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Relationship Between Medical-Surgical Nurse Manager Age, Level of Education, Gender, Tenure, and Staff Nurse Turnover

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Doctor of Education in Organizational Leadership

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by

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Abstract

Medical-surgical nursing unit nurse turnover rates of over 20% annually are consistently higher than other RN specialty turnover rates. The purpose of this quantitative study was to examine the relationship between medical-surgical nurses' ages, levels of education, and turnover intentions. Ninety-one medical-surgical nurse managers (NMs) recruited from the Dallas-Fort Worth metroplex responded to the survey questionnaire. The study used inferential statistics. The result of the analyses showed a negative association between educational attainment and turnover rates; however, the relationship was insignificant, $r_s(91) = -.251$, $p = .016$. The second set of hypotheses considered the relationship between NMs' tenure and their units' turnover rates. The result showed a significant negative correlation between years as a manager and turnover rates, $r_s(91) = -.262$, $p = .012$. The third set of hypotheses considered the relationship between the NMs' ages and their units' turnover rates. The result showed a negative correlation between age and turnover, $r_s(91) = -.273$, $p = .009$. The fourth set of hypotheses considered the relationship between the NMs' genders and their units' turnover rates. The result showed a negative correlation between gender and turnover; however, the relationship was determined as insignificant, $r_s(91) = -.103$, $p = .0.332$.

Keywords: nurse manager and nursing turnover, nursing turnover, and nurse turnover intention

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Chapter 1: Introduction

Medical-surgical (med-surg) nursing represents the largest U.S. nursing specialty, constituting approximately 650,000 of the 3.1 million registered nurses (RNs) working in the United States (Bureau of Labor Statistics [BLS], 2018). Med-surg nurses practice in both hospital units and surgical settings with acutely ill adult patients with a wide variety of medical issues or those recovering from surgery. Med-surg nurses face intense emotional experiences associated with patients' life and death decisions while caring for people at their most vulnerable times (Collini et al., 2015). Med-surg nurses manage care for multiple patients, administer medications, educate patients and families, and continuously develop critical thinking skills and knowledge of disease states and body systems while remaining calm under intense pressure (Ma et al., 2015). In addition to their daily patient care responsibilities, med-surg nurse managers (NMs) handle leadership, motivation, and management, med-surg nurse retention, and high-quality patient care (Spano-Szekely et al., 2016).

NMs and healthcare administrators face the nurse turnover rate as a complex and formidable challenge (Collini et al., 2015). The problem of nurse turnover in a hospital setting is costly and disruptive to operations. Nursing Solutions (2018) estimated the cost of replacing a single hospital RN over $58,000 at between $1.4 and $2.1 billion annually (Duffield et al., 2014). Leaders who invest in orientation and training, professional development, and support reduce nursing turnover and attendant operating costs (Collini et al., 2015). In addition to the monetary cost for hospitals, leaders who have high nurse turnover face placing patients at risk; significant associations exist between high nursing turnover rates and adverse patient outcomes (Collini et al., 2015).

Leaders face many factors regarding nurse turnover rates. For instance, Soomro (2020) defined a correlation between nursing leadership demographics and nursing turnover rates. Soomro defined leader tenure and education as significant factors to consider when predicting turnover intentions among nurses. Researchers have similarly noted that NM characteristics have shown a significant correlation to employee organizational commitment, indicating whether the employee stays or leaves, resulting in employee turnover (Kwon & Kang, 2019; Magbity et al., 2020; Sun & Wang, 2017). In addition to the age of nurses, nurses may change their intentions to stay based on their education levels (Soomro, 2020). For example, Kash et al. (2010) found that an employee with higher education than their manager would more likely leave their job compared to the opposite scenario. As such, researchers should examine NMs demographic characteristics, such as age and education, to decrease and lower turnover rates in hospitals (Kash et al., 2010; Soomro, 2020). In a more recent study, Magbity et al. (2020) added how NMs with certain characteristics, such as tenure and leadership style, have a direct impact on the turnover rates in hospitals.

Researchers can use the key principles of the job demands-resources theory to understand the relationship between manager demographic characteristics and staff turnover (Bakker, 2007; Hoonakker et al., 2013; Magbity et al., 2020; Van der Heijden et al., 2018). Researchers have commonly used the job demands-resources theory when examining turnover intention factors (Bakker & Demerouti, 2017; Van der Heijden et al., 2018). Job demands-resources theorists have posited that vital components and dimensions of work environments need to be considered to influence employees' quality and performances or induce absenteeism and turnover (Bakker, 2007; Hoonakker et al., 2013), including employee and leaders' personal characteristics and demographic factors (Bakker, 2007; Hoonakker et al., 2013). Regarding nursing, researchers

may link NMs' tenure and education levels to turnover, as each may have differing levels of work suitability, work significance, and leadership attributes, which impact nurses' intent to stay (Iguchi, 2016).

Statement of the Problem

Researchers have shown med-surg nursing unit nurse turnover rates of over 20% annually as consistently higher than other RN specialty turnover rates (Roche et al., 2015). Nurses who work on med-surg units face turnover for many reasons. Ciocco (2014) found that med-surg nurses could face higher burnout levels than other specialty areas, leading to high turnover rates. For example, med-surg nurses face high nurse-patient ratios, leadership support, autonomy, and professional status (Staggs & Dunton, 2012). Hayward et al. (2016) indicated that med-surg nurses had among the highest intentions to leave their units.

Researchers found that certain NMs' factors might be correlated with nursing turnover rates (Kwon & Kang, 2019; Magbity et al., 2020; Sun & Wang, 2017; Yoo & Kim, 2016). Magbity et al. (2020) found a significant relationship between education and tenure of emergency department NMs with turnover intention. Similarly, Yoo and Kim (2016) proposed that NMs' education and leadership training might be correlated to critical care nursing turnover rates. Because med-surg nursing has the highest nursing turnover rates, researchers should examine the characteristics of med-surg NMs to understand how to reduce staff nurse turnover rates. Researchers have yet to focus on this topic of med-surg nursing in existing literature, indicating a gap in knowledge regarding the relationship between staff nurse turnover intentions and med-surg NMs' ages, genders, tenure, and levels of education.

Purpose of the Study

The purpose of this quantitative study was to examine the relationship between med-surg NM's ages, levels of education, tenure, genders, and turnover rates on their units. Researchers have associated med-surg nursing turnover rates with lower-quality patient care and diminished patient outcomes (Griffiths et al., 2008), poor patient satisfaction (O'Brien-Pallas et al., 2010), and high costs for the hospital (Carter & Tourangeau, 2012). Statistics have shown that the demographic factors of nurses are significantly associated with turnover rates (Kash et al., 2010; Soomro, 2020; Sun & Wang, 2017). Although not healthcare-specific, researchers have defined leader demographic factors as associated with employee turnover rates (Matarid et al., 2018; Sun & Wang, 2017).

Research Questions and Hypotheses

The research questions and hypotheses included the following:

RQ1: What is the relationship between NMs' educational level and their units' turnover rates?

$H_0$1: There is no statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

H_a1: There is a statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

RQ2: What is the relationship between NMs' tenure and their units' turnover rates?

$H_0$2: There is no statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

H_a2: There is a statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

RQ3: What is the relationship between the NMs' age and their units' turnover rates?

H_03: There is no statistically significant relationship between the NMs' age and nursing turnover rates on their units.

H_a3: There is a statistically significant relationship between the NMs' age and nursing turnover rates on their units.

RQ4: What is the relationship between NMs' gender and their units' turnover rates?

H_04: There is no statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

H_a4: There is a statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

Definitions of Key Terms

To establish a common understanding, I provide definitions for several terms and concepts used in the study.

Nurse manager (NM). A nurse manager (NM) refers to the formal leader of a nursing unit responsible for daily operations, including staff management (Raup, 2008).

Nurse unit turnover. For this study, turnover was synonymous with the term voluntary turnover. Krausz (2002) defined voluntary turnover as an employee who would voluntarily leave an organization or department within an organization.

Summary and Preview of the Next Chapter

Healthcare leaders will face a shortage of up to 500,000 nurses by 2022, creating significant challenges for healthcare delivery systems (American Association of Colleges of Nursing, 2014). Researchers have correlated nursing turnover rates with demographic factors, such as age and education (Kash et al., 2010). Literature has shown that leaders must understand

demographic factors to influence nurses' professional turnover intentions (Arslan Yürümezoğlu et al., 2019). However, there is a lack of research about the link between med-surg NMs' characteristics, such as age, level of education, and turnover intentions (Labrague et al., 2018a).

The purpose of this quantitative study was to examine the relationship between med-surg NMs' ages, levels of education, genders, tenure, and staff turnover rates. Nursing organization leaders may develop strategies to decrease turnover once they understand the underlying causes better. Chapter 2 includes a description of the literature search strategy, the state/trait variants to job demands-resources theory, and research on the following study variables: nurse turnover and the NM demographic factors of educational attainment, gender, tenure, and age.

Chapter 2: Literature Review

Those who work in the health care industry often face intense emotional experiences. Nurses face life and death issues in addition to caring for people in vulnerable positions. Therefore, nurses face increased stress and turnover; however, turnover and retention factors are diverse. Van der Heijden et al. (2018) indicated a relationship occurred between demographics and intention to stay or leave among employees; when researchers analyzed age and education, they found significant correlations with turnover intentions within a nursing unit (Smith et al., 2019; Van der Heijden et al., 2018). Statistics showed that nurses decided to remain in their positions based on their NMs' educational attainment, tenure, and leadership style (Alsubhi et al., 2020; Bello et al., 2020; Magbity et al., 2020; Majeed & Jamshed, 2020; Sule & Omoankhalen, 2019).

Medical leaders who have high nursing turnover can face several negative outcomes, including poorer patient outcomes (Griffiths et al., 2008), decreased levels of patient satisfaction (O'Brien-Pallas et al., 2010), and increased costs for hospitals (Carter & Tourangeau, 2012). Therefore, researchers should examine this topic further, exploring the demographic variables that are significantly correlated to turnover intention. This chapter includes the research about nurse turnover, its impact on hospital and patient care, and the relevant measurements about the theoretical constructs of the job demands-resources theory. I discuss the job demands-resources theory regarding its applicability to themes concerning demographic variables of age, tenure and education, and possible impacts on nursing turnover.

Chapter 2 includes a review of the literature on nurse turnover, types of turnover, nurse turnover rates, nurse turnover research, impact of nurse turnover on patient care, NM characteristics, NM effect on turnover, NM age and turnover intention, NM educational

attainment and turnover intention, NM gender and turnover intention, NM tenure and turnover intention and promoting retention. Finally, I conclude Chapter 2 with a summary of key findings. Overall, I organized Chapter 2 to review the literature search strategy, theoretical foundation, literature related to key variables, and summary of the chapter.

Literature Search Strategy

I searched the following online databases: Academy of Management, Google Scholar, SAGE Journals, ScienceDirect, Taylor & Francis Online, and Wiley Online Library. I used the Google search engine in all cases, except when using a proprietary database and search engine was required. The development of keywords occurred iteratively and included the following: *demographic factors of nurses*, *demographic factors that impact nurse retention*, *factors that impact nurse retention*, *NM and turnover*, *NM educational attainment and turnover*, *NM tenure and turnover*, *NM gender and turnover*, *nurse turnover, nurse retention, leadership and turnover*, and *manager and turnover and staff retention strategies*. The literature review included peer-reviewed journal articles, books, and dissertations. I used literature published between 2016 and 2020 as the primary period of study. However, I studied earlier works when researching the theoretical foundation to ascertain its origins, applications, and evolution over the years. Approximately 85% of the studies were quantitative, and only 15% were qualitative. I chose the articles based on retention-referenced demographic factors related to both turnover and retention across different industries, specifically among nurses.

