

IMPACT OF NURSE RESIDENCY PROGRAMS ON NEW
GRADUATE NURSE RETENTION OUTCOMES:
AN INTEGRATIVE REVIEW

By

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A professional project submitted in partial fulfillment
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DEDICATION

To the new nurses around the world who rolled up their sleeves and worked long diligent hours during the COVID-19 pandemic. These nurses will continue to help overcome ongoing challenges and lead our healthcare workforce to promote positive patient outcomes. I hope this project will entice our healthcare systems to prioritize the individuals who are the backbone and forefront of patient care, the nurses.

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ABSTRACT

Problem/Purpose: New graduate nurses are essential employees. Given the nationwide nursing shortage and the turmoil caused by the COVID-19 pandemic, there is a need to focus on new nurses' transition to practice. The transition from an academic setting into real-life practice is often stressful; therefore, nursing organizations have shifted their focus to emphasize new nurse satisfaction, support, and retention through the implementation of nurse residency programs. Nurse residency programs are hospital-implemented programs lasting about a year, and can vary in format, length, and structure. The programs aim to support new nurses' growth in essential skills like critical thinking, prioritization, and delegation. The purpose of this study was to conduct an integrative literature review to identify and evaluate the influence that nurse residency programs have on new graduate nurse attrition and retention outcomes.

Procedure/Methods: Electronic database search of CINAHL, PubMed, and Web of Science discovered studies completed in the United States from 2017 to 2022. English-language articles were selected and reviewed for inclusion of registered nurses in an acute care setting that addressed new graduate nurses and intent to leave (attrition or retention) as a primary or secondary measure. Twelve articles met the inclusion criteria. The studies were evaluated for quality using Whittemore and Knafl's (2005) data analysis process. The application of Benner's Novice to Expert (1982) nursing theory provided the framework for the transitional experiences of new nurses. **Results:** Evidence supports new nurses participating in nurse residency programs experience positive outcomes, including increased confidence, social support, and decreased turnover rates. Workplace challenges and personal stressors were found to negatively impact turnover. Communication, recognition, rewards, and preceptor/mentor support positively influenced retention for at least a year, which provided hospitals with break-even to positive return on investment. **Conclusions:** New graduate nurses require time to grow and learn during the first year of practice. Three new phases of the novice nurse transition, supported by nurse residency programs, are proposed to enhance the expansion of Benner's theoretical model. The major thematic findings and improved retention rates demonstrate the need for resources and structured support encompassed within nurse residency programs.

CHAPTER ONE

INTRODUCTION

Project Introduction

New graduate nurse transition to practice represents both access to an exciting career and entry into a challenging work environment. New graduate nurses are essential employees and have sparked discussion, given the nationwide nursing shortage and the turmoil caused by the COVID-19 pandemic. However, the transition new graduate nurses experience from an academic setting into real-life practice is often stressful, challenging, emotionally exhausting, and overwhelming due to feelings of inadequacy, incompetence, and lack of confidence in today's advanced healthcare system (Alghamdi & Baker, 2020; Phillips et al., 2017).

Blegen et al. (2017) observed an increased new graduate nurse turnover rate of approximately 18% in northeastern United States hospitals. Other researchers identified that graduate nurses in the United States leave their first positions at a rate between 35% and 61%, which the authors found was often attributed to negative transitional period experiences (Cochran, 2017). These statistics were reported before the COVID-19 pandemic, which exposed new graduates and healthcare providers to increased anxiety, stress, and fatigue (Pearman et al., 2020). Today, the impact of a global pandemic has changed the physical and social healthcare environment, compounding stressors on new nurses' transition to practice.

To meet the challenges of attrition of newly graduated nurses, nursing organizations have shifted their focus to emphasize new nurse satisfaction, support, and retention through the implementation and advancement of nurse residency programs (NRPs). These programs aim to

promote the transition to practice by helping build resilient, prepared, and confident new nurses (Eckerson, 2018). In addition, an NRP offers a supportive work environment through the assistance of experienced professionals to mitigate the risks of medical errors and gaps in patient care (Alghamdi & Baker, 2020).

Researchers have analyzed the significance of NRPs on new graduate nurse satisfaction and retention; however, such programs' implementation, evaluation, and effectiveness should be strategically addressed (Perron et al., 2019). Therefore, this integrative review hopes to discover attributes of NRPs and how programs explicitly impact and influence the new graduate nurse transition to practice and job retention.

Background

Since the initial proposal of NRPs a little over two decades ago, the popularity within healthcare facilities has translated to producing increased program implementation (Perron et al., 2019). While the concept of NRPs has evolved, nurse advocacy organizations have always strived to generate program initiatives from nursing workforce issues. For example, the Joint Commission on Accreditation of Health Care Organizations (JCAHO) launched a 2001 report, "Health Care at the Crossroads: Strategies for Addressing the Evolving Nursing Crisis," described as a "call to action" to report multidimensional recommendations for the nursing workforce (Fitzpatrick, 2003). In 2003, Fitzpatrick described the three broad recommendations to "(a) create organizational cultures of retention, (b) bolster the nursing educational infrastructure, and (c) establish financial incentives for investing in nursing" (p. 72). As nursing issues were identified, JCAHO first used the term "residency program" in this report to address the gap between nursing education and nursing practice (Fitzpatrick, 2003).

A decade later, the Institute of Medicine and Committee on the Robert Wood Johnson Foundation Initiative on the Future of Nursing (IOM) (2011) published the report “Future of Nursing, Leading Change Advancing Health” during the transformation of healthcare reform. This report served as a framework for changes within the nursing profession, ultimately defining Recommendation 3 as the Implementation of Nurse Residency Programs (IOM, 2011). The proposed actions called on state boards of nursing, the federal government, accrediting bodies, and organizations to champion the engagement of nurses’ participation in NRPs after completion of licensure or advanced degree programs or when transitioning into a new clinical practice setting. In addition, this recommendation reiterates that the effectiveness of NRPs should evaluate the progress of retention, competency expansion, and betterment of patient outcomes (IOM, 2011).

The notable recommendations outlined in the IOM report emphasized the evaluation of a NRP. Additionally, evaluation standards are foundational for an NRP to implement once accredited. There are two national accreditation organizations for the programs: the Commission on Collegiate Nursing Education (CCNE) and the American Nurses Credentialing Center (ANCC). Each organization holds accredited NRPs to high-quality standards and curricula with specific guidelines. However, not all NRPs choose to implement an accreditation process; therefore, programs vary.

Nurse residency programs have been conceptually developed throughout the years and are continually evolving today. An accredited program may have a mandated or regulated set framework for NRPs, whereas another NRP may develop the foundational guidelines independently. However, the literature implies similarities in the NRPs’ format, length, and

structure (Perron et al., 2019). An NRP may or may not incorporate all three of these structures or utilize them during various program phases. The format of a program varies with technological resources and the ability to meet in person or virtually due to social distancing mandated by the pandemic. The program structure includes didactic-centered learning like case studies, simulation-based with the use of technology to develop clinical decision-making skills, and clinical preceptorships to pair a new graduate nurse with an experienced nurse to learn from (Perron et al., 2019). Cochran (2017) found that NRPs are most effective when 10 to 15 months are allocated to process textbook knowledge into applying clinical skills and assimilation into the professional nursing role.

Regardless of the structure of an NRP, the new graduate nurse is more recently challenged with their transition into practice due to the COVID-19 pandemic. The pandemic-related surges in patient volume, personal protective equipment (PPE) shortages, and increased regulation leave nurses in emotional distress and burnout and cause nurses to retire or leave the profession entirely (Chan et al., 2021). The impact of experienced nurses feeling burnout and fatigue becomes a concern for new graduate nurses. For recently graduated nurses, Smith et al. (2021) found that the COVID-19 pandemic changed nursing school clinical requirements when hospital clinical hours decreased or were withdrawn, and clinical education was transferred to virtual learning platforms. Many nurses agree that applying nursing concepts to practice with little clinical experience is difficult (Smith et al., 2021). Today, hospital organizations assume COVID-19 affected new graduate cohorts and potentially impacted the system; they have begun to recognize the increased transition to practice challenges (National Council of State Boards of Nursing, 2021).

During the pandemic, the demand for nurses skyrocketed and increased the nursing shortage. According to the 2020 National Council of State Boards of Nursing and the National Forum of State Nursing Workforce Centers, the national survey indicated that more than one-fifth of nurses intend to retire from nursing over the next five years. This number is believed to be accelerated due to the pandemic (American Nurses Association [ANA], 2022). The nursing attrition rates among new and seasoned nurses not only impact the quality of patient care and available nursing preceptors or educators but subsequently cause negative fiscal effects for hospital organizations (Cline et al., 2017). These circumstances have shifted the focus of nursing organizations toward an emphasis on new nurse satisfaction, support, and retention through the necessary adaptations and pandemic changes to NRPs.

Problem

The COVID-19 pandemic changed the healthcare system, impacting new graduate nurses and NRPs. Identifying the current challenges of NRPs to support quality improvement opportunities will sequentially improve the experiences and outcomes of new graduate nurses as they transition to practice.

