91.5
1	12	8.5
Burnout		
1	8	5.6
2	60	42.3
3	44	31.0
4	26	18.3
5	4	2.8

Note: For all demands and resources variables, 0 indicates presence of the variable while 1 indicates absence. For the turnover variables, 0 indicates no turnover, while 1 indicates turnover. For reduced FTE, 0 indicates FTE was not reduced, while 1 indicates FTE was reduced. The

burnout measure had five different response options, with 1 representing no burnout and 5 representing severe burnout.

Table 4

Summary of Analysis for Hypotheses and Research Questions

Research Question/Hypothesis	Method of Analysis
RQ1: What are the key emerging themes for job and home demands and resources for emergency department nurses?	Abductive Coding
RQ2: What is the nature of the relationship between job and home demands and resources and emergency department nursing turnover?	Logistic Regression
RQ3: Is one type of demand (i.e., job or home) more predictive of emergency department nursing turnover than the other?	Did not run due to job and home demands not being predictive of emergency department nursing turnover
RQ4: Do job and home demands and resources differ between turnover types (i.e., departmental, organizational, downshifting) for emergency department nurses?	Did not run due to low sample size
H1: There will be significant positive relationships between job and home demands and emergency department nursing turnover.	Correlation and Logistic Regression
H2: There will be significant negative relationships between job and home resources and emergency department nursing turnover.	Correlation and Logistic Regression
H3: Job and home resources will moderate the relationship between job and home demands and emergency department nursing turnover, such that when resources are higher, the relationship between turnover and demands will be weaker.	Moderation
H4: There will be significant positive relationships between job and home demands and burnout.	Correlation and Linear Regression
H5: There will be significant negative relationships between job and home resources and burnout.	Linear Regression

H6: Burnout will mediate the relationship between job and home demands and turnover.	Mediation

Table 5

Themes for Job Demands, Home Demands, Job Resources, Positive Home Resources, and Negative Home Resources

Theme	Definition	Example Comments
Job Demands		
COVID-19	Concern regarding COVID-19, specifically pertaining to vaccination mandates.	"Frustration with people who aren't vaccinated."; "Uncertainty of COVID-19 vaccine mandates."
Compassion Fatigue	Concern regarding experiencing compassion fatigue, which is defined as "the traumatization of helpers through their efforts at helping others (Potter et al., 2010).	"Compassion fatigue is real."
Needed Organizational Support	Concern regarding the need to feel supported and valued by the organization through words, actions, and/or resources.	"Unappreciated. Uncompensated."; "Not being properly compensated for the increase stress/workload."
Negative Attitudes Toward Work	Negative thoughts, attitudes, and feelings toward work.	"Dreading returning to work."; "Knowing I have to go back to this job."
Negative Work-to-Home Spillover	Concern regarding the impact of work demands and/or stress on one's home life.	"Working night shift and balancing a family/quality of life."; "Disconnecting from work."
Nonexistent	No job demands.	"Nothing."; "No."
Patient Aggression and Violence	Physical assault, verbal abuse, and poor treatment of RNs by patients.	"[…] how terribly these patients have been treating nurses due to long wait times […]"; "Dealing with a lot of verbal abuse from patients…"
Personnel Concerns	Concern regarding poor attitudes, work ethic, and quality of staff.	"The quality of travelers."; "Terrible charge nurses."