Theoretical Framework

Job Demands-Resources Theory

I chose the job demands-resources theory as the study's theoretical framework. Bakker and Demerouti (2017) stated researchers introduced this theoretical framework in international

literature more than two decades ago. Commonly used as a theoretical framework for examining factors of employee turnover intention, researchers have used the job demands-resources theory to explore the influence of a manager's characteristics, gender, age, and education on staff turnover intention (Hoonakker et al., 2013; Van der Heijden et al., 2018). Job demands-resources theorists have defined job demands and job resources as two vital components and dimensions of work environments that influence either the employee's quality and performance or absenteeism and turnover (Bakker, 2007; Hoonakker et al., 2013). According to Bakker (2007), job demands refer to physical, psychological, social, and organizational characteristics of a job. An employee uses physical and psychological energy when facing such characteristics, increasing physiological and psychological costs (Bakker, 2007). In addition, job resources refer to the psychological and social support provided by the employee's manager. Employees need such characteristics to attain their personal or professional goals (Bakker, 2007). Figure 1 shows the job demands-resources theory as a framework of this study to explain med-surg NMs' ages, levels of education, genders, tenure, and staff nurse turnover.

Figure 1

Job Demands-Resources Framework
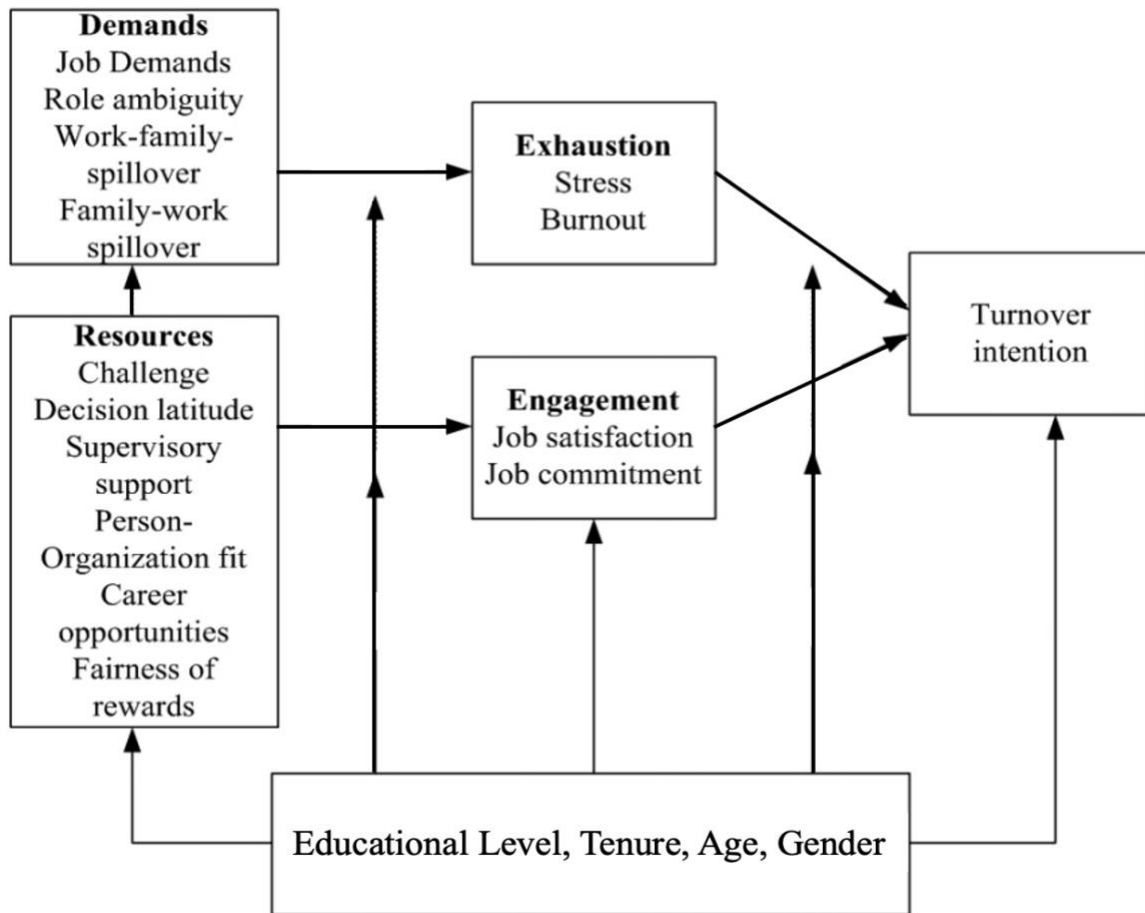
Note. Job Demands-Resources Framework. Adapted from "Using the Job-Demands-Resources Model to Predict Turnover in the Information Technology Workforce–General Effects and Gender Differences" by Hoonakker et al., 2013, *Horizons of Psychology, 22*(1), 5, Copyright 2013 by Peter L. T. Hoonakker. Adapted with permission.

Researchers have linked these two vital components and dimensions of job demands and job resources to the employee's well-being and attitudinal outcomes (Hoonakker et al., 2013). For example, an employee experiencing high levels of demands will likely experience increased stress and burnout resulting in absenteeism and turnover intention. In contrast, employees who experience manager or leadership support may have enhanced motivation and positive job

attitudes resulting in job satisfaction and employee commitment (Bakker, 2007; Hoonakker et al., 2013).

Another key principle of the job demands-resources theory includes that the associations between job demands, resources, and outcomes are mediated by negative, strain reactions (i.e., burnout and emotional exhaustion; Bakker, 2007). In addition, a person can mediate these associations using motivational processes, such as job satisfaction and commitment (Bakker, 2007; Hoonakker et al., 2013). Researchers have further related work-to-family conflict, personal characteristics, and demographics to an employee's intention to stay or leave based on the job demands-resources theory (Hoonakker et al., 2013; Van der Heijden et al., 2018).

Researchers have related personal characteristics and demographics to work-related attitudes and behaviors (Hoonakker et al., 2013; Van der Heijden et al., 2018). Van der Heijden et al. (2018) and Parasuraman (1982) defined manager and staff demographic variables as having significant effects on employee turnover intentions over indirect effects on turnover intention through factors of satisfaction and involvement. Van der Heijden et al. (2018) further justified this finding when examining job characteristics and experiences as predictors of occupational turnover intention and occupational turnover in the European nursing sector. Van der Heijden et al. used the job demands-resources theory as the framework and showed that job resources, ages, and experiences in the nursing profession were negatively related with nursing turnover intentions. Additionally, the researchers defined the quality of nurse leadership, professional developmental opportunities provided by NMs, and social support from NMs as significant factors that impact staff nurse turnover intentions (Van der Heijden et al., 2018). The researchers defined the job demands-resources theory as a robust theoretical framework for examining turnover intention and exit behavior, indicating an explanatory mechanism for predicting

turnover intentions by determining factors of the turnover variable (Bakker & Demerouti, 2017; Hoonakker et al., 2013; Van der Heijden et al., 2018).

Aside from Van der Heijden et al. (2018), Iguchi (2016) and Kaiser et al. (2020) utilized the job demands-resources theory to examine and analyze turnover intention, specifically among healthcare workers. For example, Iguchi (2016) examined the factors related to turnover intentions of public health nurses. Through the lens of job demands-resources theory and questionnaires to gather data among female nurses, researchers have defined four factors as significantly influencing the structure of job demands and job resources leading to turnover intention: work suitability and leadership support, quality of leadership, leaders' professional development for staff nurses, leader emotional intelligence (EI), work significance, positive work self-balance, and growth opportunity of job resources (Iguchi, 2016; Majeed & Jamshed, 2020; Van der Heijden et al., 2019). Iguchi (2016) studied nurses but did not include the demographics or personal characteristics of the respondents, as the study only included female nurses.

Kaiser et al. (2020) also used the job demands-resources theory to evaluate work-related outcomes among 489 healthcare professionals. The authors studied healthcare professionals working in public health services for children and their families in Norway based on the job demands-resources theory as the framework (Kaiser et al., 2020). The findings of their multilevel structural equation model analysis showed that job demands and job resources were important predictors of employee well-being and organizational outcomes (Kaiser et al., 2020). The researchers related job demand and burnout significantly to turnover intentions among healthcare professionals (Kaiser et al., 2020).

Like Iguchi (2016), Kaiser et al. (2020) did not focus or include the leadership demographic factors of their respondents. Moreover, Kaiser et al. did not focus on nurses,

focusing on healthcare professionals instead. This pool of findings showed empirical justification regarding the robustness of the job demands-resources theory as a framework for indicating factors that impact turnover intention among nurses. However, the researchers did not focus on the demographic factors of nurse respondents in the extant literature (Iguchi, 2016; Kaiser et al., 2020).

This gap in literature is vital to address because the relationship between manager demographic factors and labor turnover cannot be overemphasized. According to Sule and Omoankhalen (2019), "the work leaves the worker due to retrenchment and others (involuntary turnover) or the worker will leave the work perhaps because of lack of leadership or any other organizational deficits" (p. 32). Emiroğlu et al. (2015) concurred with these assertions and defined turnover intention as dependent on demographic factors of both the employee and manager (e.g., gender, age, educational level, and tenure). As such, each demographic variable impacts the turnover intention of the employee differently and uniquely. Emiroğlu et al. further examined the relationship between turnover intention and demographic factors in hotel businesses in Istanbul (2015). The researchers used t tests and ANOVA tests and defined the demographic factors of age, gender, marital status, education and tenure, wage, position, working department, and turnover intention as determinant factors of turnover intention. Omindo et al. (2020) examined the relationship between leadership and labor turnover of staff among private schools. Using a descriptive survey design, the authors surveyed 204 employees. Findings showed that leaders' experience and practices had a significant impact on labor turnover (Omindo et al., 2020).

Despite these findings, a lack of literature exists about the impact of NM demographic factors on turnover intention among U.S. nurses (Emiroğlu et al., 2015; Sule & Omoankhalen,

2019). Past researchers who have examined or focused on nurses' turnover intentions, and researchers have yet to explore factors associated with this variable, such as demographic factors (Adebiyi et al., 2020; Arslan Yürümezoğlu et al., 2019). Most researchers of nursing turnover intention have focused on organizational commitment, job satisfaction, workload, and stress (Arslan Yürümezoğlu et al., 2019; Obiechina, 2019). In this study, I examined variables of NM demographics and the possible impacts on turnover intention among nurses using the job demands-resources theory as the framework to bridge this gap in knowledge and contribute to the literature on turnover intention among nurses.