Significance

The progression into practice remains a valuable and vulnerable time for new graduate nurses to learn new skills and uphold unfamiliar responsibilities. The significance of this integrative review guides the understanding of NRPs and their support during this new nurse transition. Organizations use healthcare dollars to create and maintain a vibrant and vital workforce. Organizations commit a hefty financial sum to onboard new nurses, which is

significant because nurse training uses extra hospital resources and staff. Therefore, eventual nurse turnover is costly (Silvestre et al., 2017). Ultimately, the investment in NRPs aids in the longevity, retention, and satisfaction of the new nurse and the new workforce. The influence of the pandemic led to nurses leaving their jobs, a staffing crisis, and an influx of patients; all these factors impacted the system and potentially threatened patient care. Patients and the healthcare community may be affected if the novice nurse does not receive support from resources like NRPs.

Purpose and Aims

The purpose of this study was to conduct an integrative literature review to identify and evaluate the influence that NRPs have on new graduate nurse attrition and retention outcomes.

Aim 1: Review and critique the attributes of NRPs in the United States.

Aim 2: Identify challenges and barriers to NRP success by analyzing new graduate nurse retention and attrition outcomes.

Aim 3: Synthesize the study findings.

Definitions and Abbreviations

The following definitions present common terminology used throughout this paper (see Table 1). The nurses' transition to practice is a critical time for development. Therefore, examining this time and the relationship between an NRP aiding novice nurses is imperative.

Table 1: Key Terms and Definitions

TERM	ABBREVIATION	DEFINITION
New Graduate Nurse / Novice Nurse	NGN	Registered nurse with less than one year of acute care work experience (Cochran, 2017).
Nurse Residency Program(s)	NRP NRPs	A hospital-implemented, structured program lasting about 10-15 months. The program aims to support the first year of new nurses' growth in essential skills like critical thinking, prioritization, and delegation (Eckerson, 2018).
Transition to Practice	TTP	The development of a novice nurse's ability to grow from an academic nursing student into a clinical practice nurse role (Cochran, 2017).
Commission for Collegiate Nursing Education	CCNE	National NRP accreditation agency Domains of competence: person-centered care, quality, and safety; informatics and healthcare technologies; evidence-based practice and quality improvement; personal, professional, and leadership development (CCNE, 2021) Partnership between healthcare organization and academic nursing program (CCNE, 2021)
American Nurses Credentialing Center Practice Transition Accreditation Program	ANCC	National NRP accreditation agency Core criteria domains: program leadership, organizational enculturation, development and design, practice-based learning, nursing professional development, and quality outcomes (ANA, 2023).

Table 1 Continued

American Association of Colleges of Nursing Nurse Residency Program/Vizient	AACN/ Vizient	Evidence-based, vendor program Key NRP elements: curriculum focus on professional practice, mandatory participation of new grad hires, evidence-based practice project, interactive with experts in the organization, support development of professional portfolio or plan, requirement for an academic partnership, evaluation and benchmarking (Vizient, 2019).
Versant New Graduate Nurse Residency Program	Versant	Evidence-based, competency focused program Program elements: competency gap analysis, competency gap remediation and validation through preceptorship. Outcome evidence focused on organizational commitment (Versant, 2019).
National Council of State Boards of Nursing Transition-to Practice-Model	NCSBN	Evidence-based online course series Five fee-based modules: Communication and Teamwork, Patient-Centered Care, Evidence-Based Practice, Quality Improvement, and Informatics. Offer Preceptor Training Module (NCSBN, 2023).
Graduates: Engaged Mastering Succeeding	GEMS	Independent facility-based NRP model Program components: classroom education, preceptor unit orientation, quarterly debriefing sessions, and professional development (Stamford Health, 2018).

CHAPTER TWO

LITERATURE SEARCH METHODS

Overview

The goal of this chapter was to highlight the recent literature pertinent to the research purpose: to investigate the influence of NRPs on new graduate nurse attrition and retention outcomes. This integrative review included the following aims: to review and critique the attributes of NRPs in the United States, identify challenges and barriers to NRPs' success through analysis of new graduate nurse retention and attrition, and synthesize the study findings. The search strategy uncovered pertinent studies using three databases and strategic key terms and identified 12 articles included in this integrative review. A table formulated to identify the purpose, methods, primary findings, and quality ratings of the search results aided the organization and analysis of the literature (see Table 2). In addition, Dreyfus and Dreyfus' (1980) Model of Skilled Acquisition and Benner's (1982) Novice to Expert theory provided theoretical applications of the novice nurse transitioning through practice stages in the professional setting. The application of the proposed topics is discussed further in this chapter.

Search Strategy

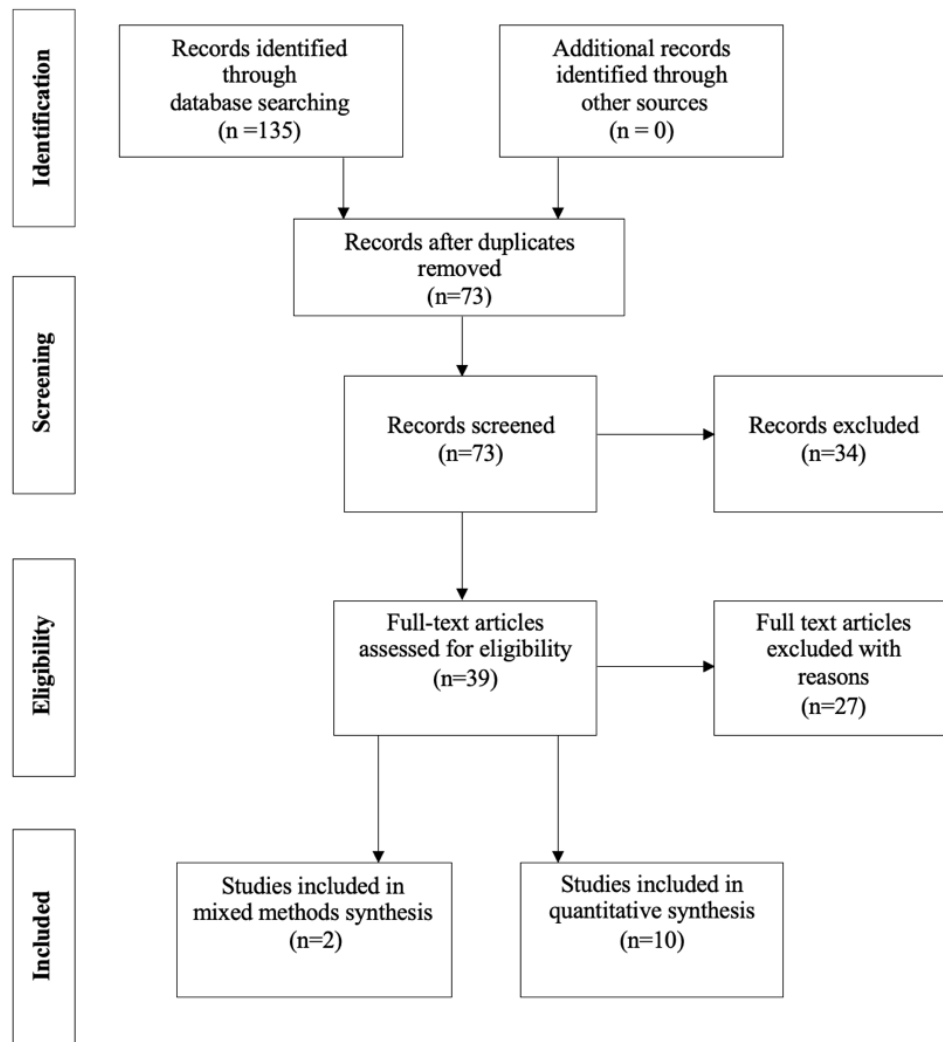
This integrative review analyzes new nurse transition to practice through the implementation and evaluation of NRPs and outcomes. Literature appraisal of three databases, Cumulative Index to Nursing and Allied Health Literature (CINAHL), PubMed, and Web of Science, investigated articles based on specific inclusion criteria. The initial literature search

utilized a combination of key search terms: “nurse residen*” OR “nurse residency program” OR “new graduate nurse” AND “attrition or retention” OR “turnover or outcomes” AND “support” OR “mentor*” OR “preceptor*” OR “COVID” OR “pandemic” OR “outcomes” OR “completion” OR “evaluation.” An additional search feature filtered articles to include only publications from 2017 to 2022 written in English.

The investigator independently screened the titles and abstracts of the initial results to determine if they met the following inclusion criteria: (a) published between 2017 and 2022, (b) written in English, (c) studies completed in the US, (d) acute care setting, (e) registered nurses, and (f) addressed new graduate nurses and intent to leave (attrition or retention) as a primary or secondary measure. Conversely, a study was excluded for the following reasons: (a) written in foreign languages; (b) addressed long-term care facilities or programs outside of a hospital; (c) analyzed advanced practice nurses, nurse practitioners, licensed vocational nurses, or medical residents/doctors; and (d) did not measure new graduate nurse retention or intent to leave.

