2023

Factors Influencing Newly Licensed Nurse Position Selection and Retention

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This is to certify that the doctoral study by

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has been found to be complete and satisfactory in all respects,
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Abstract

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by

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MSN, Walden University, 2011

BSN, West Virginia University, 2008

of the Requirements for the Degree of

Doctor of Healthcare Administration

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May 2023

Abstract

Newly licensed nurse turnover can be costly, causing a mismatch between supply and demand for nurse staffing needs, lowering quality outcomes, and decreasing patient satisfaction. This quantitative study was conducted to identify the relationship between why newly licensed nurses selected their first position and their retention in that initial position. Other factors examined in relation to retention were unit most worked, age, race, sex, and education level. Irvine and Evans's theory of job satisfaction and Maslow's hierarchy of needs guided the analysis of the data. Secondary data used were the Newly Licensed Registered Nurse New Cohort 3 Survey from 2016 as part of the RN Work Project by the Robert Wood Johnson Foundation. Analysis showed the following reasons, both professional and personal, had a statistically significant positive relationship for newly licensed nurses retaining their initial position: (a) clinical experience there while a student, (b) job had the best working conditions, (c) organizational reputation, (d) best interprofessional relationships, (e) wanted to move to or live in that area, and (f) commute to work was short. Reasons showing a statistically significant negative relationship with retention were (a) only full-time position working as an RN that was offered, (b) unit most worked other, and (c) age ≥ 50. The findings of this study have potential implications for positive social change by improving recruiting practices, decreasing nurse turnover, and improving job satisfaction among newly licensed nurses.

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Dedication

I dedicate this work to my loving husband, Heath. Your love, encouragement, and support have made this doctoral study completion possible. Thank you for your spiritual leadership of our family. You are proof that God loves me.

Acknowledgments

I thank God for the ability to use my mind to complete the work needed to achieve my academic goal. While there were times when completion seemed far away, He gave me the strength to see it through.

Many people assisted me by encouraging and guiding me through the process. My husband, Heath, has given me strength in times of need. My committee chair, Dr. Nicole McGuire, has been helpful throughout the process and has spent so much time guiding me through edit after edit. I also want to thank Dr. Donna Clews for helping with edits and guidance throughout, as needed. These ladies have been integral to the completion of this research. Thank you to Dr. Zin Htway for all the assistance with my statistical analysis.

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Section 1: Foundation of the Study and Literature Review

Introduction

Nurse retention and turnover can be costly to any healthcare organization. With increasing levels of turnover causing supply and demand mismatches (Halter et al., 2017), it is imperative to understand the factors that influence position selection and retention. Nurses are essential to the healthcare workforce, when newly licensed nurses leave their roles, it raises significant obstacles to building the needed workforce (Brook et al., 2019b). Examining factors affecting newly licensed nurses' selection of their first position and retention in that position can lead to a better understanding that can help minimize turnover. The findings of this study may improve recruitment, set realistic expectations, and increase newly licensed nurse retention.

Background

The current research shows a plethora of information about recruitment and retention efforts in the nursing profession. Nonetheless, little to no research has been conducted on nurses' original reason for accepting a position and their retention in that initial position. In a study involving newly licensed nurses in a medical–surgical unit, attributes such as having a supportive manager, feeling valued, and work–life balance were rated high in consideration for accepting a position, as were workload, scheduling, and organizational reputation (Steele–Moses et al., 2018). This research was minimal, with only five hospitals, representing another potential gap (Steele–Moses et al., 2018).

Many recent studies have been focused on nurse residency programs and their influence on nurse retention. One literature review shows that nurse residency programs

can increase retention rates higher than the national average (Asber, 2019). Another focus of current research includes leadership skill training for nurse managers of newly licensed nurses to enhance retention (Lea et al., 2017). Considering the current critical shortage of nurses expected to continue through 2025 and the rate of graduating nurses being below the expected need (Bong, 2019), connecting nurses with desired positions may increase retention.

Problem Statement

According to the Robert Wood Johnson Foundation (2014), nearly 20% of nurses leave their first position within the first year, and 33% leave within 2 years. The cost to replace a nurse can range from $22,000 to $64,000 and beyond, depending on the use of temporary staff, the hiring process, and the training process (Robert Wood Johnson Foundation, n.d.). In this study, I examined why newly licensed nurses select their first position and their retention in that initial position. Because close to 80% of newly licensed nurses work in hospital–based positions and 30% leave their unit during their first year (Kovner et al., 2016), understanding how nurses decide to accept their first position and their decision to remain in that position during first–year post–licensure could provide insight into retaining newly licensed nurses.

Purpose of the Study

In this quantitative study, I examined factors influencing newly licensed nurses' first position selection and their retention during the first year after licensure. Findings from this study may help create better recruitment processes, set realistic expectations for positions, and maintain newly licensed nurses. Newly licensed nurses are sensitive to

growth and adjustments for their professional development to succeed (Ke & Stocker, 2019). This information may help organizations assist newly licensed nurses in their vocation (Ke & Stocker, 2019).

In this quantitative study, secondary data were used to examine the factors that led newly licensed nurses accepting their first position and how those factors influenced retention in the initial position. The dependent variable was retention in their first position. The independent variables included reasons the position was selected (i.e., clinical experience there as a student, volunteered at the organization before starting nursing school, the only full–time position offered, best working conditions, organizational reputation, best pay or benefits, best educational advancement opportunities, best interprofessional relationships, racial and gender diversity of staff, other professional reasons, wanted to move to or live in the area, work hours and schedule for work–life balance, the commute was short, onsite childcare, family or friend's recommendation, have friends who work at the organization, or other personal reasons). Other independent variables included the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and participants' age, race, sex, and educational level for additional discernments. Gaining additional insights into these data may help minimize turnover in newly licensed nurses by allowing for proper selection and unit placement.

Research Questions and Hypotheses

RQ1: What is the relationship between the reason newly licensed nurses selected their first position and retention in their initial position?

$H_0$1: There is no statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

H_A1: There is a statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

RQ2: What is the additional relationship of other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position?

$H_0$2: There is no statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

H_A2: There is a statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

Framework

For this study, Maslow's hierarchy of needs was used to evaluate newly licensed nurses' need for position security, sense of belonging, respect, independence, and personal growth (Mcleod, 2018) as part of the position selection process. The hierarchy of needs illustrates the drive or motivation of an individual to get their basic needs met (Mcleod, 2018). According to Maslow, five levels of needs influence our behavior (Learning Theories, 2014). These five levels start with basic physiological needs and

advance to the need for safety, belongingness, self–esteem, and self–actualization (Learning Theories, 2014). The bottom basic needs are physiological and safety, including threats in the workplace, care delivery compromises, traumatic experience recovery, and feelings of isolation (Advisory Board, 2021). The top of the pyramid focuses on self–actualization, including helping nurses reach their full potential by meeting their career goals (Advisory Board, 2021). The theory can be used to further evaluate additional factors as needs change throughout life with situational differences and education levels. This theory has been used in other studies, such as Zangaro's (2001) study of organizational commitment. Zangaro posited that if nurses' needs were met and they were comfortable with the organization, they would remain in their position.

I used Irvine and Evans's (1995) theory to understand the relationship between the dependent (retention) and independent (reason position selected) variables. This theory examines the relationship between position satisfaction and retention (Irvine & Evans, 1995). This theory has been used to posit that work content and environment are more important to position satisfaction, thus improving retention compared to economic and individual difference variables (Irvine & Evans, 1995). Marrying Maslow's hierarchy of needs with Irvine and Evan's theory will show the connection between the personal needs of newly licensed nurses and the relationship between position selection and retention. Individual needs and position satisfaction must be considered when a nurse accepts a position and remains in that position. These theories helped to give a rounded approach to the research.

Nature of the Study

In this study, I used data from a newly licensed registered nurses survey conducted from August 1, 2014, to July 31, 2015. The survey results were used to understand the relationship between newly licensed nurses' reasons for selecting their first position and their retention in the initial position. The survey results were analyzed to determine any statistical significance. Further analysis was conducted on the relationship between the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention to determine any statistical significance.