Nurse Turnover

Leaders facing nurse turnover in a hospital setting face costly problems. The consequences of nurse turnover include decreased morale of staff who stay, loss of productive high performers, and the cost to hire and train new employees (Soomro, 2020). Subramony and Holtom (2012) discussed the major financial impact of turnover regardless of the size of the organization. Hom et al. (2012) stated that the recruitment, onboarding, and training costs of hiring a new employee could cost double the annual salary of an employee. Furthermore, Jones and Gates (2007) estimated the cost of replacing a single nurse was over $60,000. Brewer et al. (2012) estimated the annual cost of nursing turnover at $1.4 to $2.1 billion. Leaders who have high nursing turnover rates face greatly reduced hospital operating budgets, requiring additional funding on advertising, recruiting, orientation, and training. In addition to the monetary costs for hospitals, leaders who have high nursing turnover rates place patients at risk. Castle and Engberg (2005) and O'Brien-Pallas et al. (2010) found significant associations between high nursing turnover rates and adverse patient outcomes.

Types of Turnover

Hom and Griffeth (1995) defined two major types of turnover: voluntary and involuntary. Wilson et al. (2010) defined voluntary turnover as an employee willingly leaving an organization. Krausz (2002) defined involuntary turnover as leadership terminating a contract between the employee and organization. Voluntary turnover refers to the most prevalent form of turnover and occurs when an employee chooses to leave an organization (Lynch & Tuckey, 2008). Involuntary turnover can occur when an employer asks the employee to leave or can result from an external factor (e.g., injury, illness, or death; Lynch & Tuckey, 2008).

Because high turnover can result in a negative impact on an organization, many researches have studied turnover (Allen et al., 2010; Hom et al., 2012). Hausknecht and Trevor (2011) summarized their meta-analysis of 115 turnover related research articles: In addition to the financial implications of lost training and recruitment expenditures, leaders who face high turnover may face the collective loss of employees with the skills and knowledge to have a productive value within the organization. Additionally, the remaining members must handle training and building new interpersonal relationships (Hausknecht & Trevor, 2011). Employees may contemplate leaving based on the resultant decrease of staff morale.

Although turnover refers to the actual measure of staff leaving an organization, turnover intention refers to staff contemplating leaving the organization (Rizwan et al., 2013). Researchers have closely linked turnover intention to staff level engagement (Twigg & McCullough, 2014). Hayes et al. (2010) associated multiple factors with turnover intention, including collaboration with peers, recognition, professional development, perceived value to the organization, relationship with leadership, work schedules, compensation, and benefits. Although one should understand turnover intention, turnover intention does not equate to one leaving the

organization. Cowden et al. (2011) indicated that one having turnover intention did not necessarily mean they would leave the organization. Griffeth et al. (2000) conducted a meta-analysis of employee turnover. The researchers defined turnover intention as the best predictor of employees leaving; however, the researchers stated that studying actual turnover would more accurately show why employees would leave.

Nurse Turnover Rates

Cross-national assessments showed that turnover rates differed based on the nation (Duffield et al., 2014). Researchers examined turnover rates in four countries: the United States, Canada, Australia, and New Zealand. The researchers aimed to measure and compare the rates and costs of turnover. The researchers used multiple sources to determine rates, including Medline and the Business Source Complete. After compiling data and using the nursing turnover cost calculation model, Duffield et al. (2014) found that leadership in Australia reported termination occurring at a more frequent rate, leading to increased temporary replacement costs. In comparison, the researchers defined costs associated with nursing turnover as 50% lower in the United States, Canada, and New Zealand.

Despite Australia showing the highest turnover costs, leaders in New Zealand reported the highest turnover rates (Duffield et al., 2014). Australia leaders reported the lowest turnover rates but the highest turnover costs. The findings showed that leaders defined turnover costs as not necessarily associated with higher turnover rates but defined replacement costs as a large contributor to turnover costs. This finding showed the importance of organization leaders retaining nursing staff (Duffield et al., 2014). Researchers also noted that leaders facing increased turnover rates faced costs to their organizations because of costs associated with attracting new employees.

Researchers estimated that about 17.5% of new nurses left their jobs within their first years (Kovner et al., 2014). However, the researchers noted conflicting definitions of turnover existed. In some cases, turnover referred to both involuntary and voluntary leaving. In other cases, the definition was more restricted. Duffield et al. (2014) defined turnover as inclusive of involuntary departure. Kovner et al. (2014) indicated that future researchers required more consistent definitions of turnover to ensure that results in studying the turnover rate showed consistent outcomes. Duffield et al. (2014) discussed the lack of consistent definitions for turnover and noted that researchers complicated studies of turnover rates because of differences in study design, metrics, and definitions for turnover.

Globally, medical leaders face a significant shortage of nurses (Armstrong et al., 2017). Despite the shortage, researchers have predicated the nursing field would remain one of the fastest growing by 2022. However, researchers warned that 37% of nurses considered a change in jobs within their first years, and 13% did change jobs. Other negative effects occur in the nursing industry; for example, researchers have related an estimated 19% of all nurse absenteeism to personal issues due to families and responsibilities (Armstrong et al., 2017).

Nurse Turnover Research

Researchers have defined nurse workload as predictive of turnover (Subramony et al., 2018). Researchers reported that effective patient care was often enhanced when nurses had a higher patient volume. However, researchers have defined higher turnover as predictive of reducing high patient quality and influencing the improvement of patient care. As turnover increased, patient mortality increased. Another factor in turnover included a lack of adequate staffing (Park et al., 2014). Researchers have found that leaders facing poor staffing would experience increased turnover, thereby exacerbating the turnover problem (Park et al., 2014).

Researchers in China have associated numerous factors with turnover intentions (Chen et al., 2018; Yang et al., 2017). Yang et al. (2017) identified whether factors in Western countries also contributed to turnover in China. The researchers used a sample of 800 nurses with less than one year of work experience and classified turnover intentions on a range from very weak to very strong (Yang et al., 2017). The researchers identified work pressure as the most prominent factor influencing turnover intentions (Yang et al., 2017). The researchers noted that factors associated with work pressure included less experience, higher workload, and a specific age group of workers (Yang et al., 2017). Those within the 30 to 39 age brackets would most likely intend to leave their jobs. Chen et al. (2018) also studied nurse turnover intentions in China by examining nurse turnover intention factors. Through a cross-sectional study, the authors surveyed 1,978 nurses working in 48 hospitals, measuring levels of intent to leave and factors associated to this variable (Chen et al., 2018). The findings showed that turnover intention was significantly influenced by work environment, hospital affairs, resource adequacy, age, professional title, tenure, employment type, and education level (Chen et al., 2018). The authors concluded and asserted the need to investigate this topic further, as nurse turnover intention or the resignation rate of nurses continue, as high as 12.7% (Chen et al., 2018). This body of knowledge showed the problem of nurse turnover intention, as high rates of nurse turnover could lead to detrimental outcomes, especially for patients (Chen et al., 2018; Yang et al., 2017).

Researchers in Korea found two separate variables that might impact turnover intentions (Kim & Lee, 2014). Kim and Lee (2014) studied 297 nurses from across three general hospitals in two separate Korean cities. The researchers generated data from responses to self-administered questionnaires and analyzed the results using various data analysis methods. Then, the researchers identified both emotional labor and job satisfaction as predictors of turnover.

Emotional labor refers to the ability to manage one's feelings, and researchers associated an inability to do so with a higher desire to leave the job. Similarly, researchers also associated low levels of job satisfaction with higher turnover intentions (Kim & Lee, 2014). These results indicated that organization leaders should attempt to help employees manage their emotional responses better to increase job satisfaction.

Researchers have explored the impact of work support and the potential for career advancement, discovering the importance of the work environment (Yang et al., 2015). Yang et al. (2015) compiled a sample of 526 nurses from eight hospitals in China. Yang et al. used the Work Support Scale, Nurse Turnover Intention Scale, and Organizational Career Growth Scale. After analyzing the data, the researchers found that a lack of work support was more likely to cause higher turnover intentions. Employees stated feelings of work support strengthened when facing career advancement opportunities, with researchers linking career advancement opportunities to turnover intentions (Yang et al., 2015). Consequently, the researchers concluded that a lack of career growth opportunities and work support was likely to drive higher desires to leave the job.

Researchers have also identified violations of the psychological contracts and low chances for advancement as reasons that nurses might depart from their positions (Takase et al., 2014). Takase et al. (2014) identified 1,337 potential participants and recruited 766 RNs and midwives from Japan. The researchers found that when nurses believed leaders violated established mutual expectations within the psychological contract, nurses would more likely want to leave their jobs. Researchers rarely mentioned this psychological contract in the literature about nurse turnover, making this study significant. Researchers identified the second factor contributing to turnover intentions as the lack of career advancement (Takase et al., 2014).

This finding was like other studies' findings that similarly showed a lack of career opportunities as contributors to turnover intentions (Mazurenko et al., 2015; Yang et al., 2015).

Although many researchers of nurse turnover used quantitative explorations, researchers also used qualitative approaches to understand better why nurses left their jobs (Hayward et al., 2016). Hayward et al. (2016) conducted interviews with 12 nurses who, on average, had spent 16 years practicing in the medical field. These nurses came from a variety of acute care inpatient environments. Following the collection of data from interviews, the researchers concluded that several factors promoted increased turnover. When the workload increased, when working relationships declined, when leadership was poor, and when there was higher patient acuity, nurse intention to leave and turnover increased (Hayward et al., 2016).

Dawson et al. (2014) conducted another qualitative exploration of nursing turnover by exploring experiences of turnover in Australian hospitals. Dawson et al. studied responses from 362 nurses in a national survey in three Australian territories. After analyzing the responses from these nurses, the researchers identified several reasons nurses might leave their positions. Staff who faced limited career opportunities, lack of recognition, poor support, and negative attitudes had increased turnover rates. Nurses reported working with a poor ratio of patients to staff and having an inappropriate mix of skills. Nurses rarely helped with decision making in their units, especially when facing rising patient demands. Therefore, nurses reported stress increased alongside increasing workloads, indicating a feeling of disempowerment (Dawson et al., 2014). Therefore, this qualitative exploration showed the negative circumstances that nurses faced, which led to increased turnover.

Nurses differ in why they decide to leave the profession or organization (Mazurenko et al., 2015). Researchers examined 8,796 nurses, drawing on data from the 2008 National Sample

Survey of RNs. Following data analysis, the researchers concluded that nurses who left the profession left because of work-related disabilities, burnout, illness, high physical demands, dissatisfaction with scheduling, and staffing arrangements. In contrast, nurses who left their jobs but stayed within the profession left because of dissatisfaction with leadership, dissatisfaction with career advancement opportunities, and poor compensation (Mazurenko et al., 2015). The findings showed that nurses left the profession rather than just their jobs for significantly different reasons.

Researchers have associated many factors with nurses leaving their companies. According to O'Brien-Pallas et al. (2010), some predominant factors precipitating nursing turnover include work hours, workload, teamwork, working relationships with leaders, professional development, autonomy, and stress levels. Stimpfel et al. (2012) discussed 12-hour nursing shifts as creating a hardship for nursing. Nurses who worked shifts 10 hours or more were almost three times more likely to experience issues (e.g., job dissatisfaction and burnout) compared to nurses who worked shorter shifts. Earlier researchers seemed to minimize the importance of scheduling and hours worked, stating that less than 6% of the variance of intent to stay was related to scheduling.