The initial search identified 135 articles exported into EndNote9 and duplicates were removed. The investigator screened 73 titles and abstracts for eligibility based on the inclusion and exclusion criteria. After examining 39 full-text articles for relevance and rigor, 27 were excluded. The remaining 10 quantitative and two mixed-methods articles met the inclusion criteria for this integrative review. Figure 1 displays the data collection process using a Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) flow diagram.

Figure 1. PRISMA Flow Diagram.



Adapted from Moher et al. (2009).

Theoretical Framework

The framework featured in *From Novice to Expert*, authored by Benner (1982), discussed a nursing theory that guides the transitional experiences of new nurses. The novice nurse requires support to apply learned education and begin acquiring skills for clinical practice. The levels of Benner's theory suggested fluid movement for nurses' transition into competent practice. Nurse

residency programs provide strategies to assist novice nurses transitioning from an academic setting to a professional nurse (Goode et al., 2018).

Benner's theory provided meaningful reflection to understand the new graduate nurse for this integrative review. The practicing nurse maintains an ongoing responsibility for career development and learning. Therefore, Benner suggested a requirement of "understanding of the differences between the experienced nurse and the novice" because of the highly evolving healthcare field (1982, p. 402). The foundation of Benner's model utilized the ideas of Dreyfus and Dreyfus' Model of Skilled Acquisition, which addressed five stages of skill development based on concrete experience (Dreyfus & Dreyfus, 1980). The Model of Skill Acquisition addressed the complex experiential learning for an individual in the field over time (Benner, 2004). This model connected to mental activity (recollection, recognition, decision, awareness) and the five stages involved in skill acquisition (novice, competent, proficient, expert, master), which set the stage for Benner's application to the nursing field (Dreyfus & Dreyfus, 1980).

With the application and foundational stages set forth by Dreyfus' model, Benner (1982) proposed the development through five levels of nursing proficiency: novice, advanced beginner, competent, proficient, and expert. The experiential movement between the theoretical stages takes time and is referred to as the "refinement of preconceived notions and theories through encounters with many actual practical situations" (Benner, 1982, p. 407). A novice nurse is challenged by unpredictable judgment and complex decision-making, which is often necessary for nursing. The advanced beginner nurse may ignore the importance of discerning the clinical problems and integrating appropriate actions (Benner, 1982). Once past the initial stages, most nurses stay at the level of a competent nurse, having the feeling of mastery and ability to manage

many avenues of clinical nursing practice. At this level, competent nurses are ideally champions within their healthcare setting and benefit nursing leadership; however, they can still lack speed and flexibility (Benner, 1982). Benner (1982) suggested that the proficient nurse has a holistic understanding and can predict events and expect plans in response to a situation. Benner (2004) proposed that expert nurses develop an understanding of patient care over time by seeing and responding to situations where the link between the patient's condition and nurse-focused actions is strong, with an innate intuition of clinical situations.

The study of nursing practice encompasses a complex skill set with moral reasoning and emotional engagement. It is important to note that an expert-level nurse caring for adults will not be at the same skill level when caring for premature infants (Benner, 2004). As the learner is emphasized through the progression of skill performance, Dreyfus and Dreyfus (1980) explained the implications and importance when designing training aids and courses, further emphasizing that "at all times be aware of the developmental stage of the student, so as to facilitate the trainee's advancement to the next stage, and to avoid the temptation to introduce intricate and sophisticated aids" (p. 16). Nurse residency programs establish the training platform of step-by-step strategies and skills to aid in the transition of the novice nurse. The theoretical application offers an explicit and formalized framework and can be a guide for asking the right questions because the realities of clinical practice are complex (Benner, 1982).

Search Results

This integrative review included ten quantitative articles and two mixed-methods studies. Based on methodological rigor and data relevance, the studies were evaluated for quality using Whitemore and Knafel's (2005) data analysis process. Each article was assigned a strong,

moderate, or weak score based on a scale analysis. The researcher independently reviewed the sample size and variance, articulation of statistical data collection and analysis, and assessment of the relationship between variables to assign the score. No articles were excluded due to quality. Of the 12 articles, six were found to be strong, three were assigned moderate, and three were weak. Table 2 presents the purpose, methods, and primary findings and the quality ratings assigned to each study.

In general, the table shares the purpose of the articles, mostly comprised of evidence with retrospective comparative and correlational analysis, retrospective descriptive, and descriptive comparative design. Some articles used the Casey-Fink Nurse Retention Survey for data collection, but most utilized surveys with a five-point Likert scale to measure intent to leave or job satisfaction, among other variables. The nurse residency program structure within each article is diverse, ranging from a Vizient accredited program to a Versant competency-based program to an internally developed independent program, with some articles not defining the structure of a program altogether.

Table 2. Literature Review Synthesis Matrix

Author/Year	Purpose	Sample/Years	Evidence type	NRP Structure	Major Findings	Quality
Africa & Trepanier (2021)	Examined NGN intent to leave and reasons why during first 2 years of practice.	N=1317 baseline competency completion survey responses, month 8 N= 1564, year 1 N=1295, year 2 N=838. June 2018 – 2020. Across 6 states.	Mixed methods: Longitudinal study with survey analysis (quantitative) and feedback (qualitative)	Versant system and developed metrics, Turnover Intent is one of 13 collected.	Intent to leave increases with time.	Strong: This study has a large sample size, using a recent data set. Examined over multiple time periods and among 6 states.
Blegen et al. (2017)	Examined effects and retention of a newly designed transition-to-practice (TTP) program among hospitals. Secondary analysis data.	N=1082 NGN participants. Survey completed at baseline, 6 and 9 months. For only one year (collection year not disclosed). 42 hospitals assigned TTP, 55 hospitals usual methods. Across 3 states.	Quantitative: Longitudinal study with multisite randomized trial	Newly designed transition-to-practice program. Excluded federal government hospitals, Versant, AACN/University transition program hospitals. Included Magnet designation.	The one-year retention rate for all NGN was 83%. RNs more likely to stay if 30 years or younger, a night shift worker, or educated in a traditional baccalaureate program.	Strong: This study has a large sample size. Unclear when data collected, used randomized but hospitals who volunteered. Statistical analysis clearly done with multivariate logistic regression, at individual level.
Church et al. (2018)	Examined factors associated with organizational commitment of NGN via NRP commitment effect on turnover intent and actual job turnover. Used secondary analysis data.	N=1498 NGN data via evaluations and debriefing sessions from 2011 cohort. Hospitals across the US.	Quantitative: Retrospective correlational analysis	Versant New Graduate Nurse Residency hospitals and data	All variables except actual job turnover were significantly correlated with each other. Turnover intent was low at 1-year post-residency. Organizational commitment has significant effect on turnover intent.	Strong: This study has a large sample size from across the US among Versant group. Strong descriptive statistical analysis methods for each variable.

Table 2 Continued

Author/Year	Purpose	Sample/Years	Evidence type	NRP Structure	Major Findings	Quality
Cline et al. (2017)	Examined 10 years of NGN outcomes and retention who participated in an internally developed nurse residency program.	N=1267 NGN initial surveys at baseline and at completion of program (N=1118). Casey-Fink Graduate Nurse Experience Survey, 31 cohorts, 10 years of residency data (2005-2015).	Quantitative: Retrospective correlational analysis	Internally developed nurse residency program	Statistically significant (P=.05) change scores in skills, procedure performance, work environment, job satisfaction, communication/leadership, and patient safety scores. Data does not clearly find a link between stress and retention rates. Significant relationship between support domain and 1-year retention data.	Strong: Large sample size over time and recent. Data collection strong statistical analysis programs and linear regression of dependent variables.
Silvestre et al. (2017)	Examined retention and return on investment (ROI) of transition-to-practice (TTP) group vs. control group with limited programs.	N=1032 NGN from 70 hospitals among 3 states for both TTP and control group. Surveys at 6 and 12 months, in 2013.	Quantitative: Comparison study with multisite randomized, controlled design	All types of hospitals included (public, private, Magnet designation, university affiliated).	Transition-to-practice group had lower turnover rate (p<0.00). Positive ROI by implementing program in hospital to decrease turnover. NGN less likely to leave hospital by end of first year less than age 30 (p<0.05).	Strong: Large sample size among many hospitals. Examined individual characteristics compared to turnover and reasons for leaving using analysis of variance, along with others.
Williams et al. (2018)	Examined influence of intentional mentoring and group mentoring. NGN transition to practice outcomes and turnover intentions for evidence of return on investment with mentoring during NRP. Secondary analysis data.	N=3484 NGN from hospitals around US. Data from 2011-2014.	Quantitative: Retrospective, cross-sectional study	Versant New Graduate Nurse Residency Program and Versant Self Competency Self Confidence and Turnover Intention Surveys	Higher degree of comfort in role of staff nurse, less turnover intention. No significance between mentoring and turnover intention unless NGN has group mentoring experience with low levels of contact.	Strong: Large sample size, including diverse hospital representation over a few years. Transparent, detailed statistics of turnover intention among many variables including mentoring, stress, nurse role, perceived comfort level.

