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Factors Associated with Intentions to Leave Bedside Nursing During Early Nursing Career Development

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Abstract

Introduction: The transition from student to nurse is a predictably stressful developmental period. Early transition experiences can contribute to newly graduated registered nurses developing intentions to leave direct patient care. This study applied Duchscher's [1] Transition Stages Theory as a lens to examine the Newly Graduated Registered Nurse (NGRN) transition and associated challenges and their intention to leave bedside nursing within two years of starting practice.

Methods: A descriptive correlational design was used to explore factors associated with newly graduated registered nurses' intentions to leave bedside practice. This study utilized the Casey-Fink Graduate Nurse Experience Survey[®], a validated survey designed to measure new graduate registered nurses' transition including perceptions of support, professional satisfaction, communication and leadership, stress and safety was used.

Analysis: Survey scores, months in practice, and other demographics were evaluated using a logistic regression.

Results: Four hundred nine registered nurses in the United States licensed in New Jersey, with up to two years' experience responded to the online survey. One third of the survey respondents ($n = 115$) reported intention to leave within two years. Factors found to effect intentions include professional satisfaction, support, months of employment and the number of preceptors a nurse has had during the orientation period.

Conclusion: This study provides a better understanding of the issues and experiences affecting RNs as they transition to practice. Early identification and intervention measures can mitigate RN attrition rates, RN role dissatisfaction, and loss of well-trained nurses delivering safe patient care at the bedside.

Keywords: Attrition; Job satisfaction; New graduate nurse; Novice nurse; Perceptions; Turnover

Introduction

Newly Graduated Registered Nurses (NGRNs), riding a wave of confidence upon completion of a rigorous nursing curriculum and a challenging licensure exam often experience disillusionment once they enter the healthcare workforce [1]. The period of transition for the NGRNs consists of many challenges including adaptation to the new role, accelerated competence expectations, and a complex higher acuity work environment [2]. Duchscher [1] defined the novice nurse transition as a 12-month journey where nurses evolve through the stages of doing, being and knowing. NGRNs are challenged as they progress through the transition into practice to achieve satisfaction and success in their career [1].

Due to increased implementation of technology, as well as a heightened focus on patient quality outcomes, the current acute care environment is demanding and chaotic [3]. Brewer, et al. [4] estimated that as many as 26% of NGRNs left their first job within two years, and 43% within three years. More troubling is the potential impact on patient safety; new nurse attrition typically occurs in the acute care bedside role, leaving less experienced nurses as the majority of caregivers at the bedside. The revolving door of inexperienced nurses providing care at the bedside is detrimental to hospital organization's bottom line with as much as 800 million US healthcare dollars lost yearly to attrition [4].

The stressful healthcare environment is causing many novice nurses to leave acute care bedside positions. Many NGRNs are dissatisfied with their new roles and may intend to leave early in their career [5]. Specifically, researchers have found that NGRNs may feel under qualified to perform safe patient care independently, question work conditions that jeopardize patient safety, feel stressed by time requirements for documentation, and often intend to leave their positions within the first two years of practice [6,7]. The challenges addressed above are an expected part of a NGRN's transition to practice as predicted in Duchscher's Transition Stages Theory [1]. The failure to weather these challenges may impede a NGRN's development and result in intentions to leave bedside practice for other roles within nursing or to leave practice entirely. There are gaps in our knowledge about the association between intention to leave acute care within early practice transition.

Although most nursing programs provide students with hundreds of hours of clinical experience in the acute care healthcare environment, new graduate nurses are often disillusioned with their first nursing position, and feel unprepared for their new roles [1]. Approximately one quarter of NGRNs plan to leave the acute care bedside role within the first two years of practice, pursue advanced degrees to provide opportunities leading them away from direct patient care in the acute care setting, or leave the nursing profession entirely [4,8]. Duchscher's Transition Stages Theory posits that many of the stressful perceptions of the NGRN are normal during the transition from student to registered nurse [1]. There is a gap in our knowledge in the relationship between alterations in transition/development and the intention to leave bedside practice. Using Duchscher's Transition Stages Theory as a lens, this study seeks to identify modifiable factors that contribute to development of the intention to leave and provide knowledge to reduce the attrition of NGRNs in acute care.

Statement of the Problem

Lack of experienced nurses at the bedside has tremendous safety implications. The IOM [9] stated that safety is paramount to reinventing the United States health care system, affirming that care delivery should be safe and innovative. NGRN's express concern regarding performing skills safely, and preceptors echo concern that new to practice nurses are unaware of what they don't know, thus putting patients at risk [10]. James [3] estimated that 210,000 to 400,000 premature patient deaths per year are due to medication errors. NGRNs, in a fast-paced, stressful environment who are taking care of complex patients, are at a high risk of committing medication errors, as well as increasing the risk for infection, falls, and other safety-related measures [3]. Djukic, et al. [11] surveyed NGRNs with up to thirty-six months of experience and found that only 68 percent felt very prepared to prevent nosocomial infections in their patients. Nursing schools and hospital organizations must investigate how to redesign their curriculum as well as recruitment and training practices to meet the needs of new nurses, and allow for successful transition to the registered nurse role [12,13].

