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Role of Intravenous Access Support in Novice Nurses' Job Satisfaction and Intent to Stay

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This is to certify that the doctoral dissertation by

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Abstract

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MSN, Walden University, 2012

BSN, Resurrection University, 2010

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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Abstract

The nursing shortage is a growing concern across the country, especially due to the Covid-19 pandemic. Novice nurse retention is essential to solving this national problem. The purpose of this study was to examine whether intravenous (IV) access support influences job satisfaction and retention among novice nurses to improve their retention. Herzberg's two-factor theory guided this research; IV access support acts as the hygiene factor. The absence of IV access support can result in dissatisfaction among novice nurses, contributing to higher turnover rates. This quantitative nonexperimental causal-comparative research design utilized a nurse work satisfaction questionnaire and intent to stay scale to collect data from 114 novice nurses (ADN/BSN/MSN) with less than 2 years of nursing experience in acute care settings. The study explored the relationship between IV access support and job satisfaction and the moderation effect of IV access support on the relationship between job satisfaction and intent to stay among novice nurses. A simple linear regression revealed no statistically significant ($p > .05$) effect of IV access support on job satisfaction among novice nurses. Multiple regression analysis results to determine the moderation effect of IV access support revealed a statistically insignificant ($p > .05$) moderation effect of IV access support on the relationship between job satisfaction and intent to stay. The findings may contribute to positive social change among health care organizations. It revealed that job satisfaction together with IV access support could predict intent to stay among participants. Future research should focus on various factors to improve novice nurses' job satisfaction and intent to stay with their organization.

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Dedication

This work is dedicated to my parents, who instilled the spirit of learning from my childhood. I also dedicate my dissertation to my wonderful wife, Maya, who supported me throughout my lifelong academic journey. No way I could have accomplished this life enrichment goal without your continued love and support. To each of my children, Stanley, Steffin, Megha, and Samuel, I want to thank you for your continued prayers and for taking care of your academic responsibilities to relieve pressure from my shoulders. Finally, I want to dedicate this to my uncle, Mr. Cyriac Lukose Puthenpurayil, and my aunt, Chinnamma Njaravelil, who opened the door to this beautiful land of opportunities.

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Chapter 1: Introduction to the Study

The nursing shortage has been a growing challenge to the nursing discipline and to the health care system. New graduate nurses are considered one of the most valuable healthcare industry resources to meet these nursing shortages (Heidari et al., 2017). However, according to Lee (2019), the turnover rate is as high as 25% within the first year of employment among novice nurses. K. J. Kim and Yoo (2018) reported that the turnover rate among Korean new graduates was 29% within the first year of their employment, which was twice the turnover rate of career nurses (13.8%). Rapid turnover among novice nurses accelerates the nursing shortage, creating more understaffed settings and financial obligations to healthcare organizations in replacing turnover staff. In one study, researchers revealed that the mortality risk was 6% higher in understaffed units than in a fully staffed unit (Hoeve et al., 2020). As experienced nurses (baby boomers) are retiring, novice nurse retention is a priority for healthcare organizations to provide safe and quality care to a vulnerable population (Labrague & Santos, 2020). Thus, healthcare organizations should investigate the factors that mitigate nurses' intention to leave their organizations to reduce turnover (Heidari et al., 2017).

Many studies have highlighted that job satisfaction is one of the significant factors contributing to novice nurse turnover (Bong, 2019; Lee, 2019). Increased job satisfaction with the work environment can increase the retention rate among novice nurses (Lin et al., 2019). Novice nurses often experience inadequate support and mentoring beyond their traditional 3 to 4 weeks of orientation, creating dissatisfaction (Coyne et al., 2020). Organizations should implement strategic interventions to support novice nurses to

master difficult skills to mitigate their turnover intention. More specifically, intravenous (IV) access skills are among the most complicated skills novice nurses need to master (Wenger, 2015). IV access support through a resource person or technological support using ultrasound guided IV access can alleviate novice nurses' discomfort in establishing IV access. In this study, I aim to understand the moderation effect of IV access support on the novice nurse's job satisfaction and retention.

The study can create positive social change among novice nurses due to their increased comfort and job satisfaction with IV access support and ultimately their retention in the field. Healthcare organizations can also benefit as novice nurse retention can improve safety and quality of care by having consistent staffing and decreased financial obligations caused by hiring and training new nurses. In the following sections, I focus on the study's background, problem statement, the purpose of the study, research questions and hypotheses, theoretical framework, nature of the study, definitions, assumption, scope and delimitations, limitations, significance, and summary.

Background of the Study

The nursing shortage is a growing concern affecting health care across the globe. As aging baby boomer nurses retire, millennial generation nurses have become a rapidly growing segment of the workforce (Waltz et al., 2020). The rapid turnover among these nurses is costly for healthcare organizations in hiring and training new nursing staff. It can also hinder health care organizations' efforts to maintain a steady workforce to render safe and quality care to the patient community. Finding ways to increase novice nurses'

intent to stay is a possible solution to this growing nursing shortage. Various factors contribute to novice nurses' intent to stay in their organization.

One contributing factor to the rapid turnover among novice nurses was the stressful transition from an academic role to a professional role. Bong (2019) reported novice nurses experience challenges and stress due to the shift from academic to professional roles, creating dissatisfaction that results in a higher turnover rate within the first year compared to nurses of all other tenures. Novice nurses' insufficient resiliency was another factor leading to their rapid turnover. Concilio et al. (2019) reported novice nurses' insufficient resiliency contributes to growing job dissatisfaction and adversely affects their intent to stay.

Self-perceived competency is another factor contributing to novice nurses' job satisfaction and turnover (Chen et al., 2017). Professional competency plays a vital role in turnover among nursing disciplines. Many organizational factors contribute to novice nurses' intent to stay in their organization. Novice nurses leave their job within 1 year for several reasons, including workplace incivility, violence, and bullying. Most importantly, researchers have identified the pivotal role of job satisfaction on novice nurses' intent to stay (Bong, 2019; Lin et al., 2019).

Novice nurses are expected to function as competent nurses after their orientation period. Instead, nurses often feel they are left alone without adequate clinical support and supervision while performing complicated tasks (Coyne et al., 2020). As a result, they may experience a hectic work environment due to limited resources, increasing patient acuity, decreased staff availability, and technology advances (Coyne et al., 2020).

Administrations can positively change novice nurses and their retention by ensuring a supportive clinical environment to cope with chaotic work environments (Hoeve et al., 2020). The study results could expand existing literature on providing clinical support on complicated tasks to novice nurses to improve their job satisfaction and intention to stay in their organizations.

Problem Statement

The rapid turnover among novice nurses accelerates the nursing shortage and is detrimental for the nursing discipline and society as a whole (Heidari et al., 2017). According to Bong (2019), novice nurses with less than 1 year of nursing experience have the highest turnover. Lee (2019) revealed that the novice nurse turnover rate was 25% within the first year. In another study on the Korean population, K. J. Kim and Yoo (2018) also reported that the turnover rate among Korean new graduates was 29% within their first employment. Healthcare settings and nursing educational institutions need to implement strategic interventions to decrease turnover, improve organizational stability, reduce costs, and enhance effective nursing care (Tomietto et al., 2015). In short, novice nurse retention is essential to meet the global concern on nursing shortage.

Job satisfaction plays a crucial role in novice nurse retention. According to Han et al. (2019), decreased job satisfaction may contribute to early career turnover among novice nurses, while improved nurse job satisfaction can reduce the new graduate's turnover (Unruh & Zhang, 2014). The novice nurse's job satisfaction can increase with assistance on hard-to-achieve skills. For instance, Wenger (2015) reported that many graduate nurses conveyed uneasiness in IV catheter insertion. In fact, IV access skills are

the most challenging skills for novice nurses (Ehrhardt et al., 2018). Technological support and training to improve novice nurse's IV access competency for novice nurses can enhance their job satisfaction. Some researchers have documented that IV skills workshops improved new graduates' comfort levels and, hence, improved their job satisfaction (Coyne et al., 2020). Additionally, Feinsmith et al. (2018) described a quality improvement project in the ER on difficult IV access using ultrasound-guided intravenous access (USGIV). The study revealed that USGIV training programs reduced the total number of IV attempts (Feinsmith et al., 2018). However, little is known about IV insertion support on job satisfaction and turnover among novice nurses. This research will add knowledge to the effectiveness of strategic intervening in IV insertional technological support and training for novice nurses to promote job satisfaction and retention.

Purpose of the Study

The purpose of this quantitative study was to examine whether IV access support influences job satisfaction and retention among novice nurses. In this quantitative research, I used job satisfaction as the independent variable and novice nurses' intent to stay as the dependent variable. Job satisfaction is the predictor variable in novice nurses' intent to stay (dependent variable). I also used the moderating variable of IV access technical support to reveal the moderation effect on the relationship between the independent and dependent variables. I evaluated IV access support as a strategic intervention to increase the novice nurse's intent to stay.

Research Question and Hypothesis

The research questions and hypotheses that guided me through this research study are listed as below.

Research Question (RQ)1: What is the effect of IV access support on job satisfaction among novice nurses?

$H_0$1: There is no effect of the IV access support on job satisfaction among novice nurses.

H_a1: There is a statistically significant effect of the IV access support on job satisfaction among novice nurses.

RQ2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

$H_0$2: There is no effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

H_a2: There is a statistically significant effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

Theoretical Foundation

Herzberg's two factor motivational theory, also known as the motivator-hygiene theory, provided a sound basis for my research study. Herzberg (1968), a well-known motivational theorist, created his theory based on Maslow's hierarchy of needs and by conducting an investigation of events with engineers and accountants. Herzberg repeated the study among various populations from different socioeconomic cultural back grounds, including some in communist countries, to derive his theoretical model.

According to Herzberg's two factor theory, there are two distinct sets of factors influencing employee job satisfaction and performance (DeShields et al., 2005). The first set of factors is called motivators or satisfiers. Motivators are intrinsic to the job itself and are largely administered by employees (DeShields et al., 2005). The motivational factors intrinsic to job are achievement, recognition for achievement, the work itself, responsibility, growth, and advancement (Herzberg, 1968). The second set of factors are called hygiene factors, also called dissatisfies. Hygiene factors are extrinsic to the job itself and are highly controlled by organizational leadership. The hygiene factors associated with job satisfaction are company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and security (Herzberg, 1968). The presence of hygiene factors can remove the dissatisfaction from work and thereby positively influence job satisfaction.

Herzberg's two-factor theory is relevant to my research study as I focused on the moderation effects of IV access support and the relationship between job satisfaction and novice nurses' intent to stay. IV access support acts as the hygiene factor in which the absence of it can cause dissatisfaction among novice nurses, contributing to their turnover. As hygiene factors are extrinsic to the job, organizational leadership should ensure the presence of hygiene factors to create job satisfaction among their employees. As such, the theoretical model supports that the absence of IV access support as an extrinsic (hygiene) factor can create job dissatisfaction among novice nurses. Hence, IV access support can contribute to job satisfaction and towards the retention of novice nurses.

Nature of Study

My research study utilized a quantitative, nonexperimental causal-comparative research design (Gray et al., 2017). A nonexperimental, causal-comparative design aligns with the research questions and purpose to explore how the relationship between job satisfaction and the novice nurse's intent to stay varies depending on whether the nurse has access to intravenous support. In this study I focused on job satisfaction as the independent variable and novice nurse's intent to stay as the dependent variable. Additionally, I explored IV access support as the moderating variable between job satisfaction and novice nurse retention/turnover. The study collected data from an acute care setting in the Midwest region. The study didn't collect data from the sister facility, though initially planned based on the availability of the study participants with the primary site. The study also collected data through Facebook and LinkedIn social media platforms to augment data collection. For this study, I measured the effect of novice nurses' subjective ratings of job satisfaction (independent variable) on their intent to stay (dependent variable) depending upon IV access support (moderating variable with two levels—access support or no access support). The data were analyzed using IBM SPSS Statistics (Version 27). The quantitative data analysis helped me to describe the extent to which the relationship between job satisfaction and intention to stay among novice nurses strengthens or weakens depending upon IV access support.

Definitions

This section provides the key variables and terms used for this study.

Novice nurse: Novice nurses are new graduates transitioning into their professional roles. For this study, novice nurses are considered new graduates with less than 2 years of work experience in acute care settings.

Job satisfaction: Job satisfaction is the state of mind reflecting the degree to which employees like or dislike their jobs. High job satisfaction has been found to positively impact employees' job performance and lead to decreased turnover and absenteeism (E.-Y. Kim & Yeo, 2020).

Intent to stay: is defined as a nurse's desire to remain with an organization (Mayfield & Mayfield, 2007).

Intravenous (IV) Access Support: For this study's purpose, IV access support is defined as any support from personal or technological intravenous access support that establishes successful IV access.

Assumptions

An assumption is a belief accepted as accurate and could compromise the findings' believability if assumptions are false (Gray et al., 2017). Research assumptions are taken for granted and viewed as reasonable and widely accepted (Theofanidis & Fountouki, 2018). Nevertheless, researchers must make explicit assumptions or beliefs that guide the study. One assumption of this study was novice nurse participants answered survey questions honestly. The online Survey Monkey platform ensured participants' anonymity and confidentiality to help them answer survey questions honestly. The researcher assumed that participants responded to questions on the survey questionnaires based on their personal perspectives without bias. The researcher also

assumed that participants meet the eligibility criteria (i.e., a nurse with less than or equal to 2 years of experience) as outlined in the screening question at the beginning of the survey. Finally, the researcher assumed that participants were technologically competent to participate in online surveys without training.

Scope and Delimitations

The scope of this study was to investigate how the relationship between novice nurses' job satisfaction and retention differ according to whether nurses' have IV access support. The quantitative research utilized Herzberg's two-factor motivational theory to understand IV access support's hygienic effect. Participant data collection occurred via an online Survey Monkey platform. Delimitations are limitations a researcher consciously sets and are hence under researcher control (Theofanidis & Fountouki, 2018). The study was delimited to new graduates with less than two years of experience working in acute care settings. Nurses with more than two years of experience are excluded from the study because they may have more IV access skills.

Limitations

Limitations include potential weaknesses the researcher cannot control (Theofanidis & Fountouki, 2018). To validate study findings, it is highly important to address study limitations. My research study had several limitations. The study was limited to new graduates with less than two years of experience working in an acute care setting. Focus on one geographical location may limit the transferability of study findings. One primary aim of data collection on social media platforms was to collect data across various geographical locations. Study procedures may need repeating across

various geographical areas to maximize the generalizability of results. The study was also limited by a small sample size because the research focused only on novice nurses with less than two years of experience. In the case of insufficient participant availability in the primary location, the primary investigator planned data collection from a sister facility in the same Midwest region.