Staffing and Scheduling	Concern regarding staffing shortages, turnover, and scheduling.	"Staffing is the main issue."; "Working flip shifts."
Supply Shortages	Concern regarding a shortage of supplies that are necessary for RNs to properly administer care to their patients.	"Lack of equipment."; "We need monitors in the ED."
Work Overload	Concern regarding excess workload and its impacts on well-being and the ability for RNs to safely and effectively perform their job duties.	"Constant bed holds backing up the ED."; "The volume of patients to room ratio."
Home Demands		
COVID-19	Concern regarding COVID-19, including social isolation, politics and the media, fear of exposure, and frustration toward those who don't take COVID-19 seriously.	"Staying safe during COVID.", "The public doesn't seem to care about COVID or what it's done to our healthcare workers."
Family	Concern regarding family and family-related stressors.	"Marital separation.", "Family health concerns."
General Home Stressors	General life stress and other nonwork demands including, but not limited to school, weather, financial stress, and major life changes/events.	"Trying to finish moving is overwhelming."; "Inflation and prices getting higher […]"
Marital/Relationship Stress	Concern regarding the health and stability of spousal and other personal relationships.	"Tolerance of significant others."; "My personal relationships are suffering."
Nonexistent	No home demands.	"Nothing."; "None."
Job Resources		
Organizational Support	Perceived support from an entity/entities within the organization, such as co-workers, managers, and leadership.	"I have an awesome Leadership Team and I always feel supported."; "My nurse manager is VERY supportive."
Positive Attitude Toward Staff	Positive feelings held about staff members (i.e., managers, co-workers, work team).	"Great co-workers."; "My peers, I love them. I stay for them."
Positive Home Resources		

Engagement in Non-Work Activities	Participation in activities or events outside of work (e.g., exercise, social outings with family and friends, church).	"A steady exercise routine."; "Planning for the holidays."
Family and Friend Support	Perceived support from individual(s) in one's group of family and friends (e.g., spouse, child, church member).	"Spouse supports my work."; "Most supportive family/husband ever."
Recovery from Work	Time spent outside of work that enables recovery and/or the ability to disconnect from work.	"I got to take a small vacation."; "Time off."
Nonexistent	No positive home resources.	"Nothing."; "Not sure."
Negative Home Resources		
Difficulty Fulfilling Responsibilities/Completing Tasks	Difficulty in fulfilling responsibilities or completing tasks, often due to lack of motivation or energy.	"Overwhelming exhaustion to participate in daily functions."; "Having the motivation to complete daily tasks like laundry/housework etc. consistently."
Mental Health	Self-reported mental health concerns (e.g., depression symptoms, anxiety).	"Motivation to do the things I used to enjoy doing."; "Anxiety attacks […]"
Sleep and Relaxation	Concern regarding sleep (e.g., difficulty falling asleep, poor sleep schedule) or the ability to relax.	"Finding enough time, and ways, to relax."; "Sleeping has been very difficult over the last few weeks. I'm exhausted but unable to sleep."

Table 6

Means, Standard Deviations, and Correlations of Study Variables

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9
1. Burnout	2.70	0.93									
2. JD	0.76	0.43	.16								
3. HD	0.23	0.42	-.06	-.13							
4. JR	0.32	0.47	-.19*	-.04	.10						
5. PHR	0.56	0.50	.11	.13	-.03	-.64**					
6. NHR	0.16	0.37	.10	.07	-.15	-.14	.16				
7. Turnover Status	0.22	0.41	.26**	.06	.04	.08	-.04	.09			
8. Dept. Turnover	0.15	0.36	.26**	.06	.00	.13	.03	.08	.81**		
9. Org. Turnover	0.06	0.24	.05	.01	.07	-.05	-.12	.04	.49**	-.11	
10. Reduced FTE	0.08	0.28	-.04	-.13	.08	-.04	.02	-.06	-.04	.01	-.08

Note. N = *142*. *M* and *SD* are used to represent mean and standard deviation, respectively. All variables except burnout (scale of 1-5)

are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. * indicates $p < .05$. ** indicates $p < .01$. JD = Job Demands, JR = Job Resources, HD = Home Demands, PHR = Positive Home Resources, NHR = Negative Home Resources.

Table 7

Logistic Regression Results Using Turnover as the Outcome

Predictor	*b*	*SE*	OR [95% CI]	Fit
(Intercept)	-1.89**	0.65	0.15 [0.04, 0.50]	
JD	0.39	0.52	1.47 [0.56, 4.42]	
JR	0.42	0.58	1.53 [0.49, 4.94]	
HD	0.33	0.49	1.39 [0.51, 3.59]	
PHR	-0.07	0.56	0.93 [0.32, 2.96]	
NHR	0.68	0.53	1.97 [0.67, 5.48]	
				Adj. R^2 = .02

Note. N = 142. *b* represents unstandardized regression weights. OR = Odds Ratio, [95% CI] = Lower and upper bound of the 95% confidence interval. * indicates p < .05. ** indicates p < .01. All variables are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. JD = Job Demands, JR = Job Resources, HD = Home Demands, PHR = Positive Home Resources, NHR = Negative Home Resources.