It is important to examine the factors that contribute to NGRN's transition into the role and responsibilities of clinical practice. An unsuccessful transition may lead a NGRN to leave or plan to leave direct patient care at the bedside setting. The literature has examined many contributing factors impacting NGRNs leaving direct patient care. These factors include demanding work schedules, rotating shifts, feeling unprepared to provide safe care, difficulty maintaining healthy work-life balance, inadequate staffing, and coping with unpredictable, chaotic, and challenging patient care assignments [14]. There have been numerous studies relating nurses' job dissatisfaction with the intention to leave [4-6,8]. Although nurse attrition is not a new issue, the present status of the healthcare environment is dynamic, with many technological challenges, high patient acuity and strict patient outcome measures. In addition, as nurses from the baby boomer generation retire and the RN workforce becomes younger, new generational norms will impact work satisfaction and attitudes of hospital nurses. Generational expectations can impact successful transition and contribute to intentions to leave [15]. These dynamic changes in the healthcare environment reinforce the need to study this vulnerable group of nurses to identify strategies to be utilized in both the hospital setting as well as in academia to prepare, onboard and train acute care bedside nurses.

Inquiry Question (s)

- Which factors and selected demographics are associated with NGRNs intentions to leave or stay at the bedside after the first two years of practice?
- Question (1) What are the intentions of NGRNs to continue providing direct patient care in an acute care setting beyond their initial two years of practice?
- Question (2) What are the factors associated with NGRNs intentions to leave acute care practice settings and no longer provide direct patient care at the bedside?

Background and Significance

To better understand the transition to clinical practice of the NGRN and their intention to provide direct care at the bedside beyond two years, a review of the literature was performed examining existing research on this topic. Factors that contribute to NGRN's transition including job satisfaction, organizational commitment, and feelings of competence, and type of licensure program were identified as factors impacting NGRN's intention to leave direct care bedside positions in the acute care setting [4,6,16].

A literature search using CINAHL, OVID full text, Google Scholar and Academic Search Premier was undertaken to identify research articles appropriate for this study. Using a combination of the keyword search terms including new graduate nurse, novice nurse, perceptions, intentions, job transition, job satisfaction, turnover, and attrition, approximately 350 articles were initially identified. A thorough ancestry search identified several more research articles pertinent to the study. Articles and studies identified as relevant to the study range from research that surveyed NGRN's transition into practice, job satisfaction, organizational commitment, feelings of competence, as well as NGRN's career intentions to leave direct care bedside positions in the acute care setting. Literature was limited to studies based in the United States and Canada; however, it is important to note that similar themes emerged from research in other countries worldwide [17-19]. Many studies have reiterated the negative consequences of turnover in new graduate nurses including lost revenue related to orientation and training of novice nurses. Turnover costs associated with dissatisfied NGRNs have been estimated to be one to three times the annual salary of a registered nurse in the United States [4]. In a longitudinal panel design survey of 1,653 NGRNs, Brewer, et al. [4] reported that 26% left their first job within two years, and 43.4% left their first job within three years. In a survey of new nurses with 52 or less weeks of experience as a nurse, Ashton [6] found that 20% of the nurses surveyed had left their original position or had left the hospital where they were first employed. Wu, et al. [20] found that 31% of a sample of new nurses with less than three years of experience intended to quit their current employment. Dimattio, et al. [8] found that 40% of BSN graduates had left hospital nursing over a median of five years, similarly Ashton [6] found BSN prepared nurses more likely to plan to leave their current position within two years.

Nei, et al. [16] sought to "Determine a holistic understanding of the causes of turnover" (p.248) and conducted a meta-analysis of 106 studies on the reasons for nurse turnover. The studies included in the meta-analysis ranged from 1971 to 2010 with the majority of research based in the United States, however Canada, Israel, Sweden, Singapore, Finland and twelve other countries were represented, indicating the worldwide impact of nurse attrition and retention. Findings included that supportive leadership and organizational commitment were related to job satisfaction and a decrease in turnover. The presence of strong social connections to coworkers, mentors who are paired according to personality and values to the mentee also minimize turnover [16]. Novice nurses benefit from a stable work environment, thus benefiting the entire hospital organization. Hodges, et al. [21] surveyed nineteen new BSN prepared nurses on causes of positive adaptability and career longevity at the bedside. Laschinger [22] surveyed NGRNs with 2 years or less of work experience to determine factors related to job and career satisfaction and turnover intent. Both research studies indicated that clinical mentors and support beyond traditional orientation programs were successful in aiding assimilation into the new nurse role. Hodges, et al. [21] described acute care environments as "Unpredictable, chaotic, and challenging places to work" (p. 83). Laschinger [22] correlates burnout to turnover intent and work engagement, as well as a limited number of primary preceptors as strongly related to job satisfaction.