Table 2 Continued

Author/Year	Purpose	Sample/Years	Evidence type	NRP Structure	Major Findings	Quality
Failla et al. (2021)	Examined NGN perceptions of affective commitment, job satisfaction, job stress, and other variables with transition to practice.	Baseline N=117 NGN survey, at 12 months N=100, and 24 months N=97 survey participants. 5 hospitals. Collection years not disclosed.	Quantitative: Descriptive comparative design	Sharp HealthCare system. Used 10 instruments to measure study variables and one author-developed instrument to measure intent to stay.	When social support declines, intent to leave increases. Lack of Support subscale significant increase (P=0.001) over time. The 12-month is when NGN are most likely to leave their unit.	Moderate: Smaller sample study, from the same healthcare system. Measures with significant instruments and with multiple survey occurrences.
Mulkey & Casey (2021)	Examined a standardized method for evaluation of retention data of NRP. Identified perceptions of work factors.	N=429 RNs with NRP participation from Oct 2011 to Nov 2018, 21 cohorts. N=220 NGN eligible to take survey (36% response rate), Nov-Dec 2018.	Mixed Methods: Descriptive survey analysis (quantitative) and open-ended questions (qualitative)	Single hospital, NRP structure not discussed. Casey-Fink Nurse Retention Survey	Three-year retention rates fell below the national benchmark, but institutional retention rates were similar. Recognition and rewards in work environment were a positive influence in retention.	Moderate: Smaller sample size evaluated from one hospital and low response rate. Well analyzed and presented statistical data, however, is lacking comparative/correlation to RN demographic and retention.
Wolford et al. (2019)	Examined the effectiveness of NRP on less-than-1-year RN turnover and work engagement and quantify NRP return on investment (ROI).	N=232 NGN with 2-year NRP, N=791 control group NGN. Included 5 regional hospitals.	Quantitative: Retrospective pretest, posttest design	Utrecht Work Engagement Scale (UWES) survey	Work engagement decreased as months of experience increased. Control group 14% turnover compared to NRP group at 3.5%. NRP group yielded a positive fiscal ROI.	Moderate: Small sample size. Examined NRP group turnover and compared variables within survey. Utilized statistical analysis for turnover relationship. No comparison of engagement between groups.

Table 2 Continued

Author/Year	Purpose	Sample/Years	Evidence type	NRP Structure	Major Findings	Quality
Hernandez et al. (2020)	Examined employment and retention rates of nurses who completed an internship and residency program within the facility.	N=404 RNs hired by UNMH, year 1 N=341, year 5 N=203 could have been employed but N=88 RN remained employed; January 2008 – May 2017.	Quantitative: Retrospective descriptive statistics	University of New Mexico Health Sciences, Vizient NRP	No demographic differences of demographic differences or percentage of 1 year retention. Higher percentage of males remained employed for 5 years or longer (P= .023).	Weak: Small sample size from same organization. Causes of retention and attrition of RNs not addressed.
Pillai et al. (2018)	Examined RN retention rates with comparison of demographics, reasons of termination, cost comparisons of NRP. Analyzed the GEMS program.	N=241 NGN, among 20 cohorts at one hospital. August 2009 to November 2016.	Quantitative: Descriptive study	Graduates: Engaged Mastering Succeeding (GEMS) institutionally developed NRP. Magnet designated hospital.	Turnover rate of GEMS at 1-year post-hire was 12%, at 2 years 31%. From year 1 to end of year 2, turnover 21.3% overall. Found that a new graduate nurse must work for 12 months and an experienced nurse work for 6 months for a hospital to recoup initial investment.	Weak: Small sample size among one hospital. Unsure how outcome evaluations or identification of retention based on hiring status was done. Limited cost comparison equation or financial statistics.
Ward-Smith et al. (2022)	Examined a program for best practice for structured mentoring program and evaluate the impact of nurse mentoring has on recruitment and retention.	N=227 NGN, spring 2018 to summer 2020.	Quantitative: Descriptive study	Three phases developed for NRP at single study site.	Retention summer 2018-2019 cohort 86.6%, winter 2019- 2020 cohort with 93.1% retention and summer 2019-2020 cohort had 95.8% retention. Overall, 85.5% remained in initial hire position beyond 12 months.	Weak: Small sample size within one hospital setting. Limited comparative data without explanation of statistical analysis.

Summary

Chapter Two included selections from the literature using search terms to identify retention of the new graduate nurse among participants of NRPs. The databases CINAHL, PubMed, and Web of Science were utilized to select 12 studies based on inclusion and exclusion criteria. The researcher synthesized the literature matrix, guided by Whitemore and Knafl's (2005) methods to evaluate quality. The theoretical application of Dreyfus and Dreyfus' (1980) Model of Skilled Acquisition and Benner's (1982) Novice to Expert theory applied the five stages of development as the new graduate nurse gains experience. Chapter Three describes the methodological analysis by which the research data is newly conceptualized.

CHAPTER THREE

DATA ANALYSIS METHODS

Introduction

This integrative review examined five key components to analyze the data comprehensively. The following sections highlight (a) the process of conducting the integrative review, (b) the evaluation of the quality of the data, (c) data reduction, (d) data display and comparison, and (e) conclusion drawing and verification. The methods guided the tools and resources utilized in this study.

Process of Conducting the Integrative Review

The integrative literature review is a distinct and sophisticated form of research that requires skill and insight to generate new knowledge about topics (Russell, 2005; Torraco, 2005; Torraco, 2016a). Integrative reviews comprehensively analyze data on a spectrum. They incorporate qualitative or quantitative data based on theoretical or empirical literature to fully understand the phenomenon of concern (Torraco, 2016a; Whittemore & Knafl, 2005). Integrative reviews involve critical analysis through critiques and synthesis to examine the relationships of an issue and shape new frameworks and perspectives (Torraco, 2005; Torraco, 2016b). Including diverse methodologies captures potential significant conclusions for evidence-based nursing practice, emphasizing additional suggestions for nursing research and policy initiatives (Whittemore & Knafl, 2005).

The integrative review development process lacks a standardized framework for writing and conducting research. There are various ways to organize an integrative review; however, the expectation is that the author provides clarity and transparency among the accepted conventions and criteria for reporting the study methods (Torraco, 2005; Torraco, 2016b). The approach of an integrative review should be conducted with the same intensity and scientific rigor used with primary research (Russell, 2005). Based on Whitemore and Knafl's (2005) recommendations, a five-step process was developed to provide the integrative review with a systematic methodology. The process begins with quality data evaluation, then data reduction, then data display, data comparison, and conclusion drawing and verification (Whitemore & Knafl, 2005).

Data analysis and evaluation have the least developed procedural guidelines and are one of the most challenging aspects to execute due to the potential for error. The potential for bias remains relevant due to the complex inclusion of diverse primary sources such as quantitative, qualitative, or mixed-methods research (Whitemore & Knafl, 2005). The integrative review requires systematic methods and scientific integrity to be thoroughly maintained, especially during data analysis. It is necessary to pay attention to threats to validity and "protect against bias and improve the accuracy of conclusions" (Russell, 2005; Whitemore & Knafl, 2005, p. 547). Rigorously developed integrative reviews can significantly impact, as they "allow for various perspectives on a phenomenon to be synthesized into a systematic knowledge base, thus forming the foundation for nursing practice" (Whitemore & Knafl, 2005, p. 552).

Since new graduate nurses and NRPs remain widely researched among many variables, an integrative review provided a solid platform to study the topic. In addition, the integrative literature review equipped the researcher with the data framework to critically analyze,

effectively synthesize, identify common themes, patterns, or gaps in current research and the need for future research, and reconceptualize the topic (Russell, 2005; Torraco, 2016b).

Ultimately, this process provides conclusions and verification to enhance a holistic understanding of the complex healthcare problems and concerns in nursing (Whittemore & Knafl, 2005).

Evaluation of the Quality of the Data

Consistent with Whittemore and Knafl's (2005) method, an extraction tool was utilized to sort relevant data from the sampling frame and help evaluate the quality of the research. Initially, each article was sorted, and the level and quality of the evidence were determined using the table adapted from Stetler et al. (1998). Table 3 lists the strongest rated type of evidence from levels one to five in each study. No level six articles were considered or included in this review.

Table 3: Strength of Reviewed Level and Quality for Journal Articles

Level & Quality of Evidence	Source of Evidence
Level I (A-D)	Meta-analysis of multiple controlled studies
Level II (A-D)	Individual experimental study
Level III (A-D)	Quasi-experimental studies, such as nonrandomized controlled single group pre-post test, time series, or matched case-controlled studies
Level IV (A-D)	Nonexperimental studies, such as correlation descriptive research and qualitative or case studies
Level V (A-D)	Case report or systematically obtained, verifiable quality, or program evaluation data

Table 3 Continued

Level VI (A-D)	Opinion of respected authorities (e.g., nationally known) based on their clinical experience or the opinions of an expert committee, including their interpretation of nonresearched-based information. This level also includes regulatory or legal opinions
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From Stetler et al., 1998.