Table 8

Moderated Regression Results Using Turnover as the Outcome

Predictor	*b*	*SE*	OR [95% CI]	Fit
(Intercept)	-1.50*	0.55	0.22 [0.06, 0.60]	
JD	0.12	0.62	1.13 [0.35, 4.32]	
JR	-0.11	0.95	0.90 [0.11, 5.51]	
JD*JR	0.66	1.06	1.93 [0.25, 18.70]	
				Adj. R^2 = 0.02
(Intercept)	-1.10	0.33	0.33 [0.17, 0.62]	
HD	-0.29	0.73	0.75 [0.15, 2.87]	
PHR	-0.44	0.47	0.65 [0.25, 1.63]	
HD*PHR	0.95	0.96	2.58 [0.40, 18.45]	
				Adj. R^2 = 0.01

Note. N = 142. *b* represents unstandardized regression weights. OR = Odds Ratio, [95% CI] = Lower and upper bound of the 95% confidence interval. * indicates p < .05. ** indicates p < .01. All variables are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. JD = Job Demands, JR = Job Resources, HD = Home Demands, PHR = Positive Home Resources.

Table 9

Linear Regression Results Using Burnout as the Outcome

Predictor	*b*	*SE*	*t*	[95% CI]	Fit
(Intercept)	2.62**	0.22	11.73	[2.17, 3.06]	
JD	0.33	0.18	1.78	[-0.04, 0.69]	
JR	-0.41	0.22	-1.89	[-0.84, 0.02]	
HD	-0.03	0.19	-0.17	[-0.41, 0.34]	
PHR	-0.09	0.20	-0.46	[-0.50, 0.31]	
NHR	0.68	0.21	0.79	[-0.25, 0.59]	
					Adj. R^2 = .03

Note. N = 142. *b* represents unstandardized regression weights. [95% CI] = Lower and upper bound of the 95% confidence interval. * indicates $p < .05$. ** indicates $p < .01$. All variables are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. JD = Job Demands, JR = Job Resources, HD = Home Demands, PHR = Positive Home Resources, NHR = Negative Home Resources.

Table 10

Regression Results for the Relationship Between Job Demands and Turnover Mediated by Burnout

Effect	*b*	95% CI	*p*
Total Effect	0.05	[-0.12, 0.19]	.46
ACME	0.03	[-0.002, 0.08]	.06
ADE	0.02	[-0.15, 0.15]	.77
Prop. Mediated	0.31	[-3.50, 6.29]	.46

Note. N = 142. Total effect = total model; ACME = average causal mediation effect (effect of Job Demands on Turnover through Burnout); ADE = average direct effect (effect of Job Demands on Turnover), Prop. Mediated = proportion of effect due to Burnout. [95% CI] = Lower and upper bound of the 95% confidence interval from 1,000 nonparametric bootstrap replicates. All variables except burnout are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. Burnout ranges from 1-5, with 0 indicating no burnout and 5 indicating burnout to the point of needing help.

Table 11

Regression Results for the Relationship Between Home Demands and Turnover Mediated by Burnout

Effect	*b*	95% CI	*p*
Total Effect	0.06	[-0.08, 0.24]	.48
ACME	-0.01	[-0.06, 0.04]	.61
ADE	0.07	[-0.08, 0.25]	.40
Prop. Mediated	-0.03	[-2.26, 3.35]	.89

Note. N = 142. Total effect = total model; ACME = average causal mediation effect (effect of Home Demands on Turnover through Burnout); ADE = average direct effect (effect of Home Demands on Turnover), Prop. Mediated = proportion of effect due to Burnout. [95% CI] = Lower and upper bound of the 95% confidence interval from 1,000 nonparametric bootstrap replicates. All variables except burnout are binary, in which 0 indicates absence of the variable and 1 indicates presence of the variable. Burnout ranges from 1-5, with 0 indicating no burnout and 5 indicating burnout to the point of needing help.