The healthcare climate has seen tremendous changes over the past decade. The economy has undergone changes including an economic downturn, which delayed the well-publicized nursing shortage [23]. In addition, the implementation of The Patient Protection and Affordable Care Act has influenced hospital reimbursements, increased safety measures, and introduced more technology at the bedside [4]. Kovner, et al. [24] surveyed two cohorts of NGRNs six years apart to determine if changes in the economy and healthcare influenced new nurse's perceptions of the work environment. Over the six-year time period between 2006 and 2012, healthcare saw many changes in the economic climate, changes in reimbursement, and a surge in the implementation of technology in the healthcare workplace. Kovner, et al. [24] compared newly licensed nurses within two years of initial licensure to determine if changes in healthcare influenced nurses' opinions about their chosen profession in two cohorts six years apart in 2006 and 2012. The comparison between cohorts indicated that more NGRNs in 2012 were working outside of the hospital setting, which could have been related to fewer older RNs retiring due to the slowing economy [24]. Despite changes in the economy that have impacted the health care landscape, Kovner, et al. [24] reported no difference in the two cohorts of NGRNs regarding their intent to stay in their present position. However, with an increased focus on safety, the more recent cohort of NGRNs indicated that 26% had concerns regarding safety issues on the units where they were working.

Craig, et al. [14] surveyed new BSN graduate nurses practicing for six months to identify common themes regarding their transition. Data was collected for three different cohorts in years 2008, 2009, and 2010. Craig, et al. [14] compared the 2008 cohort to the 2010 cohort when the jobs were less abundant, to determine if changes in the economic climate influenced a successful NGRN transition. The researchers found that nurses in the more recent cohort were concerned with gaining acceptance in their new work environment, being treated as a professional, and spending time studying outside of work to become more confident [14]. Key indicators of a successful transition to practice included novice nurses receiving positive feedback, a growth in self-confidence and being accepted as part of the care team [14].

In another study that explored safety concerns of new-to-practice RNs, Myers, et al. [10] surveyed NGRNs with less than one-year experience and their preceptors. A qualitative study included nineteen NGRNs and twenty-two preceptors that focused on the complex transition process as well as the learning needs and safety concerns of both NGRNs and their preceptors. NGRNs were found to be most concerned with the technical aspects of the role including utilizing new technology and medication administration as well as developing critical thinking abilities [10]. Preceptors were mostly concerned about NGRNs performing care safely and "not knowing what they did not know" (p. 169). Preceptors felt that timely assessments and care planning associated with those assessments that incorporated critical thinking skills were paramount [10]. Both NGRNs and their preceptors agreed that working as a nurse's aide or a patient care associate prior to gaining employment helped with the transition. The survey indicated that there is a need for preceptors to adapt teaching to the NGRNs learning style, pointing toward a more thoughtful process needed to match NGRN and their preceptor [10].

The literature has discussed many factors that have contributed to the formation of intention to leave during the transition of NGRNs from graduation through the first two years of novice nurse experience. It is important to identify and explore the factors to minimize turnover of this vulnerable population of health care workers. Novice nurse attrition causes significant stress on the patient care environment and contributes to economic losses in hospital organizations. In addition, patient safety may be significantly impacted by the revolving door of nurses providing care at the bedside.

The objective of this research study is to characterize modifiable and demographic factors associated with intentions to leave bedside nursing after two years of employment. The specific aims of this study are to: (a) explore the factors that influence the clinical practice and career goals of NGRNs, specifically their intention to continue to provide direct patient care in an acute care setting beyond two years of employment; (b) evaluate the impact of the developmental progression of NGRNs as specified by Duchcher's Transition Stages Theory as measured by the unrelated Casey Fink Graduate Nurse Experience Survey by time in practice; and (c) to explore other factors that contribute to NGRNs changing their intention to provide care at the bedside beyond two years.

Theoretical Framework: The theoretical framework for this study is Duchscher's Transition Stages Theory. According to Duchscher [1], transition shock occurs as nursing students' transition to the role of professional nurse in stages during the first twelve months. While this research looks at nurses with less than 2 years, it is expected that the decision of whether to stay in their role at the bedside in the acute care settings has been influenced by how well the transition of the first 12 months has happened. This transition encompasses developmental and professional, intellectual, and emotional, skill and role-relationship changes [1]. The new graduate's development and previous experience as well as the nurse's emotional, intellectual, and physical well-being influence a positive transition. Duchscher [1] has determined that the first twelve-month period of transition is considered the process of becoming. The process of becoming involves the new graduate evolving through the stages of doing, being and knowing.

Duchscher's [1] transition theory provides a congruent framework for this study and may provide insight into areas within the novice nurse developmental experience that may benefit from interventions for a smoother transition. The failure to endure these challenges may impede a NGRN's development and result in intentions to leave bedside practice for other roles within nursing or to leave practice entirely. The intended findings of this study may allow for early identification and intervention of novice nurse transition difficulties while providing direct patient care. Duchscher's [1] transition theory provides the framework of this study that utilizes the unrelated Casey-Fink Graduate Nurse Experience Survey^a to determine contributing factors of novice nurse attrition in acute care nursing positions.