Karantzas et al. (2012) found a large correlation with RN turnover and an unsupportive work environment. Supervisor support was the largest component of determining a healthy work environment, and the findings showed an inverse relationship between staff perceived support and intention to leave (Karantzas et al., 2012). Researchers defined the quality of working relationships, particularly supervisor relationships, as having the largest impact on a nurse's intention to stay within an organization. Supervisor relationships remain one of the largest components of a nurse's job satisfaction (Galletta et al., 2013).

Impact of Nurse Turnover on Patient Care

Several notable consequences exist for patients when nurse turnover occurs, such as the resulting increase in mortality rates (Subramony et al., 2018). Leaders face increased mortality from increased turnover. Antwi and Bowblis (2016) defined nurse turnover as influencing mortality. The researchers examined the impact of turnover and found that when nurse turnover increased by 10%, a 19.3% increase in annual deficiencies would occur. The researchers defined this finding as resulting in lower rankings of inpatient quality associated with an increase in mortality (Antwi & Bowblis, 2016).

Researchers have stated that turnover of nurses can lead to negative patient outcomes. According to O'Brien-Pallas et al. (2010), leaders must manage turnover within nursing units to achieve high-quality patient care. Some researchers have associated turnover with an increase in "unit-acquired pressure ulcer rates" (Park et al., 2014, p. 1205). Park et al. (2014) obtained data from the National Database of Nursing Quality Indicators and analyzed a total of 2,294 units across 465 hospitals. The researchers found a significant impact of turnover occurred on unit-acquired pressure ulcers. Pressure ulcer rates increased by 4% every time that turnover increased by 10% within a single yearly quarter. The relationship was significant enough that the researchers recommended that hospital administrators should prepare for increased pressure ulcers during periods when turnover increased (Park et al., 2014).

Studies into turnover indicated many reasons why turnover and retention could occur. Workload (Subramony et al., 2018), work pressure (Yang et al., 2017), and burnout (Dyrbye et al., 2017) were a few of the factors associated with turnover. Likewise, leaders could encourage retention by increasing job satisfaction (Armstrong et al., 2017) and reducing job strain (Nei et al., 2015), among other actions. O'Brien-Pallas et al. (2010) delved further into this by

examining the impact and determinants of nurse turnover in a Canadian hospital. The authors examined and analyzed nurse surveys, unit managers, medical records, and human resource databases, showing that various factors impacted high turnover rates in Canadian hospitals (reportedly at 20%; O'Brien-Pallas et al., 2010). Their findings showed that lower job satisfaction was significantly related to turnover (O'Brien-Pallas et al., 2010). Tschannen et al. (2010) concluded similar findings when examining the relationship between missed nursing care, nurse turnover, and intention to leave. The authors used a cross-sectional approach, examining the staff working in 110 patient-care units in 10 acute-care hospitals. The findings showed that patient-care units with higher rates of missed care ($ß = .302$, $p < .0001$) and absenteeism ($ß = .247$, $p = .034$) had more nurses with intentions to leave (Tschannen et al., 2010).

Similar to the findings of O'Brien-Pallas et al. (2010), Tschannen et al. (2010) linked low levels of satisfaction to intentions to leave (and subsequent turnover). Smith et al. (2019) concurred and defined nurse job enjoyment as vital in addressing intentions to leave. Smith et al. also explored the relationships among missed nursing care, job enjoyment, and intention to leave for neonatal nurses. Using a cross-sectional design, the authors examined secondary data from the 2016 National Database of Nursing Quality Indicators RN Survey and found that 15% of nurses intended to leave their jobs (Smith et al., 2019). Further findings showed that intentions to leave neonatal nurse jobs occurred due to decreases in job enjoyment, resulting in missed nursing care, and decreased quality of patient care (Smith et al., 2019).

As such, these findings indicated empirical knowledge on the factors that would lead to turnover and retention among nurses, specifically due to low levels of satisfaction, enjoyment, job strain, and stress, among others (Smith et al., 2019; Tschannen et al., 2010). Researchers and leaders should acknowledge these factors to decrease the risk of turnover intentions among

nurses, which could lead to decreased patient care. NMs need to determine and address nurse turnover intention to ensure high-quality patient care (Smith et al., 2019).

Researchers have stated that turnover of nurses occur due to significantly high burnout rates. For instance, Chang et al. (2018) explored the impact of burnout on self-efficacy, outcome expectations, career interest, and nurse turnover. Using a cross-sectional design, the authors employed full-time nurses in their study, measuring burnout, self-efficacy, outcome expectations, career interest, and intent to stay (Chang et al., 2018). The findings showed that overall intents to leave among nurses were influenced by burnout levels (Chang et al., 2018). In turn, high turnover of nurses would lead to decreased patient outcomes (Chang et al., 2018). Kelly et al. (2020) reported similar findings, exploring the impact of nurse burnout on organizational and position turnover. The authors examined and surveyed 1,688 direct care nurses in three hospitals and showed that turnover was significantly high among nurses due to burnout reports (Kelly et al., 2020). Additionally, the impact of burnout on nurse turnover was significantly high, resulting in decreased patient care, as hospitals became understaffed (Kelly et al., 2020).

Furthermore, O'Brien-Pallas et al. (2010) showed how turnover of nurses could lead to increased job ambiguity, increased role conflict, and increased likelihood of medical error. Alsubhi et al. (2020) noted similar findings when examining nursing care and nurses' intentions to leave through an integrative review. The authors reviewed eight existing qualitative and quantitative studies on the topic and showed that turnover intention of nurses could lead to missed nursing care (Alsubhi et al., 2020). Alsubhi et al. (2020) also found that nurses with intentions to leave would more likely have lower performances and abilities in coordinating and providing care interventions properly, leading to errors and mistakes. As such, leaders must decrease the chances of turnover intentions among nurses to ensure high-quality patient care,

which merit the need to examine further the factors linked to turnover intention in this cohort (Kelly et al., 2020; O'Brien-Pallas et al., 2010). Nurses' intentions to leave could lead to decreased patient care and, ultimately, inadequate staffing (Alsubhi et al., 2020).

Sasso et al. (2019) also found that nurse staffing impacted nurses' intentions to leave, further leading to a decreased quality of patient care. The authors further examined the factors related to intention to leave among nurses and turnover. Through a cross-sectional approach, the authors surveyed 3,667 med-surg nurses in Italy, measuring factors of intention to leave, work environment, burnout, job satisfaction, and missed care (Sasso et al., 2019). The findings showed that 36% of nurses intended to leave their jobs, and 33% intended to leave the nursing profession altogether. The authors further found that nurses with intentions to leave experienced job dissatisfaction, understaffing, emotional exhaustion, poor patient safety, and performing non-nursing care (Sasso et al., 2019). Researchers should examine this finding further because nurses' intentions to leave their jobs, causing turnover, contributed to the shortage of nurses, leading to a decreased quality of patient care (Alsubhi et al., 2020; Sasso et al., 2019).

Turnover Intention

Researchers have tested age and turnover. Researchers have identified age as a significant variable associated with turnover intention (Bello et al., 2020; Sule & Omoankhalen, 2019). Sule and Omoankhalen (2019) examined age, marital status, and level of education and the relationships with turnover intention among academic staff of private higher institutions. Using employee retention theory as a theoretical framework, the researchers found older aged employees were more likely to stay in their organizations, while younger employees were more likely to have intent to leave (Sule & Omoankhalen, 2019). In an older study, Rhodes (1983) found concurrent findings and noted that younger employees were more likely to leave their

organizations than older employees. The author noted that younger employees often had lower job satisfaction and organizational commitment, leading to turnover intention (Rhodes, 1983). After many years, Bello et al. (2020) still noted these findings when investigating the demographic factors related to labor turnover in a manufacturing company. The authors examined age, work experience, and educational attainment, gathering survey data from 150 employees (Bello et al., 2020). The findings showed a significant effect of age on labor turnover in the manufacturing company (Bello et al., 2020). Furthermore, their findings indicated that educational qualification and labor turnover were significantly related (Bello et al., 2020). This pool of knowledge showed the importance of analyzing age as a demographic factor influencing turnover intention among employees (Bello et al., 2020; Rhodes, 1983; Sule & Omoankhalen, 2019). More research is needed regarding the relationship between age and turnover intention among nurses.

Other authors have underscored age in examining labor turnover. Researchers have noted that in general, younger employees are more likely to leave their jobs, as they are hastier in making decisions to leave an organization (Soomro, 2020). Kwon and Kang (2019) and Sun and Wang (2017) noted this finding in their studies, defining age as significantly influencing employees' decisions to remain in or quit an organization. Kwon and Kang (2019) noted that employees aged 45 and below would more likely have intent to leave their organizations. Soomro (2020) attempted to explain this phenomenon, underscoring that younger employees seemed intrinsically more uncertain than their older counterparts. Furthermore, younger employees tended to have more options and job opportunities than their older counterparts (Soomro, 2020). Hence, younger employees had lower levels of organizational commitment than

older employees (Soomro, 2020). As such, this body of findings showed empirical knowledge regarding age and its role on turnover intention.

Due to low levels of organizational commitment, hasty employee decision making, and more options and job opportunities among younger employees, young nurses are more likely to leave an organization. Labrague et al. (2018a, 2018b) also noted this finding, examining Filipino nurses. For instance, Labrague et al. (2018a) examined the factors influencing turnover intention among RNs in Samar, Philippines. Using a descriptive, cross-sectional approach, the authors studied 166 nurses and measured their demographics, work satisfaction, and work stress levels (Labrague et al., 2018a). Using descriptive and inferential statistical tools, the findings showed that nurses' ages were significantly related to turnover intentions (Labrague et al., 2018a). Younger nurses had higher intentions to leave their healthcare organization than the older ones. Also, their findings showed that job satisfaction and job stress were influential in driving turnover intentions in this cohort (Labrague et al., 2018a).

Labrague et al. (2018b) conducted a similar study in the Philippines, focusing on organizational commitment and turnover intention among rural nurses. The authors utilized a cross-sectional research design and tasked 166 nurses to answer surveys related to organizational commitment and turnover intention (Labrague et al., 2018b). The results showed that Filipino nurses' ages were significantly correlated to turnover intention, while an inverse relationship was found between organizational commitment and turnover intention (Labrague et al., 2018b). Like Labrague et al. (2018a), Labrague et al. (2018b) concluded that younger nurses were more likely to have turnover intentions than their older counterparts. This body of findings seemed consistent to those of past researchers, such as Kwon and Kang (2019), Soomro (2020), and Sun and Wang (2017). This topic is worth investigating further, specifically among U.S. nurses, as past

researchers of turnover intention, examining demographics factors of age and education, have only focused on Filipino nurses.

Similar to other researchers, Tourigny and Lituchy (2016) stated that younger nurses were more at risk of leaving the hospital. The researchers provided detailed statistical findings on the reasons that younger nurses contributed more to turnover rates than older nurses. The authors focused on occupational mental health and job attitudes among younger, middle-age, and older nurses (Tourigny & Lituchy, 2016). Among 252 hospital nurses from Trinidad and Tobago, the findings showed that younger nurses tended to leave their healthcare organizations because of high levels of stress and feelings of inadequacy in the job (Tourigny & Lituchy, 2016). Further, the authors found that younger nurses had significantly higher levels of stress, burnout, and depression symptoms while reporting low levels of job satisfaction and organizational commitment. Researchers found the extent of these factors considerably higher than middle-age and older nurses (Tourigny & Lituchy, 2016).