Significance

The study is significant because it focused on novice nurse retention amid rapid turnover. High turnover among novice nurses can be financially detrimental to organizational resources. According to Alshawush et al. (2020), the turnover intention is harmful to an organization's financial stability, costing anywhere between $10,000 to $88,000. The study's focus on novice nurse retention is significant to health care organizations in improving retention and decreasing financial obligations involved in hiring and training new employees. The study findings may also contribute to maintaining a steady workforce to offer quality care to vulnerable populations (Kaddourah et al., 2018). Quick turnover among novice nurses can promote adverse patient outcomes, lack of continuity of care, increased time and costs toward managing employees, loss of staff productivity, and financial challenges (Africa, 2017). Given IV access support among novice nurses, the study's findings may contribute to positive social change through increased comfort, subsequently improving job satisfaction and retention rates. Additionally, study findings may improve novice nurse retention and contribute to positive social change among health care organizations by offering a steady workforce to provide safe and quality care to the patient community. Healthcare

organizations will also benefit through decreased financial obligations from hiring and training new nurses.

Summary

Novice nurse retention and turnover is a growing concern for global health care. Many studies have shown job satisfaction among novice nurses was the key predictor of their turnover intent (Bong, 2019; Lee, 2019). Novice nurses reported their discomfort with establishing IV access (Ehrhardt et al., 2018). Supportive measures on challenging tasks such as IV access support novice nurses in improving job satisfaction. The study evaluated the role of IV access support in predicting the relationship between novice nurses' job satisfaction and retention. Implications of study findings may include promoting positive social change among health care organizations, patients, and the novice nurse community. Chapter 2 will discuss the theoretical framework used to guide this study and analyze existing work through a literature review to explore and identify the knowledge gap.

Chapter 2: Literature Review

Introduction

The nursing shortage has created an international crisis and significantly threatened global health (Church et al., 2018). New graduate nurses are a valuable human resource to meet this crisis (E.-Y. Kim & Yeo, 2020). According to Nursing Solutions (2016), the turnover rate among nurses with less than 1 year of experience was 30% (see also Bong, 2019). Rapid turnover among new graduates has accelerated the nursing shortage and concern to the health care system (E.-Y. Kim & Yeo, 2020). A comprehensive review of 34 articles on new graduate pediatric nurses indicated the highest turnover rate was among novice nurses with less than 1 year of experience (Bong, 2019). Using the Graduates Occupational Mobility Survey (GOMS) data, Lee (2019) conducted a longitudinal panel study to explore factors contributing to South Korean novice nurse turnover. The study revealed a turnover rate of up to 25% among novice nurses' with less than 1 year of experience, and 50% left their first job during the study period. The quick turnover among the novice nurse workforce is detrimental to health care settings in maintaining a steady force to offer quality care to vulnerable populations (Africa, 2017; Kaddourah et al., 2018). Specifically, high turnover has been found to contribute to adverse patient outcomes, lack of continuity of care, increased time and costs of managing employees, loss of staff productivity, and financial challenges (Africa, 2017). According to the U.S. registered nurses' workforce report card and shortage forecast, the nursing shortage is projected to continue across the nation until 2030 (Juraschek et al., 2019). Hence, strategic approaches are needed to decrease turnover.

The purpose of this study is to explore the influence of IV access support on the relationship between job satisfaction and novice nurse retention and turnover. Heidari et al. (2017) showed increased job satisfaction improved novice nurses' retention rate. According to Ehrhardt et al. (2018), IV access skills are among the most challenging for novice nurses to acquire. According to this study, multiple attempts to establish IV access was associated with delay and stress among patients and nurses. Supportive measures in challenging novice nurses' skills such as IV access support may improve job satisfaction among novice nurses and subsequently increase their retention. Studies have shown the addition of IV access resources, such as Ultrasound Guided Intravenous (USGIV) access support and Near Infrared (NIR) technology, may reduce the number of IV access attempts and potentially increase job satisfaction among novice nurses (Barreras & Chang, 2017; Feinsmith et al., 2018).

Chapter 2 will describe the literature review strategies and Herzberg's (1968) two-factor theory to address the moderating effect of intravenous access support on the relationship between novice nurses' job satisfaction and retention. Chapter 2 will also incorporate an analysis of key concepts and variables used in the study: (a) intention to stay (dependent variable), (b) job satisfaction (independent variable), (c) organizational factors, (d) individual factors, and (e) intravenous access support (moderating variable). The chapter will provide a summary at the end suggesting the study's significance toward novice nurse retention.

Literature Search Strategies

For this study, I selected articles related to job satisfaction, novice nurse retention/turnover, and the potential moderating effects of IV access support on this relationship. An advanced search was conducted in various databases, including CINAHL Plus, ScienceDirect, MEDLINE, supplemental index, complemental index, science citation index, and APA PsycINFO, to retrieve articles demonstrating the influence of IV access support may have on the relationship between job satisfaction and novice nurse retention/turnover. The keywords and combinations used for the search included: *novice nurse or newly graduated nurse or junior nurse or new nurse, turnover intention or intention to leave or intention to quit, novice nurse retention, and job satisfaction or work satisfaction or employee satisfaction.* This three-level search pulled 36 peer-reviewed sources from 2016 to 2021. An additional search with the keyword: *intravenous access or IV access* with *challenges or barriers or difficulties* produced 105 articles. Hence, a total of 141 (36 + 105 = 141) articles were included in the literature review for this study. Out of 141 articles, the study eliminated articles on novice nurse managers, novice nurse faculty, and novice nurse practitioners along with duplicate articles and articles written in non-English languages. After screening, the study included the remaining 70 articles towards its final review.

Theoretical Framework

Herzberg's (1968) two-factor motivation theory is the theoretical framework guiding my study. Herzberg, a pioneer among motivational theorists, introduced his motivation-hygiene factor through a comprehensive literature review on job attitudes and

job satisfaction (Alrawahi et al., 2020). Based on Maslow's hierarchy of needs, Herzberg postulated the two-factor motivation theory from an investigation of events among engineers and accountants. Herzberg replicated the study across various populations, including in communist countries. According to Herzberg, there are two distinct sets of factors contributing to job satisfaction (DeShields et al., 2005). The first set of factors are called motivators and the second set of factors are called hygiene factors are causing job dissatisfaction (Herzberg, 1968). Motivators are considered intrinsic factors (e.g., achievement, recognition, personal growth) and are directly related to the job. Hygiene factors are considered extrinsic because they are under administrative management control (DeShields et al., 2005). Therefore, organizations should focus first on hygiene factors before motivators.

Motivators/Intrinsic Factors

One critical component of Herzberg's (1968) two-factor theory is motivators that can foster a positive attitude and job satisfaction among employees (Alrawahi et al., 2020). Motivators are intrinsically related to the job and are largely employee driven (DeShields et al., 2005). That is, motivators focus on employees' emotional needs and personal development (Herzberg, 1968). According to Herzberg, growth and advancement opportunities are key motivators that organizations should ensure to promote job satisfaction. Employers should offer employees the opportunity to grow through advanced training in required technological innovations to perform their jobs efficiently and provide training on newly introduced care equipment and tools before nurses are required to use them at work. Opportunity for upward mobility and career

advancement may increase satisfaction among employees. A sense of achievement is another motivator that can enhance job satisfaction (Herzberg, 1968). Employers should create an environment that enables employees to assume responsibility and work harder on complicated tasks with minimal direction or control. A more challenging work environment may help nurses feel a sense of achievement and thus add meaningfulness to their work. Recognition is essential to creating job satisfaction, especially when employees make a significant contribution to their work. For example, the Daisy award is offered in acute care settings to recognize nurses for their nursing excellence. Motivating factors are critical for meeting employees' basic needs, creating positive feelings, and improving performance (Alrawahi et al., 2020). Motivation factors are the driving force each organization needs to explore and make available to improve employees' job satisfaction.

Hygienic/Extrinsic Factors

Hygiene factors (dissatisfiers) make up the second set of factors of Herzberg's (1968) two-factor theory. The presence of hygiene factors could positively influence job satisfaction by reducing work dissatisfaction. Job security is one hygiene factor organizations need to reduce employee dissatisfaction (Herzberg, 1968). The absence of job security may create concern for employees about the prospect of losing their jobs and thus reduce job satisfaction. Poor working condition and low salaries may also create job dissatisfaction (Herzberg, 1968). Organizations should ensure a safe and clean environment for employees to reduce negative attitudes and dissatisfaction. Employee salary across similar jobs should be competitive and cover living costs to reduce

dissatisfaction. Healthy interpersonal relationships among coworkers and superiors are another hygiene factor predicting job dissatisfaction (Herzberg, 1968). Particularly, organizations should cultivate a fair working environment for employees to maintain good connections with their coworkers and superiors. Additionally, bullying behavior in professional environments should be discouraged because it can hinder relationship building. Administrative supervision should be practical and directed toward supporting employees and avoid intrusiveness. This constructive approach toward control may decrease job dissatisfaction and diminish negative attitudes among employees. Company policy and administration is another hygiene factor organizations must cultivate to reduce dissatisfaction (Herzberg, 1968). For example, fair company policies that may improve job satisfaction may include offering employee sick days, vacations, and breaks between working hours. Finally, administrations that offer health plans for their employees and families may find their employees less dissatisfied.

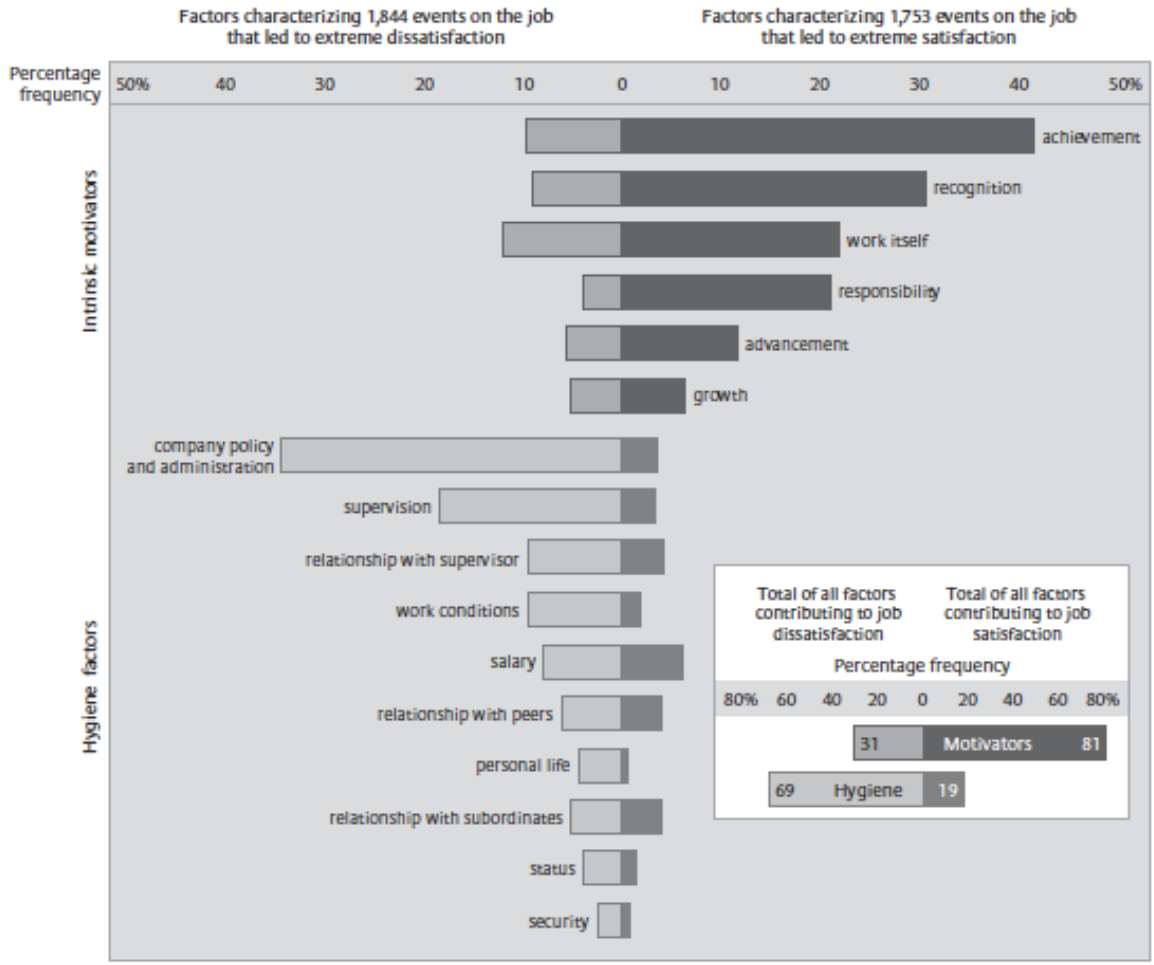
Hygiene factors do not intrinsically motivate employees but facilitate a reduction in negative attitudes and dissatisfaction among employees. Hygiene factors are extrinsic in nature and primarily the responsibility of management to promote, thus reducing employee motivation toward the simple promise of a paycheck rather than generating an internal desire to put forth extra effort to accomplish something meaningful. Hence, an optimal approach to increase job satisfaction among employees may include a balance between motivational and hygiene factors. Figure 1 illustrates a composite of factors contributing to job satisfaction and dissatisfaction in 1,685 employees (Herzberg, 1968).

Satisfaction Versus Dissatisfaction

Job satisfaction and dissatisfaction are not opposites (DeShields et al., 2005). The contributing factors producing satisfaction are entirely different and distinct from those contributing dissatisfaction. Motivators are the primary contributors of satisfaction, and hygiene factors are the primary contributors of dissatisfaction (DeShields et al., 2005). Furthermore, the other end of the job satisfaction is not job dissatisfaction, but rather no job satisfaction. Likewise, the other end of job dissatisfaction is not job satisfaction, but rather no job dissatisfaction (Herzberg, 1968).

Figure 1

Factors Affecting Job Satisfaction as Reported in 12 Investigations



Rationale for Theory Selection

Herzberg's (1968) two-factor theory has become one of the most widely respected theories for explaining motivation and job satisfaction (DeShields et al., 2005). The approach has been used in many studies exploring job satisfaction and employee retention across various domains. According to Langan et al. (2007), motivators including feeling valued, receiving recognition for extra effort, and having opportunities

for personal growth and advancement contributed to job satisfaction among nurses and increased their retention. Cox (2019) used the two-factor theory to conduct a study examining the factors predicting job satisfaction and retention for nurse managers in in-home healthcare agencies. Core motivator themes identified were interpersonal relationships with staff, leadership support, and responsibilities appropriately corresponding to their position. Another two-factor prospective study conducted with Oman medical laboratory professionals in the Sultanate of Oman hospital found hygiene factors such as health and safety, heavy workload, poor salary, and organizational policies contributed to dissatisfaction and motivators such as the relationship between coworkers and leadership and professional development opportunities contributed to laboratory staff satisfaction (Alrawahi et al., 2020). Using the two-factor motivation theory lens, a study on pharmacists in Saudi Arabia called for managers to eliminate dissatisfaction through improvement of hygiene factors such as interpersonal relationships between employees, salary, and job security, and increase pharmacists' satisfaction via promotion opportunities, recognition, and the nature of the work (Slimane, 2017). Other studies have used the two-factor theory to identify factors contributing to work motivation among seasonal tourism workers (Lundberg et al., 2009) and to explore the motivational factors predicting business student satisfaction and retention (DeShields et al., 2005). Given successful adaptations of Herzberg's two-factor theory across various domains, greater confidence can be placed in the usefulness of this theoretical framework as it applies to understanding the moderating effect of IV access

support (i.e., an extrinsic/hygiene factor) to job satisfaction and retention among novice nurses.