Correlational regression analysis was selected to show a relationship between why newly licensed nurses selected their first position and their retention (see Calvello, 2020). The regression analysis was used to reveal statistical significance in how the reason influences retention (see Calvello, 2020). Other factors were also considered to determine if they show statistical significance in enhancing the understanding. I selected this method to glean any learnings that may help to influence retention.

Literature Search Strategy

Articles selected for this preliminary review of position selection, recruitment, and retention are included here. Keyword searches included *new nurse position selection, new nurse recruitment, new nurse retention,* and *new nurse position satisfaction* in Walden University library databases, such as CINAHL & MEDLINE Combined Search, ProQuest Health & Medical Collection, and SAGE Journals. I focused on sources published between 2016 and 2021.

Literature Review Related to Key Variables and/or Concepts

Increased turnover and decreased retention negatively impact the healthcare workforce and the quality of care patients receive (Brook et al., 2019a). In the first year of a newly licensed nurse's employment, there is high risk for turnover (Brook et al., 2019a). A gap in the literature exists regarding specific interventions that may influence newly licensed nurses' retention rates (Brook et al., 2019a). I conducted this study because there may be merit in understanding the correlation between why newly licensed nurses chose their first position and their retention in that initial position. This research may help drive interventions that could retain newly licensed nurses.

Nursing Shortage

As the United States population ages and the need for healthcare expands, the nursing shortage is expected to worsen (American Association of Colleges of Nursing, 2020). Current projections show that nursing will see approximately 7% growth from 2019 to 2029, totaling 221,900 added nurses. Still, the expected openings project 175,900 annually until 2029 (U.S. Bureau of Labor Statistics, 2021). Many of these openings are predicted to replace current nurses who migrate to another profession or retire (U.S. Bureau of Labor Statistics, 2021). In a 2018 re–evaluation of the nursing shortage, the predicted nursing shortage by 2030 is 510,394, with the South and West regions in the United States having higher deficits than the Northeast and Midwest (Zhang et al., 2018). This is an improvement over a 2012 study's findings (Zhang et al., 2018), but the findings still demonstrate a need for understanding how to decrease the shortages by improving recruitment and retention.

The nursing shortage must be examined from a global view. The World Health Organization (WHO) has identified a deficit of 10.3 million healthcare workers (doctors, nurses, and midwives) worldwide (A. Jones et al., 2019). Rural healthcare workers have a deficit of seven million compared to urban areas with a deficit of three million (A. Jones et al., 2019). According to the WHO, half of the world's population lives in rural areas, but their healthcare is provided by 38% of the nurses and 24% of the doctors (A. Jones et al., 2019). In the United States, 19% of the population lives in rural areas and is generally older, sicker, and poorer compared to urban people (Mester, 2018). In Canada, 17% of the population lives in rural areas, with 11% of the nurses (A. Jones et al., 2019). In South Africa, 43.6% of the population lives in rural areas, served by 19% of the nurses (A. Jones et al., 2019). Overall, most healthcare professionals in rural areas are nurses (A. Jones et al., 2019).

In the United Kingdom, the number of nurses is rapidly falling for many reasons (Davidson et al., 2021). From 2016 to 2017, there was a 20% reduction in the nursing registry, indicating more nurses left the profession than entered (A. Jones et al., 2019). The same projections have been seen in Australia and the United States (A. Jones et al., 2019). In 2019, it was reported that, since the Brexit vote in 2016, there had been an 85% decline in nurses coming into the United Kingdom (Gilroy, 2019). From 2016 to 2017, the United Kingdom received 6,382 nurses from the European Union but only saw 968 from 2018 to 2019 (Gilroy, 2019). Furthermore, Gilroy (2019) explained that nursing shortages had reached record levels, with 43,000 open nursing positions. The National Health Service reported a vacancy rate greater than 10% in June 2020, which accounted

for 45% of the total vacancies in hospitals and community health settings in England (The Health Foundation, 2020). Over the past decade, Canada saw the lowest annual growth rate of nurses in 2016 (A. Jones et al., 2019).

In 2019, England reported a 4% increase in preregistration for nursing over the previous year, yet a shortage of 15,000 nurses (Foster, 2019). Even further concerns are noted when looking at students older than 25, which have decreased by 71% since 2016 (Foster, 2019). In addition, nursing faculty shortages impact student capacity when program growth is genuinely needed (Bienemy, 2007). Many programs across the country are declining suitable candidates due to faculty shortages (Bienemy, 2007). Another concern is that the skill mix (nurses versus support staff) is changing and becoming diluted, potentially decreasing the quality of care (The Health Foundation, 2020). The WHO endorses universal health coverage and believes the nursing shortage is the biggest threat to access to quality healthcare for all (Mao et al., 2020).

The COVID–19 pandemic has caused further attrition of qualified nurses; many have elected to leave the profession and others have died from the illness. In January 2021, according to the International Council of Nurses, the confirmed number of nurse deaths from COVID–19 was 2,200, and a high level of infections continued among the nursing workforce. The pandemic could affect nursing shortages for generations to come unless specific action is taken (International Council of Nurses, 2021). Besides increased COVID–19 infections among nurses, other reasons causing the shortage include short–staffing and increased workloads and physical exhaustion, psychological distress, abuse, and protests from those opposed to vaccination (International Council of Nurses, 2021).

With the world already six million nurses short of the current needs and a predicted four million retiring in the next 10 years, the pandemic will exponentially increase the shortages (International Council of Nurses, 2021). Many countries have reported nurses leaving positions; nurses feel overwhelmed and experience increased anxiety levels, burnout, stress, depression, and fear compared to prior levels (International Council of Nurses, 2021). The COVID–19 pandemic has also impacted nursing schools by limiting access for nursing students to complete clinical course requirements (Bowden & Schmus, 2021).

Cost of Turnover and Shortages

Nurse turnover can be costly to an organization and profoundly impact its profit margin and ability to offer needed services. The 2019 National Healthcare Retention and RN Staffing Report published by Nursing Solutions Inc. (NSI) estimated that each nurse turnover can cost an organization approximately $328,400 (F. Shaffer & Curtin, 2020). The average hospital loses $4.4 to $6.9 million annually due to nurse turnover (F. Shaffer & Curtin, 2020). With the turnover rate averaging 17.2% and the average time to fill at 85 days (longer for specialty positions), costs are associated with overtime and onboarding (F. Shaffer & Curtin, 2020). The average price for replacing a nurse is $82,000, without including overtime, onboarding, and training of a new nurse (F. A. Shaffer & Curtin, 2020). This turnover perpetuates the cycle by increasing the stress and workload on those remaining nurses.

Another study by NSI showed an average cost of turnover being $40,038 (range of $28,400 to $51,700), meaning each hospital loses an average of $3.6 million to $6.5

million per year (NSI, 2021). In 2020, the nurse turnover rate increased by 2.8% to 18.7% (NSI, 2021). Current registered nurse (RN) vacancy rates average 9.9%, one point higher than the previous year, and 62% of organizations report vacancy rates higher than 7.5% (NSI, 2021). Of the hospital participants in the study, 23.9% reported a less than 5% vacancy, while 35.8% reported a greater than 10% vacancy along with an 89–day time–to–fill average (NSI, 2021).

Travel nursing can be a significant expense when trying to cover nurse vacancies. Because labor expense is a top budget item, reducing travel nurse expenditures will facilitate an organization's margin compression (NSI, 2021). NSI estimated that for every 20 travel nurse assignments eliminated, an organization could save $3,084,000 (NSI, 2021). With the COVID–19 pandemic, travel nursing packages dramatically increased, causing increased costs for organizations and encouraging nurses to leave their positions (NSI, 2021). During COVID–19, travel nurse rates increased by 200%, and organizations spent 62.5% more at the end of 2020 than at the beginning (NSI, 2021). The nursing shortages also cause organizations to pay overtime and critical staffing pay that may push hourly rates exponentially (NSI, 2021).

Other considerations for an organization are potentially reduced capacity and unit closures (A. Jones et al., 2019). Services could also be impacted or reduced, specifically in rural areas (A. Jones et al., 2019). Considering these implications, rural populations must travel farther for services, which could be detrimental to their health status, especially in emergent situations (A. Jones et al., 2019). According to the Centers for Disease Control and Prevention, rural populations have a higher incidence of disease,

diabetes, cancer, unintentional injuries, chronic respiratory disease, and strokes (Mester, 2018). This represents a prime example of healthcare disparities that could be impacted by the current nursing shortage allowing for decreased healthcare quality (A. Jones et al., 2019).

Nurse Recruitment

Many factors could influence newly licensed nurses in selecting their first position. These factors include compensation, unit preference, shift availability, orientation programs, and organizational reputation (Steele–Moses et al., 2018). Nurse support and being part of a team and organizational reputation have been rated highest in why new nurses select their first position (Steele–Moses et al., 2018). Steele–Moses et al.'s review also included managers' need to understand what newly licensed nurses bring to the team and how they will fit in. Nurse residency programs have been enticing to newly licensed nurses as partnerships with nursing colleges have flourished with enhanced clinical experiences during the final semester of school and prehire position offers in choice areas for newly licensed nurses (Wildermuth et al., 2020).

The United Kingdom has recruited staff from other countries to bridge the gap caused by nurse shortages. In 2018–19, 1,791 nurses were recruited from India, and 3,118 came from the Philippines (Gilroy, 2019). Even with these efforts, however, the National Health Service for the United Kingdom continues to miss annual recruitment goals (Gilroy, 2019). Other recruitment issues for the United Kingdom include changes to English language testing, which has since been relaxed to assist with global recruitment (Gilroy, 2019). The pressure remains to recruit nurses within the United Kingdom and

globally to fill the needs, including ensuring that migration policies do not cause obstacles (Gilroy, 2019). The British Journal of Nursing reported that possible interventions could include preemployment programs, work placement, volunteer opportunities, career development programs, and apprenticeships (Foster, 2019).

Other techniques currently being utilized for recruitment include advertising in numerous channels, including social media, offering career advancement opportunities, emphasizing work–life balance, creating nurse ambassadors to promote positive cultures, building nursing communities, promoting a positive brand, and emphasizing workplace safety (Wolters Kluwer, 2019). Organizations must remain faithful to their prehire promises and increase the flow of candidates by standing out in the crowd of many trying to recruit (Wolters Kluwer, 2019). Three crucial recruitment strategies include attractive employer branding with an excellent culture, extraordinary recruitment processes with quick offer times, and a successful orientation program (communication and approach to the first day; Griffin, 2021).

Employee referral programs have also been beneficial for the quantity and quality of nursing applicants, noting their success could reflect on the employee (Stockman et al., 2020). Employee referrals have also been more effective than position ads in finding credible applicants (Stockman et al., 2020). Employee referrals tend to match applicants better to the needs and culture of an organization (Stockman et al., 2020). Belgian hospitals sent 110 nurses an email encouraging them to recruit other nurses by promising a referral bonus that did not significantly change the quantity and quality of referred nurses (Stockman et al., 2020). This same study showed autonomous recruitment

motivation was more fruitful and meaningful (Stockman et al., 2020). This autonomous recruitment process allowed for a sense of belonging, unity, and connectedness to each other and the organization (Stockman et al., 2020).

Because 90% of the world's nursing population are women, focusing on recruitment of men could help alleviate nursing shortages (Mao et al., 2020). There has been a steady increase in male nurses in the United States over the past four decades (Mao et al., 2020). These percentages vary based on country cultures and expectations. For example, in Taiwan 2.06% of nurses are male, while in Hong Kong 13.4% are (Mao et al., 2020). Barriers to recruiting male nurses include not seeing them as appropriate caregivers or other societal and social expectations (Mao et al., 2020). Mao et al. (2020) found that Japanese men pursued a career in nursing due to a lack of different career choices. Other reasons for men becoming nurses in Taiwan include economic benefits or parental decisions (Mao et al., 2020).

Nurse Retention

Organizations are attempting many different tactics to promote nurse retention. WHO categorized these tactics into four major categories: (a) education, (b) regulatory, (c) financial, and (d) professional/personal support (International Centre on Nurse Migration, 2018). Preceptorships, mentoring, residencies, internships, externships, orientation/transition programs, and clinical ladder/advancement programs have been shown to be beneficial in retaining newly licensed nurses (Brook et al., 2019a).

The Press Ganey report from 2018 for optimizing the nursing workforce showed several things organizations can do to promote retention among new and experienced

nurses (F. A. Shaffer & Curtin, 2020). The basics include offering a fair wage, flexibility for work–life balance, respecting staff by treating them well, and providing autonomy in workflow and care goals (F. A. Shaffer & Curtin, 2020). Other essential actions for nurse retention include improved communication, accountability of staff and leadership, hiring the correct people, managing conflict quickly, and fairness to all staff (F. A. Shaffer & Curtin, 2020). All organizations must understand its workforce and focus on consistency in policies (F. A. Shaffer & Curtin, 2020).

In a recent study on position satisfaction versus work engagement among RNs in New York, researchers sought to determine if either was a statistical predictor of turnover intention (Edwards–Dandridge et al., 2020). The results showed that position satisfaction was a significant predictor, whereas work engagement was not (Edwards–Dandridge et al., 2020). One of the recommendations from the study was that leadership should concentrate on regularly assessing nurses' position satisfaction (Edwards–Dandridge et al., 2020). Another recommendation was to train leaders in techniques to encourage staff engagement (Edwards–Dandridge et al., 2020).

In a recent study of male nurses in Macau and mainland China, differences were identified in retention among the two populations. During the first years of their careers, Macau male nurses planned a long career in nursing, whereas in mainland China, male nurses considered leaving nursing (Mao et al., 2020). Macau nurses pursued specialty areas of nursing, while mainland China nurses had difficulty finding career alternatives and sought opportunities in nursing to leave the bedside (Mao et al., 2020). More Macanese nurses chose the nursing profession as their first career choice, but among the

mainland Chinese group of nurses, only one participant identified nursing as their first choice (Mao et al., 2020).

Reasons for Turnover

Nurses are more likely to stay in their position if expectations are set early, along with programs that provide more than a standard orientation (Mester, 2018). A recent study shows that newly licensed nurses' turnover due to low position satisfaction is related to: (a) unanticipated workloads, (b) scheduling conflicts, (c) decreased patient contact, (d) inability to practice autonomously, and (e) little recognition/rewards (Wolters Kluwer, 2017). Other reasons include: (a) lack of good relationships with coworkers, (b) managers, and (c) colleagues (Wolters Kluwer, 2017). While pay can play a factor, it carries less impact if the newly licensed nurse feels supported with staffing and scheduling challenges that can be addressed (Wolters Kluwer, 2017). It is also mentioned that men are twice as likely to leave for a higher paying position than women (Wolters Kluwer, 2017).

Emory University conducted a secondary analysis of the HHS Health Resources and Services Administration survey from 2018 on nursing burnout, including 3,957,661 respondents (Advisory Board, 2021). The majority (63.7%) worked in hospitals (Advisory Board, 2021). This analysis showed that 10.6% or 418,769 had left their positions due to: (a) stressful work environments (34%), (b) lack of good leadership (34%), (c) burnout (31%), (d) inadequate staffing (30%), or (e) better pay/benefits (26%); (Advisory Board, 2021). An additional 17%, or 676,122, reported considering leaving due to: (a) better pay/benefits (50%), (b) burnout (43%), (c) inadequate staffing (43%),

(d) stressful work environment (42%), and (e) lack of good leadership (40%); (Advisory Board, 2021).

Burnout is a serious condition that could influence turnover within an organization (Kelly et al., 2021). Of the nurses included in a study from 2018 to 2019, 54% experienced some level of burnout, and 28% of those with high levels (Kelly et al., 2021). Burnout was noted to be higher in women than men by 9% (Kelly et al., 2021). Tenure increases also increase burnout (Kelly et al., 2021). Age also influences burnout, decreasing with advancing age (Kelly et al., 2021). When tenure is constant, nurses who begin at a younger age will have less burnout than those who start at an older age (Kelly et al., 2021). Nurses who witnessed one death per month showed an increase in burnout of approximately 40% over the year (Kelly et al., 2021). Markers for emotional exhaustion increased by 10%, and cynicism increased by 19% from the initial survey in 2018 to the follow–up survey in 2019 (Kelly et al., 2021).

Definitions

Newly licensed nurses: Nurses who obtained their first license to practice nursing between August 1, 2014 and July 31, 2015 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018).

Nurse retention: Nurses keep their current position/employer (Efendi et al., 2019). For this study, retention will be based on the first position held by the newly licensed nurse.

Nurse turnover: Nurses leave their current organization for any reason (International Centre on Nurse Migration, 2018).

Assumptions

Assumptions are presumed valid for the study's specific purpose of theory building (Wargo, 2015). Assumptions also validate decisions made during the study concerning design and synthesis (Wolgemuth et al., 2017). Assumptions for this study include: (a) appropriate design, (b) the questions relevant to the topic, and (c) the participants answering honestly, giving meaningful results. Another assumption is that only the targeted population's answers were included in the results.

Scope and Delimitations

The scope and delimitations refer to the study's boundaries to make the research more manageable and applicable to what is being studied (Discover PhDs, 2020). This study is restricted to newly licensed nurses that participated in the targeted research and limited to the data, including the reason the newly licensed nurse selected their first position and retention in the initial position. Demographic elements (the unit most worked (i.e., intensive care unit [ICU], step–down, general, other), age, race, sex, and educational level) were also included. This is the only data used for this study. The delimitations, or boundaries of the study (Discover PhDs, 2020), set for this research include the choices for the problem, purpose, research questions, and the conceptual framework selected to examine the data. Other delimitations include the literature used for the review and the data set used for determining study validity.

Limitations

Considering the data has been derived from a survey, there are inherent limitations, including participant recall or answer inconsistencies and validity (T. L.

Jones et al., 2013). While the sample size is quite large, which may lead one to believe the result to be quite inclusive, it may not represent the group because the survey was sent to 14 states (Organizing Your Social Sciences Research Paper, 2020). Answers may differ in other states (Organizing Your Social Sciences Research Paper, 2020). Only ten states provided lists of nurses with exams and licenses with the prescribed dates leaving many potential participants not included, thus missing valuable data and limiting potential participants (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). Restrictions based on the methodology and population can also exist. These may include cultural differences or biases influencing survey responses (Organizing Your Social Sciences Research Paper, 2020). Finally, bias cannot be fully controlled or guaranteed.

Significance

Understanding the first position decision and retention data can assist organizations in refining their retention programs, thus minimizing staff turnover and the associated costs caused by that turnover. The gap in the literature includes what can be done (specific interventions) to influence these newly licensed nurses' retention rates (Brook et al., 2019a). Voluntary nurse turnover is directly connected to lower–quality patient care and satisfaction scores (De Simone et al., 2017). Considering that 25% of an organization's Centers for Medicare and Medicaid Services (CMS) reimbursement is directly based on patient satisfaction, 25% is based on safety, 25% is based on clinical care (quality of care), and the final 25% is based on cost reduction (CMS, 2017), organizations must understand nurse recruitment and retention for these reasons.

Other benefits of nurse retention for organizations include: (a) reduced recruiting costs, (b) fewer vacancy and hiring costs, (c) reduced training costs, (d) reduced termination costs, (e) increased productivity, (f) higher staff satisfaction and organizational trust, and (g) easier nurse recruitment (C. B. Jones & Gates, 2007). A staffing report from 2016 estimated that hospitals lose an estimated $5.2 to $8.1 million annually ("The High Cost of Nurse Turnover," 2016). These costs include: (a) the maintenance of a recruiting department, (b) including recruiters, (c) position postings, application systems, and (d) external staffing agencies ("The High Cost of Nurse Turnover," 2016). With healthcare turnover being ranked as having the third highest turnover by industry at 43% ("The High Cost of Nurse Turnover," 2016), the potential costs to an organization are understandable for replacing these nurses.

Other operational effects include the influence turnover has on other remaining staff. These include working with: (a) staffing shortages, (b) burnout, (c) working overtime, and (d) increasing workload ("The High Cost of Nurse Turnover," 2016). All of these could lead to further turnover and raise the issue exponentially. Considering it can take an average of 85 days to fill a general nursing position and more than three months to fill a specialized position ("The High Cost of Nurse Turnover," 2016), the weight of turnover on the remaining staff can be hefty.

This research study could improve recruiting practices and decrease turnover, thus resulting in positive social change. Another positive social change will be newly licensed nurses remaining in their positions longer, thus gaining experience and minimizing

training costs for newly licensed positions. Reducing turnover will not only save money but also improve position satisfaction among these newly licensed nurses.

Summary and Conclusions

While the current research shows a plethora of information about recruitment and retention efforts in the nursing profession, there is little to no research that has been conducted on nurses' original reason for accepting a position and their retention in that initial position. Completing this study to determine significance of the reason a newly licensed nurse selects their first position and their retention status in that first position will provide information to organizations of what is important to promote retention or show what does not promote retention. These actions could improve hiring practices, retention practices, and job satisfaction among newly licensed nurses.

Section 2: Research Design and Data Collection

Introduction

In this study, I aimed to examine factors influencing newly licensed nurses' first position selection and how that may influence retention in their initial position. Findings from this study may help create better recruitment processes, set realistic expectations for positions, and maintain newly licensed nurse hires. Newly licensed nurses are sensitive to growth and adjustments for their professional development to succeed (Ke & Stocker, 2019). This information may help guide organizations to assist them in their vocation (Ke & Stocker, 2019). In this chapter, I discuss the research design and rationale, including the variables used, along with the methodology used and any threats to validity.

Research Design and Rationale

The data used in this study were secondary data through a survey using a questionnaire comprising multiple variables relevant to the research objectives of this study. A total of 1,171 participant responses were available in the present secondary data set. However, a vast number of participant responses to multiple questions were missing or incomplete. Therefore, the data needed to be cleaned and the missing values removed from the data set prior to statistical analysis. First, the frequency counts were computed for the dependent variable retention in the initial position and the independent variables professional reasons and personal reasons, along with additional factors like age, gender, ethnicity, unit most worked, educational qualification, and nonnursing degrees. Next, I ran two binary logistic regression models to satisfy the research objectives as framed in the form of the two research hypotheses at a 5% significance level. I chose binary logistic

regression to validate the two hypotheses because the dependent variable was a dichotomous nominal variable and the independent variables are all nominal or ordinal predictors. Therefore, using the binary logistic regression models was the most appropriate. The odds ratio was computed for each variable level to estimate its influence on the dependent variable and check its statistical significance.

Methodology

Population

The target population included newly licensed RNs surveyed between August 1, 2014, and July 31, 2015 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). This population is a crucial part of the healthcare workforce, with 81% of hospitals hiring at least one new graduate in 2000 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). Hospitals have concerns regarding these newly licensed nurses due to turnover occurring within the first year of employment (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). Understanding how to manage the retention of these newly licensed nurses could help reduce the need to continually hire newly licensed nurses and ease the burden of the nursing shortage (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016).

Sampling

For this study, the secondary data set I used was the Newly Licensed Registered Nurse New Cohort 3 Survey from 2016 as part of the RN Work Project by the Robert Wood Johnson Foundation (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). This survey is the third part of a series that started with graduates in 2004–

2005 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). The principal investigators were Christine Kovner from Rory Meyers College of Nursing and Carol Brewer from the University of Buffalo School of Nursing (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). This survey included newly licensed nurses between August 1, 2014 and July 31, 2015 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). The survey results are publicly available online. This study series used panel data to determine similarities and differences in different graduating years (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018).

To determine the sample size for this study, I performed a power analysis using G*Power, Version 3.1.9.4. For my binomial regression, I entered a medium effect size of 0.5, an alpha error of probability of 0.05, and a power of 0.90. Based on the calculations, the necessary sample size for statistical significance was 261. The survey sample size was 1,171, exceeding the minimum needed.

Instrumentation and Operationalization of Constructs

The Newly Licensed Registered Nurse New Cohort 3 Survey (2016, 2018) from the RN Work Project by the Robert Wood Johnson Foundation was designed as part of a more extensive comprehensive study to describe work patterns and factors connected with changes over an extended period among newly licensed nurses. Comparisons were made regarding education status, work setting, and work satisfaction among the numerous cohorts (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018).

Surveys were mailed to newly registered nurses meeting the eligibility requirements in 14 states, with 10 states providing perfect lists of newly licensed nurses (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). The survey sought demographics, first position, retention/turnover, educational level, position satisfaction, organizational commitment, and position preferences. A total of 3,780 surveys were sent across 20 metropolitan statistical areas, one rural county, and 14 states with a response rate of 36% or 1,171 surveys for the final sample (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018).

The dependent variable was retention in their initial position. The independent variables included reasons the position was selected (clinical experience there while a student, worked or volunteered at the organization prior to starting nursing school, only full–time position working as an RN that was offered, job had the best working conditions, organizational reputation, best pay and/or benefits, best educational advancement opportunities, best interprofessional relationships, racial or gender diversity of staff, other professional reasons, wanted to move to or live in the area, work hours/schedules were good for work/life balance, commute to work was short, on–site childcare was available, family or friend's recommendation, have friends working at the organization, and other personal reasons). Other independent variables included the unit most worked (intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level for additional discernment.

Data Analysis Plan

For this study, I used SPSS software to conduct binary regression analysis. The results were interpreted to accept or reject the null hypothesis. The following research questions and hypotheses were used to guide the study:

RQ1: What is the relationship between the reason newly licensed nurses selected their first position and retention in their initial position?

$H_0$1: There is no statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

H_A1: There is a statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

RQ2: What is the additional relationship of other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position?

$H_0$2: There is no statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

H_A2: There is a statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

Threats to Validity

When the experimenter misinterprets the data and uses it to make assumptions regarding other people, settings, or situations, this is considered an external validity threat (Trochim, 2021). The collected responses in the secondary data set represent an external threat to validity. Internal threats to validity can influence the research study's conclusions related to the population's research design, treatments, or experiences (Laerd Dissertation, n.d.). These internal threats include the process of survey design, distribution, and participants' experiences beyond the researcher's control. Statistical conclusions can also threaten validity due to inadequate or incomplete analysis, low statistical power, violated assumptions, or range restrictions (Glen, 2015).

Ethical Procedures

The data obtained for this study were accessed via the Inter–University Consortium for Political and Social Research. The purpose of the Inter–University Consortium for Political and Social Research is to promote and facilitate research regarding social sciences and related areas (Constitution, n.d.). This author completed this study without direct contact, and all participants were anonymous. After reviewing the data, no ethical concerns were identified. Walden's IRB committee has approved this study.

Summary

In this section, the data set was defined as being from the Newly Licensed Registered Nurse New Cohort 3 Survey from 2016 as part of the RN Work Project by the Robert Wood Johnson Foundation as the basis for the research study. The description of

the design, methodology, sample size, analysis, and threats to validity were given above. The following section will present the results, findings, and interpretations.

Section 3: Presentation of the Results and Findings

Introduction

In this section, I review the data, completed tests, and the statistical analysis results. The following research questions and hypotheses guided this study:

RQ1: What is the relationship between the reason newly licensed nurses selected their first position and retention in their initial position?

$H_0$1: There is no statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

H_A1: There is a statistically significant relationship between the reason newly licensed nurses selected their first position and retention in the initial position.

RQ2: What is the additional relationship of other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position?

$H_0$2: There is no statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

H_A2: There is a statistically significant relationship between the other factors of the unit most worked (i.e., intensive care unit [ICU], step–down, general, other) and nurses' age, race, sex, and educational level on retention in the initial position.

Data Collection and Secondary Data Set

The secondary data set used for this study was the Newly Licensed Registered Nurse New Cohort 3 Survey (2016, 2018) as part of the RN Work Project by the Robert Wood Johnson Foundation. This survey was the third part of a series that started with nursing graduates in 2004–2005 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). The principal investigators were Christine Kovner and Carol Brewer. The survey participants were newly licensed nurses between August 1, 2014 and July 31, 2015 (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018).

Results

The data used in this study were secondary data collected through a survey using a questionnaire comprised of multiple variables relevant to the research objectives of this study. A total of 1,171 participant responses were available in the secondary dataset. I ran two binary logistic regression models to satisfy the research objectives at < 0.05 significance level. I chose binary logistic regression to validate the two hypotheses because the dependent variable was a dichotomous, nominal variable with only two possible outcomes (*retention* versus *no retention*), and the set of independent variables were all nominal or ordinal predictors (multiple reasons the position was selected, most worked unit, age, race, sex, and educational level). Therefore, binary logistic regression models were appropriate. Assumptions to use logistic regression include having a binary answer (retention versus no retention), independent results as a nurse cannot be in both groups, and the sample size was sufficient. The odds ratios were computed for each

variable level to estimate its influence on the dependent variable and check its statistical significance.

Population

Demographic characteristics like age, gender, and ethnicity were also crucial in determining participant retention. Table 1, Table 2, and Table 3 show participants' frequency counts and percentages. Gender among participants were predominantly women, 85.5% (1,001). The male participant count was 13.5% (158). Missing gender responses comprised 1% (12). Approximately 54.4% (637) of participants involved in the study were younger than 29; 27.2% (318) of participants were in the 30–39 age group. Individuals ages 40–49 totaled 153, 13.1%, and participants ages 50 or older were 4.4% (51). Only 1% (12) of participants did not answer the age question. Regarding ethnicity, 71.8% (841) of respondents were White non–Hispanic. However, all other ethnicities were collectively 25.5% (299), with 2.6% (31) of participants not responding. All participants held a nursing degree as a requirement to participate in the survey, but that may not have been the highest degree participants achieved. The highest–level degree (nursing or nonnursing) was used for statistical analysis. Among participants, 0.9% (10) held a diploma degree, 37.7% (441) held an associate degree, 58.2% (681) held a bachelor's degree, 2.6% (30) held a master's degree, 0.3% (4) held a doctorate degree, and 0.4% (5) did not respond regarding education.

Table 1

Gender Totals

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Male	158	13.5	13.6	13.6
	Female	1,001	85.5	86.4	100.0
	Total	1,159	99.0	100.0	
Missing		12	1.0		
Total		1,171	100.0		

Table 2

Age Totals

		Frequency	Percent	Valid percent	Cumulative percent
Valid	≤ 29 years	637	54.4	55.0	55.0
	30–39 years	318	27.2	27.4	82.4
	40–49 years	153	13.1	13.2	95.6
	≥ 50 years	51	4.4	4.4	100.0
	Total	1,159	99.0	100.0	
Missing		12	1.0		
Total		1,171	100.0		

Table 3

Race Totals

		Frequency	Percent	Valid percent	Cumulative percent
Valid	White non–Hispanic	841	71.8	73.8	73.8
	All other	299	25.5	26.2	100.0
	Total	1,140	97.4	100.0	
Missing		31	2.6		
Total		1,171	100.0		

Table 4

Education Attained

		Frequency	Percent	Valid percent	Cumulative percent
Valid	Diploma	10	.9	.9	.9
	Associate degree	441	37.7	37.8	38.7
	Bachelor degree	681	58.2	58.4	97.1
	Master's degree	30	2.6	2.6	99.7
	Doctorate degree	4	.3	.3	100.0
	Total	1,166	99.6	100.0	
Missing		5	.4		
Total		1,171	100.0		

Professional vs. Personal Reasons and Retention

The data collected during the survey were analyzed to ascertain one position versus more than one position to determine retention in the nurse participants' initial position. Respondents were to indicate the number of employers they have held since they graduated with their nursing degree. The results showed: (a) 79.8% (934) of participants had one employer, (b) 16.1% (188) had two employers, (c) 2.2% (26) had three employers, (d) 0.1% (1) had five employers, (e) 0.1% (1) had eight employers, and (f) 1.8% (21) did not provide a response.

Table 5

Number of Employers Since Graduation

		Frequency	Percent	Valid percent	Cumulative percent
Valid	1	934	79.8	81.2	81.2
	2	188	16.1	16.3	97.6
	3	26	2.2	2.3	99.8
	5	1	.1	.1	99.9
	8	1	.1	.1	100.0
	Total	1,150	98.2	100.0	
Missing		21	1.8		
Total		1,171	100.0		

Respondents were permitted to select more than one professional or personal reason for selecting the first position they accepted after graduation. Of the participants who responded with a professional reason (10 possible answer choices were given), organizational reputation was chosen by 42.6% (499 participants), clinical experience there while a student was selected by 37.5% (439), job had the best working conditions was selected by 32.1% (376), the only full–time position working as an RN was offered was selected 31.1% (364), best pay and/or benefits was chosen by 29.6% (347), worked or volunteered prior to starting nursing school was selected 25.2% (295), best educational advancement opportunities was selected by 23.2% (272), best interprofessional relationships was selected 17.0% (199), other professional reasons was selected 18.6% (218), and gender diversity was selected 7.9% (93). Of the participants who responded with a personal reason (seven possible answer choices were given), commute to work was short was chosen by 43.1% (505), work hours/schedules were good for work–life balance was selected by 42.6% (499), have friends working at the organization was chosen by 31.1% (364), family or friend's recommendation was selected 20.9% (245),

wanted to move to or live in the area was selected 19.2% (225), other personal reasons was selected by 10.0% (117), and on–site childcare was available was selected 0.3% (3).

Other Variables

Other variables to show the comparison among the respondents include the unit most worked during the survey. These units included intensive care unit [ICU] with 12.7% (149), step–down with 11.5% (135), general with 33.2% (389), other area with 37.5% (439), and 5.0% (59) did not respond.

Table 6

Units Most Worked

		Frequency	Percent	Valid percent	Cumulative percent
Valid	intensive care unit [ICU]	149	12.7	13.4	13.4
	Step–down	135	11.5	12.1	25.5
	General	389	33.2	35.0	60.5
	Other	439	37.5	39.5	100.0
	Total	1,112	95.0	100.0	
Missing		59	5.0		
Total		1,171	100.0		

Statistical Analysis Research Question 1

Several binary logistic regression analyses were conducted to investigate if retention can be predicted by the professional and personal reasons selected for accepting the initial position. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) clinical experience there while a student, (b) worked or volunteered at the organization prior to starting nursing school, (c) only full–time position working as an RN that was offered, (d) job had the best working conditions, (e) organizational reputation, (f) best pay and/or benefits, (g) best educational

advancement opportunities, (h) best interprofessional relationships, (i) racial or gender diversity of staff, (j) other professional reasons, (k) wanted to move to or live in the area, (l) work hours/schedules were good for work/life balance, (m) commute to work was short, (n) on–site childcare was available, (o) family or friend's recommendation, (p) have friends working at the organization, and (q) other personal reasons. Due to the numerous available responses, these independent variables were grouped into five categories for further understanding. The other professional reasons and other personal reasons were not included due to the vagueness of the response.

Group One

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all nominal (clinical experience there while a student and worked or volunteered at the organization prior to starting nursing school), meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (clinical experience there while a student and worked or volunteered at the organization prior to starting nursing school) were independent selections.

Assumption 4 –There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

Group one included the two independent variables from the professional reasons related to prior experience at the organization: (a) clinical experience there while a student and (b) worked or volunteered at the organization prior to starting nursing school. A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by clinical experience there while a student and worked or volunteered at the organization prior to starting nursing school. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) clinical experience there while a student and (b) worked or volunteered at the organization prior to starting nursing school. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > .05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1085.858] and the [Nagelkerke R squared = .020]. The model resulted in the independent variable, worked or volunteered at the organization prior to starting nursing school, as not significant ($p > .05$); however, the independent variable, clinical experience there while a student, was found to be significant ($p < .05$). The predictor variable, clinical experience there while a student, in the logistic regression analysis, was found to contribute to the model. The unstandardized B = [.575], SE = [.167], Wald = [11.837], p = [<.001]. The estimated odds ratio shows that retention in the initial position was almost 80% more likely with clinical experience there while a student

[Exp (B) = [1.778], 95% CI (1.281, 2.467)] when compared to those who did not select clinical experience there while a student.

Group Two

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all nominal (only full–time position working as an RN that I was offered, job had the best working conditions, organizational reputation, best pay and/or benefits, and best educational advancement opportunities), meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (only full–time position working as an RN that I was offered, job had the best working conditions, organizational reputation, best pay and/or benefits, and best educational advancement opportunities) were independent selections.

Assumption 4 –There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

Group two included the independent variables from the professional reasons regarding the organization: (a) only full–time position working as an RN that was

offered, (b) job had the best working conditions, (c) organizational reputation, (d) best pay and/or benefits, and (e) best educational advancement opportunities. A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by: (a) only full–time position working as an RN that was offered, (b) job had the best working conditions, (c) organizational reputation, (d) best pay and/or benefits, and (e) best educational advancement opportunities. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) only full–time position working as an RN that was offered, (b) job had the best working conditions, (c) organizational reputation, (d) best pay and/or benefits, and (e) best educational advancement opportunities. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > 0.05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1032.116] and the [Nagelkerke R squared = .094]. The model resulted in the independent variables best pay and/or benefits and best educational advancement opportunities as not significant ($p > 0.05$); however, the independent variables only full–time position working as an RN that was offered, job had the best working conditions, and organizational reputation were found to be significant.

Controlling for job had the best working conditions and organizational reputation, the predictor variable, only full–time position working as an RN that was offered, in the logistic regression analysis was found to contribute to the model. The unstandardized B = [-.331], SE = [.164], Wald = [4.094], p = [.043]. The estimated odds ratio shows that they were approximately 28% more likely not to retain their initial position with only full–time position working as an RN that was offered [Exp (B) = [.718], 95% CI (.521, .990)]

when compared to those who did not select only full–time position working as an RN that was offered. Controlling for only full–time position working as an RN that was offered and organizational reputation, the predictor variable, job had the best working conditions, in the logistic regression analysis was found to contribute to the model. The unstandardized B = [.512], SE = [.236], Wald = [4.721], p = [.030]. The estimated odds ratio shows that retention in the initial position was approximately 67% more likely with job had the best working conditions [Exp (B) = [1.669], 95% CI (1.051,2.648)] when compared to those who did not select job had the best working conditions. Controlling for only full–time position working as an RN that was offered and best pay and/or benefits, the predictor variable, organizational reputation, in the logistic regression analysis was found to contribute to the model. The unstandardized B = [.896], SE = [.210], Wald = [18.155], p < [.001]. The estimated odds ratio shows that retention in the initial position was 145% more likely with organizational reputation [Exp (B) = [2.450], 95% CI (1.622, 3.700)] when compared to those who did not select organizational reputation.

Group Three

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all

nominal (best interprofessional relationships and racial or gender diversity of staff), meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (best interprofessional relationships and racial or gender diversity of staff) were independent selections.

Assumption 4 –There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

Group three included the independent variables from the professional reasons regarding people: (a) best interprofessional relationships and (b) racial or gender diversity of staff. A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by: (a) best interprofessional relationships and (b) racial or gender diversity of staff. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) best interprofessional relationships and (b) racial or gender diversity of staff. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > 0.05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1078.742] and the [Nagelkerke R squared = .030]. The model resulted in the independent variable, racial or gender diversity of staff as not significant ($p > 0.05$); however, the independent variable, best interprofessional relationships, was found to be significant. The predictor variable, best interprofessional relationships, was found to contribute to the model in the logistic regression analysis. The unstandardized B = [1.21],

SE = [.272], Wald = [16.953], p < [.001]. The estimated odds ratio shows that retention in the initial position is approximately 206% more likely with best interprofessional relationships [Exp (B) = [3.067], 95% CI (1.799, 5.229)] when compared to those who did not select best interprofessional relationships.

Group Four

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all nominal (wanted to move to or live in that area, work hours/schedules were good for my work/life balance, and commute to work was short), meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (wanted to move to or live in that area, work hours/schedules were good for my work/life balance, and commute to work was short) were independent selections.

Assumption 4 –There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

Group four included the independent variables from the personal reasons regarding life factors: (a) wanted to move to or live in the area, (b) work hours/schedules were good for my work–life balance, and (c) commute to work was short). A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by: (a) wanted to move to or live in the area, (b) work hours/schedules were good for my work–life balance, and (c) commute to work was short. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) wanted to move to or live in the area, (b) work hours/schedules were good for my work–life balance, and (c) commute to work was short. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > 0.05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1086.183] and the [Nagelkerke R squared = .020]. The model resulted in the independent variable work hours/schedules were good for my work/life balance as not significant ($p > 0.05$); however, the independent variables, wanted to move to or live in that area and commute to work was short were found to be significant.

Controlling for commute to work was short, and the predictor variable, wanted to move to or live in that area, in the logistic regression analysis was found to contribute to the model. The unstandardized B = [.434], SE = [.212], Wald = [4.201], p = [.040]. The estimated odds ratio shows that retention in the initial position was almost 55% more likely with wanted to move to or live in that area [Exp (B) = [1.544], 95% CI (1.019, 2.338)] when compared to those who did not select wanted to move to or live in that area. Controlling for wanted to move to or live in that area, the predictor variable, commute to

work was short, in the logistic regression analysis was found to contribute to the model. The unstandardized B = [.354], SE = [.160], Wald = [4.894], p = [.027]. The estimated odds ratio shows that retention in the initial position was approximately 42% more likely with commute to work was short [Exp (B) = [1.424], 95% CI (1.041, 1.948)] when compared to those who did not select commute to work was short.

Group Five

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all nominal (on–site childcare was available, family's or friend's recommendation, and have friends working at the organization), meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (on–site childcare was available, family's or friend's recommendation, and have friends working at the organization) were independent selections.

Assumption 4 –There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

Group five included the independent variables from the personal reasons regarding facility factors: (a) on–site childcare was available, (b) family or friend's recommendation, and (c) have friends working at the organization. A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by: (a) on–site childcare was available, (b) family or friend's recommendation, and (c) have friends working at the organization. The outcome of interest was retention in the initial position. The possible predictor variables were: (a) on–site childcare was available, (b) family or friend's recommendation, and (c) have friends working at the organization. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > 0.05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1096.492] and the [Nagelkerke R squared = .005]. The model resulted in the independent variables on–site childcare was available, family or friend's recommendation, and have friends working at the organization as not significant ($p > 0.05$).

Statistical Analysis Research Question 2

A binary logistic regression analysis was conducted to investigate if retention in the initial position can be predicted by the unit most worked, age, race, sex, and educational level.

There are basic requirements for the use of binomial logistic regression testing. Assumption 1 – The dependent variable must be measured on a dichotomous scale. The dependent variable for this study was dichotomous (retained/not retained in the initial position), meeting the assumption.

Assumption 2 – The independent variables must be continuous (interval or ratio) or categorical (ordinal or nominal). The independent variables for this study were all nominal (race and sex) and ordinal (unit most worked, age, and educational level) variables, meeting the assumption.

Assumption 3 – There is independence of observation because the occurrence of one observation provides no information regarding any other observation. The independent variables (race, sex, unit most worked, and educational level) were independent selections.

Assumption 4 – There needs to be a linear relationship between continuous independent variables and the transformation of the dependent variable. There are no continuous independent variables.

The outcome of interest was retention in the initial position. The possible predictor variables were: (a) unit most worked, (b) age, (c) race, (d) sex, and (e) educational level. The Hosmer–Lemeshow goodness–of–fit was not significant ($p > 0.05$), indicating the model is correctly specified. Additionally, the [-2 log Likelihood = 1006.148] and the [Nagelkerke R squared = .044]. The model resulted in the independent variables race, sex, and educational level as not significant ($p > 0.05$); however, the independent variables unit most worked and age were found to be significant. With intensive care unit [ICU] as the baseline, stepdown and general were found not significant, while other was found to be significant. The unstandardized B = [-.849], SE = [.298], Wald = [8.121], p = [.004]. The estimated odds ratio shows that they were approximately 57% more likely not to retain their initial position for other unit [Exp (B)

= [.428], 95% CI (.238, .767)] when compared to those who did not select other unit. With age younger than 29 as the baseline, 30–39 age group and 40–49 age group were found not significant, while age 50 or older was found to be significant. The unstandardized B = [-.826], SE = [.349], Wald = [5.588], p = [.018]. The estimated odds ratio shows that they were approximately 56% more likely not to retain their initial position for age 50 or older [Exp (B) = [.438], 95% CI (.221, .868)] when compared to those who did not select age 50 or older.

Summary

In summary, there were a total of five professional reasons that were statistically significant. The professional reasons included: (a) clinical experience there while a student, (b) only full–time position working as an RN that was offered, (c) job had the best working conditions, (d) organizational reputation, and (e) best interprofessional relationships. Out of these, all showed a positive relationship with retention, except only full–time position working as an RN that was offered showed a negative relationship with retention.

Table 7

Significant Professional Reasons

Professional reason	Retained	Not retained
Clinical experience there while a student	80%	
Only full–time position working as an RN that was offered		28%
Job had the best working conditions	67%	
Organizational reputation	145%	
Best interprofessional relationships	206%	

For personal reasons, there were two that were statistically significant. The personal reasons were: (a) wanted to move to or live in that area and (b) commute to work was short. Both reasons showed a positive relationship with retention.

Table 8

Significant Personal Reasons

Personal reason	Retained	Not retained
Wanted to move to or live in that area	55%	
Commute to work was short	42%	

For the other variables tested, only unit most worked of other and greater than 50 age group showed statistical significance. Both showed a negative relationship with retention.

Table 9

Other Significant Variables

Other variables	Retained	Not retained
Unit most worked: Other		57%
Age: ≥ 50 years		56%

The professional reasons shown not to be statistically significant included: (a) worked or volunteered at the organization prior to starting nursing school, (b) best pay and/or benefits, (c) best educational advancement opportunities, and (d) racial and gender diversity of staff. The personal reasons that were shown not to be statistically significant included: (a) work hours/schedules were good for work/life balance, (b) on–site childcare was available, (c) family or friend's recommendation, and (d) have friends working at the organization. Other variables that were shown not to be statistically significant included:

(a) race, (b) sex, (c) educational level, (d) 30–39 age group, (e) 40–49 age group, (f) unit most worked of stepdown, and (g) unit most worked of general.

Section 4: Application to Professional Practice and Implications for Social Change

Introduction

In this quantitative study, I examined factors influencing newly licensed nurses' first position selection and their retention during the first year after licensure. Findings from this study may help create better recruitment processes, set realistic expectations for positions, and maintain newly licensed nurse retention. Newly licensed nurses are sensitive to growth and adjustments for their professional development to succeed (Ke & Stocker, 2019). This information may help organizations assist them in their vocation (Ke & Stocker, 2019).

I used secondary data in this quantitative study to examine the factors that led newly licensed nurses to accept their first position and how that influenced retention in the initial position. The dependent variable was retention in newly licensed nurses' first position. The independent variables included reasons the position was selected (clinical experience there while a student, worked or volunteered at the organization prior to starting nursing school, only full–time position working as an RN that was offered, job had the best working conditions, organizational reputation, best pay and/or benefits, best educational advancement opportunities, best interprofessional relationships, racial or gender diversity of staff, other professional reasons, wanted to move to or live in the area, work hours/schedules were good for work/life balance, commute to work was short, on–site childcare was available, family or friend's recommendation, have friends working at the organization, and other personal reasons). Other independent variables were unit most worked (intensive care unit [ICU], step–down, general, other), age, race, sex, and

education level for additional discernment. Gaining additional insights into this data may help minimize turnover among newly licensed nurses by allowing for proper selection and unit placement.

The data in this study were secondary data collected through a survey comprised of multiple variables relevant to the research objectives of this study. A total of 1,171 participant responses were available in the present secondary data set. Binary logistic regression was used to validate the two hypotheses because the dependent variable was a dichotomous, nominal variable, and the independent variables were all nominal or ordinal predictors. The odds ratios were computed for each variable level to estimate its influence on the dependent variable and to check its statistical significance.

Interpretation of the Findings

Based on my statistical analysis, five professional reasons were identified as statistically significant in the data: (a) clinical experience there while a student, (b) only full–time position working as an RN that was offered, (c) job had the best working conditions, (d) organizational reputation, and (e) best interprofessional relationships. The reason *only full–time position working as an RN that was offered* showed a negative relationship with retention, but the four other statistically significant reasons showed a positive relationship with retention. Among the personal reasons respondents identified, two were statistically significant: (a) wanted to move to or live in that area and (b) commute to work was short. Both reasons showed a positive relationship with retention. For the other variables tested, only *unit most worked of other* and *greater than*

50 age group showed statistical significance. Both showed a negative relationship with retention.

The professional reasons shown not to be statistically significant included (a) worked or volunteered at the organization prior to starting nursing school, (b) best pay and/or benefits, (c) best educational advancement opportunities, and (d) racial and gender diversity of staff. The personal reasons that not statistically significant included (a) work hours/schedules were good for work/life balance, (b) on–site childcare was available, (c) family or friend's recommendation, and (d) have friends working at the organization. Other variables that were not statistically significant included race, sex, education level, age 30–39, age 40–49, unit most worked stepdown, and unit most worked general.

These results further show the importance of an organization valuing student nurses and trying to enhance their learning experience. The nurses with clinical experience at the organization were 80% more likely to retain their initial position. This shows that nurses who had experience as a student applied for and were hired for positions in the organization. This relates to Irvine and Evans's theory showing a relationship between position satisfaction in the student extending into the employed nurse, thus improving retention.

Also crucial for organizations to consider is their reputation. This could include the organization's level of safety, magnet status, work environment, public opinion, and much more. Organizational reputation increased the rate of retention by 145% in the analysis of this data. Working hand in hand with reputation is overall working conditions. The best working conditions also directly feed into an organization's reputation and

improve retention by 67% in my analysis. These findings directly relate to Maslow's hierarchy of needs of safety and self–esteem for newly licensed nurses.

The final professional reason of the *best interprofessional relationships* improved retention by 206% in my analysis, showing that organizations need to focus on team building. Such activities and efforts may be as simple as staff outings, time for socialization, proper mentoring programs, or celebrations. This finding connects to Maslow's hierarchy of needs by meeting newly licensed nurses' need for belongingness and self–actualization.

When newly licensed nurses accept the only position they are offered, they are 28% more likely not to stay in their initial position according to my analysis. While it is not appropriate for an organization to query about the number of positions a nurse has been offered, organizations can work with newly licensed nurses to understand where they want to work or what they are passionate about and try to meet those needs. This finding relates to Irvine and Evans's theory on position satisfaction that can improve retention.

For personal reasons, the two found significant in this study were directly related to an organization's geographical location. Wanting to move or live in the area of the organization resulted in a 55% increase in the likelihood of retention, and a short commute to work was 42%. Organizations can use these findings to understand that newly licensed nurses' current location or if a desire to relocate are important factors to consider. This connects to Maslow, as basic physiological needs appear at the top of the hierarchy as important basic life needs.

For the two other statistically significant reasons of *unit most worked other* and *greater than 50 age group*, newly licensed nurses was 57% less likely and 56% less likely to retain, respectively. The result regarding *unit most worked other* may be related to newly licensed nurses not working in units they desire, floating to multiple units, their confidence level in the care given, or other personal reasons. For newly licensed nurses *greater than 50 age group* at the time of the survey, nursing may have been a second career choice, the ability to manage the workload may have been difficult, personal health factors may have been an influence, or other personal reasons. This finding can relate to Irvine and Evans's job satisfaction and retention theory. Also, Maslow's hierarchy of needs could be connected to not meeting their physiological needs for safety, belongingness, self–esteem, and self–actualization. Organizations should consider the overall needs listed above for the newly licensed nurses as they enter the hiring process.

Limitations of the Study

Considering the data has been derived from a survey, there are inherent limitations, including participant recall or answer inconsistencies and validity (T. L. Jones et al., 2013). While the sample size is quite large, which may lead one to believe the result to be inclusive, it may not represent the group because the survey was sent to 14 states and answers may vary in other states (Organizing Your Social Sciences Research Paper, 2020). Only 10 states provided lists of nurses with exams and licenses with the prescribed dates leaving many potential participants not included, thus missing valuable data and limiting potential participants (Newly Licensed Registered Nurse New Cohort 3 Survey, 2016, 2018). Restrictions based on the methodology and population

may also exist. These may include cultural differences or biases influencing survey responses (Organizing Your Social Sciences Research Paper, 2020). Another limitation of the analysis is the vast number of participant responses to multiple questions that were missing or incomplete for various reasons. This challenge required the data to be cleaned and the missing values removed from the dataset for statistical analysis. Finally, bias cannot be fully controlled or guaranteed.

Recommendations

Given the results of this study, hiring newly licensed nurses with clinical experience while a student at the organization would benefit organizations in their retention of those nurses. These results could show the importance of supporting current nonnursing staff toward nursing degree attainment. Plans for tuition reimbursement, study groups, and other programs to promote nursing education could prove a good practice for retaining newly licensed nurses.

Further results show how organizations can improve by investing in their reputation and working conditions. This may include conducting staff surveys to determine what the staff feels is important to them. Other options include improving overall quality or achieving awards such as Magnet status. The results also show that improving interprofessional relationships allows for relationships to form among the care team. These techniques could be as simple as staff outings, time for socialization, proper mentoring programs, celebrations, and more.

When hiring a newly licensed nurse, the organizations should consider the time to travel to work for the newly licensed nurse. The results show that a short commute is

statistically significant. If the newly licensed nurse is from outside the area, understanding if they want to move to or have family or friends in the area can also provide improved retention. Organizations should also consider options for moving assistance, organizational housing or leases, or other programs to assist with the travel time to work or moving to the area.

A few significant responses show why newly licensed nurses were not retained. When nurses were only offered one position, they were 28% more likely not to retain. While it may not be appropriate for organizations to query about the number of positions a nurse has been offered, organizations can work with the newly licensed nurse to understand where they want to work or what they are passionate about and try to meet those needs. Another significant response with a negative relationship to retention is working in a unit other than intensive care unit [ICU], step–down, or general. This may include not working the units they desire, floating to multiple units, their confidence level in the care given, or other personal reasons. Finally, newly licensed nurses greater than 50 also have a negative relationship with retention. While staff cannot be discriminated against due to age, understanding what the newly licensed nurse expects or wants with their new job could assist with better placement. Other things to consider is that nursing may be a second career choice, the workload may not be manageable, personal health factors, or other personal reasons. Organizations need to understand what the nurse desires to meet their needs.

Implications for Professional Practice and Social Change

This research study could improve recruiting practices and decrease turnover, thus resulting in positive social change. Another positive social change may be newly licensed nurses remaining in their positions longer, thus gaining experience and minimizing training costs. Reducing turnover will save money, improve job satisfaction among newly licensed nurses, and improve the quality of care received by patients.

Conclusion

This study examined the factors influencing newly licensed nurses' first position selection and retention during the first year after licensure. Findings from this study may help create better recruitment processes, set realistic expectations for positions, and maintain the newly licensed nurse. This study showed: (a) that clinical experience there while a student, (b) job had the best working conditions, (c) organizational reputation, (d) best interprofessional relationships, (e) wanted to move to or live in that area, and (f) commute to work was short were statistically significant for newly licensed nurses retaining their initial position. Significant reasons that had a negative relationship with retention included: (a) only full–time position working as an RN that was offered, (b) unit most worked of other, and (c) greater than 50 age group. With continual changes in the healthcare landscape, including impacts from the recent pandemic, continued research will show strategies healthcare organizations can implement to promote nursing retention.

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Appendix A: New Cohort-3 Survey Data User's Manual

Data Use Agreement for Public Use Files Individual identifiers have been removed from the data file. Data were collected by the principal investigators, Christine Kovner, R.N., Ph.D., FAAN, Professor, New York University College of Nursing, and Carol Brewer, R.N., Ph.D., Professor, University at Buffalo, The State University of New York School of Nursing. The project is funded by the Robert Wood Johnson Foundation (RWJF). Data may not be used for any purpose other than for the purpose for which it was supplied; any effort to determine the identity of any reported individual is prohibited by law. Therefore, it is understood that: No one is to use the data in this data set in any way except for statistical reporting and analysis. If the identity of any person or establishment should be discovered inadvertently, then: (a) no use will be made of this knowledge; (b) one of the principal investigators, Christine Kovner, R.N., Ph.D., FAAN, Professor, New York University College of Nursing or Carol Brewer, R.N., Ph.D., Associate Professor, University at Buffalo, The State University of New York, will be made aware of this incident; (c) the information that would identify that individual will be safeguarded or destroyed, as requested by the investigator; and (d) no one else will be informed of the discovered identity. No one will attempt to link this data set with individually identifiable records from any data sets other than the NEWLY LICENSED RN SURVEY (2006). By using this data you agree to comply with the statutorily based requirements stated above with the knowledge that deliberately making a false statement in any matter within the jurisdiction of any department or agency of the federal government violates 18 USC 1001 and is punishable by a fine of up to $10,000 or up to 5

years in prison. The principal investigators request that users cite the NEWLY LICENSED RN SURVEY (2006) as a data source in any publications or research based upon these data.