In line with Tourigny and Lituchy's (2016) findings, Burmeister et al. (2019) concluded similar results when determining factors associated with nurses' intentions to leave their positions and absenteeism. Conducting their study among nurses globally, the authors examined secondary data from direct-care RNs' responses to surveys from seven countries. Their findings showed that although the level of absenteeism and intent to leave varied significantly across countries, age was significantly associated (Burmeister et al., 2019). Age was found as a factor that significantly contributed to nurse absenteeism and intent to leave, as younger nurses had reportedly lower levels of job satisfaction than older nurses while having lower levels of experience (Burmeister et al., 2019). This body of findings is significant, indicating age as a determinant of turnover intention and absenteeism, even across various international countries.

Aside from age, research has shown that education has a vital role in turnover intention. Researchers have noted that the level of educational attainment influences the turnover intention among employees (Adebiyi et al., 2020; Yakubu, 2018). Employees with high levels of educational attainment are more likely to leave their organizations and have lower levels of organizational commitment (Labrague et al., 2018a; Yakubu, 2018). Labrague et al. (2018b) defined education as significantly associated with turnover intention due to low levels of organizational commitment. Su (2020) reported similar results when examining the psychometric properties of the Turnover Intention Scale. The author conducted a cross-sectional study in Chinese cities and found that, in the tested models for predicting turnover intentions of social workers, educational attainment was a significant predictor (Su, 2020). The findings also showed that employees with higher levels of educational attainment reported significantly higher levels of turnover intention, as measured through the Turnover Intention Scale (Su, 2020). Su (2020) showed that employees with a higher level of educational attainment also had lower levels of job satisfaction.

In addition to Su (2020), Ju and Li (2019) noted similar findings when exploring the impact of training, job tenure, and education-job and skills-job matches on employee turnover intention. The authors employed 1,531 respondents in South Korea, examining variables of training, job tenure, education-job match, skills-job match, and turnover intention in their organizations (Ju & Li, 2019). The results showed that employees with higher levels of educational attainment were more likely to have low job satisfaction (Ju & Li, 2019). This finding occurred when the authors compared overeducated employees and adequately educated employees (Ju & Li, 2019). This body of knowledge showed the role of education in influencing turnover intention (Ju & Li, 2019). Turnover can be influenced by education, as well as age, in

varying industries. More research is needed to examine the variable of education on turnover intention, specifically among U.S. nurses.

Yakubu (2018) also underscored the role of education in explaining turnover intentions. The author studied teachers in Tamale Technical University, capturing and analyzing demographic factors of level of education, marital status, age group, gender, income level, and tenure (Yakubu, 2018). The findings showed that level of education could be used to predict the turnover among academic staff; those with higher academic qualifications and educational backgrounds were more likely to leave the university, because they could gain more opportunities and increased incomes outside of the university (Yakubu, 2018).

Similarly, Nursalam et al. (2020) studied turnover intention specifically among nurses. The authors examined the relationship between organizational commitment, personal factors, and burnout syndrome to turnover intention in nurses. Employing 83 nurses, the authors found that only education had a significant relationship with burnout syndrome and, consequently, turnover intention (Nursalam et al., 2020). The authors further concluded that to reduce the levels of nurse turnover in Indonesia, leaders should pay more attention to the nurses' educational characteristics and their emotional and individual needs (Nursalam et al., 2020). Therefore, future researchers should study U.S. nurses and their levels of educational attainment. Yakubu (2018) and Nursalam et al. (2020) did not specifically focus on the level of educational attainment of U.S. nurses and its relationship to their turnover intentions.

Manager Characteristics and Staff Turnover

Researchers have supported the notion that the characteristics of managers have a profound effect on turnover rates (Bass et al., 2018; Malek et al., 2018). Specifically, researchers have stated supportive managers who create and sustain a positive work environment can

decrease employees' intent to leave (Doe et al., 2015; Sabat et al., 2020). Such managers should have emotional intelligence (EI) to adapt to their employees' needs (Doe et al., 2015). Doe et al. (2015) examined this topic further and found that leaders with high EI scores not only result in improved organizational outcomes, but also increased employee satisfaction. In addition to this, Sabat et al. (2020) stated that managers' own beliefs and biases can lead to increased voluntary turnover. Sabat et al. (2020) further discovered that leaders that are effective supervisors can significantly and positively impact staff satisfaction and turnover intention. I found Sabat et al.'s study to be unique because the researchers utilized the perceptions of both employers and employees across four different points in time.

Adding to these findings, managers with adept communication skills can reduce turnover rates (Bass et al., 2018). Bass et al. (2018) noted this after they examined employee retention and turnover in a global software development company. Malek et al. (2018) noted similar outcomes when exploring the impact of managers on employee turnover intentions. The authors focused on the hospitality industry in the southeastern United States and found that management communication and style, as well as manager-employee relationship, are vital in reducing employee turnover (Malek et al., 2018). Malek et al. (2018) concluded leaders needed to supply more training for managers to enhance their effectiveness in communication and leadership style to reduce turnover intentions in their study. Although not healthcare-specific, researchers have argued that characteristics of managers, such as high emotional scores, positive attitude, and advocacy for positive workplace environment, predict leadership effectiveness and thus decrease employee turnover rates (Bass et al., 2018; Malek et al., 2018).

Nurse Managers and Staff Turnover

Acree (2006) acknowledged limited studies focused on nursing leadership and staff nurse retention. Although the current literature remains sparse, researchers have historically linked NMs' characteristics with nursing retention. Researchers have defined strategies to enhance leadership training as important in decreasing nurse turnover (Acree, 2006; Hayward et al., 2016; Pishgooie et al., 2019). Furthermore, research indicates that NM characteristics continue to have a direct impact on nursing turnover rates (Hayward et al., 2016; Pishgooie et al., 2019). For instance, Pishgooie et al. (2019) found a strong correlation between nursing managers' leadership styles and the anticipated turnover of nursing staff, as they examined 1,617 nurses working in government hospitals in Iran. NMs with transactional leadership characteristics improved the level of employee satisfaction, decreasing both nurse stress and anticipated turnover (Pishgooie et al., 2019). Further to this finding, Hayward et al. (2016) recommended that nurse leaders and staff nurses develop relationships that influence a staff nurse's intention to stay on the job. NMs should acknowledge the importance of managing day-to-day operations while fostering relationships with their staff through inspiration, motivation, and cultivation of their greatest potential. There is little consensus on how to develop an NM's leadership style to decrease nursing turnover rates.

More researchers have supported the finding that characteristics of managers are linked to nurse turnover rates. Managers with high managerial qualities can encourage nurse retention (Purdy et al., 2014; Suliman et al., 2020; Wang et al., 2018). Purdy et al. (2014) noted that leaders had defined nursing shortages as influencing patient outcomes, finding the need to retain nurses. The investigation of Purdy et al. (2014) included an analysis of management qualities associated with increased retention. This study took the form of a literature review, drawing upon

studies from both PubMed and CINAHL (Purdy et al., 2014). Following a review of the

literature, the researchers concluded that specific types of managers were more likely to retain

nurses (Purdy et al., 2014). Those managers who used practices of transformational leadership

and demonstrated high EI were more likely to retain their staff. These same leaders often could

psychologically empower their nurses' staff (Purdy et al., 2014). Consequently, the researchers

concluded that employing the right types of managers might encourage increased nurse retention

(Purdy et al., 2014). Wang et al. (2018) concurred with these findings, as they defined EI as a

forecaster of a person's intent to leave a company. The researchers studied the role of both

transformational leadership and EI in retaining nursing staff. A total of 535 Chinese nurses were

drawn for a sample (Wang et al., 2018). The researchers drew their data from this sample and,

following analysis, concluded that transformational leadership was a predictor of employee

retention, which is consistent with the findings of Purdy et al. (2014; Wang et al., 2018).

Similarly, Suliman et al. (2020) aimed to examine the impact of NMs' leadership

characteristics and styles on predicted nurse turnover. Through a descriptive, cross-sectional, and

correlational approach, the authors administered surveys to 280 nurses in three public sector

hospitals in Jordan. The findings of their study showed that leaders that are inspiring and

motivating significantly reduced overall predicted nurse turnover (Suliman et al., 2020). Heidari

et al. (2017) concurred, noting that NMs who provide support to their staff result to positive

outcomes, such as job satisfaction and decreased turnover intention of nurses. As such, a leader

with transformational characteristics, such as being motivational and inspiring, and those who

exercise high levels of EI can positively influence a worker's intentions to remain on the job

(Purdy et al., 2014; Suliman et al., 2020; Wang et al., 2018). Overall, it can be concluded that

leaders who are motivational and inspirational could significantly decrease the turnover intentions of nurses (Heidari et al., 2017; Suliman et al., 2020; Wang et al., 2018).

Promoting Retention

Research indicated an association between turnover, turnover cognitions, turnover intentions, and actual turnover (Nei et al., 2015). Nei et al. (2015) conducted a meta-analytic assessment to understand the strongest predictors of voluntary turnover based on data from 106 primary studies. Following the analysis of the data, the researchers concluded that several ways of promoting retention could exist. When nurses perceived that their leadership supported their decisions and kept open lines of communication, nurses were more likely to stay. Moreover, nurses who experienced organizational commitment would stay on the job. However, as job strain, role tension, lack of team cohesion, and work-family conflicts increased, the chances of turnover were likely to increase. The research team also identified other variables, such as job complexity, as predicting turnover (Nei et al., 2015). The findings showed that factors that produced job strain were predictive of turnover, but nurses acknowledged identifiable factors could encourage retention.

Leaders may use multiple ways to improve retention. Leaders may promote retention by reducing the patient workload (Subramony et al., 2018). Therefore, leaders can promote retention by increasing staffing. Researchers also recommended increasing flexible scheduling to increase workplace satisfaction, which may contribute to retaining nurses (Armstrong et al., 2017). Studies have also shown that commitment to the job increased when nurses felt more involved in their jobs (Armstrong et al., 2017).

Leaders can use one tactic for promoting retention based on unit-level nurse data (Park & Boyle, 2015). Although general trends may contribute to an understanding of the factors that

influence nurse turnover intentions across multiple hospitals, individual hospital leaders may determine specific factors within their organizations that impact turnover intentions among nurses. Park and Boyle (2015) collected data from the National Database of Nursing Quality Indicators, using surveys from 178 hospitals. The results indicated that most hospital leaders surveyed either *agreed* or *strongly agreed* that they could use quality unit-level data. Hospital leaders used these data to learn about turnover and the stress of certain factors within their organizations (Park & Boyle, 2015). The researchers suggested that hospital leaders collecting unit-level data would more easily show burdens that promoted turnover.

Leaders increasing levels of organizational justice and highlighting personal demographic characteristics can encourage nurse retention (Chen et al., 2018; Matarid et al., 2018). Chen et al. (2018) and Kash et al. (2010) noted that nursing shortages had started influencing patient outcomes and that retaining nurses was critical. Kash et al. (2010) explained that healthcare organization leaders should consider nurse job satisfaction, perceived empowerment, and education level when developing ways to retain nurses in nursing homes and hospitals. Similarly, researchers have concluded that leaders required critical interventions to address the factors that could impact intent to stay to retain nurses (Alsubhi et al., 2020; Chen et al., 2018). Sasso et al. (2019) proposed more efforts to increase nurses' positive perceptions of quality and safety of care, providing opportunities for nurses to perform core nursing activities to increase their job satisfaction levels. This body of knowledge showed how to decrease the risk of nurses' intentions to leave, which leaders could use for averting nursing shortages. More researchers should incorporate demographic factors in their studies to show that hospital efforts and interventions can potentially increase nurse retention.