Limitations to the Herzberg Two-Factor Model

One limitation of Herzberg's (1968) two-factor model is the disregarding of individual differences and challenges in distinguishing between motivators and hygiene factors (Lundberg et al., 2009). Critics have argued that motivational factors vary depending on personal characteristics such as age, gender, and cultural background. For example, job security may be a motivator for older generations but a hygienic factor for younger generations. In addition, flexible work hours may serve as both a motivator and a hygiene factor for women with school-aged children. As these examples suggest, there are situations where hygiene factors such as salary, interpersonal relationships, and working conditions function as motivators (Pinder, 2008, as cited in Lundberg et al., 2009). Moreover, due to the development of the theory for use among industrial workers, it may not explain phenomena across other workplace domains as effectively. Despite this criticism, Herzberg's two factor theory is one of the most widely used motivation theories for measuring job satisfaction.

Literature Review Related to Key Variable

Studies have shown the United States has been experiencing a critical nursing shortage for the last 10 years and will continue through 2025 (Bong, 2019; Juraschek et al., 2019). As much of this nursing shortage has contributed to the rapid turnover among novice nurses (E.-Y. Kim & Yeo, 2020), organizations are interested in taking measures to decrease stress level and increase comfort, job satisfaction, and retention among novice

nurses. The literature review will analyze various individual and organizational factors contributing to novice nurses' job satisfaction and turnover. Factors discussed included intention to stay/turnover, job satisfaction, organizational factors, individual factors, and IV access support. The section concludes with a summary and conclusion.

Intent to Stay

Novice nurse turnover has become a growing concern across the world. According to Alshawush et al. (2020), over 1 million expert nurses are expected to retire by 2025. New graduates expected to fill these vacancies are challenged in their transition to a professional role, leading to a high turnover rate. Many studies reported that novice nurses' turnover is as high as 25% during the first year of their job (Bong, 2019; E.-Y. Kim & Yeo, 2020; Lee, 2019) compared to experienced nurses. Novice nurses' turnover intention can impact staff morale, attrition, absenteeism, and quitting the nursing profession (Hawkins et al., 2019). Nursing staff instability caused by this turnover is detrimental to health care organizations and patient outcomes (Dwyer et al., 2019). Turnover intention is harmful to an organization's financial stability, as turnover may cost anywhere between $10,000 to $88,000 (Alshawush et al., 2020). Nurses are one of the most valuable and largest cohorts of the professional workforce. For this reason, implementing strategies to address factors contributing to attrition, should positively impact the nursing workforce by improving their intent to stay and ultimately improve patient outcomes (Mills et al., 2016). Novice nurses experience a hectic work environment due to limited resources, increasing patient acuity, decreased staff availability, and technology advances (Coyne et al., 2020). Administrations may

contribute to positive social change for novice nurses and their retention rates by ensuring a supportive clinical environment to cope with chaotic work environments (Hoeve et al., 2020). Novice nurses' job satisfaction plays a vital role in their retention and turnover (Waltz et al., 2020).

Job Satisfaction

Job satisfaction is considered one of the higher-level decisive factors in nurses' intention to stay (Halter et al., 2017). A cross-sectional survey design of 3,240 clinical nurses from nine tertiary hospitals in China reported organizational support, job control, and job satisfaction significantly and positively impacted nurses' intent to stay with an organization, and job satisfaction was also found to mediate the relationship between job control and nurses' perceived organizational support on their intent to stay (X. Li et al., 2020). This study helped delineate various factors influencing nurses' intent to stay. A systematic review on nine articles from the Cochran database reported results consistent with the findings by X. Li et al. (2020), such that nurses' stress and dissatisfaction were important determinants of turnover (Halter et al., 2017). Waltz et al. (2020) conducted an exploratory descriptive study on 33 millennial nurses to examine job satisfaction and workplace engagement and reported results consistent with Halter et al. (2017) and Z. Li et al. (2020). The study examined key areas of concern with the effects of job satisfaction on millennial nurses' work engagement and turnover intent. Findings revealed praise and reward contributed to the effects of job satisfaction on retention among millennial nurses. Heidari et al. (2017) also found job satisfaction positively affected staff nurses' intent to

stay. The various factors contributing to novice nurses' job satisfaction and retention can be grouped into organizational factors and individual factors (Lee, 2019).

Individual Factors

Personal/individual factors positively impact novice nurse retention and turnover. Studies have reported individuals who easily adapt to the work environment, have psychological capital (intrapersonal skills), and high quality social (interpersonal) skills to develop stronger coworker relationships experience higher job satisfaction and reduced turnover intention (Cochran et al., 2020; Delgado et al., 2017). The following section analyzes various individual factors contributing to novice nurse retention.

Studies have shown novice nurses' resilience and self-perceived competencies are pivotal in retaining their jobs (Chen et al., 2017; Cochran et al., 2020; Delgado et al., 2017; Lin et al., 2019; Walsh et al., 2020). Resilience is a confidential source. Resilient novice nurses display a proactive psychological adaptation ability to handle adverse circumstances and assist them in maintaining their mental health (Lin et al., 2019). An integrative review of empirical literature has synthesized knowledge on resilience and reported that building resilience among novice nurses plays a vital role in mitigating the adverse effects of workplace stress and emotional labor (Delgado et al., 2017). Concilio et al. (2019) reported complimentary results that novice nurses' poor resiliency contributes to growing job dissatisfaction, adversely affecting their intent to stay. Resilience-building strategies can shield novice nurses from the impact of workplace stress (Cochran et al., 2020). Chen et al. (2017) identified self-perceived competency as another individual factor contributing to novice nurses' job satisfaction and turnover,

such that self-perceived competency increased with age and clinical experience, increasing job satisfaction. Job satisfaction positively influences self-perceived competency as it motivates nurses to surge their competency (Chen et al., 2017).

Psychological capital (PsyCap) and new graduates' motivational factors are other significant intrapersonal characteristics influencing new graduates' transition outcomes (Dwyer et al., 2019). PsyCap is an individual characteristic and intrinsic motivation that helps novice nurses quickly adapt to their work environment, enhances their work engagement, and increases their intention to stay. This confidential source help new graduates with work engagement, burnout, job satisfaction, mental health, and emotional exhaustion (Dwyer et al., 2019). K. J. Kim and Yoo (2018) described high PsyCap individuals as individuals who experience low emotional exhaustion, can quickly adapt to work situations and organizational climate, and exhibit positive work behaviors and increased intent to stay compared to an individual with low PsyCap. Autonomous motivation, or innate motivates to help others, also plays a vital role in new graduate nurses' job satisfaction and turnover intention. Recent graduates with autonomous motivation were deeply involved in their work for inherent pleasure and happiness, resulting in a lower intention to quit (Fernet et al., 2017). Novice nurses with high autonomous motivation will find inherent pleasure in their work and ultimately experience heightened job satisfaction.

Organizational Factors

The nursing shortage has created a global health care crisis in continuing to provide safe and quality care to a vulnerable population (Lu et al., 2019). Organizations

can contribute to relieving this crisis by ensuring the presence of various organizational factors in the workplace that may significantly impact novice nurses' job satisfaction and retention. The following section will analyze multiple organizational factors that can profoundly impact new graduate's intent to stay.

Nurse transition support programs are one way to influence novice nurse retention and turnover. Studies have shown transition to practice programs to be one well-established strategic intervention for increasing retention among novice nurses (Africa, 2017). Cline et al. (2017) conducted a 10-year retrospective review on the outcomes of an internally developed nurse residency program and reported a high retention rate in 1 year of greater than 90%, consistent with previous work. A cross-sectional study of new graduate nurses from five hospitals in Ontario, Canada, reported high job satisfaction and low turnover intent associated with lower role conflict and role ambiguity through the preceptorship program (Lalonde & McGillis Hall, 2017). Studies have shown demonstrating organization commitment through effective mentoring programs could positively impact new graduates' job satisfaction and retention rate (Hussein et al., 2019; Rudin & Ludin, 2018).

Organizations should implement strategic interventions to increase their commitment to improving job satisfaction and retention among new graduates. A retrospective correlational study from Versant New Graduate Nurse Residency (VNGNR) used secondary data to examine factors associated with organizational commitment and its effect on turnover intent and actual turnover among novice nurses who participated in residency programs (Church et al., 2018). Findings indicated when

novice nurses experienced higher organizational commitment, their turnover intention decreased (Church et al., 2018). Lu et al. (2019) conducted a comprehensive literature review on 59 articles and found results consistent with the findings of Church et al. (2018) that organizational citizenship behavior is an important factor in improving novice nurse retention.

Workplace recognition and reward also positively impact novice nurses' job satisfaction and turnover (Park et al., 2019). Waltz et al. (2020) conducted an exploratory, descriptive qualitative study on 33 millennial nurses to examine their job satisfaction and workplace engagement. One theme identified in this study was the positive influence of workplace praise and reward on job satisfaction and retention among millennial nurses. That is, participants reported verbal and written recognition for satisfactory job performance was gratifying and led to greater job satisfaction and retention. Another cross-sectional study design of 951 Korean nurses found fundamental rewards and provision of necessary working conditions positively impacted their turnover intention (Park et al., 2019). Many studies have reported supportive leadership is essential to retaining new graduate nurses (Fallatah et al., 2017; Hoeve et al., 2020; Mélanie et al., 2016; Spence Laschinger & Read, 2016).

Intravenous (IV) Access Support

New graduates' transition to practice settings can be challenging, so various supportive measures may be essential for their job satisfaction. Coyne et al. (2020) conducted a descriptive study design with 23 nurses with less than 2 years of experience. The independent variable, a novice nurse support group, was implemented for 12 months

to evaluate their job satisfaction and retention rate. During this 12-month implementation, novice nurses attended sessions for 4–8 weeks. New graduates were given opportunities to explore skills that were challenging to acquire and arduous experiences requiring immediate support from experienced nurses and leadership. During this session, experienced nurses mentored novice nurses on time management and addressing peer-to-peer conflict with unit team members. The program improved overall job satisfaction, and all participants decided to continue the novice nurse support group. Emotional support is vital to reduce stress and increase job satisfaction and retention among novice nurses (Ebrahimi et al., 2016, as cited in Coyne et al., 2020).

Many studies have reported clinical and emotional support from colleagues and nurse managers is essential for novice nurses' transition to practice settings (Coyne et al., 2020; Kox et al., 2020). Wenger (2015) conducted an evidence-based practice project with new graduate nurses to investigate challenges with IV skills in an IV access workshop. The study collected baseline data from 32 recent graduates in an academic medical center using the Casey-Fink graduate nurses experience survey and indicated 29% of participants reported IV skills as one of the three most challenging skills (Wenger, 2015). The study implemented a peripheral IV therapy course for new graduates, and a post survey indicated an improved comfort level in establishing IV access. Study findings advocated for new graduate support during their challenging transition through focused education and skills practice to alleviate transitional discomfort. Education and skills practice may facilitate IV access success and encourage novice nurses to seek advanced IV access options instead of repeat failed attempts.

Many prevalent factors contribute to predicting the success of IV access among the vulnerable patient population. Armenteros-Yeguas et al. (2017) conducted a cross-sectional study design to explore the prevalence of difficult IV access (DIVA) among complex hospitalized patients. The study reported a 59.3% prevalence of DIVA in complex, female patients with significant risk factors and a history of vascular access complications. Whalen et al. (2018) also reported female gender, history of chemotherapy treatments, sickle cell disease, obesity, and IV drug use as prevalent factors contributing to DIVA. Finally, Yalçınlı (2019) conducted a descriptive observational study in the emergency room (ER) setting and found factors contributing most to the success of the first IV insertion were history of difficult IV access, nonpalpable vein after tourniquet, choosing a non-upper extremity site for IV insertion, and nurses' moderate to high degrees of predicted insertion difficulty, and professional status of less than 2 years of professional practice.

Many studies have shown DIVA is a common barrier for nurses (Bell & Spencer, 2020; Whalen et al., 2018), so it is important to take measures for improving DIVA to increase patient and staff satisfaction. Whalen et al. (2018) conducted a quasi-experimental study in an urban emergency department to evaluate the extent to which a dedicated IV access team addressed and offered possible solutions to DIVA. The study found implementation of the DIVA team significantly decreased the mean lab order to lab completion time, reduced number of IV attempts, and diminished lag time in administering medications (Whalen et al., 2018). Study findings suggested establishing a

DIVA team may decrease both physician intervention and failed IV access attempts and improve patient and staff satisfaction.

Timely establishing of IV access can promote prompt care and treatment. Anderson et al. (2020) conducted a mixed-method study approach to identify barriers to optimal febrile neutropenia management in children with cancer. The study collected data from 81 parents and 42 clinicians on children presenting with fever across multiple diverse hospital locations in Australia. The study found 31% of parents and 36% of clinicians reported a delay in assessment and treatment among febrile neutropenic children because of various factors, including a delay in establishing successful IV access to administer IV antibiotics (Anderson et al., 2020). In a retrospective study, Davis et al. (2020) aimed to describe the prevalence of DIVA and how it affects care delivery. The study evaluated 147,260 patients during the ED visit and 13,192 (8.9%) met the inclusion criteria (i.e., DIVA). Consistent with the findings of Anderson et al., Davis et al. found a statistically significant delay in establishing IV access and time to IV analgesia. The study also showed nurses' USGIV access also significantly improved time to IV access and time to IV analgesia (Davis et al., 2020). Hence, timely IV access is essential to deliver quality care to a vulnerable population.

Health care has used technological innovation to establish timely peripheral vascular access (PVA) to DIVA patients. Ultrasound is one standard technology used as a rescue technique to accomplish successful IV access when the traditional way to establish IV access fails. Studies have reported USGIV can decrease IV attempts, decrease complications from multiple unsuccessful attempts, and increase patient satisfaction

(Davis et al., 2020; Edwards & Jones, 2018). Bell and Spencer (2020) conducted a study to examine the process and outcome of establishing and implementing a vascular access specialist team in an 18-bed ER. The study showed clinicians with USGIV support achieved higher procedural success levels (Bell & Spencer, 2020). Edwards and Jones (2018) evaluated a training program developed to train ER nurses to set USGPIV access. The study reported 92.9 % of ER nurses strongly agreed the training program effectively prepared ER nurses for USGPIV access (Edwards & Jones, 2018). Study findings were consistent with Bell and Spencer and Davis et al. (2020), such that USGPIV access decreased delay in medical care and reduced use of central venous catheters, increasing staff and patient satisfaction. Near-Infrared (NIR) technology is another technological tool that can be used for DIVA. A retrospective analysis study on peripheral vascular access insertion by a vascular access team in children with needs requiring specialty care found NIR technology improved the overall success rate in acquiring PVA (Barreras & Chang, 2017).