Study Design and Methods

Study Design

To address the purpose of this study, a descriptive correlational survey design was employed. The Casey-Fink Graduate Nurse Experience Survey[®] (CFGNES) was utilized to measure the new graduate registered nurse's transition experience into the workplace. The survey measures the new graduate registered nurse's perceived skill competence, perception of support and interactions with colleagues, and level of satisfaction related to the new graduate registered nurse transition experience into the workplace [25]. An additional investigator generated question regarding intention to stay in their current position beyond two years, was included in the survey (Appendix A).

Instrument

The CFGNES has been used and validated in over 10,000 graduate nurses participating in residency programs [26]. According to Casey and Fink [26] the tool's content has been derived from a comprehensive literature review and content validity has been established through expert nurse review from both academic and private hospital settings. The survey consists of five sections; four of the five sections survey the NGRNs comfort level performing skills and procedures, job satisfaction, and demographic information including type of licensure program attended and previous healthcare experience. Section two of the survey includes 24 questions in a Likert scale format related to the NGRN's professional comfort level, expectations, perceptions of supports and stress related to the NGRN transition [26].

The second section of the CFGNES, which consists of 24 questions, is scored quantitatively. The questions are scored in total and separately in groups as subscales of support, patient safety, stress, communication leadership and professional satisfaction. In addition, answers to demographic questions were evaluated as potential factors contributing to intent to leave.

The instrument authors provided the instrument scoring syntax (Appendix D). The scoring provides both a total score and sub-scale scores [26]. When scoring the instrument for a total score the internal consistency estimates is Cronbach coefficient alpha ($\alpha = .89$, in addition, each sub-scale can also be measured individually. The reliability measures for each sub-scale category are: Support ($\alpha = 0.90$), Organizing/prioritizing ($\alpha = 0.79$), Stress ($\alpha = 0.71$), Communication/leadership ($= 0.75$), and Professional satisfaction ($\alpha = 0.83$) [26].

Setting

Recruitment, consent, and data collection was completed online (internet) using Survey Monkey® as a delivery, data acquisition and secure data management system.

Population and Study Sample

A sample of nurses from a mid-Atlantic state (New Jersey) was solicited to participate in a web based cross-sectional survey design. To recruit subjects from the population of interest, contact information in the form of email addresses were obtained from the State of New Jersey licensure board website. The initial email included an electronic link to Survey Monkey® for the potential participant to establish eligibility, provide online consent (See Appendix C) and complete the survey consisting of the CJGNS and investigator developed questions. Survey Monkey® (<http://www.surveymonkey.com>) software provides secure data management using encrypted SSL/TLS connections. Anonymity was ensured using server authentication and data encryption; all sensitive data was stored in an encrypted format.

The sample population for this study was 412 recent graduate nurses who obtained initial nursing licensure within the state of New Jersey between April 1, 2013 and March 30, 2016. The sample was obtained from a list provided by the New Jersey State Board of Nursing that included nurses who obtained initial licensure or licensure by endorsement between April 1, 2013 and March 30, 2016.

Using the inclusion/exclusion criteria, the population was reduced based on a screening of the information supplied with email contacts by the NJ State Board of Nursing.

The inclusion criteria for this study were (all inclusion criteria must be met to participate):

- Registered nurses with initial (post-graduation) licensure was on or after April 1, 2013 in the state of New Jersey.
- Registered nurses licensed in New Jersey who self-identified as having up to two years of experience working in an acute care patient setting.
- The exclusion criteria were (meeting any of the following would exclude a subject from participation):
 - Registered nurses who did not self-identify as working in an acute care patient setting.
 - Registered nurses who were in practice in acute care in New Jersey and any other state for longer than two years.
 - Registered nurses who obtained NJ licensure by endorsement and not initial licensure between April 1, 2013 and March 30, 2016

Data Collection

The Casey-Fink Graduate Nurse Experience Survey® (CFGNES) is a validated instrument previously used to evaluate several domains in NGRNs and an investigator-developed question were used to address the primary question of this study. The independent variable in this study is a response to the investigator developed self-report question defining a nurse's intention to leave practice within two years from start of their career or not. The dependent variables include time in practice, demographic data and the five subscales from the CFGNES.

This study used Duchscher's Transition Stages Theory as a conceptual framework (Figure 1). This model casts the graduate nurses' development through time with the attainment of "Doing" within the first 3-4 months followed by "Being" within 7-8 months and "Knowing" within 8-12 months [1]. The CFGNES total score (summing the five factors) was used as a surrogate measure of the new graduates' developmental progression in which those who have an intention to leave will score lower than those committed to remain in acute care practice.