Summary

NMs in the healthcare industry may have emotionally draining experiences. As a result, many nurses experience burnout, and leaders face high turnover (Armstrong et al., 2017; Duffield et al., 2014; Kovner et al., 2014; Subramony et al., 2018). Researchers have defined multiple factors as contributing to nurse retention, with demographic factors defined as influencing retaining nurses (Hoonakker et al., 2013; Van der Heijden et al., 2018). Examining demographics of NMs could lead to increased knowledge and better understanding of how to influence retention positively within a nursing unit. However, the literature is mostly lacking information about the association between nurse turnover intentions and NM age, education, gender, and tenure among U.S. nurses.

Some researchers have linked positive attitudes and increased organizational commitment to decreased turnover intentions among nurses; however, there is a lack of literature regarding specific demographic factors that significantly impact turnover among nurses (Labrague et al., 2018a, 2018b). Research among nurses has shown why they leave their jobs and professions, with many reasons linked to stress and burnout. However, researchers have linked several NM factors that seem to reduce nurse turnover, including reducing patient workload, increasing flexible scheduling, and increasing nursing engagement (Dyrbye et al., 2017; Smith et al., 2019; Yang et al., 2017).

Younger nurses with higher levels of educational attainment are more likely to encourage increased retention (Labrague et al., 2018a; Labrague et al., 2018b) while NMs' leadership characteristics, such as experience and leadership styles, have a significant effect on staff nurse turnover (Majeed & Jamshed, 2020; Van der Heijden et al., 2019). However, there was little in the literature about this topic among U.S. nurses (Smith et al., 2019). Consequently, there

remains a gap in the literature about this relationship, specifically how age, gender, tenure, and education among NMs impacts staff turnover intentions. Chapter 3 includes the research design, sample, tests, and the data analysis plan conceived to address this study's research questions. I gathered data from nurses and data analysis to better understand the relationship between nurse turnover intentions and NMs' ages, genders, tenure, and education levels.

Chapter 3: Research Methods and Design

The purpose of this quantitative study was to examine the relationship between nurse turnover rates and med-surg NMs' ages, gender, tenure, levels of education. Leaders who face med-surg turnover generate substantial recruitment and training costs (Galletta et al., 2013), poor patient outcomes (Choi et al., 2011), and lower nurses' engagement (Roche et al., 2015). Researchers have linked demographic factors to turnover rates in many fields, but there is limited research within nursing (Soomro, 2020). In future research suggestions, Soomro (2020) and Labrague et al. (2018a) encouraged researchers to explore demographic factors in relation to nursing turnover.

Research Approach and Design

I used a quantitative nonexperimental correlational research design to examine research questions intended to study the relationship between nursing turnover rates and NMs' ages, genders, tenure, and levels of education. Researchers base their quantitative research designs on a postpositivist interpretive framework grounded in the scientific method (Leedy & Ormrod, 2015). Postpositivist researchers rely on empirical data collected using standardized measures and inferential statistics to test hypotheses. Key assumptions for using postpositivism include knowledge formed from empirical instruments for data collection, evidence, and reflection (Leedy & Ormrod, 2015); thus, I examined relationships between variables using hypotheses testing, validity, reliability, and repeatability critical for generalizing findings.

Quantitative researchers find designs appropriate when they have clearly defined and empirically measurable variables. Such researchers must clearly state the research problem as testable using hypotheses, with a desire for generalizable findings (Leedy & Ormrod, 2015). Nonexperimental design researchers do not manipulate an independent variable and random

assignment of participants, and research questions involve a nonassociative statistical relationship between variables, such as correlations (Leedy & Ormrod, 2015). Researchers can use correlational research designs to test empirical relationships between variables, with data collection for each variable sufficiently close in time to create an exogenous variable (Leedy & Ormrod, 2015).

Based on the study's purpose and research questions, the current researcher used a nonexperimental, correlational research design as the most rigorous quantitative approach found appropriate for this study. The turnover rate represented the dependent variable, while the independent variables included NMs' ages, genders, tenure, and levels of educational attainment. I analyzed demographic descriptive and correlational inferential data and statistics to test hypotheses. The research questions and hypotheses included the following:

RQ1: What is the relationship between NMs' educational level and their units' turnover rates?

H_01: There is no statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

H_a1: There is a statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

RQ2: What is the relationship between NMs' tenure and their units' turnover rates?

H_02: There is no statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

H_a2: There is a statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

RQ3: What is the relationship between the NMs' age and their units' turnover rates?

H_03: There is no statistically significant relationship between the NMs' age and nursing turnover rates on their units.

H_a3: There is a statistically significant relationship between the NMs' age and nursing turnover rates on their units.

RQ4: What is the relationship between NMs' gender and their units' turnover rates?

H_04: There is no statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

H_a4: There is a statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

Population

The population consisted of approximately 1,200 med-surg NMs. The population resided in the Dallas-Fort Worth metroplex (BLS, 2018).

Sample

I used a purposive sampling technique to recruit the participants. Researchers use the purposive sample technique to gather a nonprobability sample based on specific characteristics of the study purpose and population (Leedy & Ormrod, 2015). Purposive sampling techniques are less rigorous than random sampling techniques due to the potential for unconscious researcher bias and participant self-selection bias; moreover, the sample may not represent the entire population. I determined that using a random sample would be impractical based on the study population and minimum sample size.

Minimum Sample Size

I used G*Power to determine a minimum sample size of 116 participants. The calculations were based on a two-tailed test, a medium effect size of .3, an alpha of .0125, and an

a priori power of .8. These parameters yielded an a priori sample size of 116, which means that at least 116 valid participants would be needed for the test results to be generalizable (Appendix A).

Setting and Context of the Study

The setting of the study included medical/surgical units at 100+ hospitals and surgical centers. These centers were located in North Texas, specifically the Dallas-Fort Worth metroplex. I asked NMs to participate by completing online surveys hosted on a SurveyMonkey portal.

Instrumentation

The instruments included a researcher-developed demographic survey (Appendix C). I asked the participants to respond to a demographic survey used to gather data on age, gender, educational attainment, and years as a manager. Table 1 shows the operationalization and measurement for all study variables. The ratio variable included unit turnover. The continuous variable included age, and the categorical variables included educational attainment and gender.

Table 1

Variables, Scales of Measurement, Variable Type, and Operationalization

Variable	Scales of measurement	Variable type	Source
Unit turnover rate	Ratio	Dependent variable	Turnover ratio
Age	Continuous	Independent variable	Demographic survey
Educational attainment	Categorical	Independent variable	Demographic survey
Years as manager	Continuous	Independent variable	Demographic survey
Gender	Categorical	Independent variable	Demographic survey

Turnover Rate

I measured the NMs' turnover rates by the participants' self-disclosed 12-month turnover rate. I defined this rate as the number of nurses who left for any reason over the preceding 12-month period based on other research (see Nei et al., 2015).

Independent Variables

I treated NMs' ages, educational levels, gender, and tenure as independent variables based on earlier researchers who noted that age and educational attainment were related to turnover intentions (Labrague et al., 2018a, 2018b). I defined age as an independent variable. I defined educational level as ordinal by using the following categories: 1 = *associate*s *degree,* 2 = *college degree,* and 3 = *master's degree*.

Data Collection Procedures

After institutional review board (IRB) approval, I created a mailing list of med-surg NMs from publicly available databases and a recruitment email (Appendix A) for participation. The participants selected an active link in the recruitment email, leading to surveys hosted on a

SurveyMonkey portal page. The participants completed the demographic survey. After one week, additional email requests were resent, requesting med-surg NM participation. The inclusion criteria for the study consisted of being employed as the NM on a medical/surgical unit for a minimum of 12 months to cover the period for calculating unit turnover.

Data Analysis Plan

I imported data gathered in the study to SPSS v.26.0 to prepare for data analyses. I then used frequencies and percentages to describe the participants based on their demographic characteristics and also used frequencies and percentages to describe the participants' responses in the demographic survey. I conducted Spearman's correlation analyses to examine the relationship of ages and years as a manager with turnover rates and to address the research questions posed in the study because of the ordinal variables. Spearman's correlation analyses were also conducted (see Table 2) to examine the relationship of gender and educational attainment with the turnover rate because of the categorical and ordinal variables. I measured the strength of an association between two variables: The value $r = 1$ represented a perfect positive correlation, and the value $r = -1$ represented a perfect negative correlation (see Leedy & Ormrod, 2015). Bonferroni correction was applied to handle the increased risk of a Type 1 error in conducting multiple statistical tests. Thus, a significance level of .0125 instead of .05 was used for all analyses. A significance level of .0125 was selected as there were four independent variables measured throughout data analysis.

Table 2

Statistical Tests for Null Hypotheses

Hypothesis	Variables	Statistic
H_o1: There is no statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.	Turnover rate, educational attainment	Spearman's correlation analysis
H_o2: There is no statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.	Turnover rate, tenure	Spearman's correlation analysis
H_o3: There is no statistically significant relationship between the NMs' age and nursing turnover rates on their units.	Turnover rate, age	Spearman's correlation analysis
H_o4: There is no statistically significant relationship between the NMs' gender and nursing turnover rates on their units.	Turnover rate, gender	Spearman's correlation analysis

Ethical Considerations

I asked the Abilene Christian University's IRB to review the research to ensure all ethical aspects related to the research were met. All data will be stored on a password-protected website, with electronic data stored on a secure hard drive for three years. All information provided by the participants will remain secure and confidential. I did not collect data until approval from Abilene Christian University's IRB.

All participants gave informed consents before participating. The applicants could participate solely voluntarily. The consent indicated the research procedures, risks, benefits, and discussion of confidentiality practices. Individuals or by hospital leaders employing the NMs did not individually identify NMs. I did not provide incentives for the NMs to participate. The NMs could receive a summary of their responses from the demographic questionnaire.

Assumptions

The use of Pearson correlation statistics showed the normal distribution (skewness and kurtosis) of variables. If data were abnormally distributed, I conducted Spearman's correlation analysis, the non-parametric counterpart of Pearson's. I conducted Spearman's correlation for ordinal and categorical variables, such as age, years as manager, educational attainment and gender, respectively (see Leedy & Ormrod, 2015).

Summary and Preview of the Next Chapter

The purpose of this quantitative study was to examine the relationship between nursing turnover rates and med-surg NMs' ages, genders, tenure, and levels of education. The setting of the study entailed Texas-based medical/surgical units at 100+ hospital and surgical centers in North Texas. I recruited for a minimum purposive sample of 119 med-surg NMs from a population of approximately 1,200 to address the quantitative research questions.

Chapter 4: Presentation and Analysis of Data

This chapter includes the data collected by the systematic application of quantitative research methodology. I conducted a quantitative study to examine the relationship between nurse turnover and med-surg NMs' ages, genders, tenure, and levels of education. This chapter includes a presentation of the research conducted, results of the data collection and analysis, and a summary of findings. The research questions and hypotheses guiding this study included the following:

RQ1: What is the relationship between NMs' educational level and their units' turnover rates?