Developing and implementing a training program on USGIV access may also improve IV access skills specifically for novice nurses. PVA is a standard invasive procedure in acute care settings to replace fluid volume deficiencies, restore electrolyte imbalance, and administer IV medications. According to Smith (2018), approximately 11% of adult patients present with DIVA, causing a delay in diagnosis and treatment. Smith (2018) evaluated whether training nurses to use USGIV in DIVA patients could positively affect physician workload and patients with difficult venous access. Smith found nurses can be trained successfully on USGIV in DIVA patients, thereby preventing

unnecessary central lines, reduce the number of unsuccessful IV access attempts, and minimize delay in diagnosis and treatment. Consistent with Smith's findings, Oliveira and Lawrence (2016) reported developing and establishing a training program for nurses on USGIV is both feasible and safe.

Venous puncture skills are among the most challenging for novice nurses to master (Ehrhardt et al., 2018). Indeed, Ehrhardt et al. (2018) showed novice nurses were neither confident in their ability to successfully start an IV access nor able to predict the degree of difficulty in establishing IV access. As a result, novice nurses make multiple unsuccessful attempts to start IV access instead of asking for help or support, causing a delay in treatment. Ehrhardt et al. conducted a quality improvement project to develop an evidence-based tool for novice nurses employed in an urban medical center to use in their clinical settings to identify DIVA patients. Study findings changed the institution's IV access policy standard, limiting attempts to two per nurse and four per patient and sought advanced options with the physician after reaching the threshold of four shots (Ehrhardt et al., 2018). As a result, the DIVA tool can improve patient comfort and satisfaction and possibly employee satisfaction by limiting IV insertion attempt regulations. Findings of this study informs my research as the DIVA tool may be one supportive measure for improving novice nurses' ability to predict an IV insertion's difficulty and seek an advanced option to establish IV access for difficult cases, subsequently improving patient and employee satisfaction. Song and McCreary (2020) conducted an integrative review of 16 articles to identify new graduates' self-assessed competencies during their first year of practice. Study results substantiated Ehrhardt et al.'s findings that new graduate nurses

need improvement in advanced technical skills for establishing IV access (Song & McCreary, 2020), which may ultimately improve their job satisfaction and retention. One of the limitations of this integrative review (Song & McCreary, 2020) is that the search may not have captured relevant articles. The studies were conducted in seven different countries and may have limited generalizability due to inconsistencies in novice nurses' work settings and job requirements (Song & McCreary, 2020). However, the study offers important information on novice nurse's perspectives on the competencies they find challenging during the beginning of their nursing career (Song & McCreary, 2020).

Summary and Conclusion

As nurses are one of the largest workforces, the nursing shortage has become an international threat to the health care system. Much of the shortage is attributed to novice nurses' high turnover rates in their first year of practice (E.-Y. Kim & Yeo, 2020). As described in the literature review, various factors contribute to nurses' turnover intention, including work environment, clinical competence and level of support, the presence of effective leadership, team cohesion, and job satisfaction (Song & McCreary, 2020). Studies have reported more than 20 % of novice nurses leave their position within the first year of their career (Bong, 2019; Lee, 2019; Song & McCreary, 2020; Unruh & Zhang, 2014). Novice nurse turnover is detrimental to the health care system. Turnover can cause adverse patient outcomes, lack of continuity of care, increase in time and costs of managing employees, loss of staff productivity, and financial challenges in hiring and training new nurses (Africa, 2017). Hence, it has become a supreme priority for health

care organizations to implement strategic interventions that facilitate a smooth transition of novice nurses from academic to professional practice roles.

Various factors may predict novice nurses' job satisfaction, an important contributing factor for retention. The literature review revealed both individual and organizational factors play a vital role in contributing to novice nurses' job satisfaction. The nurse leader's role is pivotal in understanding and valuing novice nurses' perspectives to increase their job satisfaction and engagement toward improving retention (Waltz et al., 2020). One-way organizations can improve novice nurses' job satisfaction is by offering supportive measures for achieving advanced skills, such as IV access. A review of the literature demonstrated establishing IV access is one of the most challenging skills for new graduates to master (Coyne et al., 2020; Ehrhardt et al., 2018). Organizational leadership plays a vital role in offering supportive resources to help novice nurses acquire this challenging skill.

New graduate nurses' transition to the practice setting is challenging. As IV access skills are challenging for novice nurses to master, training and technical support can improve novice nurses' ability to successfully establish IV access and contribute to improved job satisfaction and comfort. Studies reported novice nurses' IV access skills improved with supportive measures such as IV access skill workshops (Coyne et al., 2020). Feinsmith et al. (2018) developed a quality advancement project in the ER to address troublesome IV access using USGIV training programs that were found to reduce the total number of IV attempts. Supportive measures and tools helpful for successful IV access can improve patient satisfaction and reduce stress among patients and nurses

(Ehrhardt et al., 2018). Lack of support in IV access can delay and promote stress in both patients and nurses (Ehrhardt et al., 2018). However, little is known about how IV access support may strengthen or weaken the relationship between novice nurses' job satisfaction and turnover. A more robust understanding is needed on how IV access support may moderate the effect of job satisfaction on retention among novice nurses. This research will add to the existing knowledge of the effects of strategic personal and technological interventions in IV access support and training on job satisfaction and retention among novice nurses.

Chapter 2 provided a detailed review of job satisfaction and turnover intention among novice nurses and contributing factors. A review of the literature suggested a gap in how IV access support can influence the relationship between job satisfaction and retention among novice nurses. Chapter 3 will introduce this study’s research design, method, research questions, and hypotheses. Chapter 3 will include a comprehensive discussion on the sample population, sampling methods, data collection, data analysis, validity threats, ethical considerations, and a chapter summary.

Chapter 3: Research Method

Introduction

Staffing shortages in the nursing discipline have continued for decades. The current pandemic and rapid turnover rate of novice nurses has magnified the nursing shortage. Novice nurse turnover has been reported to be as high as 25% during the first year of employment (K. J. Kim & Yoo, 2018; Lee, 2019) therefore, retaining novice nurses may alleviate the critical nursing staffing shortage. In 2019, two studies reported increasing nurses' job satisfaction increased retention (Bong, 2019; Lee, 2019). Additionally, Coyne et al. (2020) and Ehrhardt et al. (2018) found establishing IV access was one complex task novice nurses need to master; as such, supporting new nurses in IV access may boost job satisfaction and potentially improve novice nurse retention.

This study investigated the effect of IV access support on job satisfaction and retention among novice nurses. Researchers have reported job satisfaction is a primary predictor of staff retention (Bong, 2019; Heidari et al., 2017). In this quantitative study, IV access support acts as the variable moderating the relationship between job satisfaction and novice nurse retention. The study evaluated IV access support as a strategic intervention to strengthen the positive relationship between novice nurses' job satisfaction and retention rate. The remaining sections of Chapter 3 will include the research design and rationale, methodology (comprised of the population, sampling, recruiting, data collection instruments, and data collection strategies), threats to validity, and a summary.

Research Design and Rationale

Quantitative research focuses on relating or comparing variables or constructs (Creswell & Creswell, 2018). For this study, the independent variable, the predictor variable, is job satisfaction, while the dependent variable (i.e., the outcome variable) is the novice nurse's intent to stay/turnover. I explored IV access support as the moderating variable on the association between job satisfaction and novice nurses' intent to stay/turnover. After selecting the methodology for data collection, researchers choose a design that will provide a meaningful answer to the proposed study's research question (Gray et al., 2017).

The purpose of research design is to outline the study's major components and provide specific directions for research study procedures (Creswell & Creswell, 2018). Due to time constraints, the proposed study will use a nonexperimental, causal-comparative design versus a longitudinal study to estimate the moderation effect on the association between independent and dependent variables. Consistent with Creswell and Creswell's (2018) review, a cross-sectional survey design will allow me to answer my research question on the moderating effect of IV access support on the relationship between job satisfaction and novice nurses' intent to stay. Many studies have reported using survey instruments to measure job satisfaction and intent to stay among nursing staff (Borrott et al., 2016; Coyne et al., 2020; Heidari et al., 2017). Therefore, my study utilized standardized survey instruments to measure participant perceptions regarding the effect of IV access support on the relationship between job satisfaction and novice nurses' intent to stay. The research questions are shown below address this study's focus

on the relationships between the moderating variable (i.e., IV access support), the independent variable (i.e., job satisfaction), and the dependent variable (i.e., intent to stay/turnover). The independent and dependent variables are measured as continuous variables, and the moderating variable is measured as a dichotomous variable (i.e., IV access support or no IV access support).

The research questions are:

Research Question 1: What is the effect of IV access support on job satisfaction among novice nurses?

Research Question 2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

The survey design was judged the best fit for my study as it aligns with my quantitative methodological approach. According to Burkholder et al. (2016), survey designs are cost-effective compared to other data collection techniques and relatively easy to administer, precluding the resource constraint. Additionally, my survey didn't collect any identifying information from participants, so a web-based survey questionnaire will offer greater privacy to study participants. Survey design also allows researchers to collect an abundance of data within a short period and offers flexibility to be completed remotely through online platforms (e.g., Survey Monkey). This flexibility is particularly important because of the geographic and time constraints introduced during the pandemic.

Despite these advantages, there are also many disadvantages to survey design. First, surveys can only estimate the actual population to generalize the finding to a larger

population (Burkholder et al., 2016). Second, surveys sometimes yield low response rates, limiting the researcher's ability to generalize results to the targeted population. Finally, according to Burkholder et al. (2016), the accuracy of survey data depends on participants' abilities to accurately interpret the meaning of survey items to effectively and honestly report on their experiences and behaviors.

Methodology

Research methods refer to the exclusive ways in which the researcher chooses to conduct the study for the chosen design (Gray et al., 2017). Moreover, research methods delineate inquiry details so that other researchers can replicate the study (Gray et al., 2017). The following section describes the various components of the research methods involved in this quantitative study.

Population

The study considered novice nurses as the target population for the research. For the study's purpose, novice nurses are defined as new graduate nurses with less than two years of experience. Participants are recruited from an acute care setting in the Midwest region. Data are also collected through Facebook and LinkedIn social media platforms to supplement data collection. G* Power analysis in the following section indicates a minimum adequate sample size of 68 participants.

Sampling and Sampling Procedures

The study employed a single-stage, non-probabilistic convenience sampling methodology for data collection (Creswell & Creswell, 2018). The convenience sampling method will rely on maximizing recruitment of available novice nurses in the study site to

mitigate challenges with sufficient participant recruitment. The inclusion criteria for study participants include novice nurses with less than two years of experience working on medical-surgical, telemetry, orthopedic, emergency room, intensive care units, and acute rehabilitation units in acute care settings. Individual consultation with each unit manager provided a novice nurse list with less than two years of experience. Data collection was planned from a sister facility to the primary site depending on participant availability. The study did not collect data from the sister facility as enough participants were available at the primary site. Novice nurses from long-term care facilities or nursing homes are excluded from the study. A power analysis was conducted to estimate the target sample size needed to detect a significant effect.

G*Power is a stand-alone power analysis program for many statistical tests to determine the sample size required to detect effects of interest (Faul et al., 2009). Though empirical conclusions can be drawn with greater confidence using larger sample sizes, recruiting more participants is time-consuming and costly (Creswell & Creswell, 2018). Hence, my study utilized the newest version of G*Power 3.1 to determine the minimum sample size needed for statistical significance. G*Power analysis requires three pieces of information: (a) the alpha value (i.e., Type I error), (b) the effect size of interest, and (c) the beta value known as Type II error). First, my study set a value of .05 as the two-tailed alpha value, or a 5% probability of making a Type 1 error (i.e., false rejection of the null hypothesis). Second, the effect of interest for this study is .15 (i.e., a medium effect size). Third, the beta value, or Type II error, refers to the risk researchers are willing to take to miss a significant effect that is there (Creswell & Creswell, 2018). The beta value for my

study was set to be 0.2, or an estimated power of 0.80 (1-beta). A G*Power analysis Using multiple linear regression, G*Power analysis results showed my study required minimum sample size of 68 participants using an α level of .05 at 80% power to detect an effect size of .15.

Procedures for Recruitment, Participation, and Data Collection

I distributed flyers to recruit participants from an acute care setting in a Midwest region (see Appendix A). I also posted flyer details on Facebook and LinkedIn social media platforms to recruit participants. The distributed flyer included a Survey Monkey link to access the survey and participate in my study. A screening questionnaire identified qualifying participants with less than or equal to 2 years of experience. The participants see the following initial screening question on the Survey Monkey (see Appendix B) platform prior to proceeding with the remaining survey questions: Are you a new graduate nurse with experience ≤ 2 years? If participants answer "no," a screen thanking them for their interest in participating appears, and the survey closes. If participants answer "yes," they were presented with an informed consent screen requesting they agree to study provisions before proceeding to the survey (Creswell & Creswell, 2018).

The informed consent (see Appendix I) ensured participant confidentiality, described the sponsoring institution, provided the primary investigator's contact information, explained the purpose of the study, reviewed risks and benefits of participating, and reminded participants they could withdraw at any time without penalty (Creswell & Creswell, 2018). Participants were informed that clicking the "begin survey" button would confirm their consent and would initiate the survey process. I did not

contact study participants as data collection was anonymous and occurred at a single time point.

Collecting participant demographic data (see Appendix D) was helpful for researchers to explain the variations from previously conducted studies. My study mimicked prior research conventions in collecting demographic information, including age, gender, level of education, number of years employed at current hospital, number of years employed as a registered nurse, and country of residence (Lee, 2019; Waltz et al., 2020). The developer of the Nursing Workforce Satisfaction Questionnaire (NWSQ; Fairbrother et al., 2009) specified the need for international validation of the NWSQ. Therefore, country of residence was included in demographic data collection to support international validation of the survey instrument. Finally, participants were presented with a debriefing page at the conclusion of the survey. The debriefing page thanked participants for their willingness to participate in my research study. The data were collected across a 4-week timeframe and then downloaded into a password-protected SPSS file.

Instrumentation and Operationalization of Constructs

This section details two survey instruments my study used to collect participant data: The NWSQ and the Intent to Stay Scale (ISS). The NWSQ measures job satisfaction among novice nurses. The ISS measures novice nurses' perceptions of their intention to stay (ITS) with their current employer. This section will also include the operational definitions of job satisfaction and nurses' ITS.

Nursing Workforce Satisfaction Questionnaire (NWSQ)

The NWSQ (Fairbrother et al., 2009) measures job satisfaction among novice nurses. Researchers have considered the NWSQ is the most appropriate instrument for assessing nurse satisfaction because it includes questions that gauge support from coworkers. This instrument consists of 18 items assessed on a 5-point Likert scale. However, Fairbrother and colleagues found item 7 accounted for item 10, so item 10 was removed in the final instrument. Items 13 and 14 were also removed from internal consistency analysis as those questions were considered as fundamental stand-alone respondent descriptors (Fairbrother et al., 2009). Fairbrother et al. (2009) found high internal consistency for the NWSQ ($\alpha = .90$), and another study examining final semester nursing students' workplace satisfaction with clinical placements found high internal consistency on the subscale-level, with extrinsic $\alpha = .90$, intrinsic $\alpha = .70$, and relational job satisfaction $\alpha = .90$ (Borrott et al., 2016). For my study, participants may need between 4-5 min to answer all 15 items. The author granted his permission to use the tool for my research study (See Appendix E).