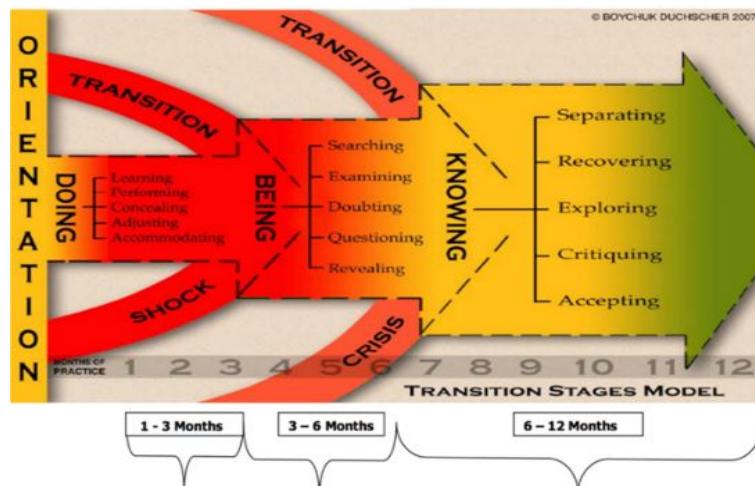


Figure 1: Duchscher's Transition Stages Model.

Ethics and Human Subjects Issue/Risks and Benefits

IRB approval was obtained, and this study received exempt status (Appendices D & E). Participation in the study was voluntary and confidential. Data collection utilized Survey Monkey's® secure data management using encrypted SSL/TLS connections. Anonymity was protected using server authentication and data encryption ensuring that all sensitive data was stored in an encrypted format. No IP addresses were recorded during the survey collection [27]. Informed consent (Appendix C) was fully explained in the invitation email that explained the purpose of the study. The subject's confidential self-report of selected demographics, the instruments, and open-ended question expose the subject to minimal risks by participating in the survey.

Data Analysis Strategies

Data was analyzed using Statistical Package for the Social Sciences (SPSS) version 23 statistical software [28]. Descriptive statistics and graphical methods were used to clean the data, evaluate distributional characteristics, and evaluate missing data.

The primary analysis assessed a model with the binary dependent variable of intention to leave and independent variables including months of practice, the Casey Fink total score for section two (CFGNES total score), and variables selected for inclusion using data reduction described below.

To evaluate independent variables (other than the number of months worked and the CFGNES total score) for retention in the model a series of bivariate analysis were completed. Both number of months and the CFGNES total score were retained in the model as they are the core to Duchscher's transition stages theory, which serves as this study's theoretical model. The data reduction analyses evaluated predictors identified by the literature as being associated with a nurses' intention to leave for inclusion in the model. The variables evaluated for inclusion were type of nursing education degree (Diploma, ADN, BSN), previous non-nursing degree, previous healthcare experience, age, and number of preceptors. The data reduction followed the recommendations of Hosmer, et al. [29], the dependent variable of intention to leave and individual predictors were evaluated using a bivariate logistic regression and only those with chi-square Wald statistic ($p < 0.2$) were included in the final model.

A second series of analyses were completed substituting CFGNES sub-scale scores as the independent variables and evaluating them for $p < 0.2$ as identified using the procedure described above. The sub-scales evaluated were support, organizing/prioritizing, stress, communication/leadership and professional satisfaction. Only those subscales with ($p < 0.2$) were included in the final model.

Results

Survey responses were obtained from 412 New Jersey NGRNs meeting the inclusion/exclusion criteria with two years or less of acute care experience. Responses were evaluated for missing data and it was determined that 409 subject responses would be used to address the main inquiry questions of this study.

Demographics

See (Table 1) for the demographic description of the sample. Female registered nurses represented 88.5 percent ($n = 362$) of the sample, 67.3 percent ($n = 274$) reported their ethnicity as Caucasian. BSN prepared nurses represented 60 percent of the sample ($n = 248$), ADN 28 percent ($n = 117$), and 10 percent ($n = 44$) were Diploma prepared NGRNs. Of the 409 NGRNs in the sample, 37 percent ($n = 155$) reported having a prior degree outside of nursing, the degree type ranged from Associates Degree in Liberal Arts to MBA and Doctor of Medicine. Eighty percent ($n = 330$) of participants reported having some kind of previous healthcare experience prior to working as an RN. Area worked in an acute care setting was also collected, areas ranged from acute adult medical/surgical (47.3%) to transplant (0.8%), all other areas are noted in (Figure 2). Other demographic factors including age, months worked and CFGNES total score and subscale scores are reflected in (Table 2).

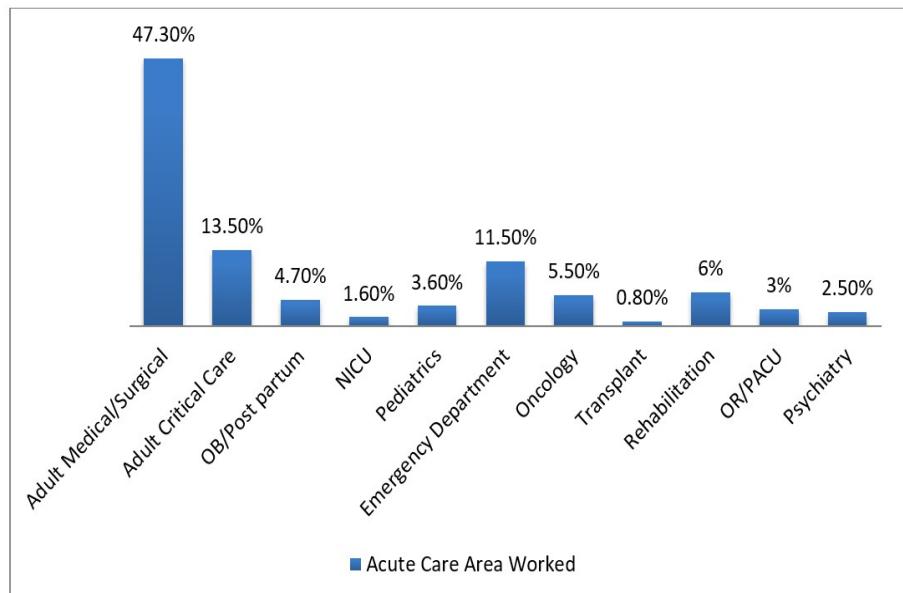


Figure 2: Acute care area worked.

Variable:	Response	Frequency (n)	Percent (%)
Gender	Female	362	88.5
	Male	46	11.3
	Unanswered	1	0.2
Ethnicity	Caucasian (White)	274	67.3
	Black	42	10.3
	Hispanic	39	9.6
	Asian	35	8.6
	Other	5	1.2
	I don't wish to include this information	12	2.9
RN Degree Type	ADN	117	28.6
	BSN	248	60.6
	Diploma	44	10.8
Prior College Degree	Yes	155	37.9
	No	254	62.1
Prior Healthcare Experience	Yes	330	80.7
	Not selected	79	19.3

Note: Prior healthcare experience includes, nursing assistant, medical assistant, EMT, nurse extern, radiology tech, respiratory therapist. Prior college degree includes Associates, Bachelors, Masters, and Doctorate. ADN = Associates Degree in Nursing, BSN = Bachelor's Degree in Nursing, Diploma= Diploma in Nursing.

Table 1: Demographics of the Sample.

	N	Minimum	Maximum	Mean	Std. Deviation	skew	Std error
CFGNES Total Score (except stress)	359	43	92	71.86	9.04	0.028	0.129
Support Factor CFGNES	381	1.33	4	3.15	0.508	-0.396	0.125
Patient Safety CFGNES	381	1.4	4	2.94	0.529	-0.2	0.125
Stress Factors CFGNES	409	0	0.83	0.1805	0.217	0.926	0.121
Communication/Leadership Factor CFGNES	381	2	4	3.1	0.431	0.298	0.125
Professional Satisfaction Factor CFGNES	380	1.67	4	3.29	0.604	-0.468	0.125
Months Since Hire	409	0	24	10.78	6.87	0.257	0.121
Age: Years	388	22	60	29.87	7.862	1.284	0.124

Note: CFGNES = Casey-Fink Graduate Nurse Experience Survey® (2006).

Table 2: Descriptive Statistics of the Sample.

Results for Question (1) “What are the intentions of NGRNs to continue providing direct patient care in an acute care setting beyond their initial two years of practice?”

Descriptive statistics were used to define the percentage of those intending to remain for more than two years. (Table 3) shows the number of NGRNs in the sample that intend to stay in their present position beyond two years (67.3%, n = 237).

	Frequency (n)	Percent (%)
Intent to stay	237	67.3
Intent to leave	115	32.7
Missing	57	
Total	409	

Note: Descriptive statistics of the sample reporting intention to stay and leave.

Table 3: NGRNs Intention to Stay Beyond Two Years.

Results for Question (2) “What are the factors associated with NGRNs intentions to leave acute care practice settings and no longer provide direct patient care at the bedside?”

A series of data screenings for bivariate regression to evaluate potential covariates and factors for inclusion in the model were performed. Factors were analyzed one by one using a bivariate logistic regression, evaluating the Wald statistic to determine significance. (Table 4) lists the factors and significance. The demographic factors that were found to be appropriate for inclusion in the models tested were prior education ($p = 0.19$) and the number of preceptors NGRN had while on orientation ($p = 0.001$). CFGNES subscales of support factors ($p < 0.001$), patient safety ($p = 0.001$), communication/leadership ($p < 0.001$), and professional satisfaction ($p < 0.001$) were all found to be significant in the screening and were added to the final regression. Type of RN degree program was not found to be significant ($p = 0.87$) in the data screening for potential covariates. Other factors found not to be significant were prior healthcare experience ($p = 0.24$), and age ($p = 0.881$).

	Frequency (n)	Percent (%)
Intend to leave to pursue education	66	16.1
Intend to stay and pursue education	51	12.5
Total intending to pursue education	117	28.6
Not intending to pursue education	292	71.4
Total	409	100

Note: Descriptive statistics of the sample that reported intent to leave and pursuit of further education.

Table 4: Advancement through Nursing Education.

Logistic Regression Results

The significant factors were entered into a binary logistic regression along with CFGNES total score and number of months worked (Model 1) (Table 5). The number of months worked (odds ratio 0.936) indicated that with each additional month worked, NGRNs were 6% less likely (or protected from) intending to leave. The number of preceptors (odds ratio 1.118) indicated that each additional preceptor increases risk of leaving by 12%. The CFGNES total score (odds ratio 0.90) indicated that with each one-point increase in CFGNES total score the NGRNs risk of intending to leave decreased by 10%.

	B	S.E.	Wald	df	Sig.		95% C.I. for EXP (B)	
						EXP (B)	Lower	Upper
Number of Preceptors	112	0.047	5.56	1	0.018	1.118*	1.019	1.228
Months in Position	-0.066	0.021	9.337	1	0.002	.936*	0.898	0.977
Previous Degree prior to RN	-0.31	0.27	1.314	1	0.252	0.734	0.432	1.246
CFGNES Total Score	-0.102	0.018	33.849	1	0	.903*	0.872	0.934
Constant	6.968	1.265	30.336	1	0	1062.339		

Note: CFGNES=Casey Fink Graduate Nurse Experience Survey® (2006). Number of preceptors, months in position, and CFGNES total score all significant *($p < 0.05$). EXP B = odds ratio. The significant variables were included in the final logistic regression.

Table 5: Logistic Regression for Intention to Leave Using CFGNES Total Score and Potential Factors for Turnover (Model 1).

As the CFGNES total score demonstrated a significant relationship with a NGRN's intention to leave, another model was constructed (Model 2) substituting the CFGNES subscale scores for the total score. This final model provided a finer grain examination. Additional data screenings using a binary logistic regression were performed to evaluate the CFGNES subscales using the data reduction method described above (Table 6). All the subscales were included with the previously identified covariates of number of preceptors and months of work as independent variables in a model to predict intentions to leave (Table 7).

Potential Covariate	Wald (Z)	df	Significance (p)
Type of RN Education	0.429	2	0.87
Formal Education Prior to RN	1.68	1	0.194 *
Prior Health Care Experience	1.4	1	0.24
Number of Preceptors While Orienting	11.41	1	0.001 *
Age	0.022	1	0.881
CFGNES Support Factors	35.42	1	< 0.001*
CFGNES Patient Safety	10.88	1	0.001*
CFGNES Stress	2.26	1	0.132*
CFGNES Communication/Leadership	12.3	1	< 0.001*
CFGNES Professional Satisfaction	45.87	1	< 0.001*

Note: CFGNES = Casey Fink Graduate Nurse Experience Survey®, *Significance $p \leq 0.20$. Factors with significance > 0.20 were excluded from the Model.

Table 6: Evaluation of Factors for Inclusion in Final Logistic Regression Models.

	B	S.E.	Wald	df	Sig.	EXP (B)	95% C.I. for EXP (B)	
							Lower	Upper
CFGNES Professional Satisfaction	-1.259	0.283	19.784	1	0	.284*	0.163	0.494
CFGNES Support Factor	-1.022	0.34	9.056	1	0.003	.360*	0.185	0.7
CFGNES Patient Safety	0.004	0.327	0	1	0.991	1.004	0.529	1.905
CFGNES Stress	0.712	0.614	1.344	1	0.246	2.037	0.612	6.785
CFGNES Communication/ Leadership	0.421	0.427	0.969	1	0.325	1.523	0.659	3.521
Number of Preceptors	0.11	0.049	5.136	1	0.023	1.116*	1.015	1.228
Months in Position	-0.11	0.024	20.349	1	0	.896*	0.854	0.94
Previous Degree prior to RN	-0.211	0.274	0.596	1	0.44	0.81	0.474	1.384
Constant	5.882	1.259	21.819	1	0	358.442		

Note: CFGNES=Casey Fink Graduate Nurse Experience Survey® CFGNES Professional Satisfaction, CFGNES Support Factor, Number of Preceptors and Months in Position all significant *(p < 0.05). The EXP B = odds ratio. The significant findings indicated those four main effects associated with intentions to leave.

Table 7: Final Logistic Regression for Factors Associated with Turnover (Model 2).

Total number of preceptors were found to be predictive of risk of leaving with an odds ratio of 1.116. For each one person increase in the total number of preceptors, odds for intent to leave increased by 12% per preceptor. The number of months worked (odds ratio 0.896) indicated that with each additional month worked, NGRNs were 10% less likely (or protected from) intending to leave. CFGNES subscale professional satisfaction (odds ratio 0.284) indicated that for each additional point in the score, there was a 72% reduction in risk of intending to leave. The support subscale (odds ratio 0.360) indicated that for each additional point in the support score, there was a 64% reduction in risk of intending to leave.

The results indicated four main effects were significantly associated with intentions to leave, including professional satisfaction, support, the number of preceptors, and the months of employment.

Summary of Results

The results indicate that 67% of nurses intended to stay beyond two years in acute care. The results indicated the factors associated with intent to leave were professional satisfaction and support as measured by the Casey Fink, months of employment and the number of preceptors a nurse has had during the orientation period.

Strengths and Weaknesses of the Study

The strengths of this study were the use of the CFGNES, a validated survey that measures the transition experience of NGRNs and its correlation to the theoretical model, Duchscher's Transition Stages Theory [1]. The findings further reinforce the need to focus attention on this vulnerable group of the nursing workforce, and point to areas of further research to determine appropriate interventions to impact the NGRN turnover rate.

There were several limitations in the study due to research design. For example, participants self-reported whether they worked in an acute-care setting, which was one of the inclusion criteria for this study. In addition, since the survey included questions regarding their feelings about their current status as an NGRN, this could result in response bias.- Response bias can occur when the survey respondent answers questions based on their thoughts of what the survey is measuring [30]. In addition, based on the title of the survey, a respondent may have chosen to participate or not based on their feelings of the topic. The online nature of the survey was vulnerable to Internet browser limitations, with many respondents contacting the investigator with complaints of the survey freezing, leaving them unable to complete the survey. While unfortunate, the survey freezing issues did not impact the ability to obtain the necessary sample size. The sample is only representative of one Northeastern state, which may not be generalizable to other regions in the country. The specific questions of this study focus on the NGRN staying or leaving acute care nursing, however that answer was not fully described in the survey questions. Where NGRNs went or planned to go after leaving their present position was not identified through the survey questions, only that they were planning to leave their present position. They may have been leaving one acute care position to go to another similar position. However, NGRNs leaving any position in acute care, even to go to another acute care position can be costly to hospitals and affect patient care.

Discussion

This study has addressed two important questions related to nurses' intentions to leave acute care early in their practice. In short, (a) what percentage of NGRNs intend to leave acute care early in the practice and (b) what factors are associated with a NGRNs intentions to leave acute care nursing early in their career?

The finding that thirty-three percent of NGRNs in NJ indicated that they intend to leave within two years of obtaining a position in acute care nursing differs from a national sample. Brewer, et al. [4] estimated that 26% of NGRNs left their first job within two years, and 43% within three years. The result supported the speculation that the turnover rates have increased over the last five years, and the expectation is they will continue to climb due to the improving economy [31].

Duchscher's [1] transition theory served as the conceptual model and was supported by the study findings. The findings are congruent with the hypothesized, NGRNs who transition through the stages of doing, being and knowing successfully during early career development are more likely to stay in their positions beyond two years. Each month spent in a position, provides a 34 % protective decrease in risk of developing an intention to leave. The CFGNS total score measures perceived skill competence, perceived support from management and co-workers, perceptions of the role and with each one-point increase in the CFGNS score there is a 10% protective effect against leaving. The CFGNS total scores also support the transition theory with scores increasing with months in practice. The higher CFGNS total score, as well as months in practice, were determined to be protective of turnover intention.

The subscales of the Casey Fink survey were used to expand understanding of the impact of the factors associated with NGRNs leaving acute care settings. The findings indicate that the perceptions of support and job satisfaction, months of employment, and lower number of preceptors, were found to be predictors of NGRNs intentions of staying in a position beyond two years. The findings support that longer time spent in an acute care position with greater support and professional satisfaction are similar to prior reports [22,32,33]. The finding that having several preceptors' increases intentions to leave acute care has not been fully investigated and has significant implication for the design of orientation and internship programs.

The lack of significance ($p > 0.05$) found for factors such as prior experience, RN degree type and previous non-nursing educational degree offer further insight into the contributors to NGRN's intention to leave. The lack of significant findings ($p > 0.05$) associated with the CFGNES subscales that measured stress, patient safety, and communication/leadership also shed light on the factors that require additional focus in the NGRN onboarding processes. The significant findings bring to light the opportunities to decrease turnover by providing greater support to NGRNs as they transition into their new role. Support in terms of the preceptor role as well as limiting the number of preceptors involved in the orientation process is a topic for further research.

Implications of the Study

Professional satisfaction, support and the number of preceptors and the significant association with intention of NGRNs to leave suggests that these are important elements in the development of orientation programs. Hospital organizations should evaluate their formal orientation or residency programs in these areas. Residency programs have shown various statistics in improvement or decrease in NGRN attrition [6,13]. Additionally, some orientation/residency programs that involve many learning opportunities with a greater numbers of preceptors report high satisfaction from NGRN's. These findings challenge this study's reported findings, however it is important to note that satisfaction with orientation may be independent of forming an intention to leave. Further research may be necessary to determine if satisfaction with the certain aspects of the orientation process is related to NGRNs intention to stay.

This design did not capture detailed information on orientation or internship program types/designs, which may be a significant moderator in the relationship between the number of preceptors and a NGRNs intention to leave. The area of orientation and internship/residency programs offered at hospitals would benefit from additional research particularly regarding number of preceptors and preparation and training of preceptors.

In closing, within the limitations of a self-report survey study design, this study provides several important insights that support previous reports and others that suggest emerging trends and new associations in NGRNs intentions to leave acute care early in their practice. The significance of the study is due to the impact of increasing NGRN turnover and a projected RN shortage in the next five years which will be difficult for many hospital organizations [23]. Costs associated with training and onboarding NGRNs into the acute care role and then leaving the organization have been estimated to be \$44,380 to \$63,400 per nurse [31]. As hospital organizations are being held more accountable for patient outcomes and pay for performance initiatives impacting reimbursements, loss of revenue due to turnover can have a substantial effect on fiscal viability.

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