Next, each article's level and quality of evidence were approached methodologically, utilizing the framework of the Johns Hopkins Research Evidence Appraisal Tool (Dang et al., 2022). The articles were assessed through the appraisal workflow tool's guidance based on whether the article was a quantitative or a mixed-methods study. While each appraisal question was not meticulously answered, the quality level of the studies could be deciphered. After determining the level of evidence based on the tool considerations, each article was individually assigned a score of strong (high quality), moderate (good quality), or weak (low quality) (see Table 2). The ratings were appointed considering the sample size and variance, thoroughness of the literature appraisal and synthesis, articulation of statistical data collection with definitive conclusions, and relationship assessment between the variables (Dang et al., 2022).

Data Reduction

The most pertinent article information was filtered and organized to aid in data reduction. This technique involves “extracting and coding data from primary sources to simplify, abstract, focus, and organize data into a manageable framework” to then compare systematically the “sources on specific issues, variables, or sample characteristics” (Whittemore & Knafl, 2005, p. 550). Each article was sorted by purpose, sample size, sample years, study design, program structure, major findings, and quality with strengths and limitations (see Table 2).

Data Display and Data Comparison

After synthesizing each article, the investigator developed Table 2 to reflect the pertinent data and information concisely. An additional chart was made to capture the major themes and important findings established within each article (see Appendix A). This structure helped find common themes and identify patterns or relationships during data comparison (Whittemore & Knafl, 2005). The opportunity to compare the data laid the foundation for critical analysis, which builds on the strengths and limitations of the literature to create a synthesized understanding of the topic (Torraco, 2016a).

Conclusion Drawing and Verification

Through data comparison and critical analysis, conclusions were drawn. The conclusions present important patterns and themes in a creative, reformulated, and integrated product (Torraco, 2005; Whittemore & Knafl, 2005). During this phase, “analytical honesty is a priority” to ensure the topic relationships are thoughtfully explored to prevent bias and protect validity (Whittemore & Knafl, 2005, p. 551). In summary, Chapter Four will further detail these conclusions and verifications.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF THE DATA

Introduction

Chapter Four includes the results of the content analysis—the patterns and themes discovered in the literature. The purpose of this chapter is to present the data extracted from the literature on NRPs and their influence on new graduate nurse attrition and retention. The transition to practice for the new graduate nurse is guided by the structure of the NRP, the social support provided by the NRP, and the work environment. The significant thematic components describe the negative attributes and supportive influences of NRPs and the return on investment. The analysis of the literature helps distinguish the structural, demographic, and new graduate nurse outcome results. The summary explains the unique findings uncovered in the literature related to the theoretical framework and opportunities to improve the experience and outcomes of the novice nurse during the transition to practice year.

Structural/Demographic ResultsStructure of NRP

Nurse residency programs generally start with a structured hospital-based orientation and progress through various phases, commonly described as a twelve-month program (Pillai et al., 2018). Institutional support, structure, and education are all key factors for a successful program. A transparent structure must be evident to study NRP outcomes, as each program includes unique components. Nine of the 12 articles defined the structure used among their NRP, which

allows for deeper understanding for comparison. Three articles utilized the Versant New Graduate Nurse Residency Program (Africa & Trepanier, 2021; Church et al., 2018; Williams et al., 2018), and one article (Blegen et al., 2017) intentionally excluded the Versant program. Each article prioritized different variables based on Versant program assessments: rating competence, nurse satisfaction, organizational job satisfaction, skills competency self-confidence, leader empowering behavior, and turnover intent (Pillai et al., 2018). Additionally, the National Council of State Boards of Nursing (NCSBN) Transition to Practice Model provided three articles with the structural foundation of the research (Blegen et al., 2017; Cline et al., 2017; Silvestre et al., 2017). Filia et al. (2021) and Ward-Smith et al. (2022) created an NRP to meet the ANCC Practice Transition Accreditation Program standards. The remaining three study articles did not define a specific structure or guidelines within their hospital and NRP (Hernandez et al., 2020; Mulkey & Casey, 2021; Wolford et al., 2019).

Hospital Characteristics/Work Environment

Along with the variety of implemented NRP structures, hospitals have the opportunity to achieve different statuses or special designations. Distinguishing these hospital characteristics embodies unique benefits and challenges but provides significance across the research. A university hospital may affiliate with a medical school or nursing school or grounded in partnerships with education programs to improve health care learning, yet Silvestre et al. (2017) did not find significant turnover with affiliation. Blegen et al. (2017) analyzed the hospital characteristics and found magnet-designated and university-affiliated hospitals were likelier to be in urban areas, in which large hospitals in urban areas had the highest rates of retention (85%). A magnet designation from ANCC means nursing leaders have gone through the rigorous program

to align the hospital's strategic nursing goals for the betterment of patient outcomes. The research found hospitals' magnet status has the largest influence on new graduate nurses' decisions to remain with their first employer and be less likely to leave (Blegen et al., 2017; Silvestre et al., 2017). Programs among magnet- recognized hospitals have transformational nurse leaders that support new graduate nurses demonstrated by improved organizational commitment (Failla et al., 2021).

New Graduate Nurse Demographic Descriptions

The NRP must consider the demographics of the participants, as each novice nurse will have an individual transition to practice experience. Nurses' personal characteristics have been studied, leading to a greater understanding of our new graduate population. The participants in the highlighted studies were predominantly female (Mulkey & Casey, 2021; Wolford et al., 2019; Hernandez et al., 2020; Cline et al., 2017; Williams et al., 2018) and less than 34 years of age (Africa & Trepanier, 2021; Hernandez et al., 2020; Wolford et al., 2019; Mulkey & Casey, 2021). Similarly, in research by Cline et al. (2017), less than 10% were older than 41 years. Additionally, most new nurses participating in NRPs had primarily earned a Bachelor of Science in Nursing (BSN) (Africa & Trepanier, 2021; Blegen et al., 2017; Williams et al., 2018; Cline et al., 2017; Hernandez et al., 2020; Mulkey & Casey, 2021). Of the studies that reported race and ethnicity, Caucasian/white participants were most represented (Cline et al., 2017; Hernandez et al., 2020; Mulkey & Casey, 2021; Failla et al., 2021; Pillai et al., 2018; Williams et al., 2018; Wolford et al., 2019; Blegen et al., 2017; Church et al., 2018).

Silvestre et al. (2017) found that new graduate nurses were less likely to leave the hospital by the end of the first year if they were younger than age 30 ($p < 0.05$) and had a

bachelor's education (not statistically significant). Blegen et al. (2017) reported statistical significance for retention across age groups with 88% being 30 years or younger and 81% aged 31 to 40 years stayed, but found no other significance between retention and gender, race, or type of unit. The study by Pillai et al. (2018) evaluating the Graduates: Engaged Mastering Succeeding (GEMS) NRP found no significant differences between the two comparative groups ("stayers" versus "leavers") for age, degree, gender, or retention at one and two years. The retention rates found by Hernandez et al. (2020), surprisingly suggested at five years, a higher percentage of males remained employed at the hospital, of which 63.6% still worked in the same location since year one of employment.

New Graduate Nurse Outcome Results

Turnover Intent

The term turnover intention (TI) was created as a measurable variable to assess participants at various times during the Versant program (Africa & Trepanier, 2021; Church et al., 2018; Williams et al., 2018). Similarly, Failla et al. (2021) utilized survey questions under an intent to leave (IL) theme, specifically to determine the participants' consideration to stay or leave their current hospital health care system. A 5-point Likert scale was used to include "strongly disagree, disagree, neutral, agree, and strongly agree" responses collected indicating an intention to leave the organization within the next year (Africa & Trepanier, 2021 & Williams et al., 2018) or collected with other instruments of subscale surveys across time (Failla et al., 2021 & Church et al., 2018). Of the 5,014 responses received in a survey by Africa & Trepanier (2021), 14% of participants reported IL at 8 months, 22% at one year, and 30% at year two. The

Church et al. (2018) study utilized secondary Versant NRP data and found TI at one year from the start of NRP to be low, and at two years, 91.7% of the sample was still employed.

Retention & Attrition

Turnover rate or retention rate analysis determined if the new graduate nurse was still employed by the hiring hospital at the end of their first year as a nurse (Blegen et al., 2017 & Silvestre et al., 2017). The goal of NRPs is to promote engagement by facilitating a successful transition to practice with the intention of retaining the new graduate nurse longer than the first year (Wolford et al., 2019). The Blegen et al. (2017) study included a large sample size across 97 diverse hospitals. The retention rate at one year for all new graduate nurses was 83%. Silvestre et al. (2017) examined a transition to a practice group (TTP) with modules and a web platform versus a control group with limited programs. They found the TTP group had a lower turnover rate of 15.5% compared to the 26.8% turnover rate for the limited control group ($p < 0.00$). Throughout the seven-year data collection period across 21 cohorts ($n=429$), survey retention rates from Mulkey and Casey (2021) averaged 93% at year one, 82% at two years, 74% at three years, 66% at four years, and 59% at five years.

In the Wolford et al. (2019) sample control group, new graduate nurses were hired during the two years before the NRP began compared to an intervention group of NRP participants. The turnover percentage before one year of practice for the control group was 14%, and the NRP participant turnover rate was 3.5%. The significant difference in turnover rates suggested the positive impact the NRP has on reducing turnover.

The GEMS NRP in Pillai et al.'s (2018) study provided insight into a one-dimensional turnover analysis, in which 88% of the 212 nurses were retained after one year; after two years,

the turnover was 31% (21.3% difference between year one and two overall). The research considers the time of year that the GEMS or new graduate nurse cohorts are hired, which may influence retention rates (Pillai et al., 2018 & Ward-Smith et al., 2022). Overall, almost half of the studies included in this integrative review found significance among the implemented NRP and improved retention (Blegen et al., 2017; Silvestre et al., 2017; Mulkey & Casey, 2021; Wolford et al., 2019; Pillai et al., 2018).

Negative Attributes (Disincentives)

Internal & External Turnover Reasons

As new graduate nurse retention is analyzed throughout this integrative review, there is a greater understanding of the various reasons turnover exists among the NRPs. Both voluntary and involuntary reasons new graduate nurses leave their jobs are categorically significant. Voluntary reasons for leaving the job included moving to another geographic area, returning to school, stressful nature of work, took a different clinical or non-clinical nursing job, took time out for family or other personal reasons, salary, and difficulty with the workload; involuntary reasons included termination with cause, medical, injury, or death (Silvestre et al., 2017 & Africa & Trepanier, 2021). Voluntary reasons for leaving accounted for 17.5% of new graduates no longer at hospitals and 1.3% leaving involuntarily (Silvestre et al., 2017). Specifically, Africa and Trepanier (2021) cited the primary intent to leave reason from initial validation through the first and second years was family or personal commitment, growing from 9% to 12% and back to 10%. The survey constructed by Cline et al. (2017) addressed external stressors, including finances, personal relationships, student loans, living situations, and childcare, which an NRP or work environment does not change but can very much compound. The highest stressor in pre-

data was student loans and finances, whereas post-data identified personal relationships and finances to be the highest. Salary as a reason for intent to leave also increases over time (Africa & Trepanier, 2021). Although not clearly linked, stress intervention programs may improve retention rates (Cline et al., 2017). Overall, some turnover reasons can be addressed for improvement, while others are out of the hospital's control. Understanding that new graduate nurses encounter work-life balance challenges suggested the importance of maintaining strategic engagement of NRP to ease the transition into practice.

Workplace Challenges

The expectations and preparation new graduate nurses experience through hospital units' transition to practice may be different than their hospital exposure during nursing school. Nurse residency programs aid in the transition. At the end of an NRP, a significant relationship ($p < 0.001$) was found in Williams et al.'s (2018) survey responses of new graduate nurses' perceived comfort level (very comfortable, comfortable, and uncomfortable) in the staff nurse role and turnover intention (none/low or high/definite). The findings identified new nurses who were "uncomfortable" as a staff nurse were more likely to describe "high or definite" turnover intention (Williams et al., 2018). A new nurse who lacks confidence during the transition to practice could demonstrate less independence and proficiency in their nursing practice. Church et al. (2018) explained the reasoning as a new graduate nurse struggles to develop individual autonomy and competence leading to less organizational commitment is the increasing likelihood of turnover.

The challenging workload, job stress, inadequate staffing, and organizational citizenship are external reasons new graduate nurses intend to leave the organization (Africa & Trepanier,

2021; Failla et al., 2021). Africa and Trepanier (2021) gathered qualitative research about safety concerns, quoting participants' feedback to "Reduce nurse-to-patient ratio so I can provide quality safe care to my patients" and "A nurse having to carry 7 sometimes 8 patients is extremely unsafe. I don't like being put into that position and risking my nursing license because of staffing issues" (p. 241). The new graduate nurse working in a difficult setting may not feel supported with growth or confidence during the first year of practice. However, during the Cline et al. (2017) surveys throughout the NRP, they found significance ($p < .001$) in the patient safety domain, suggesting improved confidence in organizing and prioritizing patient care and safety. The hope is that new graduate nurses are supported within NRPs to learn patient safety management even within challenging workplace environments.

Only one study addressed the COVID-19 pandemic. Africa & Trepanier (2021) received comments from new graduate nurses saying, "Give us the right PPE and show that you care about your nurses' lives and safety" (p. 242). In a workplace setting faced with unforeseen challenges during the pandemic, the naturally overwhelming transition to practice for new nurses could be exacerbated, leading to burnout. Therefore, nurse leaders should be attuned to the needs of the nursing workforce; a simple expression of gratitude can have a positive impact (Africa & Trepanier, 2021).

Overall, measurements of satisfaction and dissatisfaction impact new graduate nurses' perceptions of their job and intent to leave. During the residency program, Cline et al. (2017) discovered a moderate, but a statistically significant decline in support and professional satisfaction, potentially related to the transition to independent practice over the year. Similarly, dissatisfaction with the job was among the top reasons for intention to leave (Africa & Trepanier,

2021), supporting the findings that job satisfaction among a cohesive group led to organizational commitment (Church et al., 2018).

Supportive Influences (Incentives)

Communication

Integration into the practice setting can intimidate new graduate nurses due to a lack of confidence. Failla et al. (2021) described new graduate nurses as “unconsciously incompetent, meaning they may not be aware of what they do not know” (p. 610). Therefore, NRPs and leadership can support new nurses through effective communication to assist in organizational belonging and retention. Two studies found that communication scores improved over time, demonstrating increased confidence and comfort in communication skills across interprofessional colleagues and patients, and in delegating with increased experience (Cline et al., 2017; Failla et al., 2021). As new graduate nurses become competent in communication skills, it is equally important for nurse leaders to model similar communication strategies. Communication remains a main predictor to mitigate turnover intention, including listening to the new graduate nurses, identifying challenges, and celebrating successes at every level (Africa & Trepanier, 2021).

Recognition & Rewards

The impact of recognition and rewards demonstrates beneficial outcomes for new graduate nurses among NRPs and in their first job. Surveys identified that within the work environment, recognition and rewards were a positive influence on retention (Mulkey & Casey, 2021). Respondents to open-ended questions from Mulkey and Casey (2021) delivered common

themes of how new graduate nurses would like to receive recognition for a job well done that include “increase in pay, verbal thank you, and management listens to my concerns” (p. 9). Rewards, including incentives, retention bonuses, and showing appreciation for hard work were also identified as ways organizations could change intent to leave (Africa & Trepanier, 2021). The importance of this concept demonstrates how meaningful recognition of the new graduate nurse contributes to the entire organization. It has been found that individuals who demonstrate higher levels of organizational commitment decrease their intent to leave an organization (Church et al., 2018).

Mentors & Preceptors

New graduate nurses lean on the support of preceptors for learning skills to boost new nurses’ confidence and foster trust in their abilities. The preceptor or mentor is a significant role; however, this role is not a component of all NRPs, making it difficult to measure mentor effectiveness and identify patterns and themes (Mulkey & Casey, 2021; Pillai et al., 2018; Ward-Smith et al., 2022). According to Failla et al.’s (2021) analysis, when social support goes down, intent to leave increases. Support can take different forms along various timelines for the novice nurse, such as one-on-one mentoring, in-person, or virtual check-ins, or even group settings.

Williams et al. (2018) discovered that new graduate nurses mentored in groups were more likely to indicate high turnover intention if they received low to moderate contact (less than four encounters) with the group mentor. Additionally, transitioning to practice, professional development, and managing stress were reported to be more helpful during one-to-one mentoring than in group sessions (Williams et al., 2018). In general, NRPs provide support and guidance to decrease turnover and promote engagement for the new graduate nurse (Wolford et al., 2019).

Return on Investment

A handful of studies analyzed the return on investment (ROI) within NRPs. While limited on generalizability, understanding the cost breakdown per new graduate nurse suggests acknowledgement of investment and long-term outcomes. Two studies discovered cost savings and positive ROI associated with the transition to practice, and NRPs (Silvestre et al., 2017; Wolford et al., 2019). The GEMS program implemented, and cost analysis researched by Pillai et al. (2018) revealed a financial loss when new graduate nurses leave before one year, indicating a new nurse must work for at least one year before the hospital's investment is returned. This was similar to Wolford et al.'s (2019) break-even point of program costs of 8.32 productive working months, with the prevention of turnover of three new nurses before then. If the nurse worked less than 8.32 months, the ROI discussion suggested "the replacement cost of newly licensed registered nurse was \$44,085.61, significantly less than the literature reported \$90,000 per nurse" (Wolford et al., 2019, p. 48). This suggests that NRPs provide favorable fiscal ROI by increasing retention with positive engagement for the new nurse, thus productivity benefiting the healthcare facility long term.

Summary

This integrative review uncovered unique results within the literature that support the value and importance of NRPs for new graduate nurses and health care systems. The various stages and structures throughout year-long residency programs provided a specific foundation influencing outcomes of intent to leave, attrition, and retention. At the first year of practice, new graduate nurses had lower turnover while participating in NRPs. This integrative review

supported the findings that NRPs increased communication and social support and supplemented the challenging transition to practice. These attributes of NRPs contributed to the retention for at least a year, which provided a hospital with break-even to positive ROI.

The findings for the novice nurse were captured in a table format to organize the incentives and disincentives of participating in a nurse residency program. According to Whittimore and Knafl (2005), the results of this integrative review successfully “allow for various perspectives on a phenomenon to be synthesized into a systematic knowledge base, thus forming the foundation for nursing practice” (p. 552). The phenomenological themes discovered generated either supportive influences for new nurse growth and development and result in retention, or the negative attributes leading to new nurse turnover and attrition (see Table 4). These findings increase awareness and support the benefits that an NRP provides the novice nurse while uncovering new focus areas for future development and improvements of NRPs.

The goal of this integrative review was to evaluate the influence of NRPs on new graduate nurse outcomes. The aim was to review and critique the attributes of NRPs in the United States, while identifying the challenges and barriers to program successes through an analysis of new graduate nurse retention and attrition. Although there are supportive influences to supplement some challenges of NRPs within our healthcare system, the greater understanding supports the quality improvement opportunities to advance the experience and outcomes of new graduate nurses as they transition to practice. Better nurse retention rates improve the quality of patient care outcomes and show there is a need for the resources and structured support encompassed within NRPs.

Table 4: Examples of Findings: Novice Nurse Year One Supports and Constraints

<p style="text-align: center;">SUPPORTS</p> <p style="text-align: center;">Supportive Influences/Incentives (Satisfaction/Growth & Development) ↑ Retention</p>	<p style="text-align: center;">CONSTRAINTS</p> <p style="text-align: center;">Negative Attributes/Disincentives (Dissatisfaction & Turnover) ↑ Attrition</p>
NRP STRUCTURE	
<ul style="list-style-type: none"> • Structured orientation and plan for year-long phases to support educational and clinical growth • Educational modules and web platforms created to accommodate schedules and engagement • Transparent institutional, funded NRP and organizational commitment • Structure includes assigned NRP guides, preceptors, and/or mentors 	<ul style="list-style-type: none"> • Structured orientation not included in NRP framework • Educational opportunities fail to engage and encourage the novice nurse • Institutional funding of NRP but emphasis on repayment requirements with attrition or failure to stay past year 1 or 2 • Preceptors and mentors are available only episodically or not at all
NRP SOCIAL SUPPORT	
<ul style="list-style-type: none"> • Listening/communication is modeled by leadership • Reciprocal trust is developed • Organizational belonging and citizenship are encouraged • Group or individual mentor support/guidance occurs at predictable intervals • Evaluations are perceived as fair and helpful (skills competency, self-confidence) • Recognition and rewards in place 	<ul style="list-style-type: none"> • Basic social support is lacking and regular communication is rare • Fear and lack of trust prevails • Novice nurse feels alone and lacks confidence • Support and guidance from leaders or preceptors are insufficient or unsatisfying • Evaluations and assessments are perceived as punitive • Recognition and rewards are lacking
WORK ENVIRONMENT	
<ul style="list-style-type: none"> • Magnet status contributes to organizational pride and focus on nursing • Affiliations and educational partnerships enhance workplace learning opportunities • Transformational leadership present • Leaders are transparent re: workload, and staffing challenges and patient safety; work with staff on solutions • Stress intervention programs; work-life balance education 	<ul style="list-style-type: none"> • Magnet status not attempted or achieved • No perceived impact related to affiliations or partnerships • No examples of transformational leaders • Workload, job stress, and inadequate staffing are always present • Patient safety is an issue • External stressors: finances, personal relationships, student loans, childcare

CHAPTER FIVE

RELEVANCE OF FINDINGS

Discussion

The discussion provides an opportunity to address the challenges and better outcomes of new graduate nurses. The evidence suggests that NRPs have an influence on the new graduate nurse as they transition from the academic setting into the practice environment.

Common attrition challenges found throughout the literature include frustrations with work environments, lack of confidence in skill performance, and the need for communication and supportive relationships. When the experiences within NRPs are not ideal, the new nurse struggles to gain new knowledge, lacks confidence, and cannot form trusting social relationships to transition smoothly; therefore, the likelihood of turnover increases. NRPs strive to have all new graduate nurses complete the program from start to finish, and then remain at the healthcare facility. Some facilities place incentives for completion, which brings up a new disincentive of NRPs for some individuals. Mulkey and Casey (2021) observed two-year retention rates higher than the national benchmark because of a commitment agreement requiring the new graduate to remain on the hiring unit for the two years or else face financial implications. The specific reasons for turnover throughout the research shed light on the attrition challenges and areas to focus on improvement.

When NRP experiences are positive, the new graduate nurse acquires new knowledge, gains confidence, and builds successful relationships while transitioning into the new role. The supportive influences help decrease turnover and become protective retention factors embedded

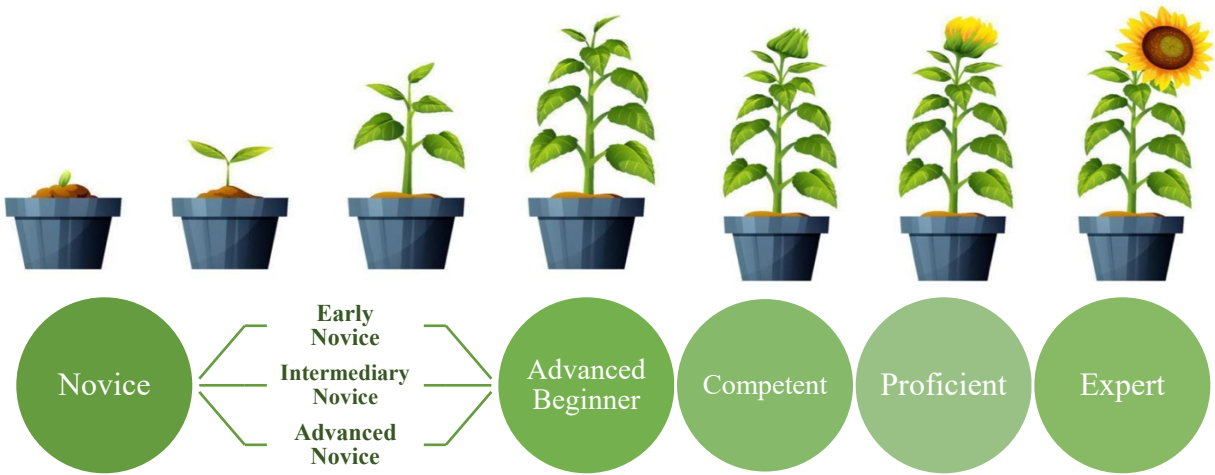
in the NRP. While there are both negative associations and supportive influences contributing to outcomes for the transition of the novice and advanced beginner nurse, better evaluation strategies throughout an NRP can help gauge what stage the individual nurse is at and how the NRP or mentors can better support them.

Nurse Residency Programs are built on a solid foundation of Benner's (1982) Novice to Expert theory, concentrated on skill and knowledge acquisition. The levels of Benner's theory suggested fluid movement for nurses' transition into competent practice, supported by the NRP characteristics and themes discussed. As a novice nurse, experience and skill take time to develop. This idea stresses that NRPs need to promote clinical knowledge over time so that each nurse, as an individual, can learn and experience increased confidence with clinical exposure. The NRPs provide valuable time to support and guide the novice nurse, which advances the expansion of Benner's theory.

The supportive influences revealed in this integrative review indicate substantial growth during the novices' first year of practice. In Benner's (1982) theory, the novice nurse is described as having no experience with the situations and using "objective attributes," which feature recognizable tasks and rules to guide action. Next, Benner explained that the advanced beginner demonstrates acceptable performance but still concentrates on remembering the rules and needs help setting priorities. The competent nurse typically has "been on the job two to three years" (Benner, 1982, p. 404). Following Benner's lead, the new nurse in the first year of practice experiences significant growth. The new nurse has the potential to grow from a novice to an advanced beginner with the foundational support of the NRP. Based on the results of this study, three growth stages are inserted between novice and advanced beginner: the early novice,

the intermediary novice, and the advanced novice. Figure 2 displays the types and levels of growth that correspond with and add to Benner’s theoretical model. Table 5 describes the three new phases of novice nurse growth possible during the NRP year.

Figure 2: Phases of the Novice Nurse Nurtured in the NRP Year



Images from Google (2023).

Diagram adapted from Benner’s Novice to Expert theory (1982).

Table 5. Phases of the Novice Nurse, Supported by NRPs

<u>Early Novice</u>	Initial transition from academic setting to nurse residency program.
<u>Intermediary Novice</u> (Until unit orientation is completed.)	Lead patient care role with preceptor assistance.
<u>Advanced Novice</u> (Through first year of practice.)	Independent with full patient care assignment. Mentor contact.

These phases support the steps needed to intentionally nurture the new nurse. The early novice phase is the initial transition from the academic setting to the first weeks of the NRP, depending on the NRP structure. The intermediary novice nurse leads the patient care role with preceptor assistance until the unit orientation is completed. Once the new nurse is independent with a full patient assignment, the advanced novice phase is achieved. The advanced novice still has contact with a mentor to assist in professional development, and depending on the individual, can be maintained through the first year of practice before becoming an advanced beginner. The NRP establishes the training platform of step-by-step strategies and skills to aid in the transitional phases of the novice nurse. The enlightenment of focused categorical support creates a valuable transition through the first year of practice, which ultimately leads to retention and continuation within the nursing field.

Limitations

A few limitations of this integrative review were identified. First, the articles included in this review were evaluated from a single-author perspective. A second verifier can be necessary to assess study qualifications, validity, and reliability of the literature data to decrease outcome bias. A specific second limitation was time, as there were only two school semesters to compose a comprehensive integrative review. Additionally, this review was limited in scope to NRPs in hospital settings and cannot be generalized to other healthcare settings in or out of the United States. Most NRP studies often have a small sample size and are of varying study designs and populations, which also makes them difficult to accurately compare. Lastly, among the included articles, a handful utilized secondary Versant data within the research, and only one addressed the COVID-19 pandemic.

Clinical Nurse Leader Competencies

Conducting this integrative review of the literature encompassed the application of Clinical Nurse Leader (CNL) competencies (American Association of Colleges of Nursing [AACN], 2013). The table in Appendix B identifies examples of how this integrative review applied to CNL competencies as described by the AACN (2013). Throughout this process, the importance of interprofessional communication among the interdisciplinary team was utilized to achieve the strategies and goals of the paper with cyclical feedback. The collected data was analyzed and evaluated utilizing outcome measurements with data comparison and integration of theoretical models. A rigorous critique of evidence from databases was derived to generate meaningful evidence for NRPs and future nursing practice. The CNL's role in this project demonstrated the ability to integrate current knowledge, provide leadership, and drive the impact that NRPs have on new graduate nurses while analyzing the potential solutions to improve program outcomes and decrease nurse turnover. Overall, through the discussion and recommendations, the CNL skillsets can influence healthcare outcomes through the continuous collection of information to develop, implement, and evaluate programs and processes (AACN, 2013).

Implications and Recommendations

The integrative review revealed the following gaps recommended for further research. Given the impact of the COVID-19 pandemic on the healthcare system, new nurses transitioning, and NRPs, a study should be done to assess and understand the needs of the new nurse entering practice. The structure and length of NRPs related to attrition should continue to be investigated.

More long-term research is needed to examine programs over time to identify how standardized and accredited NRPs impact patient outcomes and satisfaction. To strengthen the nursing workforce, the new graduate nurse needs the transition period to enhance competence, gain confidence, and learn the complexities of the profession. Consideration should be given to standardizing NRPs to reduce the risk of suboptimal nurse experiences or consequential outcomes. The standardization of NRPs advocated by policy makers could create change for all state boards of nursing to mandate that all new graduate nurses complete a one-year accredited NRP per the Future of Nursing recommendations.

Additionally, another recommendation is to investigate how the participating novice nurse perceives the effectiveness of the NRP and transition to practice, focusing on nursing growth and post-participation improvement strategies associated with the nurse residency program. Understanding the preceptor or mentors' perceptions of the new nurses' transition and areas of improvement along different NRP time intervals could prove insightful to cater to the program and individual's needs.

New graduate nurses have an emotional component throughout the transition from novice to expert, which is not directly discussed in these research studies. The study of nursing practice encompasses a complex skill set, including emotional engagement, which should not be left out. Turnover reasons like workplace stress, feeling uncomfortable in a new staff role, and lacking confidence are not always related to how the nurse is progressing with clinical knowledge and skills, but can be connected to the environment and nurses' emotional intelligence. Aligning the stages of Benner's theory through novice, advanced beginner, competent, proficient, and expert nurse with structures and stages within the NRP can support both the knowledge and growth

development of the new graduate nurse. The novice nurse is challenged by complex decision-making and, theoretically, may become distressed or lack confidence if the wrong decision was made. The NRPs provide the training platform for skills and strategies throughout the transition; therefore, the program offerings should not be limited. Components of NRP can expand on the supportive findings within this integrative review such as extra communication, recognition, and rewards, with effective mentors and preceptors throughout the transition period. Shifting emphasis to parallel beneficial influences could help turnover intent and increase retention, building a good culture and better support system for the new nurse.

Conclusion

The purpose of this integrative review of the literature was to explore the impact of NRPs on new graduate nurse retention and associated outcomes. A total of 12 articles met the inclusion criteria for this review. Retention of nurses diminishes over time, yet new graduate nurses' retention rates are generally maintained through involvement with NRPs and the first year of practice. Multiple situations and conditions challenge new graduate nurses, resulting in turnover. Insight into supportive NRP attributes (both incentives and disincentives) impacts new graduates, patients, and organizational outcomes and can be used by healthcare organizations desiring to implement or evaluate existing NRPs. NRPs provide the foundation, strengthen retention rates, and help foster a successful transition for the new graduate nurse. Nurse residency programs will continue to be an integral part of the new nurse journey and can have substantial lasting effects on a nurse's personal and professional life.

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APPENDICES

APPENDIX A

CHART TO DISPLAY STUDY THEMES & FINDINGS

APPENDIX B

APPLICATION TO CLINICAL NURSE LEADER (CNL) COMPETENCIES TABLE

The Master's Essentials and Examples of Application to CNL Competencies:

Master's Essentials	CNL Competencies & Project Application
Essential 1: Background for Practice from Science and Humanities	<p>1.1: Interpret patterns and trends in quantitative and qualitative data to evaluate outcomes of care within a microsystem and compare to other recognized benchmarks or outcomes.</p> <ul style="list-style-type: none"> - The collected data was analyzed and evaluated utilizing outcome measurements with data comparison and integration of theoretical models to generate meaningful evidence for NRPs and future nursing practice.
Essential 2: Organizational and Systems Leadership	<p>2.7: Collaborate with healthcare professionals, including physicians, advanced practice nurses, nurse managers and others, to plan, implement and evaluate an improvement opportunity.</p> <ul style="list-style-type: none"> - Collaborated with academic nurse professionals to strategically conceptualize this integrative review for NRP improvement of attrition and retention.
Essential 3: Quality Improvement and Safety	<p>3.3: Use evidence to design and direct system improvements that address trends in safety and quality.</p> <ul style="list-style-type: none"> - Through critical appraisal of evidence, findings lead to NRP improvement for novice nurse retention and safe transition to practice. <p>3.7: Demonstrated professional and effective communication skills, including verbal, non-verbal, written, and virtual abilities.</p> <ul style="list-style-type: none"> - Professionally collaborated/communicated with committee members from distance. Composed successful written integrative review.
Essential 4: Translating and Integrating Scholarship into Practice	<p>4.4: Facilitate the process of retrieval, appraisal, and synthesis of evidence in collaboration with healthcare team members, including patients, to improve care outcomes.</p> <ul style="list-style-type: none"> - Utilized databases: CINAHL, PubMed, Web of Science; guided by Johns Hopkins Research Evidence Appraisal Tool; framework by Whittemore and Knafl (2005) for data analysis process and synthesis.

<p>Essential 5: Informatics and Healthcare Technologies</p>	<p>5.1: Use information technology, analytics, and evaluation methods to: (a) collect or access appropriate and accurate data to generate evidence for nursing practice; (b) provide input in the design of databases that generate meaningful evidence for practice; (c) collaborate to analyze data from practice and system performance; (d) design evidence-based interventions in collaboration with the health professional team; (e) examine patterns of behavior and outcomes; and (f) identify gaps in evidence for practice. - Entirety of integrative review process.</p>
<p>Essential 6: Health Policy and Advocacy</p>	<p>6.3: Advocate for policies that leverage social change, promote wellness, improve care outcomes, and reduce cost. - Recommended policy change for standardization and requirement NRPs; Findings indicated turnover reduction strategies to improve organization ROI with new nurses.</p>
<p>Essential 7: Interprofessional Collaboration for Improving Patient and Population Health Outcomes</p>	<p>7.2: Advocate for the value and role of the CNL as a leader and member of interprofessional healthcare teams. - Reiterated that CNL's drive the impact that NRPs have on new graduate nurses while analyzing the potential solutions to better NRPs and decrease in nurse turnover.</p>
<p>Essential 8: Clinical Prevention and Population Health for Improving Health</p>	<p>8.7: Use evidence in developing and implementing teaching and coaching strategies to promote and preserve health and healthy lifestyles in patient populations. - The integrative review process utilized article evidence to synthesize findings. A table of examples presented strategies to increase retention and decrease attrition for promotion of new nurse successful NRP transition to practice.</p>
<p>Essential 9: Master's-Level Nursing Practice</p>	<p>9.10: Facilitate the implementation of evidence-based and innovative interventions and care strategies for diverse populations. - Developed theoretical component that adds to Benner's Novice to Expert theory (1982); created figure and table to describe three new phases of novice nurse growth possible during the NRP year.</p>

(AACN, 2013, p. 9-21)