Intent to Stay Scale

The ISS (Mayfield & Mayfield, 2007) measures novice nurses' perceptions of their ITS. This 7-item instrument includes two subscales: positive feelings and negative feelings about remaining in their current organization and is assessed on a 5-point Likert scale. Novice nurses' ITS was assessed by asking nurses to report on their positive and negative feelings about remaining in their current organization. Mrayyan (2008) demonstrated adequate internal consistency for the measure ($\alpha = .75$), and positive and

negative subscales have yielded generally acceptable reliability scores (α = .66 and .77, respectively; Mayfield & Mayfield, 2007). Participants may need between 2-3 minutes to complete all 7 items. Permission to use ISS was obtained via email communication with the author (See Appendix G).

Operational Definition of Variables

The following section will provide operational definitions of key study variables and the instruments used to measure that variable. The section will also include the measurement scale for each construct and scoring guidelines for each survey instrument. The section will conclude with a table summary on key variables, instruments, number of items in each instrument, and the time in minutes required for participants to score items on each survey tool.

Job Satisfaction

Job satisfaction is operationally defined as a feeling of happiness at work (Fairbrother et al., 2009). The 15-item NWSQ is used to measure job satisfaction across three measurable subscales: intrinsic, extrinsic, and relational job satisfaction. Each item is measured on a 5-point Likert scale with responses options ranging from 1 = *strongly agree* to 5 = *strongly disagree*. Total scores will then be calculated from participant responses. A score of 15 (i.e., a response option of 1 across all 15 items) represents the highest possible job satisfaction, and a score of 75 (i.e., a response option of 5 across all 15 items) represents the lowest possible job satisfaction.

IV Access Support

IV access support is operationally defined as any technological or resource person support for novice nurses to establish IV access with patients. IV access support is the moderating variable and is assessed as a dichotomous variable (IV access support or no IV access support with a single question: Do you have IV access support in the form of a resource person or technological support?)

Intent to Stay (ITS)

Nurses' ITS is operationally defined as their intent to remain with an organization (Mayfield & Mayfield, 2007). The ISS is used to measure ITS on a 7-item, 5-point Likert scale with response options ranging from 1 = *strongly disagree* to 5 = *strongly agree*. The ISS includes two subscales: the positive (3 items) and negative affect (4 items) of nurses' intention to remain with the organization. Total scores will then be calculated from participant responses. A score of 7 (i.e., response option 1 selected across all 7 items) represents the lowest intent to stay and a score of 35 (i.e., response option 5 selected across all 7 items) represents the greatest intent to stay. Table 1 summarizes the variables and instruments.

Table 1

Variables and Instruments

Variable	Type	Instrument	Number of items	Estimated time (min)
Job satisfaction	Predictor	NWSQ	15	5
IV access support	Moderator		1	1
Intent to stay	Outcome	ISS	7	3

Note. The moderating variable is dichotomous, measured with a single "yes" or "no" question. NWSQ = Nursing Workplace Satisfaction Questionnaire; ISS = Intent to Stay Scale.

Operational Definitions of Concepts

Novice nurse is defined as new graduate nurses with less than or equal to 2 years of nursing work experience. The study focuses on novice nurses working in acute care settings.

Job satisfaction is defined as feeling happy at work (Fairbrother et al., 2009).

IV access support is defined as a supportive resource, supportive person, or technological support used to establish IV access.

Intent to stay is defined as a nurse's desire to remain with an organization (Mayfield & Mayfield, 2007).

Data Analysis and Plan

I downloaded the data from Survey Monkey into IBM SPSS Statistics (Version 27) to analyze my survey data. Self-reported survey data are the most prevalent but do not allow investigators to observe and assess the thoughtfulness and effort of each

participant as they complete the survey (Desimone et al., 2015). As such, the participant's passive engagement can lead to data error. The data file was cleaned and screened to maximize data quality and improve confidence in study findings. I removed incomplete data and outliers from the data file. If a participant missed 7% or fewer answers, I substituted a reasonable estimated score value to replace the missing response. For example, the mean score for the missing variable can be substituted for all missing values on that variable (Warner, 2013).

The research questions and hypotheses for this study are listed below.

Research Question 1: What is the effect of IV access support on job satisfaction among novice nurses?

$H_0$1: There is no effect of the IV access support on job satisfaction among novice nurses.

H_a1: There is a statistically significant effect of the IV access support on job satisfaction among novice nurses.

RQ2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

$H_0$2: There is no effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

H_a2: There is a statistically significant effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

An ordinary least square regression with a hierarchical model was used to test both hypotheses (Hayes, 2018). The predictor variable can be either quantitative or

dichotomous. For the first research question in this study, the predictor variable (i.e., IV access support) is dichotomous, and the outcome variable (i.e., job satisfaction) is continuous. Many statisticians believe parametric statistics can be applied to scores such as 5-point ratings of the degree of agreement even though those scores do not satisfy the assumptions of interval and ratio measurement levels (Emerson, 2017). As such, I conducted a linear regression analysis to test Hypothesis 1. SPSS linear regression output consists of an ANOVA model, which contains the significance test output for the null hypothesis. Results are significant, and the null hypothesis can be rejected if the significance level is less than the conventional threshold value of .05.

The model summary table with the hierarchical regression model was used to predict the moderation effect. Changes in the R^2 measure with the model summary table were used to predict the statistical significance of the interaction term. The moderation analysis first examined the main effects of job satisfaction on novice nurses' intent to stay. If significant, interaction term (job satisfaction x IV access support) was entered into the model to determine whether IV access support or no IV access support significantly changed the association between job satisfaction and novice nurses' intent to stay. If the significance level of the interaction term is less than the conventional threshold value of .05, the interaction was judged significant and supported the prediction that IV access support moderates the relationship between job satisfaction and novice nurses' intent to stay.

Data should meet the assumptions of statistical analysis. First of all, the normal distribution of data is assumed to make valid inferences. I conducted a frequency analysis

via histogram for each predictor variable and outcome variable to examine the shape of the scores' distribution. The Shapiro-Wilk normality test in SPSS will also test for normality of the data. The researcher removed or modified extreme outlier scores (Warner, 2013). Bootstrapping is one technique used to address nonnormally distributed data. Secondly, there should be a linear relationship between predictor and outcome variables. I created a scatter plot to test this to determine the degree of linearity between variables. Further, data should not contain extreme univariate or multivariate outliers (Warner, 2013). I removed outliers from my dataset that may skew the outcome variable. Ideally, scores for both dichotomous groups (i.e., with and without IV access) should be approximately equal in size and large enough to estimate the sample mean (Warner, 2013).

Another assumption that must be satisfied in multiple regression is the homogeneity of regression (i.e., no multicollinearity between predictors). Data screening included inspection of scatter plots to determine possible multicollinearity between predictor variables (Warner, 2013). If multicollinearity emerges between predictor variables, the regression model should include the interaction to specify the regression model correctly. In my study, multicollinearity is expected as the moderation effect look at the interaction effect between predictor variables. However, it is undesirable to have very high correlations (multicollinearity) among predictor variables as it makes it difficult to distinguish between their unique contribution as predictors (Warner, 2013). In order to reduce multicollinearity with the interaction terms, the independent variable (job satisfaction) was centered over the group mean by subtracting individual scores from the

group mean. Homoscedasticity is another assumption that should be met in multiple regression. A homoscedastic plot with a fit line for both moderating groups (i.e., IV access support vs. no IV access support) demonstrated homoscedastic data.

Finally, as the moderation variable is dichotomous, the assumption of homogeneity of error variance within-subgroup is necessary when multiple regression is used to estimate the moderating effects of categorical variables (Aguinis et al., 1999). It will ensure that the distributions of outcome variables for each subgroup are comparable.

Threats to Validity

Researchers aim to conduct studies with high reliability and validity to ensure high quality research. High reliability and validity are typically achieved via quality data collection instruments (Andrade, 2018). An instrument's reliability denotes its ability to measure an attribute or concept with consistency (Grove et al., 2017). That is, a tool with strong reliability will produce consistent results upon repeated measurement occurrences. The validity of an instrument indicates the extent to which it measures the construct being examined (Grove et al., 2017). The following section will discuss the construct, internal, and external validity of my survey instruments.

Construct Validity

According to Grove et al. (2017), a threat to construct validity occurs when the measurement tool is not suitable for measuring the concept it intends to measure. My study utilized standardized psychometric surveys to measure predictor and outcome variables to minimize construct-validity threats. Several previous studies have used the

NWSQ and ISS and demonstrated high construct validity (Borrott et al., 2016; Fairbrother et al., 2009; Mayfield & Mayfield, 2007).

External Validity

External validity refers to the extent to which research findings can be generalized to other populations and settings (Grove et al., 2017). Data collection across various geographical locations and populations can minimize external validity threats. As such, my study collected data on Facebook and LinkedIn social media platforms and from novice nurses in an acute care setting in the U.S. Midwest region. Data collection on social media may introduce a degree of data heterogeneity through the potential inclusion of both national and international study participants. As such, this opportunity for sample diversification minimized external validity threats and maximize generalizability through participation across different geographical locations.

Internal Validity

Internal validity refers to the extent to which the measured outcome represents the truth among the study population (Grove et al., 2017). It reflects design-embedded decisions about how variables are measured and the influence of extraneous variables on accurate measurement (Grove et al., 2017). My study strictly followed the inclusion and exclusion criteria of participation to minimize internal validity threats. Using a larger group of participants is another way to mitigate the threat to internal validity and strictly follow the design plans. Confounding variables are a significant threat to my study's internal validity. Failing to adjust for confounding variables can cause under or overestimation of the strength of the association between variables (Asiamah et al.,

2021). One of the major confounding variables to my study is the novice nurses who may have been phlebotomists or EMTs (emergency medical transporters) before they entered nursing. Other potential confounding variables are the patient aspects, including age and gender. As the participant's age was not a valid confounding variable to my study, it was not statistically controlled.

Ethical Procedures

Sound knowledge and awareness of ethical responsibilities help novice researchers ensure participants' privacy and safety. It is crucial for novice researchers to adhere strictly to previously established ethical and validated research protocol while conducting research (Ingham-Broomfield, 2017). My research strictly adhered to Walden University's Institutional Review Board (IRB) guidelines for ethical research. The following section discusses procedures I followed for ethical participant recruitment, human participant treatment, and data collection and storage.

I collected data primarily from an acute care setting in the U.S Midwest region. Following the IRB approval from Walden (IRB approval number: 09-08-21-0284736), the study followed the data collection site’s ethical guidelines and obtained IRB approval from the site. I distributed flyers that included the survey link to the unit staff at the data collection site. The study also posted invitations to take the survey on social media (Facebook and LinkedIn) to supplement data collection and to add heterogenicity to the data. The study ensured informed consent was obtained from participants at the beginning of the survey. The informed consent assured participants that identifying information would not be collected to protect their identity.

Proper data collection procedures with my study ensured data security. Specifically, the SurveyMonkey platform securely stored confidential data during data collection. Next, data were downloaded onto a password-protected laptop computer. The downloaded data file was also be saved as a password-protected file on the laptop computer. To comply with Walden's IRB recommendations, I will keep the data file for 5 years before destroying it. I will not release data to any external agencies, with the exception of my dissertation committee. As a researcher, I disclosed to participants that I hold a part-time (two shifts per month) registry RN position with the telemetry unit at the primary data collection facility. As an adjunct clinical faculty, I occasionally bring nursing students from a nursing school to the primary data collection site for their clinical rotations. However, I did not collect data from nursing students.

Summary

Chapter 3 introduced the research design and methodology to validate the hypotheses associated with my research questions. The study employed a quantitative methodology with a cross-sectional design using non-probabilistic, convenience sampling to collect data. Hierarchical multiple linear regression was conducted to examine the moderating effect of IV access support on the relationship between job satisfaction and ITS among novice nurses. My study followed Walden University's IRB ethical guidelines for proper data collection at the data collection site. I also obtained IRB approval from the primary data collection site. Chapter 4 will review data analysis and report findings.

Chapter 4: Results

Introduction

Chapter 4 contains a discussion of data collection procedures and the time frame of data collection for this project. The chapter also includes the study results, which I analyzed through statistical testing using SPSS to answer both research questions described as follows. The purpose of this quantitative nonexperimental causal-comparative research design was to examine whether IV access support influences job satisfaction and retention among novice nurses. Healthcare settings experienced staffing shortages in the middle of the COVID-19 pandemic and are expected to become worse as the government mandates vaccine requirements for coronavirus among healthcare workers (Hut, 2022). The study is especially relevant during the COVID-19 pandemic as it explores the potential to retain novice nurses in healthcare settings. The study focused on novice registered nurses in acute care settings with less than 2 years of nursing experience.

I employed two research questions to guide this study:

Research Question (RQ) 1: What is the effect of IV access support on job satisfaction among novice nurses?

$H_0$1: There is no effect of the IV access support on job satisfaction among novice nurses.

H_a1: There is a statistically significant effect of the IV access support on job satisfaction among novice nurses.

RQ2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

$H_0$2: There is no effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

H_a2: There is a statistically significant effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

In Chapter 4, I review data collection and results of the study. I also examine the duration of data collection, any discrepancies in data collection methods, descriptive statistics on demographic data of the research sample, and statistical assumptions. Finally, Chapter 4 includes a review of the statistical analysis findings organized by research questions, and a summary of the study findings.

Data Collection

The data were collected for a four-week time frame after approval from both the study site and Walden University. Data were collected using Nurse Work Satisfaction Questionnaire (NWSQ) and Intent to Stay Scale (ISS). Both survey instruments were posted on the online survey platform, Survey Monkey along with a single questionnaire to measure moderation variables. Additions were made to the survey flyer passed among participants with a Quick Response (QR) code to access the survey quickly by scanning the QR code using their phone. I posted the flyer information on social media, including Facebook and LinkedIn. There was no follow-up on invited participants due to the anonymous nature of the survey. During the 4-week data collection period, 114 participants respond to the survey. The data were downloaded to a password-protected

laptop. I reviewed the downloaded data and cleaned it by removing incomplete entries leaving 90 valid responses resulting in a 78.9% completion rate.

One of the assumptions on statistical data is that all items must be scored in the same direction (Warner, 2013). Reliability analysis was conducted on ISS data collected on my study population and was yielding a negative Cronbach alpha of -0.220. An analysis of ISS items revealed that item numbers two, three, five, and seven were worded in opposite directions. The reverse-scored items can lead to negative Cronbach alpha (Field, 2006). Hence, the data collected on item numbers two, three, five, and seven on the ISS scale were reverse scored to reflect all items measured in the same direction. A rerun on the reliability analysis of ISS data resulted in a Cronbach alpha of 0.818.

Reliability analysis on data collected through NWSQ was also conducted, resulting in 0.835. As all 15 items with NWSQ were coded in the same direction, there were no concerns noted with reliability analysis with NWSQ. The data collected using NWSQ was in the opposite direction from the ISS scale. In ISS, the scoring guidelines were: 1 = strongly disagree, and 5 = strongly agree, whereas in NWSQ, the scoring guidelines were 1 = strongly agree and 5 = strongly disagree. A higher score in ISS means higher intent to stay with novice nurses, whereas a lower score in NWSQ reflects a higher level of job satisfaction. The study also has a moderation variable, IV access support, which was measured as a dichotomous variable. The dichotomous variable was rekeyed as 0 = No IV access support and 1 = IV access support. Table 2 depicts the research participants' baseline descriptive and demographic characteristics.