H_01: There is no statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

H_a1: There is a statistically significant relationship between the educational level of NMs and nursing turnover rates on their units.

RQ2: What is the relationship between NMs' tenure and their units' turnover rates?

H_02: There is no statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

H_a2: There is a statistically significant relationship between the NMs' tenure and nursing turnover rates on their units.

RQ3: What is the relationship between the NMs' age and their units' turnover rates?

H_03: There is no statistically significant relationship between the NMs' age and nursing turnover rates on their units.

H_a3: There is a statistically significant relationship between the NMs' age and nursing turnover rates on their units.

RQ4: What is the relationship between NMs' gender and their units' turnover rates?

H₀4: There is no statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

Hₐ4: There is a statistically significant relationship between the NMs' gender and nursing turnover rates on their units.

Data Collection Process

The participants included med-surg NMs recruited from the Dallas-Ft. Worth metroplex, with approximately 1,200 med-surg NMs in the area (BLS, 2018). I was able to obtain email addresses for approximately 800 med-surg NMs and sent them an invitation to participate through direct email addresses. The respondents had to join a SurveyMonkey portal to receive the study information by clicking the consent button on the Informed Consent Agreement before beginning the online assessments. Data was derived from the participants through a SurveyMonkey link. The participants completed the demographic survey by entering their ages, educational attainment, and unit turnover rates. SurveyMonkey automatically compiled the data and exported it to a spreadsheet for analysis.

Data Analysis

Among the 800 med-surg NMs invited to participate in the study, a total of 91 participants responded to the demographic survey questionnaires resulting in a response rate of 11.4%. Based on the post hoc power analysis, considering a two-tailed test for a correlation analysis with a $p = .0125$, the sample of 91 participants resulted to a power of 67.35% (Appendix B). This indicated that there is a 32.65% chance of having a statistically insignificant relationship between the variables when there is a significant relationship in reality. A total of 80 female (87.9%) and 11 male participants (12.1%) responded to the questionnaires (see Table 3).

Regarding educational attainment, about 50.5% of the participants completed a Master of Science in Nursing degree ($n = 46$), 48.4% of participants completed a Bachelor of Science in Nursing degree ($n = 44$), and 1.1% of participants completed an Associate's Degree in Nursing ($n = 1$).

Table 3

Frequencies and Percentages of Gender and Educational Attainment (N = 91)

	Category	f	%
Gender	Male	11	12.1
	Female	80	87.9
	Total	91	100.0
Educational Attainment	Associates Degree in Nursing	1	1.1
	Bachelor of Science in Nursing	44	48.4
	Master of Science in Nursing	46	50.5
	Total	91	100.0

Table 4 presents the descriptive statistics of age, years as manager, and turnover. The participants identified their ages as ranging from 26 to 71 years old, with a mean of 44.73 years old ($SD = 9.67$). The participants identified their years as managers as ranging from 1 year to 45 years, with a mean of 8.89 years ($SD = 7.86$). Regarding turnover, the ranges went from 0 to 28, with a mean of 11.55 ($SD = 6.82$).

Table 4

Descriptive Statistics of Age, Years as Manager, and Turnover (N = 91)

	N	Minimum	Maximum	M	SD
Age	91	26	71	44.73	9.67
Years as Manager	91	1	45	8.89	7.86
Turnover	91	0	28	11.55	6.82

I used inferential statistics to test the hypotheses in the study and used Pearson's correlation analyses to test the relationship between identified variables. Relationships between

demographic characteristics and turnover using correlation analyses were then investigated. I calculated Spearman's correlations for ordinal demographic characteristics (e.g., age and years as a manager). Additionally, I used Spearman's r_s correlation analyses for nominal demographic characteristics, such as tenure, age, gender, and educational attainment.

The first set of hypotheses showed the relationship between the NMs' educational level and their units' turnover rates. Spearman's correlations were then calculated between educational level and turnover rates. The result showed a negative association between educational attainment and turnover rates (Spearman's $r_s(91) = -.251$, $p = .016$). However, the relationship was insignificant at a p-value of .0125. Therefore, there was insufficient evidence to reject the first null hypothesis posed in the study.

The second set of hypotheses showed the relationship between the NMs' tenure and their units' turnover rates. Spearman's correlations between years as manager and turnover rates showed a significant negative correlation between years as a manager and turnover rates (Spearman's $r_s(91) = -.262$, $p = .012$). The result indicated that NMs who had greater years as managers had lower turnover rates. I gathered enough evidence to reject the second null hypothesis in the study.

The third set of hypotheses showed the relationship between the NMs' ages and their units' turnover rates. Spearman's correlations between age and turnover rates resulted in a negative association between age and turnover (Spearman's $r_s(91) = -.273$, $p = .009$). I also determined the result to be significant, indicating that older NMs had lower turnover rates. Therefore, I found sufficient evidence to reject the third null hypothesis posed in the study.

The fourth set of hypotheses showed the relationship between the NMs' genders and their units' turnover rates. I conducted Spearman's correlation analysis between gender and turnover

rates. The result of the analyses showed a negative association occurred between gender and turnover; however, I found the relationship insignificant (Spearman's $r_s(91) = -.103$, $p > .05$). Therefore, I found insufficient evidence to reject the fourth null hypothesis posed in the study.

Table 5

Spearman's Correlation Matrix for Age, Years as Manager, Gender, Educational Attainment and Turnover (N = 91)

Test	Variable	Turnover
Spearman's r_s	Age	-.273[*]
	Years as Manager	-.262[*]
	Gender	-.103
	Educational Attainment	-.251

Note. *$p < .0125$ (2-tailed).

Summary

I conducted the quantitative study to examine the relationship between med-surg NMs' ages, genders, tenure, levels of education, and nurse turnover rates. A total of 91 participants responded to the demographic surveys questionnaires. The participants included med-surg NMs recruited from the Dallas-Ft. Worth metroplex. I used inferential statistics to test the hypotheses posed in the study. The first set of hypotheses showed the relationship between the NMs' educational levels and their units' turnover rates. The result of the analyses showed a negative association between educational attainment and turnover rates; however, the relationship was insignificant, $r_s(91) = -.251$, $p = .016$. The second set of hypotheses showed the relationship between the NMs' tenure and their units' turnover rates. The result of the analyses showed a significant negative association between years as a manager and turnover rates, $r_s(91) = -.262$, $p = .012$. The third set of hypotheses showed the relationship between the NMs' ages and their units' turnover rates. The result of the analyses showed a negative association between age and

turnover, $r_s(91) = -.273$, $p = .009$. The fourth set of hypotheses showed the relationship between the NMs' genders and their units' turnover rates. The result of the analyses showed a negative association between gender and turnover; however, I found the relationship insignificant, $r_s(91) = -.103$, $p = .332$.

In Chapter 5, I provide a comprehensive summary of the analysis. The chapter contains interpretations of the findings and limitations compared to the foreseen limitations in Chapter 1. I present some recommendations for future research and discusses the implications for practice and future studies. Chapter 5 includes a summary of the study's findings and significance.

Chapter 5: Discussion and Conclusion

The purpose of this quantitative study was to examine the relationship between staff nurse turnover rates and med-surg NMs' ages, genders, tenure, levels of education. Researchers have associated med-surg nursing turnover rates with lower-quality patient care and diminished patient outcomes (Griffiths et al., 2008), poor patient satisfaction (O'Brien-Pallas et al., 2010), and high costs for the hospital (Carter & Tourangeau, 2012). Researchers have supported that the leadership characteristics of NMs have a profound effect on turnover rates (Gormley, 2011; MacKusick & Minick, 2010; Roberge, 2009).

Previous research has indicated that certain NM leadership characteristics are associated with nursing turnover rates (Asamani et al., 2016; Roche et al., 2015). According to Asamani et al. (2016), effective NMs create learning experiences for staff to support job satisfaction among subordinate employees, aid employees in reaching their highest potential, and create opportunities for career development to accommodate personal priorities. Asamani et al. defined NMs' characteristics, such as charisma, intellectual stimulation, and inspirational motivation for staff, as having some of the greatest effects on nursing turnover rates. Although not healthcare specific, researchers also showed that high emotional scores could be used to predict leadership effectiveness and decrease employee turnover rates (Abdul & Ehiobuche, 2011; Walter et al., 2011).

This chapter includes a discussion of results from data analysis. This chapter includes both a summary and interpretation of study findings, as well as detailed information on theoretical and methodological limitations. Recommendations for existing practice and future research follows. Then, I elucidate some implications of the study results. Finally, this chapter contains a brief conclusion of the study.

Summary of Findings

I recruited 91 participants to complete this study. The participants began by answering a demographic survey, which included information on gender, educational attainment, and age. Additionally, through the demographic survey, the participants answered the number of years they spent as an acting NM. I analyzed demographic surveys using descriptive statistics. The results showed a large discrepancy regarding gender, as 88% of the participants identified as female. When considering educational attainment, approximately 50.5% of NMs had achieved a Master of Science in Nursing, while an estimated 49.4% of participants held a Bachelor of Science in Nursing. Additionally, one participant reported earning an associate degree in nursing.

Overall, the ages, experiences, and turnover rates reported by the participants varied widely. The age of participants largely differed, from 26 years of age to 71 years of age, with the average age estimated at 45 years. Similarly, the number of years the participants had held an NM position varied. Some NMs had as little as one year of experience, while other participants reported as many as 45 years within their respective positions. Finally, the participants reported on their nursing units' respective turnover rates. Some participants reported no employee turnover, while other participants described turnover rates as high as 28%.

I analyzed data from the demographic surveys using inferential statistics beginning with Pearson's correlation analyses to test the relationship between identified variables, such as ages and years of experience. Then I investigated relationships between demographic characteristics and turnover using Spearman's r_s correlation analyses for nominal demographic characteristics, such as tenure, gender, age, and educational attainment. Using demographic data, I tested the relationship between the NMs educational level and turnover rates of respective units. However,

there was no statistical significance between NMs educational level and turnover rate within their units.

The second research question showed the relationship between NM years of experience and staff turnover rate within respective nursing units. Using a Spearman's correlation to test the hypothesis, a significant negative relationship occurred between NM tenure and turnover rate. With a significantly significant relationship, the null hypothesis could be rejected.

The third research question showed if there was a relationship between NM age and turnover in respective units. I used a Spearman's correlation to test data regarding the relationship between NM age and staff turnover. The results indicated a statistically significant negative relationship between NM age and turnover rates. Thus, the older the NM, the less turnover experienced among staff.

Lastly, the fourth research question showed if there was a relationship between NM gender and turnover in respective units. Also, I used a Spearman's correlation to test the data set regarding the relationship between NM gender and staff turnover.

Interpretations of Findings

The results of this study indicated that some sociodemographic variables, such as educational level and age, could impact the rates of turnover in NM units. First, I did not find any statistically significant relationship between increased NM education and reduced employee turnover within their units. Researchers have defined high levels of job satisfaction as a strong indicator of reduced turnover (Buccheri, 1986; Duxbury et al., 1984; Hayward et al., 2016; Kim & Lee, 2014). While one can infer that NMs with higher educational levels possess increased knowledge and skills to facilitate positive working environments and increase job satisfaction among employees, including how to balance nurse workload associated with a reduction in nurse

turnover (Subramony et al., 2018), findings suggest that this relationship is not statistically significant when considering nurse turnover.

I could establish that NM age influenced employee turnover, as older NMs were less likely to experience turnover. This finding was also consistent with findings of prior research, as relationships between age might indicate creating suitable work environments and possessing desirable leadership traits. Buccheri (1986) found a strong correlation with staff nurse turnover and satisfaction with their respective NM. As younger NMs would more likely experience higher turnover rates, one can infer that they are too young to create environments that adequately facilitate job satisfaction (Buccheri, 1986; Duxbury et al., 1984). Similarly, Fletcher (2001) found that unreliable NMs also negatively influenced job satisfaction. As youth anecdotally could indicate reduced levels of reliability, findings of this study were congruent with the findings of Fletcher (2001).

Confounding the relationship among NM educational level, age, and turnover is the influence of tenure of the NM and turnover of nursing staff. The impact of the tenure of NMs on nurse turnover was the focus of the second research question. The findings indicated that although a significant negative relationship was observed, researchers found tenure a significant indicator of turnover of nurses within the unit. Thus, NMs' ages may interoperate with NM tenure to create job satisfaction among employees, resulting in reduced turnover (Hayward et al., 2016).

Limitations

There were several limitations in this study. The first limitation involved using self-report tools to collect data. Self-report tools are beneficial to studies wishing to collect opinions, thoughts, or beliefs from participants. However, self-report measures are prone to a phenomenon

known as social desirability bias, in which participants answer questions about how they believe

they should, regardless of accuracy (Chung & Monroe, 2003). Although this issue is well-

mitigated using informed consent and emphasis on truthfulness from the researcher, social

desirability bias may impact study findings and reduce the validity of the study (Chung &

Monroe, 2003).

In addition, I chose a sampling strategy that caused some limitations. According to the

BLS (2018), the Dallas- Fort Worth metroplex at that time employed 1,200 med-surg NMs. I was

able to obtain approximately 800 med-surg NM email addresses through publicly accessible

databases. The decrease in the total number of potential respondents might make it difficult to

generalize results to the entire population within this area. The response rate of 11.4% also might

make the results difficult to generalize to the local geographic area. All sample participants came

from med-surg NMs in the Dallas-Fort Worth metroplex. As all participants derived from the

same medical complex, the results of this study might not be generalizable outside of this

complex, nor in medical complexes in other localities. Additionally, the study's results could not

be generalized outside the med-surg NM population. I estimated the original sample size at 119

participants; however, only 91 individuals participated. The reduction in the number of

participants could also impact the validity of study findings. Finally, I recruited all participants

using a purposive sampling method—a less rigorous sampling method than others (see Leedy &

Ormrod, 2015). However, I found purposive sampling beneficial to recruiting persons with

desirable traits. Still, there existed the potential for researcher bias, and the participants selected

might not represent the overall population (see Leedy & Ormrod, 2015).

Recommendations for Future Research

There are many avenues for future research. Future researchers may want to replicate this study with participants from multiple med-surg organizations. Additionally, researchers using more participants may understand relationships better between variables. Future researchers should explore the results of this study to show how NM tenure and age impact turnover intention among nursing staff to understand better the perceptions of nursing staff. Finally, future researchers should recreate this study with the addition of more sociodemographic factors for NMs and more information regarding demographic variables for nurses who have ceased employment to gain a more detailed description of how these factors interoperate to impact nursing staff turnover.

Implications

Leaders can use the results of this study to inform current practices for med-surg nursing. The results showed a relationship between increased age and higher levels of education among NMs. Leaders of current practices can use this information in a few ways. First, med-surg complex leaders may be more apt to hire older NMs to reduce employee turnover within respective units. Additionally, med-surg complex leaders can invest more resources in aiding younger or less educated NMs in facilitating more positive workplaces and creating increased job satisfaction among employees. With increased job satisfaction, leaders can likely reduce turnover rates among nursing staff (Buccheri, 1986; Duxbury et al., 1984; Hayward et al., 2016; Kim & Lee, 2014).

Leaders of current practices may also benefit from developing a better knowledge base of the relationship between NM tenure and employee turnover. The results indicated that a significant negative relationship occurred between NM tenure and employee turnover; thus,

leaders of med-surg complexes may reduce employee turnover by relying less on tenure to indicate proficiency within NM positions. By better understanding med-surg nursing turnover rates, leaders of med-surg complexes can increase quality patient care, increase positive patient outcomes, increase patient satisfaction, and lower costs for the hospital, which researchers have correlated with reduced employee turnover (see Carter & Tourangeau, 2012; Griffiths et al., 2008; O'Brien et al., 2010).

Conclusion

In this quantitative study, I examined the relationship among the NM sociodemographic variables of ages, gender, educational levels, and tenure on med-surg nurse turnover. Findings of this study showed that age and tenure were associated with lower levels of nursing staff turnover. Through the completion of this study, I identified variables of nursing turnover to address the predicted shortage of up to 500,000 nurses by 2022 (see American Association of Colleges of Nursing, 2014). As researchers expect a shortage of nurses to impact patient care and reduce patient outcomes, this study can be seen as a small step to mitigate the potentially devastating outcomes associated with nursing staff turnover.

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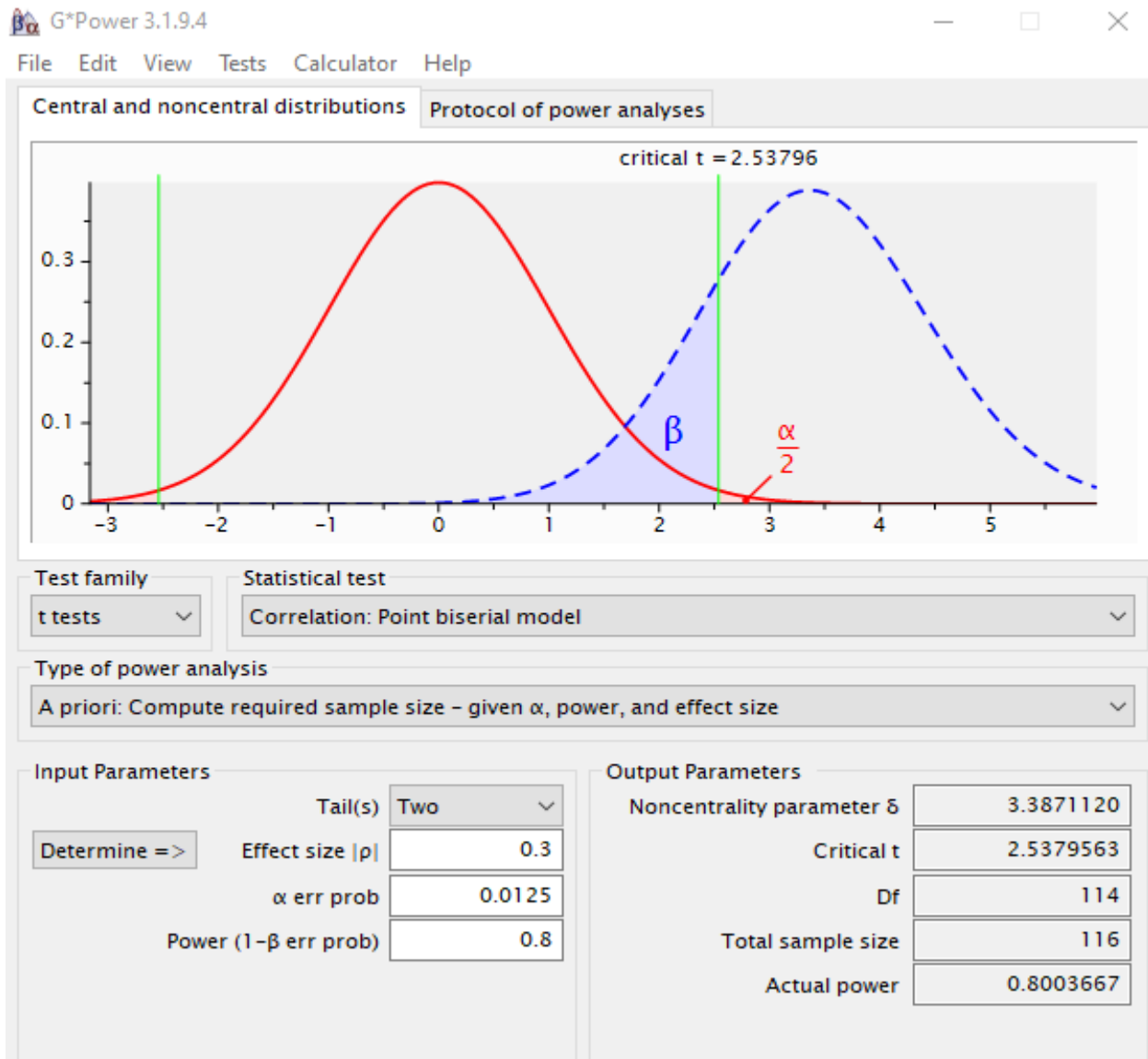
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Appendix A:G*Power Analysis Output
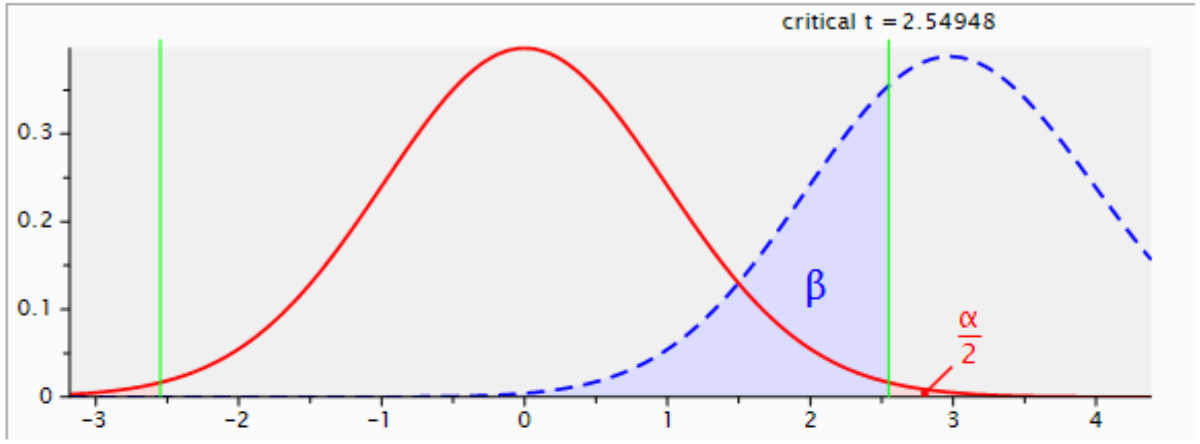
Appendix B: Post Hoc Power Analysis Using G*Power

Appendix C: Demographic Survey

19-108

Demographic Questionnaire content:

Sex: M, F

Age: ___

Educational Level: Associates Degree Nursing, Bachelor of Science in Nursing, Master of

Science in Nursing

Years in Manager Role: ___

Appendix D: IRB Approval Form

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

November 12, 2019

John B. Summers
Department of Education
Abilene Christian University

Dear John,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled
"Nurse Manager Emotional Intelligence, and Medical-Surgical Nurse Turnover",

(IRB# 19-108   )is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Our Premise: ACU is a vibrant, innovative, Christ-centered community that engages students in authentic spiritual and intellectual growth, equipping them to make a real difference in the world.