The demographic data collected provides critical information that helps explain the study's key findings. The data indicate that 55.05% of participants were domestic and the remaining were international. Most of the participants were female (80.9%), and 57.3% belonged to the 25–35 age group. The highest level of education obtained among participants was a bachelor's degree for 76.4%, associate degree for 16.9%, and master's degree for 6.7%. The demographic data on novice nurses with less than two years of experience reported 6 participants (6.7 %) were educated at master's level (MSN). While nursing schools offer direct entry MSN programs, they might have graduated from a direct entry MSN program. Those participants might also have a master's degree in non-nursing before entering nursing school. The data indicate that 56.2% of participants reported having IV access support, and 43.8% reported no IV access support.

Table 2

Demographic Data for Participants

Selected demographic	*F*	%
Gender		
Male	17	19.1
Female	72	80.9
Age in years		
<25	24	27.0
25–35	51	57.3
36–45	14	15.7
Highest education		
Associate degree	15	16.9
Bachelor's degree	68	76.4
Master's degree	6	6.7
Years in current job		
0–2	86	96.6
2–5	1	1.1
5–10	2	2.2
IV access support		
No	39	43.8
Yes	50	56.2

The data presented in Table 3 provide a representative sample of the new graduate nurses from across the globe with less than 2 years of experience. The study collected international data by posting survey flyer details on social media, including Facebook and LinkedIn, to invite study participants from any country represented in the various social media sites. Participants' country of origin represented 15 countries, with the USA accounting for the participants' largest number (49). Table 3 depicts the country of origin of the study participants.

Table 3

Participants' Countries of Origin

Country	*f*	%
Australia	2	2.25
Belgium	1	1.12
Bosnia	1	1.12
Canada	4	4.49
India	16	17.98
Iran	1	1.12
Korea	1	1.12
Kuwait	2	2.25
Mexico	3	3.37
Philippines	3	3.37
Poland	2	2.25
Russia	1	1.12
Saudi Arabia	2	2.25
Ukraine	1	1.12
United States	49	55.05

Results

I continued data collection, until it reached the required minimum of 68 as per G*Power analysis. At the end of the fourth week, 114 participants had taken my survey with 90 valid responses. After reaching and exceeding the desired sample size, I decided to close my data collection at the end of the fourth week. The data were then downloaded to a password-protected laptop and put into SPSS format. The data was scrubbed by removing invalid entries, resulting in 90 valid entries. One of the entries was missing four responses, and the mean values of the corresponding questionnaire were used to plug in

missed responses. Assumption testing revealed an outlier (case number 52) and this participant's data was removed, yielding a final count of 89 participants. A visual inspection of case number 52 revealed that participants answered 1 for all the survey questionnaires on both NWSQ and ISS.

I used two standardized survey instruments to collect data through the Survey Monkey platform. ISS was used to measure novice nurses' intention to stay with their current job. The instrument consists of 7 items measured in a five-point Likert scale with 1 = strongly disagree and 5 = strongly agree. NWSQ was the second survey instrument used to measure job satisfaction among novice nurses. It consists of 15 items measured on a five-point Likert scale with 1= strongly agree and 5=strongly disagree. The moderation variable (IV access support) was a dichotomous variable measured with a single questionnaire. It was rekeyed as 0 = no IV access support and 1 = IV access support.

Research Question 1

RQ1: What is the effect of IV access support on job satisfaction among novice nurses?

$H_0$1: There is no effect of the IV access support on job satisfaction among novice nurses.

H_a1: There is a statistically significant effect of the IV access support on job satisfaction among novice nurses.

Analysis

I conducted a linear regression analysis to answer RQ1. The descriptive statistics for the variables associated with RQ1 are shown below in Tables 4 and 5. There were 89 valid entries after cleaning and dropping the outliers from the data file.

Table 4

Research Question 1 Descriptive Statistics for IV Access Support

Category	*f*	%	Cumulative %
No IV access support	39	43.8	43.8
IV access support	50	56.2	100.0
Total	89	100.0	

Note. All 89 entries were valid.

Table 5

Research Question 1 Descriptive Statistics for Job Satisfaction

Variable	*N*	Minimum	Maximum	*M*	*SD*
Mean NWSQ	89	1.27	3.27	2.1303	0.42544

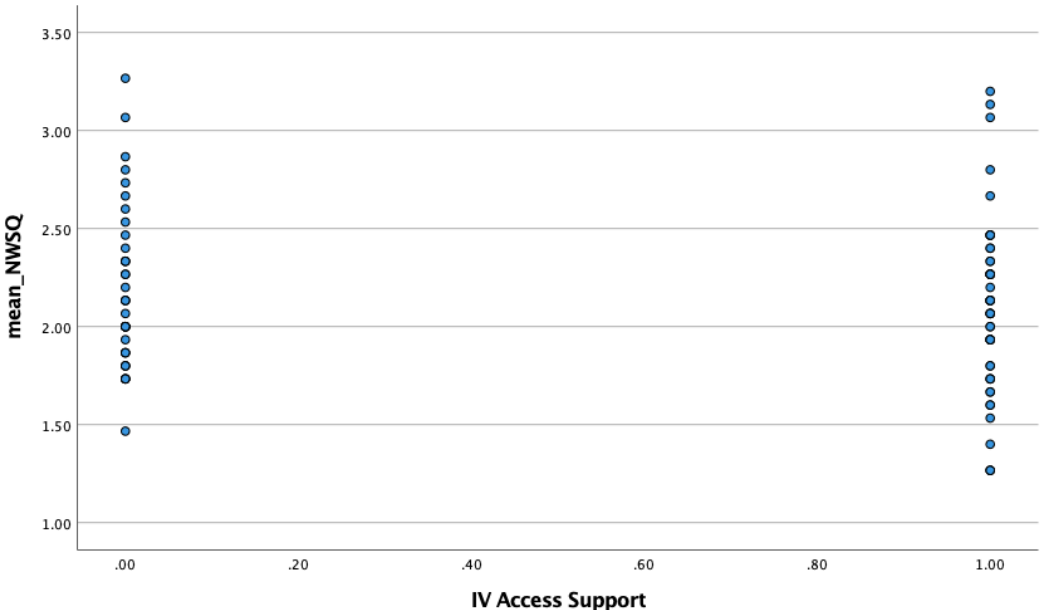
Note. All 89 entries were valid. NWSQ = Nurse Work Satisfaction Questionnaire.

The data satisfied the assumptions of linear regression. I measured the independent variable (IV access support) as a dichotomous variable, and for the analysis purpose, considered it as a continuous variable. The dependent variable (job satisfaction) is measured on a five-point Likert scale can be considered as continuous for analysis purposes. There should be a linear relationship between the independent and dependent variables. A scatterplot of job satisfaction against IV access support is shown in Figure 2.

Visual inspection of this scatterplot indicated a linear relationship between the variables. As the participants took the survey only once, the independence of observations is not applicable for this analysis. The residuals were normally distributed as assessed by Kolmogorov-Smirnov normality test, $D(89) = .093$, $p = .057$. As the p-value is greater than the conventional threshold (.05), the dependent variable (NWSQ) is considered normally distributed.

Figure 2

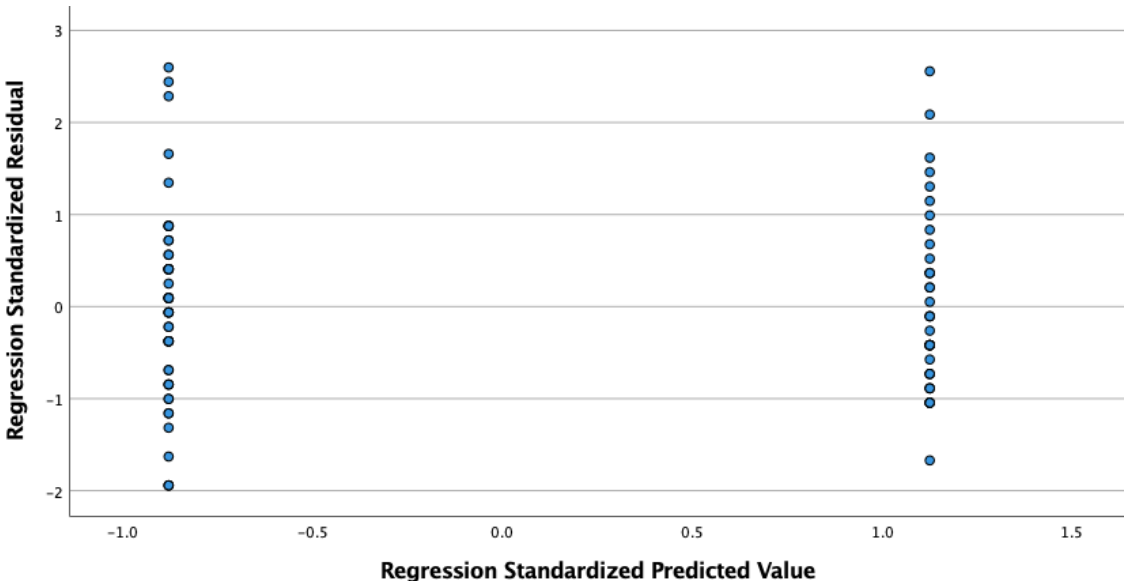
Test for Linearity (Research Question 1)



Another assumption is that there should be no significant outliers in the data on the dependent variable. A case-wise diagnostic test was conducted to report outliers with standardized residuals greater than ±3 standard deviations. No outliers were reported with this diagnostic test. Finally, in linear regression, the data should satisfy the assumption of homoscedasticity. A visual inspection of the plot (Figure 3) of the standardized residuals versus standardized predicted value assured homoscedastic data.

Figure 3

Test for Homoscedasticity (Research Question 1)



Note. Dependent variable is mean Nurse Work Satisfaction Questionnaire.

RQ1: Statistical Analysis Findings

RQ1: What is the effect of IV access support on job satisfaction among novice nurses?

I formulated and tested the null and alternate hypothesis using a simple linear regression analysis performed using IBM SPSS Statistics (Version 27) to answer the research question. The overall model was not statistically significant, as depicted in Table 6. The linear regression model (as shown in Table 7) established that IV access support does not predict novice nurses' job satisfaction, $F(1, 87) = .862$, $p > .05$. The regression equation was: job satisfaction = 2.178 + -0.084 x (IV access support). Hence, the alternate hypothesis is rejected, implying no significant effect of the IV access support on job satisfaction among novice nurses.

Table 6

Analysis of Variance Model (Research Question 1)

Source	*SS*	*df*	*MS*	*F*	*p*
Regression	0.156	1	0.156	0.862	.356 [a]
Residual	15.772	87	0.181		
Total	15.928	88			

Note. Dependent variable is mean Nurse Work Satisfaction Questionnaire.

[a] Predictors are the constant and IV access support.

Table 7

Coefficients

						95% CI *B*	
Variable	*B*	*SE B*	β	*t*	*P*	*LL*	*UL*
Constant	2.178	0.068		31.942	.000	2.042	2.313
IV access support	−0.084	0.091	−0.099	−0.928	.356	−0.265	0.096

Note. Dependent variable is mean Nurse Work Satisfaction Questionnaire. CI = confidence interval; LL = lower limit; UL = upper limit.

Research Question 2

RQ2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

$H_0$2: There is no effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

H_a2: There is a statistically significant effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

Analysis

The descriptive statistics for the variables associated with RQ2 are shown in Table 8. The study used an ordinary least square regression with a hierarchical model to answer my second research question. The study measured independent (job satisfaction) and dependent (intent to stay) variables on a five-point Likert scale. The individual questions on both scales may have been on an ordinal scale; however, the resulting score for each instrument was on a continuous scale. Many statisticians believe parametric statistics can be applied to scores such as 5-point ratings of the degree of agreement even though those scores do not satisfy the assumptions of interval and ratio measurement levels (Emerson, 2017). The moderator variable (IV access support) was measured as dichotomous (binary). As the study participants took the survey only once, the assumption on the independence of observation does not apply to this study.

Multiple regression assumes that the independent variable is linearly related to the dependent variable and vice versa (Warner, 2013). The assumption of linearity was tested by plotting a scatterplot of the intent to stay (dependent variable) against job satisfaction (independent variable) grouped by the IV access support (moderator variable). Visual inspection of this plot (Figure 4) indicated that the assumption of linearity was met. In order to reduce multicollinearity with the interaction terms, the independent variables were centered over the group mean by subtracting individual scores from the group mean. There was no evidence of multicollinearity between independent variables as evidenced by no VIF (variation inflation factor) values greater than 10, as shown in Table 9.

Homoscedasticity is another assumption in regression analysis that ensures equal error variance (Hayes, 2018). Figure 5 indicates a scatter plot of the studentized residuals plotted against the predicted value for both IV access support and no IV access support groups. A visual inspection of the scatterplot indicates that the data met the assumption of homoscedasticity. A case-wise diagnostic test showed no outliers with standardized residuals greater than ±3 standard deviations. The normal distribution of job satisfaction (NWSQ) was assessed by Kolmogorov-Smirnov normality test, $D(89) = .093$, $p = .057$. Intent to stay (ISS) was also assessed for normal distribution through Kolmogorov-Smirnov normality test, $D(89) = .080$, $p = .200$.

The assumption of homogeneity of error variance within-subgroup is necessary when multiple regression is used to estimate the moderating effects of a dichotomous variable (Aguinis et al., 1999). It will ensure that the distributions of outcome variables for each subgroup are comparable. Levene's test of homogeneity of variance is shown in Table 10. As the *p*-value is greater than .05, there is no statistically significant difference between the two subgroups (IV access support yes/no). The ANOVA model shown in Table 11 indicates a nonsignificant *p* value indicating that there no statistically significant difference between IV access support and no IV access support groups. Hence, my study has met the assumption of homogeneity of error variance between groups.

Table 8

Research Question 2—Descriptive Statistics

Variable	*n*	*M*	*SD*	Minimum	Maximum
No IV access support					
Mean NWSQ	39	2.1778	0.40475	1.47	3.27
Modified mean ISS	39	2.8059	0.68785	1.00	4.29
IV access support					
Mean NWSQ	50	2.0933	0.44140	1.27	3.20
Modified mean ISS	50	2.7343	0.71981	1.14	3.86
Total					
Mean NWSQ	89	2.1303	0.42544	1.27	3.27
Modified mean ISS	89	2.7657	0.70291	1.00	4.29

Note. NWSQ = Nurse Work Satisfaction Questionnaire; ISS = Intent to Stay Scale.

Figure 4

Test for Linearity Data (Research Question 2)

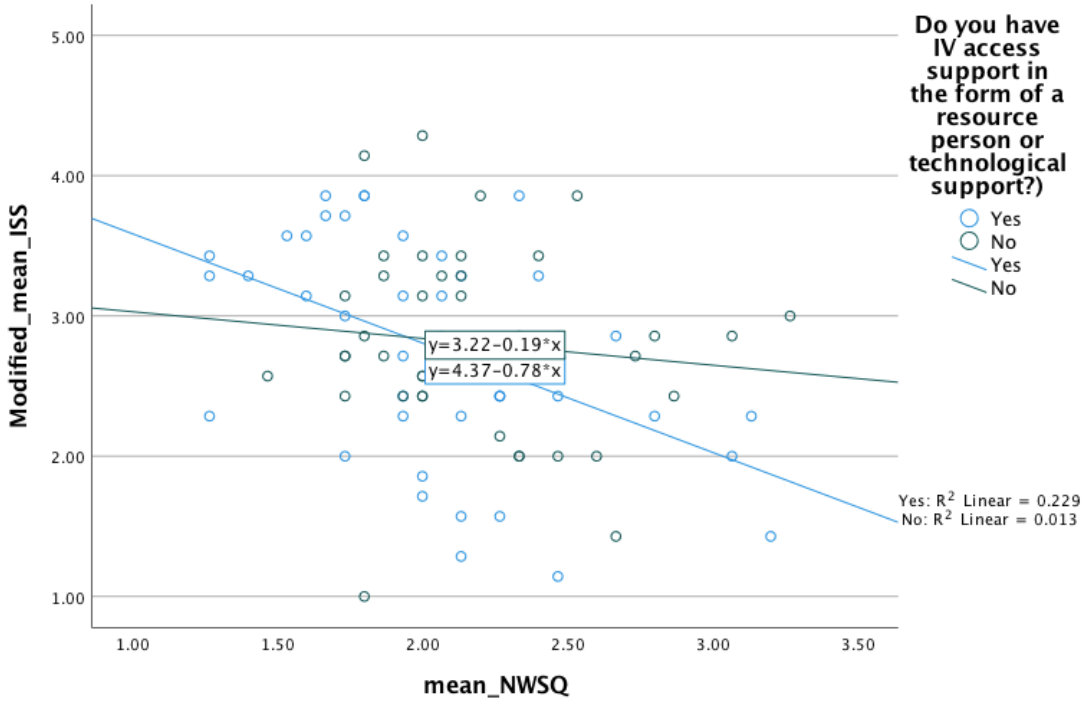


Table 9

Test for Multicollinearity

							Collinearity	
Variable	*B*	*SE B*	β	*t*	*p*	95% CI *B*	Tolerance	VIF
Model 1								
Constant	2.832	0.108		26.310	.000	[2.618,3.046]		
NWSQ mean [a]	0.547	0.169	0.331	3.243	.002	[0.212,0.883]	.990	1.010
IV access support	−0.118	0.144	−0.084	−0.819	.415	[−0.404,0.168]	.990	1.010
Model 2								
Constant	2.815	0.107		26.340	.000	[2.602,3.027]		
NWSQ mean [a]	0.191	0.266	0.115	0.718	.475	[−0.337,0.719]	.391	2.559
IV access support	−0.109	0.142	−0.078	−0.769	.444	[−0.393,0.174]	.989	1.011
Interaction	0.589	0.341	0.277	1.726	.088	[−0.090,1.268]	.393	2.542

Note. Dependent variable is modified mean Intent to Stay Scale. CI = confidence interval; VIF = variance inflation factor; NWSQ = Nurse Work Satisfaction Questionnaire.

[a] Centered over the group mean.

Figure 5

Test for Homoscedasticity (Research Question 2)

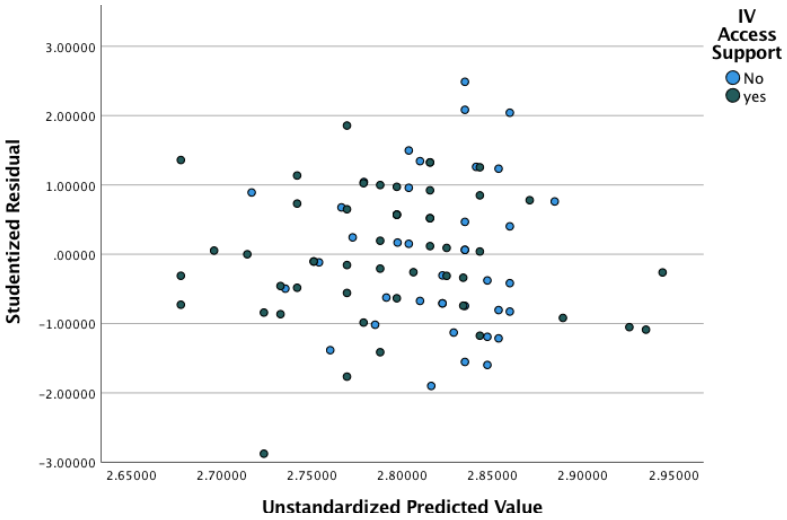


Table 10

Homogeneity of Error Variance for Modified Mean Intent to Stay Scale

Basis	Levene statistic	df_1	df_2	p
Mean	0.374	1	87.000	.542
Median	0.372	1	87.000	.544
Median with adjusted degrees of freedom	0.372	1	86.619	.544
Trimmed mean	0.394	1	87.000	.532

Table 11

Analysis of Variance Model of Homogeneity of Error Variance for Modified Mean Intent to Stay Scale

Source	*SS*	*df*	*MS*	*F*	*p*
Between groups	0.112	1	0.112	0.225	.636
Within groups	43.367	87	0.498		
Total	43.479	88			

RQ2: Statistical Analysis Findings

RQ2: What is the effect of IV access support on the relationship between job satisfaction and the novice nurse's intent to stay?

I ran a hierarchical ordinary least square regression to assess the increase in variation explained by the addition of an interaction term between job satisfaction and IV access support to the main effects model. IV access support affects the relationship between job satisfaction and novice nurses' intent to stay, as shown in Figure 6 (see also Table 12). The model summary in Table 13 indicates a change in the R^2 value of 0.030. The overall model was statistically significant as shown in Table 13. However, the interaction effect was not statistically significant as $p > .05$, as shown in Table 13. IV access support did not moderate the effect of job satisfaction on novice nurses' intent to stay, as evidenced by an increase in total variation explained by 3.0 %, which was not statistically significant ($F(1, 85) = 2.978$, $p=0.088$). Hence, the alternate hypothesis is rejected, implying no significant effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay.

The study also revealed that while there was no moderating effect of IV access, when IV access was included as a predictor of intent to stay along with job satisfaction, the model was significant, and the model summary Table 13 indicates a significant R^2 change of 0.111. Therefore, job satisfaction alone did not predict intent stay, but job satisfaction and IV access support together predicted intent to stay among participants.

Figure 6

Regression Lines for Subgroups

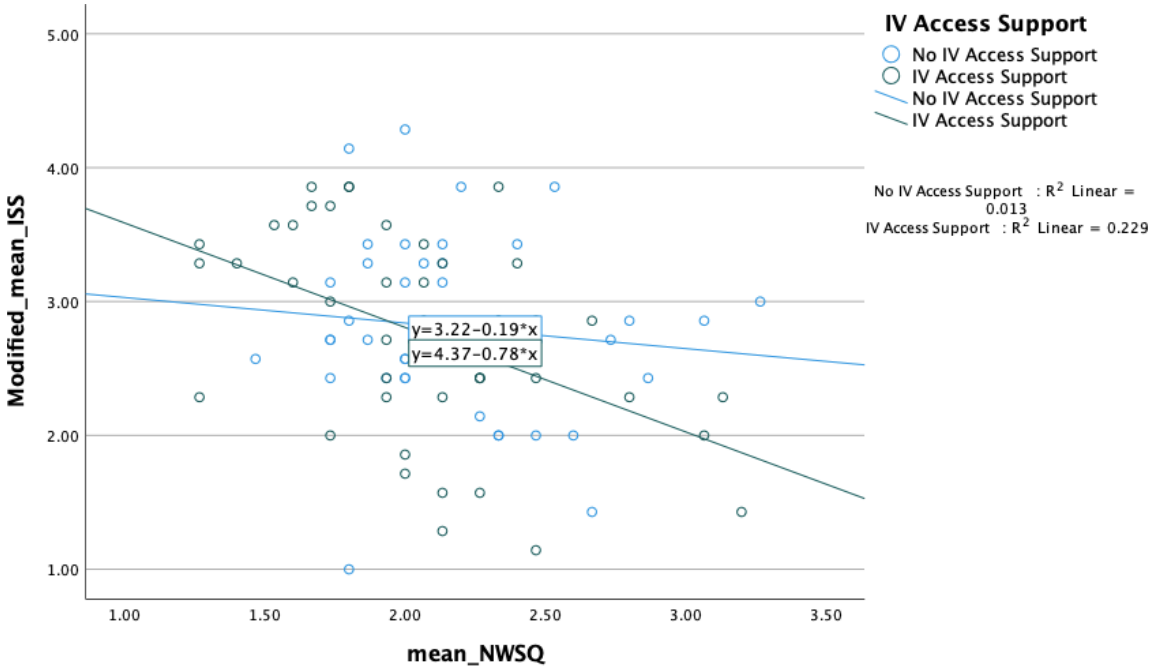


Table 12

Analysis of Variance Model (Research Question 2)

Source	*SS*	*df*	*MS*	*F*	*p*
Model 1					
Regression	4.838	2	2.419	5.383	.006 [a]
Residual	38.642	86	0.449		
Total	43.479	88			
Model 2					
Regression	6.146	3	2.049	4.664	.005 [b]
Residual	37.334	85	0.439		
Total	43.479	88			

Note. Dependent variable is modified mean Intent to Stay Scale.

[a] Predictors are the constant, IV access support, and group-mean-centered Nurse Work Satisfaction Questionnaire mean. [b] Predictors are the constant, IV access support, group-mean-centered Nurse Work Satisfaction Questionnaire mean, and interaction.

Table 13

Model Summary

					Change statistics				
Model	*R*	R^2	Adjusted R^2	*SE*	ΔR^2	ΔF	df_1	df_2	Δp
1	.334 [a]	.111	.091	.67032	.111	5.383	2	86	.006
2	.376 [b]	.141	.111	.66274	.030	2.978	1	85	.088

Note. Dependent variable is modified mean Intent to Stay Scale.

[a] Predictors are the constant, IV access support, and group-mean-centered Nurse Work Satisfaction Questionnaire mean. [b] Predictors are the constant, IV access support, group-mean-centered Nurse Work Satisfaction Questionnaire mean, and interaction.

Summary

The study data were collected for 4 weeks, and 114 participants participated in my study. I screened and cleaned the data, which produced 90 valid entries. During the assumption testing, case number 52 appeared as an outlier, and hence I dropped case 52 from the analysis, yielding 89 valid entries. A simple linear regression analysis to answer the first research question showed that IV access support appears to affect novice nurses' job satisfaction but was not statistically significant. Hence, the null hypothesis was accepted, implying there is no effect of the IV access support on job satisfaction among novice nurses. A hierarchical ordinary least square regression analysis to answer the second research question indicates that the combined effects of job satisfaction and IV access support on novice nurses' intent to stay was significant. However, the regression analysis revealed that the moderation effect was not statistically significant. Therefore, I could not reject the null hypothesis, implying there is no effect of the IV access support on the relationship between job satisfaction and the novice nurse's intent to stay. Chapter 5 will interpret the findings and describe the study findings limitations, recommendations, and implications.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

The aim of this quantitative study was to explore the moderation effect of IV access support on the relationship between job satisfaction and novice nurses' intent to stay. As the COVID-19 pandemic continues, healthcare organizations are experiencing a severe staffing shortage. The staffing shortage will become still more severe as the government mandates vaccine requirement among healthcare workers. My study is significant in the present pandemic context as it explores means to improve novice nurses' job satisfaction and retention. I conducted this study among novice nurses across the globe with fewer than 2 years of experience. Chapter 5 will include a discussion of the key findings, interpretation of the findings, limitations, recommendations, and implications of the study.

Key Findings

The first research question examined the effect of IV access support on job satisfaction among novice nurses. I conducted a bivariate regression analysis with IV access support as an independent variable and job satisfaction as a dependent variable. The results of this analysis revealed a nonsignificant relationship between independent and dependent variables. This is evidenced by the unstandardized coefficient value of 0.084 with the coefficient table (Table 7), meaning job satisfaction increased by 8.4% with IV access support. The second research question examined the moderation effect of IV access support on the relationship between job satisfaction and novice nurses' intent to stay with their organization. The analysis indicated that IV access support contributed

to 3.0% of the variation in intent to stay but was not a significant moderator of the relationship between job satisfaction and intent to stay (Table 13).

Interpretation of the Findings

The findings of this study contributed to the understanding that supportive measures for novice nurses in relation to hard-to-achieve skills can increase their job satisfaction and retention.

Comparison of Findings to Existing Literature

The first research question examined the effect of IV access support on job satisfaction among novice nurses. Based on the literature review, as discussed in Chapter 2, establishing IV access with the patient is one of the complicated tasks novice nurses are required to master in order to ensure a smooth transition to their professional role (Wenger, 2015). The literature review also indicates that supportive measures concerning hard-to-achieve tasks can improve job satisfaction among nurses. The results of my first research question reveal an insignificant positive correlation between IV access support and job satisfaction among novice nurses. Hence, my study wasn't substantiative to existing body of knowledge that providing IV access support can improve staff satisfaction (Whalen et al., 2018).

The second research question explored the moderation effect of IV access support on the relationship between job satisfaction and novice nurses' intent to stay. Many studies reported that job satisfaction is one of the higher-level decisive factors influencing nurses' intention to stay (Halter et al., 2017; X. Li et al., 2020; Waltz et al., 2020). My

results were supportive of the existing body of knowledge that job satisfaction can improve staff members' intention to stay (Waltz et al., 2020).

Many studies reported that emotional and clinical support are essential to reduce stress and moderate job satisfaction and retention among novice nurses (Coyne et al., 2020; Kox et al., 2020). Ehrhardt et al. (2018) reported IV access as one of the challenging tasks for novice nurses. An evidence-based practice project by Wenger (2015) reported an improved comfort level in establishing IV access after a peripheral IV therapy course for new graduates. Davis et al. (2020) reported that an ultra-sound guided intravenous (USGIV) access could significantly improve the time to establish an IV access leading to employee satisfaction. Smith (2018) also reported that nurses can be trained successfully on USGIV in DIVA (difficult intravenous access) patients, preventing unnecessary central lines, reducing the number of unsuccessful IV access attempts, and minimizing delay in diagnosis and treatment. My study revealed that the model was significant when IV access was included as a predictor of intent to stay along with job satisfaction. Therefore, job satisfaction alone did not predict intent stay, but job satisfaction and IV access support together predicted intent to stay among participants. Hence, my study results were supportive to the existing body of knowledge that advanced technical skills for establishing IV access may ultimately improve novice nurses' job satisfaction and, hence, their retention with the present organization (Bell & Spencer, 2020; Ehrhardt et al., 2018; Song & McCreary, 2020).

Comparison of Findings to Theoretical Framework

My study utilized Herzberg's two-factor (motivator-hygiene) theory to investigate the role of IV access support in the relationship between job satisfaction and novice nurses' intent to stay with their present organization. The motivator-hygiene factor theory postulates two distinct factors contributing to job satisfaction (DeShields et al., 2005). The motivators are the intrinsic factors focusing on employees' emotional needs and personal satisfaction, such as achievement, recognition, and personal growth. Their presence can motivate employees to improve their job satisfaction (Herzberg, 1968). In contrast to motivators, hygiene factors are those extrinsic to the job, such as job security, poor working conditions, employee sick days, vacations, and breaks between working hours. The absence of these factors can create dissatisfaction among employees (Herzberg, 1968).

Extant studies have reported that establishing IV access is one of the challenging tasks novice nurses must master as they transition to their professional role (Wenger, 2015). Hence, IV access support in the form of a resource person or technological support can decrease job dissatisfaction among novice nurses. The moderator variable in my study, IV access support, acts as a hygiene factor in which IV access support can improve job satisfaction by decreasing job dissatisfaction. My study reflected the two-factor theory by comparing increased job satisfaction with IV access support to the situation in which no IV access support is provided. The improved job satisfaction produced with the introduction of hygiene factor (IV access support) results in an insignificant increase in intent to stay among novice nurses.

Limitations of the Study

First, the results of this study were limited by the target population. My research study was limited to novice nurses with fewer than 2 years of experience. Hence, the results are not generalizable to the entire nursing population. The study involved the collection of domestic (55%) and international data (45%). Most of the domestic data were collected from an acute care facility in the United States Midwest region. The opinions of the nurses in that facility may have had a disproportionate influence on the findings, limiting the generalizability of my study results. Another limitation to my research study was the cultural differences among international participants, affecting the survey responses. The cultural differences may have significantly impacted the results of my study, as 45% of participants are from overseas.

Collecting international data caused some severe limitations to my research study. The community of novice nurses across the globe may not have the technological support necessary to establish IV access. They also may not have the same opportunity and flexibility as their U.S. counterparts to leave their current job and start with a new organization. Hence, their scoring on job satisfaction with and without IV access support can cause discrepancies with domestic data. My study didn't measure or analyze whether these confounding factors influenced the intent to stay among participants. Another limitation of my study is that it didn't account for the novice nurses who may have been phlebotomists or EMTs (emergency medical transporters) before entering nursing. The study also didn't measure or analyze the potential confounding variables associated with the patient aspects, including age and gender.

Finally, the survey instruments I used for my research study measured survey responses in the opposite direction. ISS measured survey responses in a 5-point Likert scale from strongly disagree to strongly agree. NWSQ also measured survey responses on a 5-point Likert scale, but strongly agree to strongly disagree. Hence, a higher score in ISS means strongly agree, whereas a higher score in NWSQ means strongly disagree. Therefore, it is possible that participants could have made mistakes in scoring based on the differing guidelines between the instruments.

Recommendation

First, the study should be repeated with participants (novice nurses) from the countries with similar levels of development and economic opportunity. This approach will ensure homogenous participants who have the same level of technological support in healthcare, especially concerning IV access. Homogenous participants would have the same flexibility and opportunity to switch their jobs based on their job satisfaction. This approach will avoid response variation among participants from various cultures, while producing more accurate and generalizable results about their job satisfaction and intent to stay with their organization.

Another recommendation for future researchers is to use survey instruments with items worded in the same direction. The instrument's (ISS) scoring guidelines ran in opposite directions may have confused survey participants and, therefore, skewed the results.

Finally, I would recommend that future researchers look at how the type of IV access support offered affects job satisfaction and intent to stay. My study examined IV

access support either in support personnel or technology to assist with IV access. Future research examining whether personnel support vs. technological support is significant and can provide evidence to support best practices.

Implications

The nursing discipline has been struggling with a nursing shortage, affecting the safety and quality of care provided to the vulnerable population. The present COVID-19 pandemic is exacerbating this staffing shortage, and the healthcare system is confronting a crisis. Healthcare systems are struggling to maintain a steady nursing workforce and have not experienced such a critical staffing shortage in the past decade. My study explored supportive measures on complicated tasks (IV access) for novice nurses and their effect on their job satisfaction and intent to stay. My study has significant potential for positive social change among the health care system, as it explores means to improve novice nurses' job satisfaction and their intent to stay with their organization.

Another implication of my study is that it provides information that may help healthcare stakeholders determine how to increase job satisfaction among novice nurses. The literature review indicates that novice nurses often experience a stressful transition to their professional roles. Extant research also showed that IV access skills are challenging skills novice nurses need to master during their transition. My study can create positive social change among novice nurses by increasing their intent to stay with improved job satisfaction through support on challenging-to-achieve skills such as IV access.

Finally, as my study explores how to improve novice nurses' job satisfaction and retention, it can positively change the healthcare system by reducing the financial

obligations in hiring and training new nurses. Studies have reported that turnover intention is detrimental to an organization's financial stability, costing anywhere between $10,000 to $88,000 (Alshawush et al., 2020). My study may also create positive social change among vulnerable populations as its results will help facilitate the presence of steady nursing staff to provide safe and quality care to such patients.

Conclusion

Nursing is a career in which there was already an increased demand for competent individuals. This staffing shortage in the nursing discipline has worsened during this pandemic. As the pandemic continues, older nurses are retiring, considering their increased risk factors associated with the COVID-19 infection. New graduate nurses are the potential solution to this nursing shortage. Unfortunately, many new graduates are experiencing stressful and challenging situations during their transition and, as a result, leaving the bedside nursing profession. The recent graduates may not have enough training during this pandemic situation. Hence, they may need additional support to achieve complicated nursing skills to improve job satisfaction and retention (Coyne et al., 2020). Studies have also reported that emotional support is vital to reducing stress and increasing job satisfaction and retention among novice nurses (Ebrahimi et al., 2016, as cited in Coyne et al., 2020). Leaders in healthcare settings should explore strategic ideas to reduce new graduates' stress and burnout to keep them in the nursing profession.

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Appendix A: Survey Flyer

NURSING SURVEY
OPPORTUNITY TO PARTICIPATE
VOLUNTEERS NEEDED

If you are an RN presently working at the bedside in acute care settings with 2 or less years of nursing experience, you are eligible to participate. The results of the study will be helpful to the nursing discipline to understand the influence of intravenous access support to the relationship between job satisfaction and novice nurse's intent to stay with their organization.

In order to access the survey
please scan QR code or enter this link in your Internet web browser: https://www.surveymonkey.com/r/9FJFX37

You will be directed to answer a few demographics questions and then answer questions related to the above-mentioned topics

I am conducting this study for my Walden dissertation.
If you have any questions about the survey, please email me
Shaji.kurian@waldenu.edu

Appendix B: Initial Screening Question

Are you a new graduate nurse with 2 or less years of experience? Yes/no

Note: Participants with ‘yes’ answer will be allowed to continue with survey and ‘no’ will thank participants and then survey will exit.

Appendix C: Demographics Data Sheet

1. Are you currently working as a registered nurse (RN) in acute care settings?

   1 (yes) 2 (no)

2. How long have you been working as RN?

   1 (<= 2 years) 2 (2-5 years) 3(5-10 years) 4 (10-15 years) 5 (15-20 years) 6 (> 20 years

3. How long have you been working as RN with present organization?

   1 (<= 2 years) 2 (2-5 years) 3(5-10 years) 4 (10-15 years) 5 (15-20 years) 6 (> 20 years

4. How old are you?

   1 (less than 25) 2 (25 – 35) 3 (36 – 45) 4 (46 – 55) 5 (56 - 65) 6 (over 65)

5. What is your gender?

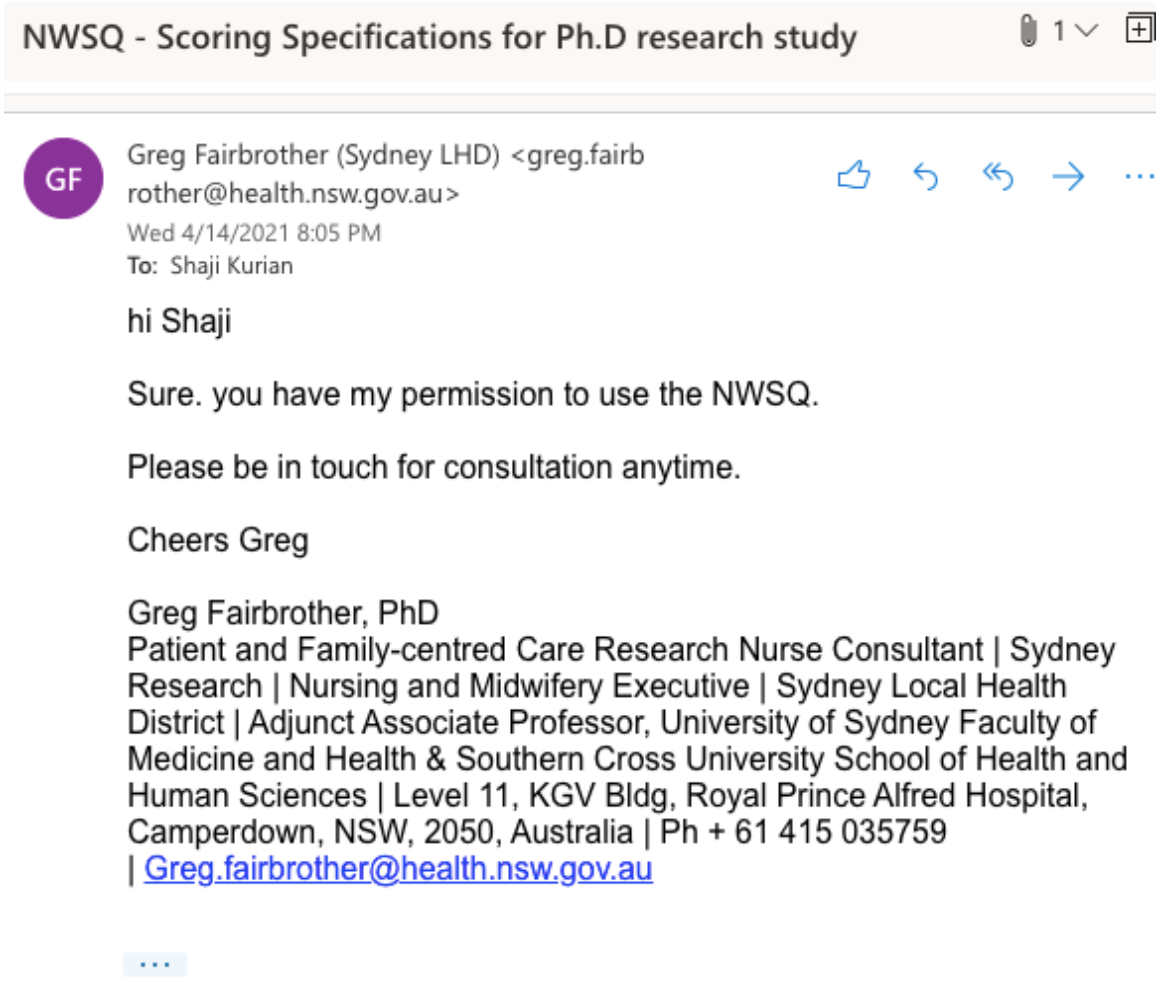
   1 (Male) 2 (Female) 3 (Do not want to answer)

6. What is your highest level of education?

   1 (Associates degree) 2 (Bachelor's degree) 3(Master's Degree) 4(Doctoral Degree)

7. What is your country of origin?

Appendix D: Permission to Use NWSQ



NWSQ - Scoring Specifications for Ph.D research study

1

GF

Greg Fairbrother (Sydney LHD) <greg.fairbrother@health.nsw.gov.au>

Wed 4/14/2021 8:05 PM

To: Shaji Kurian

hi Shaji

Sure. you have my permission to use the NWSQ.

Please be in touch for consultation anytime.

Cheers Greg

Greg Fairbrother, PhD
Patient and Family-centred Care Research Nurse Consultant | Sydney Research | Nursing and Midwifery Executive | Sydney Local Health District | Adjunct Associate Professor, University of Sydney Faculty of Medicine and Health & Southern Cross University School of Health and Human Sciences | Level 11, KGV Bldg, Royal Prince Alfred Hospital, Camperdown, NSW, 2050, Australia | Ph + 61 415 035759 | Greg.fairbrother@health.nsw.gov.au

Appendix E: NWSQ

Items

Intrinsic (How much you enjoy your job)

1. My job gives me a lot of satisfaction.
2. My job is very meaningful for me.
3. I am enthusiastic about my work
4. My work gives me the opportunity to show my worth
5. In the last year, my work has grown more interesting
6. It's worthwhile to make an effort in my job

Extrinsic (Doing your job)

7. I have enough time to deliver good care to patients
8. I have enough opportunity to discuss patient problems with my colleagues.
9. I have enough support from colleagues.
10. I would function better if it was less busy on the ward/unit.
11. I feel able learn on the job
12. I feel isolated from my colleagues at work.
13. I feel clinically confident.
14. I like the way my ward is run.

Relational

15. It's possible for me to make good friends among my colleagues.
16. I like my colleagues.
17. I feel that I belong to a team.
18. I feel that my colleagues like me.

Note. All questions had the following possible responses: Strongly agree, Agree, Neutral, Disagree, and Strongly Disagree

Appendix F: Details and Permission to Use Intent to Stay Scale (ISS)

PsycTESTS Citation:
Mayfield, J., & Mayfield, M. (2007). Intentions to Stay Scale [Database record]. Retrieved from PsycTESTS. https://doi.org/10.1037/t63366-000

Instrument Type:
Inventory/Questionnaire

Test Format:
This instrument consists of seven items, each rated for agreement on a five-point scale with the following response options: Strongly Disagree, Disagree, Neutral, Agree, and Strongly Agree.

Source:
Mayfield, Jacqueline, & Mayfield, Milton. (2007). The effects of leader communication on a worker's intent to stay: An investigation using structural equation modeling. Human Performance, Vol 20(2), 85-102. https://doi.org/10.1080/08959280701332018, © 2007 by Taylor & Francis. Reproduced by Permission of Taylor & Francis.

Permissions:
Contact Publisher and Corresponding Author.

Hi Dr. Mayfield,

My name is Shaji Kurian and I am a Ph.D. student (Nursing education) with Walden University, Minneapolis. I am so excited to see your Intent to Stay Scale in PsycTests. I am hereby kindly requesting your permission to use your ISS survey instrument for my dissertation study. I would really appreciate your consideration and support!!

Thank you,

Sincerely,
Shaji Kurian

Dear Shaji,

Yes, you can use our scale. We released the scale under a Creative Commons Attributions Share-Alike 4.0 International license.

In brief, you can use the scale in any way you want as long as you give us credit for the original scale and release any changes to the scale under the same license.

You can find more information on the license here:
https://creativecommons.org/licenses/by-sa/4.0/

Please let us know if you need something different for your dissertation or have any questions about the scale.

We wish you the best of luck with your dissertation.

Sincerely,
Milton & Jackie Mayfield

Appendix G: Intent to Stay Scale

Items

Please place an X in the bracket by the answer that best describes your feelings about your current work situation

1. I expect to be working for my current employer one year from now.
2. I would change jobs if I could find another position that pays as well as my current one
3. I am actively looking for another job
4. I would like to work for my current employer until I retire.
5. I would prefer to be working at another organization
6. I can't see myself working for any other organization.
7. I would feel very happy about working for another employer.

Note: All questions had the following possible responses: Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree