

Supporting New Graduates Successful Transition into Practice through Orientation in the  
Emergency Department: An Integrative Literature Review

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### **Abstract**

The phenomenon of newly graduated nurses (NGs) beginning their professional careers in emergency departments is relatively new in the nursing world. Considering the complex and dynamic nature of the emergency environment, clinical nurse educators are challenged to plan and implement orientation programs that meet the unique transition needs of NGs in their departments. Using Whittmore and Knafl's empirical integrative literature review as the methodological basis for this project, an examination of existing literature exploring the efficacy of orientation in supporting NG transition from the student to RN role was conducted.

Duchscher's *Stages of Transition Theory* provided the theoretical foundation for this review as it offered a clear conceptualization of the anticipated three-stage, 12 month long transition journey that NGs new to acute care clinical practice experience. The key finding of this review is that various aspects of orientation had a positive or negative effect on the successful transition of NGs into clinical practice and were dependent on their position on the transition continuum.

During the first stage of transition, NGs are best supported through practical aspects of orientation that met their immediate clinical practice and social needs. The aspects of orientation that supported NGs through the second and third stage of transition were more broadly focused on pushing their knowledge and practice at a time when they were ready, fostering and supporting more independent clinical practice, and helping them to learn about and become a part of the larger community of nursing. Based on these findings, recommendations for orientation that support NG transition are offered for those advanced education practice nurses involved in the development, implementation, or evaluation of such programs.

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## Chapter I: Area of Interest

### Introduction and Background

I will never forget the first day I set foot in the rural ED (emergency department) where I began my professional nursing career. No longer bound by my educational institution, it was the most exciting *and* terrifying time of my life. Fortunately the position began with an extended, highly comprehensive and supported orientation period. Although I did not understand the significance of this type of orientation program for new graduates at the time, I certainly do now.

Verging now on close to a decade of nursing experience in a variety of emergency settings, I have worked alongside many newly graduated nurses. I have seen well supported new graduates thrive in the ED environment and seamlessly transition into the role of an emergency nurse. Unfortunately, I have also seen the flip side to this scenario: poorly supported new graduates whose stress and trepidation in this role was palpable. Not only was their transition into the emergency nursing role unsuccessful, many gave up their position within the department, or worse yet, left the nursing profession altogether.

I recently made the professional "leap" into emergency nursing education where I work primarily with newly graduated nurses from local EDs seeking specialty certification. Motivated by my own experience as a new grad in an emergency setting, my collegial interactions with new graduates across various settings, and my now close professional relationship with this group, I have a deep personal and professional interest in the topic of the transition of NGs into the emergency environment.

The discussion around hiring NGs (new graduates) in specialty areas is certainly not new, and it remains controversial. The perception exists that EDs are not a suitable place for neophyte

nurses. In the past, new nurses were required to work on a medical or surgical ward to hone their clinical skills on stable and predictable patients before being eligible to work in a specialty area such as an ED (Berezuik, 2010; Gomes, Higgins, Butler & Fazaneh, 2009). With such factors as an aging and retiring workforce, increasing patient volumes and acuity, and a pervasive lack of experienced emergency nurses, hiring NGs has become a reality for many EDs (Considine & Hood, 2003; Loiseau, Kitchen & Edgar, 2003; Valdez, 2008; Winslow, Almarode, Cottingham, Lowry & Walker, 2009). Gomes et al. (2009) even describes hiring new graduates in EDs as being common place. With no end to the shortage of experienced emergency nurses in sight, whether we like it or not, emergency departments *need* new graduates.

There is no disputing the emergency department is a challenging place to work. It is fast-paced, dynamic, and demanding. Valdez (2009) concisely articulated one of the key differences between emergency and other nursing specialties by stating “most nursing specialties are focused on the management of defined populations, age groups, body system and disease processes, [whereas] emergency nurses care for diverse patients at various stages in the health continuum” (p.337). In addition, emergency departments are in a constant state of flux. The number of and acuity level of patients is ever-changing. ED nurses are constantly adapting to accommodate the needs of the department from one moment to the next.

It is not surprising that there are a number of challenges inherent in the integration of NGs into the emergency environment (Jarman & Newcombe, 2010) considering the complexities mentioned above. First, NGs require predictability and stability during their first twelve months of practice (Duchscher, 2009), neither of which an ED can offer. Second, new graduates have what Benner (1984) refers to as "secondary ignorance", meaning they are not aware of what they do not know. This is problematic because NGs lack the breadth and depth of knowledge required

in the ED (Berezuick, 2010), the capacity to recognize subtle changes in patient condition, and the ability to anticipate appropriate interventions (Kingsnorth-Hinrichs, 2009).

Considering these challenges, a significant amount of responsibility lies on ED leadership to adequately support the new grads they employ (Kingsnorth-Hinrichs, 2009). With the orientation period being a new nurses introduction to the nursing profession, how well supported they are during this time will have an impact on their transition experience (Duchscher, 2009). Often, clinical nurse educators are pivotal in the process of developing orientation for new nursing staff (Penz & Bassendowski, 2006). ED clinical nurse educators in particular are challenged to best prepare and support new graduates for the complex role of emergency nursing. One of the biggest challenges they face is developing strategies that simultaneously meet the specific transition needs of new graduates *and* the needs of the emergency department (Valdez, 2008).

My preliminary literature search revealed innovative and comprehensive orientation strategies are needed to adequately support the transition of new graduates in the ED (Emde & Walshe, 2003; Kingsnorth-Hinrichs, 2009; Loiseau, Kitchen, & Edgar, 2003; Salonen, Kaunonen, Meretoja, & Tarkka, 2007; Zekonis & Gnatt, 2007). Further to that, many authors have described the orientation programs they have designed and implemented that were tailored to NGs working in their emergency departments (Considine & Hood, 2003; Emde & Walshe, 2003; Jarman & Newcombe, 2010; Kingsnorth-Hinrichs, 2009; Loiseau et al., 2003; Winslow et al., 2009). Upon brief review of these programs, I discovered a distinct lack of consistency between the duration, structure, content, and the type of orientation new nurses in emergency departments are receiving. Despite these inconsistencies, *numerous* reports of successful transition of NGs into emergency nursing practice have been documented (Considine & Hood,

2003; Kingsnorth-Hinrichs, 2009; Jarman & Newcombe, 2010; Loiseau et al, 2003; Sweeney & Everson, 2010; Winslow et al., 2009; Wolf, 2005).

### **Statement of the Problem**

My preliminary review of the literature revealed a number of studies evaluating NG orientation programs in emergency departments emerged over the last 15 years. As evidenced by this trend, it was obvious that hiring novice nurses directly into critical care areas, such as emergency, had become increasingly necessary. However, two main gaps in the literature were noted. First, it appeared that orientation programs for NGs in emergency departments had only been considered in isolation. I did not locate any literature that synthesized the findings from across these studies. If the literature is there, it seemed logical that moving beyond the evaluation of the effectiveness of single orientation programs and assess for trends among many could provide great insight into what is being done during orientation that is working well for NGs. Second, it appeared that these studies paid little attention to the *transition* specific experience of the NG in the emergency department. No specific links were made between what was being done during orientation and the impact it had on the transition experience of the new nurses. Because the orientation period is new graduates' introduction into the profession, understanding their transition experience and the effects of orientation programs on it seems invaluable for those in advanced nursing practice roles developing and delivering these programs.

### **Project Purpose**

Based on the gaps in the literature noted above, the purpose of this integrative literature review was to examine available research and determine what aspects of existing orientation programs for newly graduated nurses' best support their transition into clinical emergency

nursing practice. Based on the findings gleaned from this synthesis and analysis of the available research data, I aimed to develop a list of general, evidence based recommendations to inform the development and delivery of orientation for novice nurses that best supported their transition specific needs in the ED context.

### **Research Question**

*What aspects of orientation programs designed for newly graduated nurses in emergency departments support their successful transition into clinical practice?*

## **Chapter II: Approach to Inquiry**

### **Theoretical Approach: Duchscher's Stages of Transition Theory**

In the last 30 years, there has been extensive research exploring newly graduated nurses' transition experience from student to professional. Related theories arising from this research have helped to deepen our understanding of the complex and challenging experience of NGs navigating professional practice. One such prominent nursing theory is Duchscher's *Stages of Transition Theory* (2008) which stemmed from over a decade of her own research exploring various aspects of NG transition. The theory provides a clear conceptualization (See Appendix A) of a fairly predictable personal and professional journey--referred to as the process of *becoming*--that NGs experience during their first 12 months of clinical practice (Duchscher, 2008). The process of *becoming* represents advancement through three stages--doing, being, and knowing—that involves a "complex but relatively predictable array of emotional, intellectual, physical, sociocultural, and developmental issues" (Duchscher, 2008, p.442).

I framed my enquiry with an exploration of the staged NG trajectory that Duchscher's theory explains. I examined the effectiveness of existing orientation practices from applicable literature, determining how they serve to either support or act as a barrier to NGs when they are in, or moving through the stages of transition during their initial year of clinical practice.

### **Methodological Approach: The Integrative Literature Review**

I used the integrative review framework by Whittemore and Knafl (2005) as the methodological basis for this project. This is considered an expansive review method because it allows simultaneous inclusion of literature from varied methodologies (Whittemore and Knafl). More precisely, I chose to conduct an *empirical* integrative literature review: a critical review of applicable empirically based research studies around a chosen topic (Broome, as cited in Whittemore, 2005). Inclusion of data from mixed methodologies contributes to a more comprehensive and holistic understanding of the phenomenon of concern and has "the potential to play a greater role in evidence-based practice for nursing" (Whittemore and Knafl, 2005, p.547). For that reason, this methodology was appropriate for this review as it was well aligned with my project purpose of developing a list of general, evidence based recommendations to inform the development and delivery of orientation for novice nurses that best supported their transition in the ED context.

I followed the five clearly delineated stages of the integrative review methodology by Whittemore and Knafl (2005): problem identification, literature search, data evaluation, data analysis, and presentation.

**Problem identification.** Two objectives of the problem identification stage of the integrative review are clearly identifying the research problem *and* clearly identifying the purpose of the

review (Whittemore, 2005). The *problems* are that no synthesis of the NG ED orientation programs reported on is available in the literature *and* little focus was placed on the transition specific experience of the new nurse in the ED. The *purpose* of this review was to use data from across the literature to create a synthesis of orientation strategies that best support the NGs transition in the emergency environment. From there, I could develop a list of evidence based recommendations that may be used to inform advanced nurse educators' practice surrounding the planning, designing, and implementation of orientation programs for novice nurses in their ED's.

**Literature search.** On January 23, 2012, I commenced an in-depth literature search using the following electronic databases available through the University of Victoria's online Library service: (a) Cumulative Index of Nursing and Allied Health Literature (CINAHL), (b) Medline with full text, and (c) psychINFO. I initially searched each database independently but found many articles appeared across multiple databases. To avoid duplication, I employed a search technique available through EBSCOhost (the online vendor embedded in UVIC's online Library service) that permitted me to search the above three electronic data bases simultaneously. The following key search terms and phrases were applied:

- a) new nurse, graduate nurse, novice nurse, new graduate, and new grad
- b) emergency, emergency room, and emergency department
- c) training, orientation, induction, internship, mentorship, residency, and program

I used a variety of combinations linking search terms and phrases from each of the above sections (a, b, and c). The following limiters were applied to the search parameters: written in English, peer-reviewed, and published between 1995 to present (January, 2012). My rationale for this timeframe was twofold: (a) to limit my focus to literature that is current, and (b) my preliminary literature search revealed that studies addressing the phenomena of new graduates

working in EDs began in the early 2000's. This timeframe was then inclusive of literature just prior to and during that time.

This initial search applying the limitations mentioned above yielded 113 hits. I reviewed the abstracts, or briefly reviewed the article if no abstract was available, and 19 were deemed potentially relevant to my review and were retrieved to be further evaluated against the inclusion and exclusion criteria listed below.

Whittemore and Knafl (2005) recommend that more than one literature search strategy be employed as computerized searches may yield only half of eligible literature due to inconsistencies in search terminology and how it is indexed. As such, I employed the ancestry approach involving reviewing the reference lists of the 19 applicable articles obtained through the initial electronic database search to locate related research articles. This yielded an additional seven articles, for a total of 26, to review further and evaluate against the following inclusion and exclusion criteria.

The timeline and literature type of included articles were those that were peer-reviewed, written in English, and published between the years 1995 to January, 2012. The sampling frame for the included literature was empirically research based articles. The target population of interest were NGs with equal to or less than 12 months of nursing experience since graduation and their first position were in an ED, or ED work had begun when they had equal to or less than 12 months of clinical nursing experience. The variable of interest for those research articles included in this review were orientation strategies designed for NGs in EDs.

Literature was excluded if written in a language other than English, was not peer-reviewed, written prior to 1995, or was not empirically research based. The literature was excluded if the targeted population of interest was non-NGs (nurses with greater than 12 months of clinical

experience) or a combination of NGs and non-NGs. If the variable of interest was orientation programs or orientation strategies implemented in areas other than the ED, the literature was excluded.

After closer examination of this subset of 26 articles against these inclusion and exclusion criteria, I had a few noteworthy realizations. First, many of the articles had not addressed my target population of interest. Five research articles had new graduates *and* experienced nurses new to emergency care as the target populations. In addition, two articles focused on “graduate” nursing students not nurses “graduated” from nursing school, and one article considered an NG to be an RN with up to three years of experience. Second, many of the articles were not research-based. Eight articles were anecdotal portrayals of orientation program successes for new nurses in emergency departments and lacked the methodological rigour necessary of primary research articles in an integrative literature review. Two articles were literature reviews addressing the phenomena of NGs in EDs but included non-primary research in their synthesis. A summary of the reason for article exclusion are listed in the table below.

	Reason for Article Exclusion	# of articles
PRIMARY LITERATURE SEARCH	Study combined NG and non-NG participants	5
	NG not defined as nurse with < 1 year experience	1
	Literature reviews using non primary sources	2
	Participants were student nurses or working as an undergraduate nurses	2
	Not primary research or anecdotal literature	8
	<b>Total</b>	<b>18</b>

Left with only eight research articles that met my initial inclusion and exclusion criteria, an important question had to be answered: should I select a different topic to review or should I continue with my original plan using a modified approach? Considering my significant personal and professional interest in the topic of NG orientation in EDs, I decided forge ahead on my original path, but taking a different direction. I expanded my literature search to include research

articles evaluating orientation programs for NGs in acute care clinical settings other than the ED. My rationale was twofold. First, the number of research studies addressing orientation programs for NG in EDs did not provide an adequate amount of data to form a *comprehensive* comparison. I would not have been confident providing evidence-based recommendations to be used to inform nursing education practice from such a small body of evidence. Second, I was confident the data gleaned from research articles evaluating NG orientation programs in other clinical areas could provide valuable information generalizable to the new grad in the ED context. This is supported by Cooper (1998) who recognized the reviewer might be constrained by the availability of primary research addressing the target population of interest, so those accessible research articles focused on similar populations of interest may be connected by the reviewer in a pragmatic way.

Various authors validated the importance of transition support of some kind for the NG, whether that support came in the form of a structured and extended orientation period on their particular unit of hire (Eigsti, 2009; Kidd & Sturt, 1995; Loiseau et al., 2003; Patterson et al., 2009; Winslow et al., 2009), or enrollment in a formal hospital-wide NG transition program (Blanzola, Lindeman, & King, 2009; Johnstone, Kanitsaki, & Currie, 2008; Kowalski & Cross, 2010; Rosenfeld, Smith, Lervolino, Bowar-Ferres, 2004). A large body of evidence confirmed these types of NG support programs attrition, increase retention, and increase job satisfaction of new nurses (Almada, Carafoli, Flattery, French, & McNamara, 2004; Bowles & Candela, 2005; Gomes et al., 2009; Halfer, 2009). Therefore, literature investigating whether these programs *are* effective was not the focus of the newly expanded literature search. I sought primary research that (a) evaluated orientation strategies or orientation programs for NGs in acute clinical areas for their usefulness in contributing to the successful or supported transition into clinical practice

or (b) explored the lived transition experience of the NG during the orientation process in an acute care environment.

I commenced my second literature search on March 21, 2012, and much like my first attempt, I used EBSCOhost to conduct a search combining the following electronic databases available through the University of Victoria's online Library service: (a) CINAHL, (b) Medline with full text, and (c) psychINFO. I applied the following key search terms and phrases in a variety of combinations:

a) new nurse, graduate nurse, novice nurse, new graduate, and new grad

b) training, orientation, induction, internship, mentorship, residency, and program

The following limiters were also applied to the search parameters: written in the English language, peer-reviewed, and published between 1995 and January, 2012. Using these word or phrase combinations and applying the above limiters I received a total of 219 hits. I reviewed the abstracts or briefly reviewed the article if no abstract was available for those 219 articles, 21 of which were deemed potentially relevant to my review and were retrieved to be further evaluated against my modified inclusion and exclusion criteria below. Similar to my initial literature search, I employed the ancestry approach and reviewed the reference lists of those 11 articles retrieved using the online search, from which I located an additional 10 articles to further compare against my inclusion and exclusion criteria.

The literature was included if it was peer-reviewed, written in English, and published between 1995 to January, 2012. The sampling frame was those articles that were empirically research based articles. The target population for the included literature was NGs with equal to or less than 12 months of nursing experience and their first position were in an acute care area. The

variables of interest in the literature included were those research articles exploring the effectiveness of orientation programs or orientation strategies designed for NGs in acute care.

Literature was excluded if it was not written English, peer-reviewed, or was written prior to 1995. Non-empirically based research articles were excluded. If the targeted population of interest included non-NGs or a combination of NGs and non-NGs the literature was excluded. Lastly, if the variables of interest were orientation programs or strategies implemented in areas other than acute care, or the research was evaluating only widely accepted outcomes (decreased attrition, increased retention, and increased job satisfaction) of orientation programs, rather than the effectiveness of a specific orientation strategy or component, it was excluded.

After applying the above inclusion and exclusion criteria, I retrieved 11 studies for further evaluation of their methodological rigour. Of the 31 articles I retrieved to assess against my inclusion and exclusion criteria, 15 were excluded from this review for the reasons outlined in the table below.

	<b>Reason for Article Exclusion</b>	<b># of articles</b>
THE SECOND LITERATURE SEARCH	Combined NG and non-NG study participants	5
	Not a primary source (i.e. a literature review)	2
	Research not focused on the evaluation a particular component (or components) of an orientation program	8
	Total	<b>15</b>

I ended the second literature search with a total of 16 relevant research articles using the online data base and ancestry approach search strategies. With the empirical research articles from the first and second literature search combined, I had a total of 24 articles to conduct a more in-depth evaluation of the methodological rigor of the research.

**Data evaluation.** The inclusion of research from varied methodologies increases the complexity of the evaluation stage of the integrative review (Whittemore, 2005; Whittemore & Knafel, 2005). While it has been said that there is no gold standard for how to evaluate the quality

of differing research types in an integrative review (Whittemore, 2005), Whittemore and Knafl (2005) suggested that each primary source be addressed in a meaningful way during the data evaluation stage.

In order to critique the methodological features of the 24 empirical research studies in a meaningful way, I adapted two existing evidence review frameworks: a quantitative research evidence review framework (Coughlan, Cronin, & Ryan, 2007) and a qualitative research evidence review framework (Ryan, Coughlan, & Cronin, 2007). My rationale for utilizing two separate frameworks is that just as qualitative and quantitative approaches to research are fundamentally different, so should be the approach to critiquing them (Ryan, Coughlan, & Cronin, 2007).

Each evidence review framework was comprised of a comprehensive list of questions that guided my analysis of the methodological rigour of the research studies (see Appendices B and C). These frameworks helped me determine whether the elements contributing to a quantitative or qualitative research study's robustness (i.e. the authors writing style and credentials, etc.) and believability (i.e. comprehensiveness of the literature review, theoretical framework, data collection and analysis procedures, etc.) were addressed by the author(s).

A numerical quality score was assigned to each research article to quantify how "believable" and "robust" it was, another method proposed and recommended by Whittemore and Knafl (2005). Points were awarded based on the number of questions meaningfully addressed in the research article for each element of believability and robustness as outlined in the review frameworks. Full points were awarded to those categories with all the questions answered and those with only a portion of the questions answered would receive partial points. No points were awarded to those categories if the questions were not addressed. A cumulative

score of up to 20 was assigned to each research article, and those research articles that employed mixed methodologies would be critiqued using the quantitative *and* the qualitative evidence review framework. The two scores were averaged to provide a mean score out of 20. Those research articles with equal to or less than a score of 10 were excluded from the review. The practice of excluding articles based on a low evaluation score was supported by Whittemore (2005) who posited that evaluation scores could be used “as an inclusion criteria for selecting relevant primary studies for review” (p.59). A total of seven articles were excluded based on believability and robustness scores of less than 10 and the remaining 17 research articles were selected for inclusion for the synthesis of this empirical integrative review. A summary of key research considerations for these 17 articles have been created and is available in for review in Appendix D.

**Data analysis.** During the data analysis phase, I employed a systematic and analytical method to order, code, categorize, and summarize data from the 17 included articles (Cooper, 1998, as cited in Whittemore and Knafl, 2005). I used the four step comparison method introduced by Whittemore and Knafl (2005) considered compatible with the analysis of data from varied research methodologies: data reduction, data display, data comparison, and conclusion drawing and verification.

*Data reduction.* The first step of the data reduction phase involved creating an initial, general classification system to organize the research articles into subgroups (Whittemore and Knafl, 2005). I organized the research articles into two major subgroups: those addressing NG programs specific to the ED and those that were not. These subgroups were further organized by the primary type of empirical research methodology employed-quantitative, qualitative, or mixed.

The second step of the data reduction phase was to employ “techniques of extracting and coding data from primary sources to simplify, abstract, focus, and organize data into a manageable framework” (Whittemore and Knafl, 2005, p.550). To begin this process, I extracted findings as they related to orientation processes consistent with the stages of Duchscher’s (2008) theory: doing, being, and knowing. These subgroups became the organizing framework from which I could input the coded data from each source into a word document, reducing data from each article into a single page. I used these 1-page summaries of the research data to facilitate a systematic comparison of the data from my included primary sources (Whittemore & Knafl)

*Data display.* The data display phase involved extracting data from the 1-page summaries and creating an organized display of the variables of interest among the multiple sources from each subgroup in the form of a matrix, graph, or chart (Whittemore and Knafl, 2005). Particular variables were categorized by the stage of transition they primarily supported. From there, I was able to begin the process of identifying patterns, themes, and relationships between the findings (Whittemore and Knafl, 2005).

*Data comparison.* A creative and critical analysis of the data display is essential when identifying and comparing accurate patterns and themes from the data (Whittemore & Knafl, 2005). In order to accomplish this, I created a conceptual map using CmapTools software to display the variables of interest that emerged in the data display phase and begin to interpret the relationships between them, or particularly, what key form of support a particular aspect of orientation offered the NGs based on their stage of transition. This conceptual map acted as the foundation for the final phase of the data analysis stage, conclusion drawing and verification.

*Conclusion drawing and verification.* The final phase of the data analysis stage involved moving away from the interpretive and descriptive efforts of the previous phases, and focus on

the generalization of the findings (Whittemore and Knafl, 2005). Important elements or conclusions were derived from each subgroup, and together, a summation of the findings related to NGs transition support into clinical practice during orientation emerged (Whittemore and Knafl, 2005). I verified the conclusions against the original data from the primary sources to confirm accuracy, as recommended by Miles & Huberman (1994, as cited in Whittemore & Knafl, 2005).

The final component of the data comparison phase involved revising the conceptual model that I developed in the data comparison phase to capture any additional data, relationships, or conclusions that emerged between these two processes-- based on the recommendation by Miles and Huberman (as cited in Whittemore & Knafl, 2005). This revised conceptual map (Appendix E) helped me maintain analytical transparency to the readers of this review as it is reflective of my thought and decision pattern that lead to the conclusions I drew in the presentation stage.

**Presentation of findings.** The final phase of the integrative review process involved presenting the findings in the form of a summary, located in the findings and discussion chapter. The organizing structure of the findings chapter followed the three transition stages as described in Duchscher's (2008) theory: doing, being, and knowing. Each section begins with a brief synthesis of the significant aspects of that transition stage as per the *Stages of Transition Theory* (Duchscher, 2008), followed by a summary of the general orientation strategies that were shown to support the newly graduated nurse transition during that stage. In each of these sections, explicit examples and details from primary sources were provided to demonstrate "a logical chain of evidence, allowing the reader to ascertain that the conclusions of the review did not exceed the evidence" (Oxman, as cited in Whittemore and Knafl, 2005, p.552).

In the discussion chapter, I provide a brief summary of the findings and the methodology used. I describe the relevance of the findings to the ED context, the implications of the findings for advanced nursing education practice, the impact of theory on this work, how the findings relate to theory, and provide recommendations for future research.

### **Chapter III: Findings**

#### **The "Doing" Stage**

The initial three to four months of professional practice represent the first stage of NG transition, called *doing* (Duchscher, 2008). As the name implies, the new graduate is now *doing* professional nursing. He or she is no longer in the safe and secure student role and adjusting to the role of a professional practitioner *and* entering a new clinical work environment poses many challenges for the new nurse during this stage (Duchscher, 2008). Four fundamental characteristics of the NGs during the *doing* stage were identified from Duchscher's *stages of transition theory* and are as follows.

First, NGs' emotions run very high during this stage. Many of the initial positive feelings of excitement and anticipation they experience upon completion of their nursing training and entry into the world of professional practice are quickly replaced with negative ones. New nurses in acute care areas quickly realize they are not fully equipped for the complexities of independent clinical practice, and feel uncertain whether they are able to handle the roles and responsibilities of a practicing RN (Duchscher, 2009). This uncertainty leaves the new nurse feeling overwhelmed, fearful, insecure, and with wavering confidence (Duchscher, 2008). The intense emotional fluctuations inherent to this stage are not just emotionally draining but also physically exhausting for the NG (Duchscher, 2008).

Second, NGs are highly focused on themselves and others' perceptions of them during this stage. They are deeply concerned with how they and their performance as a nurse are perceived by their coworkers. NGs are trying to go through the motions of a nurse and will go to great lengths to conceal their perceived weaknesses, not wanting to stand out or be exposed as inadequate (Duchscher, 2008). The NG is desperate to fit in to the workplace culture during the stage.

Third, the NG's learning curve is the steepest during this phase. The foundational generalist nursing knowledge gained from nursing school does not always adequately prepare them to function in the clinical environment, particularly specialty areas (Duchscher, 2008). This means that in addition to learning a new role and environment, the new nurse often has to learn a new specialized knowledge base.

Lastly, in addition to what the new nurse has to learn, an NG's way of thinking during this phase is often linear and prescriptive (Duchscher, 2008). It is likely that NGs have limited experience with many of the situations they will encounter in their initial months of clinical practice. Without contextual clinical experiences to draw from, they tend to see clinical situation in its parts, not as a whole (Duchscher, 2008).

With this understanding of common challenges and stressors faced by NGs, three aspects of orientation were identified in the literature that positively impact on their transition experience during the *doing* stage: knowledge development support, clinical practice support, and supportive practice environments.

**The three “rights” of knowledge development support.** Knowledge, in the context of this review, refers to the theoretical or practice specific educational content provided during

orientation that is necessary for the new nurses to function in their respective clinical area. All programs under study had a component of content knowledge development, primarily in the form of didactic seminars or technical skill practice workshops. How this component of orientation was structured and what content was delivered was shown to have a positive or negative effect on the NGs transition experience during this stage. More simply, these findings suggest that there is a way to give the new nurses the right stuff at the right time, the right way.

***Knowledge development that can be rapidly applied to practice: the right stuff.***

Considering that the new nurses are acutely focused on themselves and how their performance is perceived during this stage (Duchscher, 2008), it appears that providing content necessary for immediate application to clinical practice was found to enhance their transition experience. Because NGs are simply trying to cope in the clinical environment during this stage, they crave content that is of use to them in that moment and rapidly applicable to the practice setting.

Various studies support the need for clinically pragmatic content. For example, a commonly cited source of anxiety for NGs was performing unfamiliar technical or psychomotor skills for which they had little practice (Delaney, 2003; McKenna & Green, 2004; O'Malley et al., 2005; Patterson et al., 2009). In a phenomenological study by Delaney (2003), the NG participants felt particularly overwhelmed and stressed about performing new technical skills. O'Malley et al. (2005) assessed 30 NGs' perceptions of the usefulness of all the broad categories of the classroom session topics and found that "clinical skills" were ranked the highest. This view is supported by two studies whose NG participants recommended that more clinically pragmatic skills training would have been helpful during their orientation (O'Malley et al., 2005; Patterson et al., 2009). Overall, it seems the NG craves content that meets their immediate clinical practice needs.

Interestingly, the NGs perception of the utility of clinically applicable content is not shared by all. When the preceptors from the same study by O'Malley et al. (2005) were asked to rate *their* perception of the usefulness of the same categories for the NGs they worked with, the response was the exact opposite. The preceptors believed professional development was the most “useful” topic and learning clinical skills was the least useful. It was recognized by the authors of this study that this difference in opinion could be attributed to the different perspectives of a novice and the more experienced nurse: the novice is focused on skill acquisition whereas the more experienced nurse values communication and professional development (O'Malley et al., 2005).

The above findings are consistent with Duchscher's (2008) theory in that NGs are highly focused on themselves and their performance during this stage. Professional growth and development and more advanced practice-specific knowledge may be necessary for the NG during their transition into practice, but introduced at a more appropriate during the orientation process should be considered. The NG may not be ready for or receptive to content that does not meet their immediate needs of *doing* nursing during this stage.

***Save the complex stuff for later: the right time and the right way.*** Similar to *what* content was valuable to the NG during this stage, the delivery of it was also shown to have an impact on his or her transition experience. It seems that the old saying “too much too soon” can be applied to the NG in this stage. Staged complexity and incremental delivery of the content was the primary structure of many orientation programs under study (Banzola et al., 2004; Dyess & Sherman, 2009; Eigsti, 2009; Kowalski & Cross, 2010; Krugman et al., 2006; Loiseau et al., 2003; O'Malley et al., 2005; Rosenfeld et al., 2004; Winslow et al., 2009). Although no specific variables on the effectiveness of this structure for content delivery were evaluated in these

studies, some negative findings from a program that front-loaded—or provide all the content—at the beginning of the orientation process were identified.

Although convenient, frontloading delivery of the content during the orientation process was problematic for some NGs. In the six month ED orientation program described by Patterson et al. (2009), the theoretical content—based on the American Association of Critical Care Nurses Essentials of Critical Care Orientation program-- was front-loaded in the first three months. Qualitative findings from the semi-structured interviews with the 18 NG participants of this study showed that the content from the critical care program was beyond their scope and too advanced for novice nurses (Patterson et al., 2009). These new nurses felt “overloaded” and were concerned they were not capable of retaining all of the information (Patterson et al., 2009). This finding was further supported by the recommendation by these same NG participants for future programs: re-structuring the program to accommodate more complex critical care content nearer to the end of the program or to spread the theoretical content over the duration of the whole program (Patterson et al., 2009).

In summary, providing NGs the right stuff at the right time, and the right way during this stage can lead to a more positive transition experience. These findings are consistent with Duchscher’s theory, and are not all that surprising considering that the beginning of the transition process is inherently overwhelming, and providing advanced content at that time could contribute to the NGs often negative self-perception and feelings of inadequacy. Structuring the delivery of the theoretical or practice specific content to be staged, with incremental delivery during the orientation process, better accommodates the NG’s already steep learning curve. Providing simple and rapidly applicable content better meets the immediate needs as perceived by the NG’s during the *doing* stage.

**Clinical practice development support.** In the context of this review, clinical practice development refers to the clinical training component of the orientation process. The primary method for supporting the NGs' clinical practice across the programs was through prolonged preceptorships. The preceptorship model is a familiar one in the nursing education world; preceptors are often experienced nurses on the assigned clinical unit that work one-on-one with the new nurses, orienting them to the practice environment while sharing the workload of their assignment. This period gives NGs time to acclimate to the unit and become comfortable with patient care by gradually increasing their workload (Nugent, 2008).

Considering the significance of the clinical practice component of orientation for NGs, the preceptorship experience has a direct impact on their transition into practice (Delaney, 2003; O'Malley et al., 2005). Aspects of the preceptorship structure were explored for how they supported or acted as a barrier to the new nurses' transition during the *doing* stage. It was discovered that NGs have two significant needs related to their clinical practice development during this stage: constant *and* consistent support.

***Don't leave me alone: need for constant clinical support.*** Until NGs are ready and able to handle the roles and responsibilities of an RN, they need constant clinical practice development support. There is agreement across the literature that NGs need extended preceptorships as a part of their orientation. While none of the studies performed a targeted evaluation of the effect of the length of the preceptorship on the NGs transition experience, findings backing the need for constant clinical support for at least the first three months of practice--whether in a general or specialty nursing area--were identified. For example, some studies evaluated NGs' perceptions of their practice readiness at various points along the orientation continuum. New graduates from two studies reported feeling like "real" nurses about three months into the orientation process

(Delaney, 2003; Patterson et al., 2009). The participants of the Graduate Nurse Transition Program under study by McKenna and Green (2004) felt like “graduates” for the first six months of practice, after which time felt like “nurses” because they had developed the coping mechanisms necessary to survive in the clinical environment (McKenna & Green, 2004).

An NG’s perception of practice readiness appears to take longer to develop in specialty areas, but when it occurs during the orientation process appears to be inconsistent. Although the 19 participants of the ED NG orientation program under study by Patterson et al. (2009) felt like “nurses” at three months into orientation, only half felt like “emergency nurses” at the program end at six months (Patterson et al., 2009). In a different ED orientation program described by Winslow et al. (2009), all of the NG participants were able to develop the necessary confidence and skills to function as an emergency nurse by the end of the six months orientation process. After the four month ED orientation described by Loiseau et al. (2003), the NGs found the few months of practice after that time to be really challenging, but they did see themselves as “contributing members of the ED team” (p. 521). Overall, these findings support the notion that NGs believe that becoming a “specialized” nurse takes longer than three months.

Overall, it seems there is no “magic number”--or predictable length of time—when an NG will be ready to “fly solo” in the clinical environment. NGs had different perceptions about which phase of orientation their sense of professional identity was strong enough to consider themselves as “real” nurses. These findings are consistent with Duchscher’s theory in that new graduates across any of the programs did not feel like “real” nurses until they had *at least* three months of practice, which comprises the entire *doing* phase for most. Often, NGs do not feel practice ready right out of nursing school, which leaves them highly anxious about inadvertently harming their patients during this phase (Duchscher, 2008).

The NG needs time and experience to build their confidence and competence, while gaining familiarity with functional aspects of the clinical nursing environment under the watchful eye of a seasoned preceptor. Extended preceptorships appear to nurture the new nurses' overall psychological safety, in particular their feelings of being supported. Being left unsupported or having to work beyond their scope too quickly appears to contribute to more feelings of inadequacy, fear, and anxiety than are expected during this stage. Having a preceptor "looking out" for them *and* their patients supports the psychological safety of the new nurse, and therefore supports their transition experience during this stage.

***Less is more: need for a single designated preceptor.*** The second preceptorship related orientation strategy found to enhance the transition experience of the NG and foster clinical practice development was assigning a single designated preceptor, rather than multiple preceptors (Delaney, 2003; Dyess & Sherman, 2009; Johnstone et al., 2004; Patterson et al., 2009). With all the professional and personal challenges inherent to this stage of transition, it is well understood that the new nurse needs consistency (Duchscher, 2008). NGs had many questions as they navigated the clinical environment and relied heavily on those around them for answers (Dyess & Sherman, 2009). Having a single preceptor as a resource was one way to help maintain continuity (Loiseau et al., 2003) and consistency in the information they received (Dyess & Sherman, 2009). In addition, Patterson et al. (2009) suggested that a single designated preceptor would be better able to gauge an NG's competencies and therefore plan learning experiences accordingly during the orientation process.

NGs from two studies *did* find particular aspects of having multiple preceptors to be positive. The new nurses participating in the ED orientation program evaluated by Patterson et al. (2009) reported benefiting from seeing different nurses' style of and approach to patient care.

In her qualitative study exploring NGs' perceptions of working with multiple preceptors, Nugent (2008) found that exposure to different types and styles of nursing helpful in the development of their own nursing style. However, these same participants reported there was more ambiguity around the NG's role and their level of competence during the preceptorship when they worked with more preceptors (Nugent, 2008). Other negative NG outcomes associated with a lack of preceptor consistency reported on in the literature were feeling less supported (Johnstone et al., 2004), having more stress and anxiety (Rosenfeld et al., 2004), and expression of overall negative feelings about the orientation process (Delaney, 2003).

While new nurses found positive aspects to having multiple preceptors, based on what is understood about NGs during the *doing* stage, the benefits do not seem to outweigh the risks. The findings suggest that a single designated preceptor is better positioned to monitor an NG's clinical development and progress, while providing a consistent source of information and support during orientation, both of which are integral to the successful transition experience.

**The three pieces to the supportive workplace environment puzzle.** Support in the workplace environment was shown to directly influence the NG transition experience (Dyess & Sherman, 2009; Johnstone et al., 2008; Kowalski & Cross, 2010), particularly in the first few months of clinical practice. It was identified in the literature that a key source of support in the clinical environment came from the relationships NGs had with those people in it. The connections novice nurses made with their nursing leadership, RN colleagues, and fellow NGs was shown to have a substantial impact on their transition experience during the *doing* stage. For that reason, the significance of these relationships and how related orientation strategies fostered or nurtured them were explored.

***From the top down: need for formalized support from leadership.*** Those in the formal leadership roles involved in the orientation process-- managers, Clinical Nurse Educators (CNEs), and program coordinators—made an impact on the transition experience of the NG. Regardless of their specific roles and responsibilities, leaders were shown to be a substantial source of support for NGs from numerous studies (Johnstone et al., 2008; O’Malley et al., 2005; Rosenfeld et al., 2004). Findings from one particular study highlighted the significance of support from leadership. A small percentage (4.5%) of the new nurse residents from the program evaluated by Rosenfeld et al. (2004) found access to leadership to be the *most* valuable component of the nurse residency program, ranked over time on the unit, didactic teaching sessions, and relationships with supportive staff. This particular finding is powerful: some NGs place *more* merit on the support they receive from leadership than the knowledge or practice development support needed for immediate application to their budding clinical practice. Overall, NGs crave the attention of their leaders, and the frequency and nature of the contact, and their reception to the new nurses played a significant role in how supported they felt.

Findings from various studies confirmed that NGs wanted frequent contact with and transparency from their nurse leaders (Dyess & Sherman, 2009; O’Malley et al, 2005; Patterson et al., 2009). Dyess and Sherman (2009) found that the NG participants of their study felt “professionally isolated” and that more direct contact and greater visibility would have lessened this negative perception (p.407). However, it was not just how frequent and transparent the contact that is significant to NGs, but also how they are received by leadership. The novice nurse participants from the study by Johnstone et al. (2008) perceived availability *and* approachability from their leader to be supportive. In other studies, leadership was also found to be a source of encouragement, validation (O’Malley et al., 2005), and a source of constructive feedback to the

new nurses (Dyess & Sherman, 2009). It is common sense that if leaders are not available or approachable, new nurses would not likely reap these support benefits from them.

Findings from Eigsti's (2009) study further supported the need for frequent contact with leadership, but also highlighted the significance of the nature of the contact. The CNEs of the critical care internship program were highly involved in every aspect of the orientation process, from teaching didactic sessions through to daily meetings with the interns to review practical day to day matters, such as patient care and treatment plans (Eigsti, 2009). It appears that the hard work of these CNEs paid off. When the interns were asked to rank their satisfaction with support personnel *and* their perceived source of support during the orientation process, the educator ranked the highest in both, higher than family and friends, experienced RNs from the department, intern peers, managers, mentors, and their preceptors (Eigsti, 2009). It seems even the informal, practical day-to-day presence of leadership in that program made the NGs feel well supported.

Although no leadership specific orientation strategies were explored in the research, based on the findings discussed above it is apparent that engagement with leadership has a positive impact on the new nurses' perception of feeling supported and less isolated. Findings from the study by Rosenfeld et al. (2004) show that access to leadership was an element of orientation that helped the new nurses better assimilate into the workplace culture. For those reasons, it appears that orientation strategies aimed at bringing NGs and leadership together frequently and in meaningful ways would be beneficial in the first few months of practice. An example of a strategy that would help to ensure this occurs would be to schedule meetings between the novice nurses and leadership as a part of the standardized orientation process (Dyess & Sherman, 2009). Without formal, scheduled opportunities for the novice nurses and leadership

to connect during orientation, this simple yet powerful strategy could easily fall between the cracks.

***Informal Support: need for strong relationships with peers and coworkers.*** Numerous studies reported that new nurses placed a considerable amount of significance on the informal support from their fellow NGs and their RN colleagues (Blanzola et al., 2004; Delaney, 2003; Eigsti, 2009; Johnstone et al., 2008; Nugent, 2008; O'Malley et al., 2005; Rosenfeld et al., 2004). Feeling welcomed as part of the "team" had a profoundly positive effect on the NG transition experience, particularly during the first few months of practice. For example, in the phenomenological study exploring the transition experience of 10 new nurses' during orientation, Delaney (2003) found that they felt a pervasive need to "fit in" and their transition experience was much more positive if and when they felt accepted by the nurses on their unit. Interestingly, *the* most common source of support reported by the novice nurse participants of one study was that from their coworkers (O'Malley et al., 2005).

Similarly, the new nurses from the study by Johnstone et al. (2008) found that support came in the form of informal clinical teaching from helpful nurses on the unit and "supportive relationships with more senior staff" was ranked second highest for its value in the NRP by the NG participants from the study by Rosenfeld et al. (2004, p.191). Not only were coworkers found to be a significant source of support for many NGs, the participants from the study by Nugent (2008) reported that being in a supportive environment and having coworkers willing to help them fostered their clinical independence and ability to take on more workload more quickly. The above findings suggest that informal support received from colleagues could directly impact the transition experience of new graduates.

Not so surprisingly then, when the reception from colleagues was negative, so were the effects on the NG's transition experience. Those same new nurses from the study by Johnstone et al. (2008) described a specific *barrier* to feeling supported: inappropriate attitudes or behaviors from their fellow staff. NGs from Patterson et al's (2009) study expressed concerns about expectations that their colleagues would place on them and how they would be received by more experienced staff (Patterson et al., 2009). When asked to provide recommendations for future programs, these same NGs believed that staff RNs required more training on the program and its goals (Patterson et al., 2009). The significance of nurses on the unit being aware of an orientation program's goals was further supported by the finding of the study by Nugent (2008) whose NG participants found those staff unfamiliar with the orientation program to be more over-bearing and over-protective.

Although orientation strategies related to colleague support and their effect on NGs' transition were not specifically examined in the literature, based on the above findings, two general strategies were identified that could help foster the relationships between the two. The first strategy was to ensure opportunities for NGs and their colleagues to interact or socialize, particularly during the beginning stages of the orientation process. By doing so, socialization of the NG into the workplace culture is better supported, which is commonly understood as integral to a smooth transition into practice (Duchscher, 2008; 2009). A few examples from the literature of how to facilitate and support the NG socially include: introducing new nurses to the units' staff or hosting celebrations of NG cohorts at the beginning of the orientation process (Rosenfeld et al., 2004), having NGs give presentations to senior staff on selected clinically pertinent topics, and encouraging staff to engage outside of work (Loiseau et al., 2003). The second strategy is to familiarize staff with the roles and expectations of the NGs. When the RNs on the unit are clear

on the roles and expectations of the new nurses, it appears they are better positioned to support them. An example of how to achieve this was debriefing staff about the goals of the program and setting realistic expectations for the NGs prior to their start of orientation (Patterson et al., 2009).

The bond between NGs and their peers appears to be a very powerful one. Many studies demonstrated that NGs got a significant amount support from one another (Delaney, 2003; Kowlaski & Cross, 2010; Krugman et al., 2006; Patterson et al., 2009). Krugman et al. (2006) provided a good example of the significance of peer engagement in their study, finding a correlation between the structural component of creating cohort groups of NGs (divided by date of hire) and their development and overall satisfaction with the residency program. Five of the six NG cohort groups under study who participated in facilitated monthly interactive development days had a significantly higher overall satisfaction with the program compared to the group who did not (Krugman et al., 2006). Participants also reported that these days helped facilitate relationship building and promoted trust among the group through the sharing of their experiences (Krugman et al., 2006).

Providing varied opportunities for NGs to engage with each other during the orientation process was shown to positively affect their transition experience. What these opportunities looked like varied across the programs, however some of the general positive outcomes associated with them as reported by NGs from various studies were: the chance to discuss their accomplishments and address questions or concerns (Eigsti, 2009), practice reflectivity through the sharing of experiences (Blanzola et al., 2004; Delaney, 2003; Kowalski & Cross, 2010; Krugman et al., 2006), and enjoy the camaraderie with one another (Blanzola et al., 2004; Rosenfeld et al., 2004). The significance of peer support was echoed by the findings from the study by Patterson et al. (2009) whose participants reported feeling gratitude to have share the

orientation experience with each other, and would have liked opportunities to meet throughout the program. Further to that, Delaney (2003) recommended the inclusion of new nurse peer-support groups as they can contribute to better “socialization and self-reflection” (p.442).

The findings of this section are well aligned with and support what is understood about the NG during the *doing* stage. First, the findings echo how inherently intense and tiring this stage can be for the new nurse, as described by Duchscher (2008). Employing the knowledge and clinical practice development orientation strategies highlighted in this section could help prevent further overwhelming new nurses, who are already understood to be in the midst of personal and professional turmoil during this stage. Second, the findings further resonate with the tenets of Duchscher’s theory (2008) in that new nurses wanted nothing more than to fit in and be a valued part of the team. Welcoming novices with a supportive workplace environment will likely do wonders for facilitating a more positive transition experience. This can be achieved by an encouraging and approachable staff, available and transparent leaders, and provision of opportunities to bring NGs together to reflect on their experiences as novice practitioners.

### **The “Being” Stage**

The following four to five months of professional practice comprise the second stage of transition, called *being* (Duchscher, 2008). Having made it through the tough and tiring *doing* stage, they now get to enjoy some calm that comes with the *being* stage. NGs have a more solid grasp of and comfort with many aspects of professional nursing, or as the name of the stage implies, they have a better handle on what *being* a nurse is all about. Three fundamental characteristics of new nurses during the *being* stage were identified from Duchscher’s (2008) *Stages of Transition Theory* and are as follows.

First, the NG is more comfortable with the general roles and responsibilities of an RN by the time they reach the *being* stage (Duchscher, 2008). NGs are more at ease with practicing independently, but after the challenging *doing* stage, crave predictability and consistency in their practice during the first few months of this *being* stage (Duchscher, 2008). The new nurse feels smothered by constant clinical supervision, but still requires some level of practice support from a distance (Duchscher, 2008). In particular, NGs want a clinical support person that gives them the space to practice independently, but is also available for help *if* needed (Duchsher, 2008). Also, new nurses in the *being* stage often crave feedback, reassurance, and validation about how they are doing (Duchscher, 2008).

Second, NGs still have a lot to learn during this stage, but their learning curve is no longer as steep. They are less overwhelmed by the volume of information they need to know, and their learning pattern is now characterized by “a consistent and rapid advancement in their thinking, knowledge level, and skill competency” (Duchscher, 2008, p.445). Emotionally and mentally, the new nurse is better equipped to handle more information and near the end of the *being* stage—six to eight months into practice--and is ready to “seek out challenges to their thinking, [and] put themselves in new and unfamiliar practice situations” (Duchsher, 2008, p.447).

Third, NGs become more aware of themselves *professionally* during this stage (Duchsher, 2008). They see the inconsistencies between their perceived ideals about nursing and the realities of professional practice, and try to achieve some balance between their professional and personal selves (Duchscher, 2008). In addition, the NG starts looking towards the future and begins to consider his or her long term career goals during the later months of the *being* stage (Duchscher, 2008).

I assessed orientation strategies for their ability to positively impact the NGs' transition experience with this understanding of their common characteristics during the *being* stage. What I found was that just as the transition support needs of NGs became less intense compared to those in the *doing* stage, so did the associated orientation strategies. Three orientation strategies that were shown to have a positive impact on their transition experience in the *being* stage was: providing simulated learning opportunities, supporting formalized mentored relationships, and assigning same-shift" preceptors.

**Bringing it all together: need for simulated learning opportunities.**

Providing simulated learning opportunities during orientation was shown to support various aspects of a NG's clinical practice and knowledge development. While no study explicitly researched the effects of simulation on new nurses or NG transition at particular points during the orientation, the positive outcomes associated with simulation were primarily aligned with the characteristics of NGs in the *being* stage, particularly if more advanced critical care content was being introduced at this point of orientation. As described by Duchscher (2008), the NG in the *being* stage desired feedback on their performance and was better equipped to handle more complex patient presentations, both of which simulated learning can offer. Also, the NG was more comfortable with their roles and responsibilities as a nurse (Duchscher, 2008) and could handle a little pressure when faced with challenging simulated patient scenarios.

In an exploratory qualitative study, Kaddoura (2010) examined the perceptions of 10 NG participants of a critical care nurse training program for the effect of simulated learning on their development. She identified three key themes from her findings: simulation offered a safe, non-threatening learning environment, critical thinking and leadership skills were enhanced through

feedback, and knowledge and skills development were fostered (Kaddoura, 2010). Practicing scenarios in a nonthreatening environment made the NGs feel more confident because their nursing knowledge was enhanced and able to handle stress in the clinical environment (Kaddoura, 2010). Simulation was also found to help NGs develop their communication skills (Dyess & Sherman, 2010; Kaddoura, 2010). As the new nurse begins to practice more independently—no longer under the guidance of a designated preceptor—it is common sense that he or she needs to be able to effectively communicate with members of the health care team. The participants believed that the development of their communication skills was fostered through the cooperation and teamwork required between their peers and other members of the health care team during the simulation process (Kaddoura, 2010).

Simulation helped new nurses apply theoretical knowledge to practice. As the new nurses' knowledge development is in a state of consistent and constant advancement during the *being* stage (Duchscher, 2008), it would seem they are better able to and more comfortable applying what they have learned to complex simulated scenarios. Findings from Kaddoura (2010) showed that the interactive nature of simulation and use of realistic clinical situations helped the new nurses develop ICU knowledge and bridge the theory-to-practice gap through application of learned didactic content to simulated practice (Kaddoura, 2010). Further, the NG participants from the study by Patterson et al. (2009) recommended more simulation in future orientation programs to gain more hands-on experience and to reinforce theoretical content.

Simulation was shown to provide NGs the opportunity to reflect on their practice and get feedback on their performance (Kaddoura, 2010) and as described by Duchscher (2008), feedback and validation are two things new nurses crave during the *being* stage. In the ICU training program described by Kaddoura (2010), the NGs had the opportunity to practice

common ICU scenarios, rotating through various roles they might encounter in their respective clinical area. These scenarios were videotaped, providing the new nurses the opportunity to observe and reflect on their performance. They believed that articulating and reflecting on their clinical judgments and decisions during the debriefing sessions that followed provided an opportunity to learn from their mistakes (Kaddoura, 2010).

If the resources are available, findings from the literature suggest that simulation is a strategy worth incorporating in the orientation process of new nurses. Simulation fosters many aspects of NG transition, particularly during the *being* stage. Not only does it push NGs thinking when they are ready, it helps them develop valuable skills such as communication and provide an opportunity to reflect on and gain valuable feedback on their practice.

**Professional guidance please: need for mentorship.**

Inclusion of a formalized mentorship, or mentorship-like component in orientation was shown to help support a smoother transition experience during the *being* stage. Unlike the preceptor, who supports the clinical development of the NG, the mentor usually has a “non-clinical, non-evaluative focus” (Beecroft et al., 2006, p.743). Beecroft et al. (2006) further described the role of the mentor as a dedicated resource person that supports the NG with the *actual* challenges of transition--such as the emotional and interpersonal issues associated with it—rather than aspects of their clinical development. Additionally, mentors help NGs develop *professionally* by offering career planning advice and helping them network within the professional nursing realm (Beecroft et al., 2006).

Though timing of mentorships varied across the programs, it seems the *being* stage would be an appropriate time to start it. According to Duchscher’s (2008) transition theory, NGs’

awareness shifts from their personal self to professional self during this stage. New nurses are more in tune with what is happening around them, and having a mentor available to guide them through bigger professional issues that arise is beneficial. According to Beecroft et al. (2006), the NG participants of their study were overwhelmed in the first few months of practice and adding meetings with mentors was perceived as just another thing on their already loaded “to-do” list (p.745). This finding supports the notion that the NG is just not ready for a mentor until the *being* stage- a time when they feel less overwhelmed with the demands of clinical practice.

The significance of having mentor support was highlighted in a variety of studies. For example, Eigsti (2009) collected data from a questionnaire mailed to former participants of the CCNIP. The NG interns’ original, primary preceptors in this program would become their “mentor” after the formal preceptorship ended, providing continued support such as advocating and liaising as required (Eigsti, 2009). Various variables around the interns’ relationships with their mentors were explored and it was found that the interns ranked their satisfaction with, and placed more value in the mentor relationship above that with the preceptor (Eigsti, 2009). Interestingly, when Eigsti (2009) compared the satisfaction of the mentor relationship with those nurses who continued to work on the unit with those who did not, current employees ranked the mentor relationship higher, demonstrating a possible correlation to the mentor relationship and retention. Including a mentorship component during the orientation process was not necessarily enough. Findings from a few studies (Beecroft et al., 2006; Blanzola et al., 2004) showed the mentorship experience was more positive when mentors were matched appropriately and opportunities were made for NGs and mentors to meet regularly.

It appears that NGs should be involved in the mentor selection process to help them find one they will mesh well with. Formalized mentor selection support was a part of two orientation

programs under study (Krugman et al., 2006; Rosenfeld et al., 2004). For example, early in the orientation process during didactic portion of the program, NGs in the program described by Krugman et al. (2006) were provided with instruction and content on how to select an appropriate mentor. Similarly, time in the Navy Nurse Internship Program was allotted for the NGs to speak with a variety of experienced clinical nurses to promote a better understanding of the complex roles and responsibilities of more senior nurse leaders *and* provide an opportunity to select one of these nurses as their mentor (Blanzola et al., 2004).

Findings from one study highlighted the need for NGs to meet regularly with their mentors (Beecroft et al., 2006). Using summative analysis of evaluation data available from a larger scale study of a US residency program, Beecroft et al. (2006) assessed whether the mentorship portion of this program met its primary objectives: creating a satisfactory mentor/mentee match, NGs feeling guided and supported, NG socialization into the nursing profession, and whether mentors and mentees met regularly. These NGs selected from a pool of mentors who were available and did not work on the same unit, but had a similar clinical background (Beecroft et al., 2006). Overall, 83% of participants reported that they “clicked” with their mentors, but those mentor/mentee pairs who met regularly “clicked” 94% of the time, demonstrating that regular meetings fostered more successful relationships (Beecroft et al., 2006, p.740-742). In addition to higher rates of a good mentor/mentee match, the more regularly and frequently they met, the more the NG felt confident, guided, supported, and less stressed (Beecroft et al., 2006), all of which are feelings shown to contribute to a smoother transition.

The above findings support that a good relationship with a mentor can support a NG’s transition during the *being* stage. The NG in this stage is ready for and receptive to what a relationship with a mentor has to offer, professional guidance and socialization into the

professional culture. This relationship appears to be best nurtured by giving the NG some say in *who* their mentor is and ensuring that regular meetings occur as a formalized part of orientation.

**Give me some space, but please keep an eye on me: need for same-shift preceptors.**

A highly informal clinical practice support strategy, that could aid in the transition of the NGN during the being stage, was alluded to in two of the research articles. It involved providing the NG with a resource person available to them in the clinical setting *following* the formal preceptorship (Kowalski & Cross, 2010; Winslow et al., 2009). This was achieved by scheduling the new nurse on the same shift rotation as their preceptor after the one-on-one preceptorship was complete (Kowalski & Cross, 2010; Winslow et al., 2009). The purpose of aligning the shift rotations of new nurses and their preceptors was to have someone available to provide continued support to the NG beyond the formal orientation process (Rosenfeld et al., 2004; Winslow et al., 2009). Although this strategy was not under study in any of the research, it is well aligned with the needs of new nurses during this stage. NGs have the tools they need for independent practice during the *being* stage, but they still want to know someone is looking out for them and that backup is available when needed (Duchscher, 2008).

It seems the simple, presumably cost free strategy such of scheduling the new nurses on the same rotation with their ex-preceptor could better the transition experience of the NG.

**The “Knowing” Stage**

The last three to four months of the yearlong transition journey comprise the final stage, called *knowing* (Duchscher, 2008). According to Duchscher (2008), this stage represents the most stable period of the transition experience, eliciting only mild discomforts and challenges

compared to the previous, more intense stages. Two fundamental characteristics of NGs during the *knowing* stage are outlined below.

First, NGs' awareness has shifted away from themselves as professionals towards a broader focus on larger issues at the unit or institutional level (Duchscher, 2008). They have become aware of issues of hierarchal inequalities inherent in nursing, causing some stress during this stage (Duchscher, 2008). In addition, Duchscher (2008) describes NGs as desiring more unity with the larger professional community. Basically, the NG has a greater awareness of the nursing profession and his or her place within it during the *knowing* stage.

Second, NGs were confident and comfortable with most aspects of nursing practice by the end of this stage (Duchscher, 2008). Despite this obvious progression in their level of clinical comfort, some NGs expressed trepidation about their learner role coming to an end because they felt it came with "greater expectations and a reduced margin of error" (Duchscher, 2008, p.447). It appears NGs recognize that the safety and formalized support that comes with being a new graduate will no longer be in place, and this is a source of worry for them during the *knowing* stage.

With an understanding of these two common characteristics during the *knowing* stage, I assessed orientation strategies for their ability to positively impact the NGs' transition experience during these final months of the process, yet little was found. Of all the reviewed orientation programs, only six followed the new graduate through this stage and fewer studied variables pertinent to strategies used during this period of orientation. With this small amount of data available, I examined ways in which these programs attended to the longer-term support needs of NGs between the 9<sup>th</sup> and 12<sup>th</sup> month of the orientation process. A single strategy was found that

could be helpful for the NG in the *knowing* stage based on Duchscher's (2008) theory: incorporation of professional development activities into orientation.

**A shift in perspective: need for professional development activities.** A few researchers described elements of orientation aimed at supporting new nurses' professional development during the final months of transition, for example, providing educational content on profession related matters during the didactic teaching sessions (Krugman et al., 2006). In the program described by Krugman et al (2006), professional development content was added to the monthly facilitated sessions that the NGs participated in between the sixth and 12<sup>th</sup> month of the orientation program. These sessions served to support various aspects of NGs' professional development, such as career planning, while introducing them to the resources that would be available to them after the program was complete (Krugman et al., 2006). Another example of an element of orientation aimed at supporting NGs professional development *and* an appreciation for "nurses' contribution to overall health care" was providing them with opportunities to spend time with advanced nurse clinicians in a variety of clinical areas as part of their allotted clinical education days between the ninth and 12<sup>th</sup> month (Rosenfeld et al., 2004, p.189)

While no specific outcomes associated with these elements of orientation were studied, they are well aligned with what is understood about the NG during the *knowing* stage. If NGs' perspective has shifted towards bigger professional issues, it is logical to keep them engaged in related dialogue and development activities. Incorporating content or activities that will help new nurses develop aspects of their professional selves and make them aware of resources available to them upon completion of the program will likely reduce the stress associated with this stage. Introducing NGs to successful, experienced nurses in the professional community will help support their socialization into the larger professional body of nursing.

In summary, although I found few well researched strategies from the *knowing* stage in the literature, there appears to be agreement that some sort form of continued support is required for the first 12 months of practice (Duchscher, 2008; Dyess & Sherman, 2009; Krugman et al., 2006; Rosenfeld et al., 2004). Meeting NGs' transition needs during the last few months of the transition year is not as labor intensive as the other stages. Simple strategies like incorporating professionally-focused content and exposing NGs to the larger nursing community, helps support their final stage of the transition journey.

## Chapter IV: Discussion

### Summary of the Findings

The findings of this review suggest that what is done--or *not* done--during orientation has positive or negative impact on the success of the new graduate nurse's transition from the student to RN role. The overarching theme of all the orientation strategies having a positive effect on the transition experience of the NG is that all offer *support* of some kind. With the understanding that during transition new nurses face unique challenges which are sensitive to their relative position on the transition continuum as offered by Duchscher's *Stages of Transition Theory* (2008), how aspects of orientation *supported* the new nurses during the different stages: doing, being, knowing were highlighted. Transition support through orientation came in numerous forms, and as expected, was highly dependent on the NG's position on the transition continuum.

In the *doing* stage, transition support came in the form of providing NGs with layered knowledge and content building necessary for immediate application to practice, ensuring constant clinical supervision with a single designated preceptor, and promoting relationships with leadership, nurses on the unit, and their NG peers. In the *being* stage, transition support

came in the form of providing simulated learning opportunities, assigning same-shift preceptors, and ensuring that mentoring arrangements were implemented. In the *knowing* stage, transition support came in the form of orientation strategies that fostered professional engagement.

I found it particularly interesting that supporting NGs' transition through orientation has as much to do with ensuring their socialization needs were met as it does helping them become practice-ready through the development of his or her clinical skills and knowledge. As it is understood in the literature, having a supportive work environment *is* pivotal for NGs' integration into the workplace culture (Duchscher, 2008; Dyess & Sherman, 2009). Findings from this review show that positive attitudes and reception from the different members of the nursing team coupled with opportunities to connect with them appeared to be a significant contributing factor of a supportive work environment.

In summary, employing the orientation elements, strategies, and characteristics outlined in this review would help address many challenging aspects of the complex NG transition. Is it feasible that even the most comprehensive, highly supportive orientation program could prevent all negative aspects inherent to the NG transition experience? I don't think so. However, with appropriate orientation infrastructures in place and appropriate attitudes from those involved with the process, the transition into practice could be a smoother one for new nurses.

### **Relevance of Findings to the Emergency Context**

The new nurse transition experience in emergency departments was found to be similar to every acute clinical area across the literature. Many of the general orientation strategies outlined in this review were supported by findings from studies exploring the success of orientation programs for NGs in acute care areas *and* programs in emergency departments. As such, it is

logical the recommended strategies outlined in this review would function well when applied to orientation for novice nurses in emergency departments.

Despite the similarity in NG transition experiences across clinical areas, the dynamic nature of the emergency department poses additional challenges for NGs during orientation which should be taken into consideration. The ED environment is fast paced and demanding and the patients are complex and unpredictable. Based on what is understood about the NG, particularly during the *doing* stage, the ED cannot provide the stability and predictability the new nurse craves during his or her first few months of practice. First, ED nurses care for a wide variety of patient types. Every age group and any possible health problem, acute or chronic will be seen in an ED (ENA, 1999). Second, within the department itself, there are a variety of areas nurses must work, including acute care, ambulatory care, trauma or resuscitation, and triage, all of which require some form of additional training (Loiseau et al., 2003). Finally, as patients do not come to the department with a diagnosis, the potential for their acuity to change rapidly is high (ENA, 1999). Varied patient types with varied acuity levels contribute to the unpredictability of this specialty area.

To maintain as much consistency as can be offered in an ED, it would be appropriate to keep the NG in a single area of the department, often the acute care area, for the first few months of practice. This was a commonly cited strategy from the ED orientation programs under study (Loiseau et al., 2003; Patterson et al., 2009; Winslow et al., 2009). It seems logical that rotating NGs through more unpredictable or highly acute areas, like resuscitation, should be saved for later in or after the orientation process. For example, in the program described by Loiseau et al (2003) the NGs would not receive further training in any area but the acute care section in the department until six months after orientation was complete.

Another challenge is that ED nursing requires advanced critical thinking, clinical judgment and a highly specialized body of knowledge are necessary for safe practice (Dyess & Sherman, 2009; ENA, 1999). Patients seldom present to the emergency department with a diagnosis. Nurses must have strong assessment skills to recognize problems, be able to implement interventions, and be able to evaluate patient responses to those interventions, all of which require an ample knowledge base and strong critical thinking and clinical decision making skills. However, it is well understood that developing higher order thinking and skills takes time and experience (Alfaro-LeFevre, 2009).

In addition, findings from this review suggest that it is overwhelming for NGs from ICU and ED orientation programs to be frontloaded with advanced critical care content (Eigsti, 2009; Patterson et al., 2009). For those reasons, it appears that extended practice support in critical care areas is required, a notion well supported in the literature (Duchscher, 2008; Dyess & Sherman, 2009). If the NG in emergency needs time to build his or her knowledge and develop the higher order thinking skills under the guidance of a preceptor to ensure patient safety, how much is enough time? If the NG in non-critical care areas needs consistent clinical practice support for the first three months of practice, it seems logical that the NG in ED will need *more*. The length of ED orientation programs under study varied from four to six months and many reported similar outcomes such as competent and safe beginner ED nurses and successful integration into the workplace culture (Loiseau et al., 2003; Patterson et al., 2009; Winslow et al., 2009).

Not much has to be done differently to support the transition of NGs in the ED compared to those in other areas. For a NG to thrive in the ED environment, simply offering as much predictability and stability as possible during the beginning stages of orientation and providing

extended clinical practice support while the NG develops their knowledge, thinking, and skills incrementally, seems to be an effective way to support his or her transition in this specialty area.

### **Summary of the Methodology**

The methodological approach used for this project was the empirical integrative review methodology presented by Whittemore and Knafl (2005). I selected this methodology because it allowed for the inclusion of both quantitative and qualitative research reports, providing a wide range of material to help improve the understanding of the phenomena of NG transition as it relates to orientation. The five delineated stages of this review methodology as outlined by Whittemore and Knafl (2005)--problem identification, literature search, data evaluation, data analysis, and presentation-- provided the framework for engaging with the integrative review process. First, using the recommendations by Whittemore and Knafl (2005) to establish clear inclusion criteria and establish a meaningful way to evaluate the integrity of the literature, I located 17 *key* and quality primary empirical research articles to inform my synthesis. Second, by following the clear steps offered by this methodology, I was guided in systematically coding, extracting, and organizing pertinent data from each key research articles into one-page summaries, enabling their subsequent analysis. Third, this methodology guided me in interpreting and analyzing the data from these summaries through the creation of a visual display of the variables of interest and their relationship with one another in the form of a conceptual map. The themes and patterns that emerged from this conceptual map provided the basis for the organizing structure of the presentation and summary of the findings- the final step of this methodological process as per Whittemore and Knafl (2005). In addition to framing my review, having followed the systematic and rigorous step-by-step approach of the integrative literature review process outlined by Whittemore and Knafl (2005), my hope is that how I reached my

conclusions will be transparent to the reader and that the recommendations (Appendix F) are in fact evidence based and could be used to inform nursing education practice.

### **Significance of the Findings**

The findings from this review are significant for three key reasons. First, the findings validate the usefulness of nursing theory as a tool in evaluating current nursing education practice. Duchscher's (2008) *Stages of Transition Theory* helped me make sense of the complex NG transition experience, apply that theoretical understanding to existing knowledge on NG orientation, and provide a framework for recommendations for practice.

Second, the findings from this review deliver evidence that helps confirm the underlying tenets of Duchscher's theoretical work. Many, if not all aspects of the NG transition experience from various studies were congruent with those emphasized by Duchscher. In particular, the findings of this review signify a need to consider the different stages of transition during the planning of NGs' orientation because their needs vary significantly depending where they are on the transition continuum. Further, findings from this review shed light on understandings of how current orientation practices can positively or negatively impact NGs' transition experience in acute care areas. The findings indicate that certain orientation strategies, from the simplest to the most complex, can serve to best support the NG during the particular stages of transition.

The last key finding was the significance of supportive work environments on a NG's successful transition experience. As echoed throughout this paper, being well received and supported by all members of the nursing team had a positive impact on the new nurse's transition into practice; orientation strategies that foster these relationships or contribute to an overall more supportive work environment are critical to the NG's transition.

### **Implications of Findings on Advanced Nursing Education Practice**

Findings of this review have a number of important implications for advanced nursing education practice. First, the findings may be used to compare against the orientation practices currently in place for NGs. Those in advanced practice nurse educator roles involved with the process of developing, implementing, or evaluating orientation programs for novice nurses might use these findings to help gauge whether aspects of *their* orientation are supporting or serving as a barrier to the NG transition experience. Put simply, the findings of this review can help advanced practitioners confirm whether what they are doing is effective in aiding NG transition, or conversely, highlight areas that need to be improved. For example, if the critical care content of an NG emergency orientation program is frontloaded, the nurse educator involved with the process should advocate for simpler content that is staged in complexity over the entire course of the program with the understanding that this aids the NG transition during the *doing* stage.

Second, the findings highlight that the nurse educator involved in the orientation process of NGs would be better positioned to advocate for educational practices or resources shown to best support NG transition into practice. For example, a nurse educator might recognize that very little time in the orientation NG program he or she implemented was being allocated to bringing cohorts of new nurses together. With the understanding that peer engagement is a significant form of support for the NG, the educator might choose to advocate for or organize more formal NG gatherings throughout the orientation process.

The third implication of the findings for advanced nurse educator practice is the significance of the length of orientation. Results from this review demonstrate that the NG needs 12 months to transition, but many of the reviewed orientation programs are only three to four months in

length. The findings show that a few simple and tangible orientation strategies can be used to support the longer-term transition needs of the NG, particularly during the *knowing* stage. For example, a nurse educator might advocate for extending the orientation process to include supports such as mentorship or activities that foster professional engagement through to the end of the transition year.

### **How Theoretical Knowledge Informed my Work**

Duchscher's *Stage of Transition Theory* (2008) describes the complex but fairly predictable 12-month transition experience of newly graduated nurses. The theory defines the transition experience as a process of *becoming* and consists of three sequential stages: doing, being, and knowing (Duchscher, 2008). The theory describes each stage as presenting a unique set of complex personal and professional challenges for the NG (Duchscher, 2008).

The clear conceptualization of the transition experience offered by Duchscher's *Stages of Transition Theory* (2008), helped position me to assess the effectiveness or impact of orientation strategies on NGs during their transition year. There are an *abundance* of research variables and outcomes associated with new graduate transition and orientation across the studies that might have easily overwhelmed a novice researcher such as me. This theory guided my analysis of data by focusing on those orientation strategy variables and outcomes related to the complex, but fairly predictable, aspects *particular* to the new nurse transition experience.

### **How the Findings Link to Theoretical Knowledge**

How the findings link to theoretical knowledge is emphasized throughout this review. Duchscher's (2008) theory guided how I approached the data in the early phases of the review through to how I organized my synthesis of my findings. Echoed throughout the findings section

of this review are ways in which effective orientation strategies were aligned with the needs of the NG based on the conceptualization of them as per Duchscher's theory. The NG transition experience brought to life by this theory was the basis for understanding the impact of practice level considerations of orientation programs on the process. With the findings of this review being aligned with the tenets of this theory, a clear theory to practice link was demonstrated.

### **Recommendations for Future Research**

Having identified a gap in knowledge across the literature concerning NGs working in emergency departments, a need for further research on this topic has been illuminated. Through my own work in the emergency nursing education sector, I am aware of many orientation programs for NGs in critical care areas being piloted in a variety of health authorities across Canada. Further exploration and evaluation of the effectiveness of these orientation initiatives aimed at meeting new nurses' transition needs in emergency departments would be beneficial. Also, more targeted investigations of new nurses' perceptions of their transition experiences in emergency departments is needed to gain a more complete understanding of the impact this challenging clinical environment has on this group during their first year of practice. More broadly, considering that Duchscher's *transition theory* (2008) is still relatively new to the nursing education domain, more research examining the transition experiences of NG's in any clinical area using this theory would further test and support it's applicability to nursing education practice.

### **Conclusion**

In conclusion, the transition experience of the new nurse over the first year of clinical practice has proved to be a pivotal time in his or her professional journey. With a deeper

understanding of transition offered by Duchscher's *Stages of Transition Theory*, the challenging aspects of that journey--as the new nurse moved through the stages of doing, being, and knowing--were illuminated. Based on the findings from this integrative review, the recommendations provided for orientation that support NG knowledge development, clinical practice development, and integration in the workplace culture and profession, are all aimed at easing difficult aspects of the new graduate nurse transition experience.

The orientation process is not just an introduction to the NGs' respective clinical unit, but also their introduction to the nursing profession. For that reason, a significant amount of responsibility lies with those involved with the development and delivery of orientation for these new nurses. Considering the complexity of the transition experience, providing orientation that meets the unique needs of NGs as they move through the stages is no easy task. However, with some careful orientation planning and ensuring the right supports are in place, a new graduate's introduction to the nursing profession could be a much more positive one.

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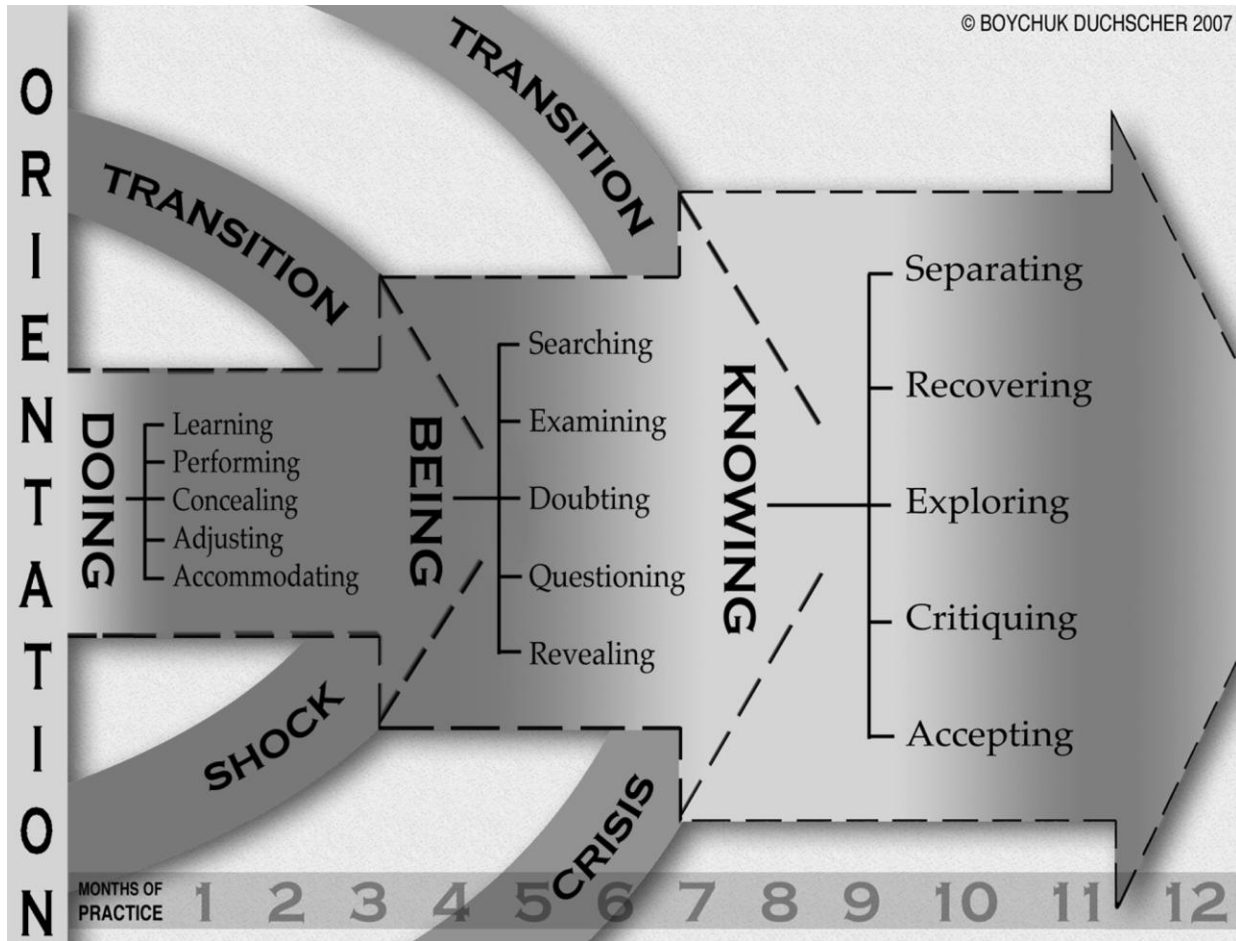
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Appendix A

Duchscher's Stages of Transition Model



From: Duchscher, J. (2008). A process of becoming: the stages of new nursing graduate professional role transition. *Journal of Continuing Education in Nursing*, (39)10, p.443

## Appendix B

## Quantitative Evidence Review Framework

<b>Table 1. Research questions: guidelines for critiquing a quantitative research study</b>			
<b>Elements Influencing believability of the research</b>			
<b>Element</b>	<b>Questions</b>	<b>Comments</b>	<b>Score</b>
Writing style	Is the report well written - concise, grammatically correct, avoids the use of jargon? Is it well laid out and organized?		/1
Author	Do the researcher's qualifications/position indicate a degree of knowledge in this field?		/1
Report Title	Is the title clear, accurate and unambiguous?		/1
Abstract	Does the abstract offer a clear overview of the study, including the research problem, sample, methodology, findings and recommendations?		/1
<b>Elements Influencing robustness of the research</b>			
<b>Elements</b>	<b>Questions</b>		<b>Score</b>
Purpose/ research Problem	Is the purpose of the study/research problem clearly identified?		/1
Logical consistency	Does the report follow the steps of the research process in a logical manner? Do these steps naturally flow and are the links clear? Is the review logically organized?		/1
Literature review	Does it offer a balanced critical analysis of the literature? Is the majority of the literature of recent origin and mainly from primary sources and of an empirical nature?		/2
Theoretical framework	Has a conceptual or theoretical framework been identified? Is the framework adequately described? is the framework appropriate?		/1
Aims/objectives/ research question/ hypotheses	Have aims and objectives, a research question or hypothesis been identified? If so are they clearly stated? Do they reflect the information presented in the literature review?		/1
Sample	Has the target population been clearly identified? How were the sample selected? Was it a probability or non-probability sample? is it of adequate size? Are the inclusion/exclusion criteria clearly identified?		/1
Ethical considerations	Were the participants fully informed about the nature of the research? Was the autonomy/confidentiality guaranteed? Were they protected from harm? Was ethical permission granted for the study?		/1
Operational definitions	Are all the terms, theories and concepts mentioned in the study clearly defined?		/1
Methodology	Clearly identified research design? Has the data gathering instrument been described? is the instrument appropriate? How was it developed? Were reliability and validity testing undertaken and the results discussed? Was a pilot study undertaken?		/2
Data Analysis / results	What type of data and statistical analysis was undertaken? Was it appropriate? How many of the sample participated? Significance of the findings?		/2
Discussion	Are the findings linked back to the literature review? if a hypothesis was identified was it supported? Were the strengths and limitations of the study including generalizability discussed? Was a recommendation for further research made?		/2
References	Were all the books, journals and other media alluded to in the study accurately referenced?		/1
<b>Total</b>			<b>/20</b>
Adapted from Coughlan, M., Cronin, P., & Ryan, F. (2007). Step by-step guide to critiquing research. Part 1: quantitative research. <i>British Journal of Nursing, (16)</i> 11, 658-663.			

## Appendix C

## Quantitative Evidence Review Framework

<b>Research questions: guidelines for critiquing a qualitative research study</b>			
<b>Elements Influencing believability of the research</b>			
<b>Element</b>	<b>Questions</b>	<b>Comments</b>	<b>Score</b>
Writing style	Is the report well written - concise, grammatically correct, avoids the use of jargon? Is it well laid out and organized?		/1
Author	Do the researcher's qualifications/position indicate a degree of knowledge in this field?		/1
Report Title	Is the title clear, accurate and unambiguous?		/1
Abstract	Does the abstract offer a clear overview of the study, including the research problem, sample, methodology, findings and recommendations?		/1
<b>Elements Influencing robustness of the research</b>			
<b>Elements</b>	<b>Questions</b>		<b>Score</b>
Statement of the phenomenon of interest	Are the phenomenon of interest and the research question consistent? Is the phenomenon to be studied clearly identified?		/1
Study Purpose	Is the purpose of the study/research problem clearly identified?		/1
Literature review	Has a literature review been undertaken? Does it meet the philosophical underpinnings of the study? Does the review of the literature fulfill its objectives?		/1
Theoretical framework	Has a conceptual or theoretical Framework been identified? Is the framework adequately described? Is the framework appropriate?		/2
Method and philosophical underpinnings	Has the philosophical approach been identified? Why was this approach chosen? Have the philosophical underpinnings of the approach been explained?		/1.5
Sample	Is the sampling method and sample size identified? Is the sampling method appropriate? Were the participants suitable for informing research?		/1.5
Ethical considerations	Were the participants fully informed about the nature of the research? Was the autonomy/confidentiality? Were they protected from harm? Was ethical permission granted?		/1
Data collection/data analysis	Are the data collection strategies described? Are the strategies used to analyze the data described? Did the researcher follow the steps of the data analysis method identified? Was data saturation achieved?		/1
Rigour	Does the researcher discuss how rigour was assured? Were credibility, dependability, transferability and goodness discussed?		/2
Findings/discussion	Are the findings presented appropriately? Has the report been placed in the context of what was already known of the phenomenon? Has the original purpose of the study been adequately addressed?		/2
Conclusions/implications and recommendation	Are the importance and implications of the findings identified? Are recommendations made to suggest how the research findings can be developed?		/1
References	Were all the books, journals and other media alluded to in the study accurately referenced?		/1
<b>Total</b>			<b>/20</b>

Adapted from Ryan, F., Coughlan, M., Cronin, P. (2007). Step by-step guide to critiquing research. Part 2: qualitative research. *British Journal of Nursing*, (16)12, 738-744.

## Appendix D

## Summary of Key Research Considerations for Included Articles

TRANSITION PROGRAMS FOR NEWLY GRADUATED RNs					
QUANTITATIVE RESEARCH STUDIES					
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p><b>#1</b></p> <p>Blanzola, C., Lindeman, R., &amp; King, L. (2004)</p> <p><b>Nurse Internship Pathway to Clinical Comfort, Confidence, and Competency.</b></p> <p><i>Journal for Nurses in Staff Development</i>, 20(1), 27-37.</p>	Quantitative	<p>Quasi-experimental Research Design</p> <p><b>Study Aim(s):</b> “Report the outcomes of a nurse internship program initiated at a U.S. Navy hospital” (p.27)</p> <p>In particular, evaluate and compare outcomes (organizational attributes and clinical competencies) of the control group and the experimental group (NIP participants) at the end of their orientation periods</p> <p><b>Sample Population:</b> <b>Control Group:</b> 10 NGs who were provided the standard orientation prior to the implementation of the NIP (Nurse Internship Program) <b>Experimental Group:</b> 8 NG who participated in the new NIP</p> <p><b>Setting:</b></p>	<p><b>Data Collection:</b> An evaluation form titled the <i>Graduate Nursing Education Nurse Internship Self-Evaluation</i> was used as the data collection instrument in this study. It was developed by the educators to assess competencies (organizational and core) of the study participants and was reflective of those competencies expected of Navy nursing staff (Nurse Corp Officers) upon hire. A variety of nursing knowledge and performance parameters were assessed using a numerical rating system (1-needs greater emphasis to 5-far above expectations)</p> <p>NG Participants, Clinical Nurse Leaders, and “peers” evaluated the study participants using the same instrument following the completion of each 30-day rotation or orientation</p> <p>A blank area was left on the each survey for “input” that was not reflected by the competencies. A variety of comments, feedback, etc. was collected this way</p> <p><b>Data Analysis:</b> Paired t-tests to analyze the differences</p>	<p>No ethical considerations explicated by the authors</p> <p>Completion of the written surveys implies consent by participants</p> <p>Surveys were not anonymous</p>	<p><b>Limitations</b> Small sample size and therefore the findings generalizability limited</p> <p>The authors provide little description of how the informal qualitative data collected in the blank section of the survey was analyzed</p> <p><b>Strengths</b> Data triangulation: data from NGs, peers, and CNLs involved in the NIP program</p> <p>Data collection instrument provided in the article therefore data collection process was more transparent to the reader</p>

<p><b>Believability and Robustness Score: 13/20</b></p>		<p>Navy Hospital, USA</p> <p><b>The program:</b> A 16 week long competency based -internship program for NG entering the Navy. The program is comprised of a combination of theory/didactic lectures and clinical experiences, including rotation through different clinical areas within the naval hospital</p>	<p>between the mean scores for the control and experimental group competencies were performed. 6- various comparison combinations were used</p> <p>Comments etc. from the blank area were summarized by the program directors and provided in the text of the article in the form of a table</p>		
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#2</p> <p>Eigsti, J.E. (2009).</p> <p><b>Graduate nurses' perceptions of a critical care nurse internship program.</b></p> <p><i>Journal for Nurses in Staff Development</i>, 25(4), 191-198.</p>	<p>Quantitative</p>	<p>Retrospective Descriptive Study Design (Pilot Study)</p> <p><b>Study Aim(s):</b> To describe the components of the CCNIP and to reveal graduate nurses' level of satisfaction with the education received while in the program</p> <p><b>Sample Population:</b> <i>Sampling type:</i> Non-probability convenience sampling <i>Sample:</i> 26 NG (&lt; 3 months of nursing experience at the time of commencing the program) Participants of a critical care nurse internship program (CCNIP) between 1998-2005 (n=26)</p> <p><b>Setting:</b></p>	<p><b>Data Collection:</b> A questionnaire was mailed to former participants of the CCNIP (37 sent, 34 returned, 26 met inclusion criteria). The questionnaire included likert-scale questions to assess the satisfaction level with the type and amount of education received, how well the CCNIP contributed to their development as a CCN, and how well it met their expectations as a nursing orientation program. In addition, the survey elicited demographic, historical, and continuing education information</p> <p>Five experts familiar with NIP research rated the questionnaire highly for face validity. 6 previous NIP participant tested the questionnaire and small changes were made based on their feedback prior to use in this study</p> <p><b>Data Analysis:</b> Raw Data was input by the researcher and</p>	<p>Participants were invited to participate in the study</p> <p>Completing and returning the questionnaire implies consent</p> <p>Approval granted from the institutional assessment and research committee at Bethel College and from Elkhart Hospital</p>	<p><b>Limitations</b> Satisfaction scores representative of a group from only one program, may not be pertinent to all interns/NIPs</p> <p>Small sample size and therefore the findings are not generalizable and increased risk of Type 1 error</p> <p>The CCNIP questionnaire was developed by a novice researcher and was not tested for reliability. Face validity was high but returned questionnaires revealed need for several revisions</p> <p>Convenience sampling: the</p>

<p><b>Believability and Robustness Score: 17/20</b></p>		<p>24-bed general critical care unit in Erkhart General Hospital, Elkhart, Indiana, USA</p> <p><b>The program:</b> A 6 month critical care internship program for NGs. The program is comprised of a comprehensive didactic and clinical portion and a variety of alternate observation experiences</p>	<p>was double checked for accuracy (by whom not stated) and analyzed with statistical packages for the Social Sciences 13.0 (Windows)</p> <p>Demographic data was analyzed using frequencies, percentages, means, and ranges and used to describe the participants</p> <p>Comparisons between the mean satisfaction scores for nurses continuing to work in the CCU and those who are not were evaluated using t-tests</p>	<p>Institutional funding for the research not sought</p>	<p>weakest form of sampling</p> <p><b>Strengths</b></p> <p>Validity of data collection instrument checked for accuracy prior to use</p>
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#3</p> <p>Kowalski, S. &amp; Cross, C.L.(2010)</p> <p><b>Preliminary outcomes of a local residency programme for new graduate registered nurses.</b></p> <p><i>Journal of Nursing Management, 18, 96-104.</i></p>	<p>Quantitative</p>	<p><b>Study Aim(s):</b> To “report preliminary findings regarding new graduate nurses participating in a yearlong local residency program at two hospitals in Las Vegas, NV” (p.96)</p> <p><b>Research questions:</b> During a residency program:</p> <ol style="list-style-type: none"> <li>1. Does the level of clinical competency and critical thinking ability improve in NGs?</li> <li>2. Does the stress level of NGs, as indicated by their level of challenge and threat, decrease?</li> <li>3. Does the level of state or anxiety of the NG decrease?</li> <li>4. Do NGs experience professional transition?</li> <li>5. What percent of NGs remain employed?</li> </ol>	<p><b>Data Collection:</b></p> <p><b>1.</b> Preceptor Evaluation of Resident Form: developed by the hospitals education staff. 31-item Likert-Scale questionnaire administered at 3, 6, 8 weeks, and 3, 6, and 8 months. It measured residents’ progress (clinical abilities, interpersonal relations, critical thinking, competency outcomes, employee role, unit-specific skills). A panel of expert nurses determined the validity of the instrument.</p> <p><b>2.</b> Pagana’s Clinical Stress Questionnaire: measures clinical stress (threat, harm, challenge) and administered at the beginning and end of phase II. Combines qualitative and quantitative components. 20 item Likert-Scale. Cronbach’s alpha coefficients for threat and challenge are 0.84 and .85. Construct validity was established through factor analysis. Concurrent validity established by comparing scores on threat and challenge scales with the coding of open-ended question (inter-rater reliability was 0.89)</p>	<p>Permission for the study granted by the University of Nevada office of sponsored programmes Institutional review board</p> <p>Ethical protocol followed thorough the study (not described)</p> <p>Informed consent/ maintaining confidentiality not addressed</p>	<p><b>Limitations</b></p> <p>Relatively small sample size, therefore, the finding generalizability limited</p> <p>Convenience sampling, the weakest form of sampling</p> <p><b>Strengths</b></p> <p>Data triangulation: data from NG and their preceptors</p> <p>Authors explicit regarding the high validity and reliability of the data collection instruments</p>

<p><b>Believability and Robustness Score: 12.5/20</b></p>		<p><b>Sample Population:</b> 55 NG “residents” who have participated in a yearlong residency program in one of 2 hospitals (n=55)</p> <p><b>Setting:</b> Two hospitals in Las Vegas, NV, USA</p> <p><b>The program:</b> A 12 month long generalist residency program for NGs working in one of two hospitals in Las Vegas</p>	<p>3. Speilberger’s State-Trait Anxiety Inventory: used to measure anxiety and was administered at the 3rd and 12th month of the programme. 40 item-likert scale. Cronbach’s alpha consistently above 0.90. Validity was established through the use of contrasted groups and correlations.</p> <p>4. Casey-Fink Graduate Nurse experience Survey: measures 5 areas of the new nurses experience (support, patient safety, stress, communication/leadership, and professional satisfaction)</p> <p><b>Data Analysis:</b> -Non parametric equivalent tests for statistical inference -Wilcoxon’s signed and ranked test was used to compare pre-post test scores for 2 samples -Freidman’s test was used to compare k-related samples -Exact p-values were calculated on exhaustively derived permutation distribution for small sample sizes</p>		
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#4</p> <p>Krugman, M., Bretschneider, J., Horn, P.B., Kresk, C.A., Moutafis, R.A., &amp; Smith, M.O. (2006)</p> <p><b>The national post-baccalaureate graduate nurse</b></p>	<p>Quantitative</p>	<p>Descriptive, comparative study design</p> <p><b>Study Aim(s):</b></p> <ol style="list-style-type: none"> <li>1. “Compare outcomes across sites using evaluation instruments”</li> <li>2. “Describe institutional resident demographics, including retention and turnover”</li> <li>3. “Review and compare specific program</li> </ol>	<p><b>Data Collection:</b> 5 evaluation instruments were used in this study to measure a variety of variables at one of or all of the following: baseline (pre-program), 6 months (mid program) and 12 months (at program conclusion): <i>Residency Job Satisfaction: McClockey Mueller Satisfaction Scale:</i> 31-item Likert-scale questionnaire (with a Cronbach’s alpha of 0.82) that evaluates a variety of domains related to job satisfaction (ie. scheduling, co-worker relations, etc.) <i>Autonomy: Gerber Control Over Practice</i></p>	<p>Participant consent obtained via online database system</p> <p>Participants invited to participate</p> <p>Authors were not explicit</p>	<p><b>Limitations</b> The sample was not described in detail, i.e. the sample size and clinical area the NGs were in, and therefore difficult to assess for generalizability</p> <p>The process of data analysis not described in detail and therefore difficult for the reader to assess appropriate steps</p>

<p><b>residency program.</b></p> <p><i>Journal for Nurses in Staff Development</i>, 22(4), 196-205.</p> <p><b>Believability and Robustness Score: 14/20</b></p>		<p>characteristics unique to sites and assess impact on outcomes and ‘best practices’” (p. 201)</p> <p><b>Sample Population:</b> Convenience Sample: NGs (graduated nursing school within 6 months) called “residents” hired in one of the 6 participating pilot sites (cohort) hosting The National Post-Baccalaureate Graduate Nurse Residency Program. Actual sample number not provided (n=?)</p> <p><b>Setting:</b> 6-hospital sites across the USA</p> <p><b>The program:</b> A 12 month long, highly structured, residency based, generalist internship program for NGs.</p>	<p><i>Scale:</i> 21-item Likert-Scale questionnaire (with a Cronbach’s alpha of 0.96) assessing the participants perception of their level of autonomy in their nursing practice.</p> <p><i>GN Experience: Casey-Fink Graduate Nurse Experience Survey:</i> consists of 3 parts: a ranking of skills and procedures difficult to perform, a Likert-scale section assessing their perceptions of situations common to NGs, and an open ended section to make comments on their experiences. Cronbach’s alpha of 0.89)</p> <p><i>Residency/Hospital Data: UHC Demographic Database.</i> Demographic data collected via the web-platform.</p> <p><i>Program Evaluation: Investigator Developed Residency Evaluation Form:</i> completed at the program end, this form measures overall satisfaction with the program, how well program goals were met, and perceptions of various dimensions such as support session topics. Answers numbers 1-4 (4 being most positive)</p> <p><b>Data Analysis:</b> Authors did not provide detail as to how they analyzed the data collected via the 5 means above. The findings were compared between cohort groups, and presented in the body of the article in figures.</p>	<p>about how anonymity and confidentiality were maintained, however, it was noted that the different cohort groups were titled as “birds” species to protect identity of cohort groups</p>	<p>were taken in the research process</p> <p>Convenience sampling: the weakest form of sampling</p> <p><b>Strengths</b> The data was collected across 6 sites in different geographical locations, therefore the findings are more generalizable to NGS from other areas</p>
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#5</p> <p>O’Malley, B., Kretschmann, S., &amp; Young, H.</p>	<p>Primarily Quantitative with Qualitative</p>	<p>Program Evaluation</p> <p><b>Study Aim(s):</b> “describe and evaluate a structured program</p>	<p><b>Data Collection:</b> A program evaluation tool was developed and distributed to the study participants at 4/12 into the program (the end of the “formal” portion of the</p>	<p>Authors not explicit regarding ethical</p>	<p><b>Limitations</b> 31 of 37 NGs responded, 30 of 33 preceptors responded- represents</p>

<p>(2005).</p> <p><b>Facilitating role transition for new graduate RNs in a semi-rural healthcare setting.</b></p> <p><i>Journal for Nurses in Staff Development, 21(6), 284-290.</i></p> <p><b>Believability and Robustness Score: 12/20</b></p>	<p>methods</p>	<p>for orientation of new graduate registered nurses” (p.284)</p> <p><b>Sample Population:</b> Purposive sampling of 30 NG’s (and 1 nurse returning from a prolonged absence from the profession) who participated in an orientation program in a semi-rural health center, 30 preceptors who worked with the NGs, and 9 clinical managers whose units the NGs worked on</p> <p><b>Setting:</b> A generic orientation program for NGs in acute care from a single regional semi-rural health care facility in Southern Oregon, USA</p>	<p>orientation). The tool contained structured-standardized questions (using “Yes or No”) and likert-type scale responses. Lastly, the tool contained open ended questions for written comments. None of the questions described in detail or provided in the text of the article</p> <p><b>Data Analysis:</b>  <i>Quantitative Data:</i> Data was analyzed using SPSS-PC (version 11.0) statistical software that yielded descriptive statistical information.  <i>Qualitative data:</i> Comments from the open ended questions were coded and content was analyzed for themes</p> <p>Neither process for analyzing data were described in much detail</p>	<p>consideration in this paper</p> <p>Consent could be implied by the participants williNGess to complete the non-mandatory evaluation</p>	<p>possible sample bias</p> <p>Questions from the evaluation tool not described, making it difficult for the reader to assess for which particular variables if interest were studied</p> <p><b>Strengths</b>                  Data triangulation: NGs, preceptors, and clinical managers</p>
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**QUALITATIVE RESEARCH STUDIES**

Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#6</p> <p>Delaney, C. (2003)</p> <p><b>Walking the fine line: graduate nurses’ transition experiences during orientation.</b></p> <p><i>Journal of Nursing</i></p>	<p>Qualitative</p>	<p>Phenomenological study design</p> <p><b>Study Aim(s):</b> to “investigate” graduate nurses’ transition experiences during orientation” (p.437)</p> <p><b>Sample Population:</b> A purposive sample of 10 female graduate nurses participating in the hospitals orientation program. 10 of the 18 available were approached and consented to participate (the additional 8 presumed to have worked with the researcher prior)</p>	<p><b>Data Collection:</b>                  Interviews, conducted in a private and quiet room in the hospital. Interviews lasted 30-60 minutes and were recorded by audiotape. Demographic data was collected. A professional transcribed interviews verbatim. Description of the nature of the interviews not provided (i.e. individual vs. in a group)</p>	<p>Study approval obtained from the hospital’s and Institutional Review Boards</p> <p>Participants did not work directly with the investigator during their orientation</p> <p>Study purpose and procedure described verbally and in writing</p>	<p><b>Limitations</b>                  Purposive sampling: the weakest form of research sampling</p> <p><b>Strengths</b>                  Researcher is very explicit about how she dealt with her own assumptions and biases during the research process</p>

<p><i>Education, 42(10), 437-443.</i></p> <p><b>Believability and Robustness Score: 14/20</b></p>		<p><b>Setting:</b> Newly developed orientation program, based on a “caring framework” (p. 437). The program components/ structure were not described by the authors</p>	<p><b>Data Analysis:</b> Analysis of the participants responses were analyzed using Colaizzi’s (1978) phenomenological method. This involved and in-depth review of each sentence. “224 significant statements were extracted and transformed into formulated meanings” (p.440) and then collapsed into 10 themes. Finally, data themes and the exhaustive description was validated by 4 of the study’s participants</p>	<p>Written consent obtained from participants</p> <p>The “Researcher reflected, self-questioned, and journaled to bring personal perceptions, presuppositions, and biases to the surface of consciousness“ to deal with her own assumptions/biases that could impact the research (bracketing)</p>	
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#7 Dyess, S.M., &amp; Sherman, R.O. (2009)</p> <p><b>The first year of practice: new graduate nurses’ transition and learning needs.</b></p> <p><i>The Journal of Continuing Education in Nursing, 40(9), 403-410.</i></p>	Qualitative	<p>Pre and post program focus groups</p> <p><b>Study Aim(s):</b> Explore novice nurses first-year practice experiences and learning needs “through the eyes of new graduates and the nursing leaders and preceptors who work with them” (p. 403)</p> <p><b>Sample Population:</b> 81 NGs (&lt;12 months clinical experience since graduation) enrolled in the Novice Nurse Leadership Institute (NNLI), a one-year transition program instituted across 13 partner agencies. The 81 participants were part of one of three</p>	<p><b>Data Collection:</b> Focus groups guided by semi-structured questions conducted before (pre) and after (post) participation in the NNLI program. Sessions run by experienced facilitators that had no connection to the program. Details not provided as to how long, how many participants per session, etc.</p> <p>Data was audiotaped and then transcribed by the researchers.</p>	<p>Institutional review board approval was granted by Florida Atlantic University</p> <p>Authors not explicit regarding obtaining consent from the participants, consent possibly implied by participation in the focus groups</p>	<p><b>Limitations</b> Data analysis process not described. Authors do not address such factors significant to qualitative data analysis such as data saturation, verification of findings, etc.</p> <p><b>Strengths</b> Data triangulation: data from different sources (NGs, nursing leaders, and preceptors)</p>

<p><b>Believability and Robustness Score: 13.5/20</b></p>		<p>“classes” who completed the NNLI program between 2006 and 2008.</p> <p><b>Setting:</b> A 12-month long university based, practice informed transition program for NGs. The program is comprised of a combination of didactic/theoretical lectures, online study, and clinical components.</p>	<p><b>Data Analysis:</b> The researchers employed a hermeneutic analysis method to analyze the data. This process was not described in detail. Authors posit that key themes and patterns emerged and were coded from the multiple reviews of the data.</p>		
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#8</p> <p>Kaddoura, M.A. (2010).</p> <p><b>New graduate nurses’ perceptions of the effects of clinical simulation on their critical thinking, learning, and confidence.</b></p> <p><i>Journal of Continuing Education in Nursing, 41(11), 506-516.</i></p>	<p>Qualitative</p>	<p>Exploratory Descriptive study design</p> <p><b>Study Aim(s):</b> to “explore new graduate nurses’ perception of critical thinking promotion in the context of clinical simulation in critical care nursing training” (p.508)</p> <p><b>Sample Population:</b> Convenience, non-probability sampling: 10 NGs (total number) participating in the ICU training program of the study hospital over a one year period</p> <p><b>Setting:</b> A 6/12 NG ICU training program in the largest Hospital in its region that has a well-developed clinical simulation center. Non-for profit teaching hospital. Clinical simulation occurred for an 8-hour day every three weeks during the 6/12 program duration</p>	<p><b>Data Collection:</b> Demographic data collected during the first week of the program</p> <p>The remainder of the data was collected via semi-structured interviews at the end of the 6/12 program. The interviews occurred in a quiet and private room away from the unit. Interviews were audiotaped and transcribed verbatim</p> <p><b>Data Analysis:</b> Data was analyzed by qualitative content analysis to identify key themes. The descriptive stage was extended for the maximum possible amount of time for reading and re-reading of</p>	<p>Institutional review board approval granted</p> <p>The researcher met with participants and explained the study in detail prior to commencement</p> <p>Participation was voluntary and they were free to withdraw at any time</p> <p>Informed consent obtained</p> <p>No physical or emotional risk to the participants identified</p> <p>Numeric code given to participants to maintain confidentiality</p>	<p><b>Limitations</b> Data collected from participants at one site at just one time and there was a small sample size (n=10); therefor findings not generalizable</p> <p><b>Strengths</b> Inclusion and exclusion criteria were clear and well defined</p>

			data. Data was coded and transformed to identify features and describe interrelations by qualitative data analysis software	Data security maintained throughout the research process and the tapes from the interviews were destroyed at the end of the research process	
<b>Believability and Robustness Score: 14.5/20</b>					
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
#9 McKenna, L.G., & Green, C. (2004). <b>Experiences and learning during a graduate nurse program: an examination using focus group approach</b> <i>Nurse Education in Practice</i> , 4, 258-263.  <b>Believability and Robustness Score: 14.5/20</b>	Qualitative	Phenomenological study  <b>Study Aim(s):</b> “provide understanding around the first experiences of new graduate nurses in their first year of professional practice” and “identify sources and types of learning challenges facing new graduates, as well as identify people and resources that are beneficial to new graduates” (p. 259).  <b>Sample Population:</b> Seven new graduate nurses participating in a new graduate nurse program  <b>Setting:</b> A private hospital in Frankston, Victoria, Australia.	<b>Data Collection:</b> Focus group interviews 6/12 and 12/12 using the same questions at each. A series of questions was developed guided by available literature on the personal experiences of NGs. Interviews were held on allotted study days. The interviews were audiotaped and transcribed by the second researcher who was not present in the focus groups  <b>Data Analysis:</b> Content analysis performed on the transcribed data. Transcripts were read for “significant statements” and were reviewed by both researchers independently. Meanings were developed and clustered into themes. The findings from each researcher were compared and verified against the original transcripts for validity	Prior to each session participants were reminded that the focus groups were confidential  Formal ethical permission granted by “relevant university ethics committee”  Written approval granted from the director of nursing from the hospital- as no formal ethics committee exists there  Participant provided with pseudonyms to maintain confidentiality	<b>Limitations</b> Small sample size: therefore generalizability of findings is limited  <b>Strengths</b> Transcripts reviewed by two separate researchers to verify findings
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
#10	Quantitative	<b>Study Aim(s):</b> Evaluation of “data	<b>Data Collection:</b>	An	<b>Limitations</b>

<p>Nugent, E. (2008).</p> <p><b>Implementing changes in educational strategies based on orientation experiences of the new graduate.</b></p> <p><i>Journal for Nurses in Staff Development, (24)5, 13-18.</i></p> <p><b>Believability and Robustness Score: 11/20</b></p>		<p>collected during an orientation in an acute care setting” (p. 13)</p> <p><b>Sample Population:</b> Evaluation data analyzed from 150 baccalaureate graduates during orientation to the acute care setting between the years 2001-2005</p> <p><b>Setting:</b> 12 week orientation process for NGs. The first week involves reviewing of policy and procedures. The second week involves working on a teaching unit with the clinical educator and coassigned nurse. Week 3 and 4, the NG works the evening shift on a teaching unit with a preceptor, increasing independence and workload.</p>	<p>Data was collected from evaluation instruments completed by the newly hired nurses in conjunction with the clinical nurse educators. Data collected at the completion of the “formal” part of their orientation (at 1/12). The evaluation instrument consisted of three questions to evaluate strategies used in the formal concentrated 4-week orientation period:</p> <p>“1. How was the goal of increasing your independence and increasing your workload accomplished over the past 2 weeks on evening shift?</p> <p>2. You were not always assigned with the same nurse/preceptor each day. How did you find this method?</p> <p>3. On a scale of 1-10, how confident do you feel about leaving the orientation unit and going to your home unit? (1 being the lowest and 10 being the highest level of confidence?)” (p.14)</p> <p><b>Data Analysis:</b> Data analysis process not described in detail by the researcher. “Emergent themes from the data” (p. 14) were established for each of the three questions posed</p>	<p>administrative assistant transcribed the data (presumed to have no professional connection to the NGs) to maintain anonymity</p> <p>No mention of ethical approval or informed consent by participants</p>	<p>Data analysis procedure not described in detail therefore difficult for the reader to assess validity of the data</p> <p>“The evaluation data were collected at the beginning of the transition and reflects the initial perceptions of recent baccalaureate” (p.16) which may limit applicability and generalizability to other NGs</p> <p>Ethical considerations not described by the authors</p> <p><b>Strengths</b> Large sample size (n=150) therefore the findings are more generalizable</p>
<b>MIXED METHODOLOGY</b>					
<b>Citation</b>	<b>Research Type</b>	<b>Description of the Methodology</b>	<b>Research Methods</b>	<b>Ethical Factors</b>	<b>Strengths/Limitations</b>

<p># 11</p> <p>Beecroft, P.C., Santer, S., Lacy, M.L., Kunzman, L., &amp; Dorey, F. (2006)</p> <p>New graduate nurses' perception of mentoring: six-year programme evaluation</p> <p><i>Journal of Advanced Nursing</i>, 55(6), 736-747.</p> <p>Believability and Robustness Score: Quantitative: 17 Qualitative: 17 Combined: 17/20</p>	<p>Mixed Methodology :Quantitative and Qualitative methods</p>	<p>Study Aim(s): "to determine whether mentoring was successful and if new graduates: (1) were satisfactorily matched with a mentor; (2) received guidance and support; (3) attained socialization into the nursing profession; (4) benefited from having a role model for acquisition of professional behaviors; (5) maintained contact with mentor throughout the programme; and (6) were satisfied with the mentorship." (p. 738)</p> <p>Sample Population: 318 newly graduated nurses (from around 10 cohort groups) who completed the RN residency program from July 1999 to February 2005. Due to technical difficulties not described, no data was collected from one cohort group in February 2004.</p> <p>Setting: this evaluation process was a part of a broader evaluation of a nurse residency program at a hospital in the USA. Programme results were published elsewhere by one of the authors of this study.</p>	<p>Data Collection: <i>Qualitative/Quantitative</i> 6 items on the survey are yes/no questions (quantitative) with space to leave comments, and the remaining 2 were open ended questions (qualitative). Survey items were agreed upon by a group of nurses actively involved in the development of the residency and mentor training. The residents completed the survey on a class day during the final week for the program. Originally paper questionnaire surveys were used, but a web-based survey was completed using a handheld device. To avoid fatigue, 2 separate time periods were booked (with a lunch break in between) to complete this and many other surveys.</p> <p>Data Analysis: <i>Quantitative</i> All data entries were double checked for accuracy. Automated data was subjected to manually and computerized entry to ensure accuracy validation and reliability. Responses to each item were summarized with descriptive statistics using SPSS software. Summary scores were represented in percentages of the total responses across cohorts. Responses were cross-tabulated with demographic variables as well and logistical regression was applied to determine the relationship between demographic information and the impact on the</p>	<p>Facility Institutional Review Board determined this study was exempt</p> <p>Participants were informed about the study at the beginning of the program and were provided an information sheet outlining the data collection and management</p> <p>Anonymity was maintained through the use codes assigned to participant at the time of collection</p>	<p>Limitations Responses were from the residents only, mentors may have had different perspectives</p> <p>Some survey items were not answered therefore potential for bias may exist</p> <p>Analysis showed that some questions wording may have been too vague/confusing</p> <p>Strengths Data collection procedures described in great detail and survey items used provided in the text of the research article, therefore transparency to the reader provided Large sample size (n=318) from numerous cohorts over a approx. 6 year time span, therefore the findings are more generalizable</p>
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			mentorship experience. <i>Qualitative</i> Comments were analyzed by item to elicit themes that were deemed impactful on the mentorship experience (satisfaction, support, and socialization). Inter-rater reliability on all themes was verified by at least 2 recorders where 95% agreement was deemed sufficient. Results were tabulated and analyzed using descriptive analysis.		
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
#12  Johnstone, M.J., Kanitsaki, O., & Currie, T. (2008)  <b>The nature and implications of support in graduate nurse transition programs: an Australian study.</b>  <i>Journal of Professional Nursing, 24(1), 46-53.</i>	Qualitative and Quantitative	Exploratory-Descriptive Case Study Research Approach (case=transition program)  <b>Study Aim(s):</b> Explore and describe the following for the neophyte nurses: 1. The “nature of and implication of “support” being provided or not provided” 2. “Development of a supportive environment that encourages and facilitates a safe environment and practice” 3. “Safe transition from novice to advanced beginner-level practitioner” (p.48)  <b>Sample Population:</b> 3 purposeful sample units of analysis: 1. 11 NGs (between 2 cohorts) (n=11) 2. 34 Key Stakeholders (unit managers, clinical teachers,	<b>Data Collection:</b> <i>Quantitative:</i> 6-Survey questionnaires to collect descriptive data on feelings and beliefs on their competence and confidence (no further details provided)  <i>Qualitative:</i> 35 individual and focus group interviews were conducted over the 12 month period that the NGs were participating in the transition program. Interview breakdown: NG (14=5 individual and 9 focus group), Key stakeholders (9 focus groups and 12 individual)  <i>Additional data sources:</i> Participant observations, field notes, and minutes from research team meetings  <b>Data Analysis:</b>	Approval from the Human Research Ethics committee granted  Approval from the Health service provided  “Plain language” letter explaining the nature and purpose of the research provided to the participants  Invited to participate and	<b>Limitations</b> Some lack of detail in the data collection and analysis section of the research article  Key stakeholders not described in detail, i.e. the number of each position, the nature and level of their involvement in the program and the NGs, etc.  Convenience sampling: the weakest form of sampling  <b>Strengths</b> Data triangulation: different forms of data collection used (quantitative and qualitative) and data from different sources (NGs, Key stakeholders)

<p><b>Believability and Robustness Score:</b>  <b>Quantitative:</b>  13.5  <b>Qualitative:</b>  14.5  <b>Combined:</b>  14/20</p>		<p>preceptors, etc.) (n=34)  3. Literature</p> <p><b>Setting:</b>  The Australian transition program eluded to in this research study is not described in detail. Rather, the notion of “support” in the context of NGs during participation of a transition program is explored.</p>	<p><i>Quantitative:</i> Questionnaire data analyzed using SPSS cross-tabulation statistical procedure, organized under 4 themes: support of NG, confidence of NG, helpfulness of NG program, learning needs of the NG. Initial depictions organized across research questions and categories of participants interviewed.</p> <p><i>Qualitative:</i> data analyzed using content and thematic analysis strategies” commonly employed in naturalistic inquiries” (as per the authors)</p>	<p>written consent obtained</p> <p>No participants refused and none dropped out</p> <p>Confidentiality and anonymity maintained through the use of codes for survey and interview transcript data</p>	
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#13</p> <p>Rosenfeld, P., Smith, M.O., Lervolino, L., &amp; Bowar-Ferres, S. (2004).</p> <p><b>Nurse residency program: a 5-year evaluation from the participants perspective.</b></p> <p><i>Journal of Nursing Administration, 34(1), 188-194.</i></p>	<p>Mixed Methodology</p>	<p>Quantitative and qualitative research methodologies employed.</p> <p><b>Study Aim(s):</b> To identify the strengths and weaknesses of the Nurse Residency Program (NRP) program elements, the degree to which the participants gained specific benefits from the program, and gain an understanding of areas in which changes to the program design should be made.</p> <p><b>Setting:</b> New York University Hospitals Centre</p> <p><b>Sample Population:</b> NGs (baccalaureate prepared) who had participated in the NRP at New York</p>	<p><b>Data Collection:</b>  <i>Quantitative:</i> A survey was developed by the NRP coordinator, the research coordinator, nurse managers, and 3 RNs who had completed the NRP in the past. The survey included both closed ended and open ended questions. Respondents were asked to rate each of the elements of the program (using a Likert-type scale), describe any revisions they would recommend, and explain whether the program benefited their career, and some demographical data, and the reason they left the health authority (if applicable). The survey was piloted by 5 RNs and was found to be</p>	<p>The survey was deemed “exempt” from the Institutional Review Board process because it is a part of an ongoing program evaluation activities of the institution and there is “no risk of harm to the respondents” (p.190)</p>	<p><b>Limitations</b>  Authors explicit about major flaws in their survey distribution: failure to include a stamped, self-addressed envelope, failure to mail first class. Therefore, low survey response rate (36%) therefore representing a high sample bias</p> <p>Due to the above problems, a majority of the respondents are still currently working for the health authority and therefore represent further sampling bias</p>

<p><b>Believability and Robustness Score:</b>  <b>Quantitative: 14</b>  <b>Qualitative: 12</b>  <b>Combined: 13/20</b></p>		<p>University Hospitals Centre during its first 5 years (1996-2001)</p> <p><b>The program:</b> The NRP is a mandatory 12 program for all NGs at this site. It follows the completion of the standard 8-12 week competency-based, preceptored, orientation on their unit of hire. The NRP is comprised of a mentorship, clinical education days, unit/ service specific clinical programs, and a celebration at program completion</p>	<p>“clear and easy to complete”. The survey was mailed to the 321 of the 422 individuals who had completed the program as these were the ones with known mailing addresses. Of these, 112 participants of the NRP returned the survey or were collected from nurses still employed at the health authority (36% response rate).  <i>Qualitative:</i> Open-ended questions embedded in the survey to elicit recommendations for revisions for the NRP and comments about features of the program</p> <p><b>Data Analysis:</b>  <i>Quantitative:</i> Responses were examined in rank order. Then, data was examined across the various clinical services. Analysis of variance (ANOVA) employed.  <i>Qualitative:</i> The data from the open ended questions was entered verbatim into a Word document, and content analysis was used to aggregate the texts from which two prominent themes emerged</p>	<p>No description of if/how anonymity and confidentiality was maintained in the research process</p>	<p>The data analysis sections of the research article not described in great detail making it difficult for the reader to assess the methodological process</p> <p><b>Strengths</b>                  Data is from participants of a program run over a 5-year period (in which the program was not altered much) with up to 8 groups per year</p>
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**ORIENTATION PROGRAMS OR STRATEGIES FOR NEWLY GRADUATED RNs IN EMERGENCY SETTING**

**QUANTITATIVE RESEARCH STUDIES**

Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#14                      Kidd, P. &amp; Sturt, P. (1995).  <b>Developing and evaluation an emergency</b></p>	<p>Quantitative</p>	<p>Longitudinal descriptive correlational design</p> <p><b>Study Aim(s):</b> “to search for patterns relating to nurses’ perceptions of job expectations and the work environment” (p.522)</p>	<p><b>Data Collection:</b> The pathway was one of the data collection instruments, proficiency levels assigned by both preceptee's and the preceptors. Also, a demographic collection form was distributed.</p>	<p>Ethics approval not described</p> <p>Meeting was held with one of the</p>	<p><b>Strengths</b>                  Data collection tools (pathway/demographic form) provided in the document, increasing transparency of collection method for the reader</p>

<p><b>nursing orientation pathway.</b></p> <p><i>Journal of Emergency Nursing, (21)6, 521-530.</i></p> <p><b>Believability and Robustness Score: 15/20</b></p>		<p><b>Sample Population:</b>  <i>Sampling Type:</i> Convenience Sampling  <i>Sample:</i> 7 NG’s and their preceptors (n=14)  <i>Number of drop-outs:</i> 0</p> <p><b>Setting:</b> An associate professor from the University of Kentucky and a Staff Development Specialist from the Emergency department of Lexington University Hospital worked with a group of preceptors from within the department to reassess their current emergency nursing orientation pathway. Following completion of the standard 6-week long orientation for all NG’s in the ED at this site, the pathway, consisting of indicators and various levels of proficiencies (clinical decision making skills specifically) expected of the NGs working in their department before working independently as a staff nurse, was used to assess the NG’s level of competency.</p>	<p><b>Data Analysis:</b>                  Analyzed with frequency distribution (scatter plots, quartile ranges), measures of central tendency (mode, median) and variation (standard deviation)</p> <p>Spearman’s rank correlations used to examine the proficiency level in each category for each week in relation to demographic characteristics of the preceptor and orientee (years of ED experience for preceptor, and prior experience in ED as a nurses aid of orientee)</p>	<p>investigators , the preceptor, and the assigned orientee to explain the purpose of the research and use of the pathway</p> <p>Informed consent obtained by participants</p>	<p>Triangulation: data from both NGs and their preceptors collected: therefore a more comprehensive understanding of the phenomena under study</p> <p><b>Limitations</b>                  Relatively small sample size (n=14), therefore the finding generalizability is limited</p>
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#15</p> <p>Loiseau, D., Kitchen, K., &amp; Edgar, L. (2003).</p> <p><b>A comprehensive ED orientation for new graduates in the</b></p>	<p>Quantitative</p>	<p><b>Study Aim(s):</b>                  The authors are not explicit about the aim of this study. This article describes a 4-month long comprehensive orientation program developed to prepare new nurses to work in their emergency department. Data was collected to assess NG behaviors and attitudes.</p>	<p><b>Data Collection:</b> Data collected during various stages of the program using 2 methods</p> <ol style="list-style-type: none"> <li>1. A self-efficacy questionnaire was administered to each orientee-(52 point- Likert scale) to assess where they rate on a set of listed behaviors</li> <li>2. A Gallup Organization Employee Attitude Survey was</li> </ol>	<p>Authors not explicit regarding informed consent: Completion of the survey implies participant consent</p>	<p><b>Strengths</b>                  Canadian program, therefore more applicable to my inquiry and my practice</p> <p>5 groups have been through the program therefore increasing the significance of the findings</p>

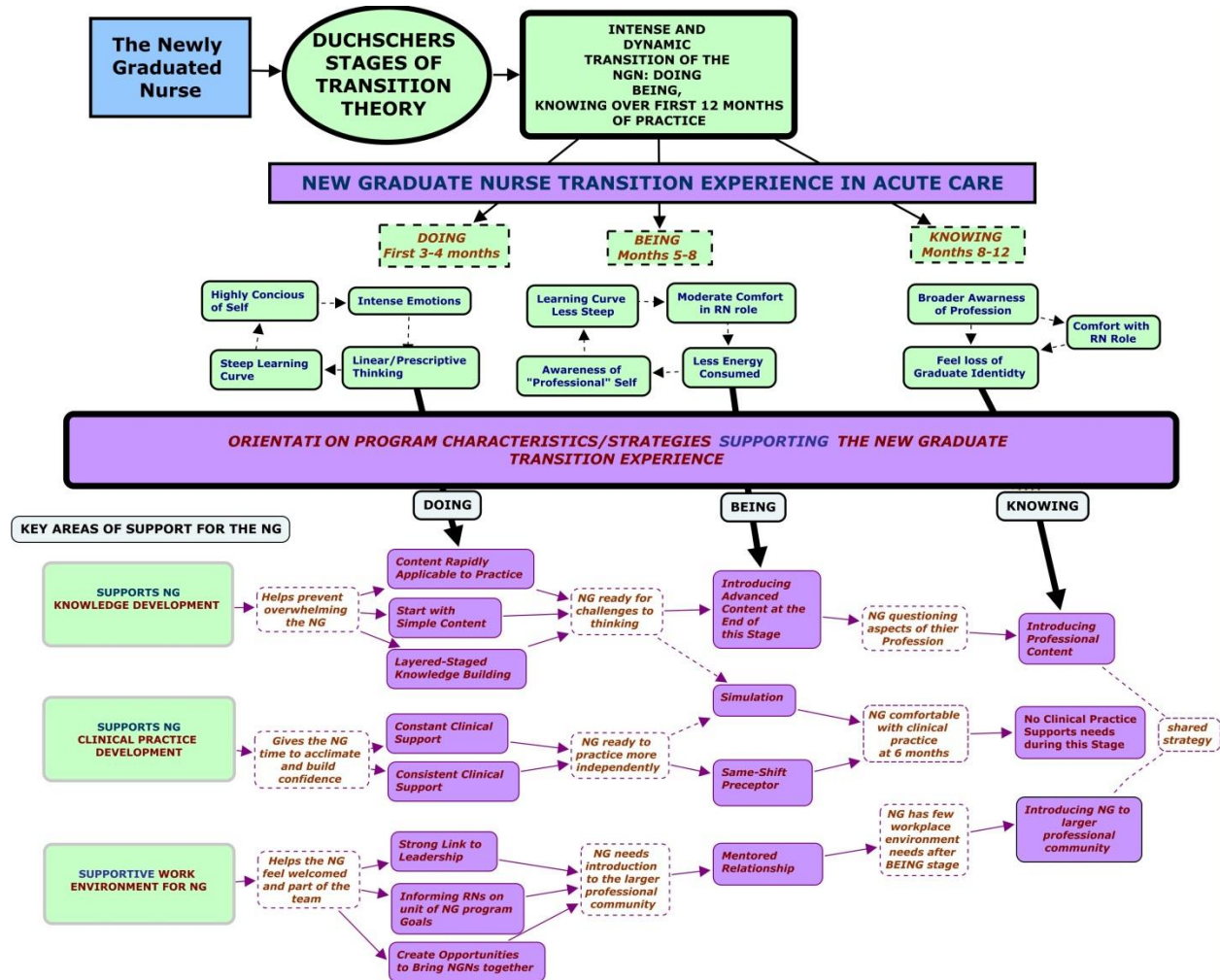
<p><b>emergency department: the 4-year experience of one Canadian teaching hospital.</b></p> <p><i>Journal of Emergency Nursing, (29)6, 522-527</i></p> <p><b>Believability and Robustness Score: 12.5/20</b></p>		<p><b>Sample Population:</b> 18 NG's from 5 program cohorts who had completed the orientation program (n=18) between 1999-2002</p> <p><b>Setting:</b> Royal Victoria Hospital site of the McGill University Health Centre, Montreal, Quebec, Canada-ED department</p> <p><b>The program:</b> A 4 month long comprehensive orientation program for NGs in their ED. The program is comprised of a combination of didactic lectures, and instructor model design and standard preceptorship the ED</p>	<p>administered (12-item survey with a 5-point Likert scale) to measure organizational performance and manager effectiveness. Administered near the end of the program</p> <p><b>Data Analysis:</b> The data analysis phase of this research study was not described in great detail. The self-efficacy questionnaire yielded a reliability coefficient averaging 3.07 or "confident" which demonstrates participants felt they were generally able to fulfill the tasks listed on the questionnaire</p>	<p>Weekly feedback forms to educators were not anonymous</p>	<p><b>Limitations</b> Convenience sampling- weakest form of sampling</p> <p>Small sample size therefore the finding generalizability is limited</p> <p>Data analysis procedures not described in detail therefore more difficult for the reader to assess methodological rigor</p>
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p><b>#16</b></p> <p>Winslow, S., Almarode, M., Cottingham, S., Lowry, K., &amp; Walker, K. (2009)</p> <p><i>New graduates in the emergency department: could you, would you, should you?</i></p> <p><i>Journal of Emergency Nursing, (35)6, 521-524.</i></p>	<p>Quantitative</p>	<p><b>Study Aim(s):</b> Evaluation of a pilot of a 6 month long orientation program for new graduate nurses in their emergency department titled "<i>The ED New Graduate Nurse Internship Program</i>". Designed to prepare inexperienced RNs for ED nursing practice with emphasis on evidence-based practice, scope, competence, assessment, and teamwork.</p> <p><b>Sample Population:</b> 3 NGs (screened with the ENA behavioral characteristics) (n=3)</p> <p><b>Setting:</b> Martha Jefferson Community Hospital, Charlottesville, VA, USA-ED department</p>	<p><b>Data Collection:</b> Two 5-point Likert- scale Self-assessments: pre-program, mid-program (3 months), and after the program (6 months)</p> <p>A combination of participant completed self-assessments of their satisfaction with the internship program, a self-assessment of their skill and knowledge goals (Likert scale questionnaire), retention rates at 1 year (6 month post completion of program</p> <p>Informal qualitative data collection of participants perceived competency at 1 year (6 month following program end) with</p>	<p>Ethical considerations not addressed by the authors</p> <p>Completing the written surveys might imply consent</p>	<p><b>Limitations</b> Sample size small (n=3) and from a single geographical area, from a single ED; limiting the generalizability of the findings.</p> <p>No description of the data analysis procedure for the small amount of qualitative data collected</p> <p><b>Strengths</b> A pilot program was conducted</p> <p>"Assessment of skills" document used in this study provided in the body of the</p>

<b>Believability and Robustness Score: 11/20</b>		<b>The program:</b> A 6 month long orientation program for NGs in their ED that includes a combination of general orientation, clinical rotations, clinical support, didactic learning, and a variety of alternate observation experiences.	interviews (further details not available)  <b>Data Analysis:</b> Collective ratings of participants self-assessments compared in table format, no description of qualitative data analysis		article, enhancing the visibility of the research instrumentation to the reader
MIXED METHODOLOGY RESEARCH STUDIES					
Citation	Research Type	Description of the Methodology	Research Methods	Ethical Factors	Strengths/Limitations
<p>#17</p> <p>Patterson, B., Bayley, W., Burnell, K., &amp; Rhoads, J. (2009).</p> <p><b>Orientation to emergency nursing: perceptions of new graduate nurses.</b></p> <p><i>Journal of Emergency Nursing</i>, 36(3), p. 203 – 211</p>	Mixed Methodology	<p>Quantitative and Qualitative Methodologies</p> <p><b>Study Aim(s):</b> This purpose of this descriptive study was to “gain an understanding of how new graduate nurses who are oriented to emergency nursing as their first professional area of employment perceive the orientation program and emergency nursing at the beginning and end of a 6-month program” (p. 203)</p> <p><b>Sample Population:</b> 18 Newly graduated nurses employed full time in their first position, enrolled in the same 6-month long comprehensive orientation program in ED (n=18)</p> <p><b>Setting:</b> All of the participants were enrolled in the same 6-month long comprehensive orientation</p>	<p><b>Data Collection:</b> Data was collected using a variety of methods at 3months (mid-program) and at 6 months (at program end)</p> <p><b>Quantitative:</b> 49- item participant survey adapted from an established tool concerning nurses’ first job experience. The tool included a combination of forced-choice, open-ended, and Likert-type rating scales.</p> <p><b>Qualitative:</b> private, semi-structured interviews with a qualitative nurse researcher</p> <p><b>Data Analysis:</b> <b>Quantitative data:</b> Descriptive statistics (means, standard deviations, or frequencies and percentages of agreement) calculated for the responses.</p> <p><b>Qualitative data:</b> Use of NVivo7 was ongoing with data collection, reading and rereading the transcripts, extracting, and clustering of statements. Validity of data addressed by constant comparison with the transcript and discussion amongst</p>	<p>Participation in the study was voluntary</p> <p>Written consent obtained for those providing demographic information</p>	<p><b>Limitations</b> Sample size small and from only one geographical area, in a single health system-limiting the generalizability of the findings</p> <p>Convenience sampling- which is the weakest form</p> <p>Lack of detail in many components of the program: for example: the "fellowship" and the simulated learning components</p> <p><b>Strengths</b> Methodologies explicitly addressed and described in great detail, increasing research method visibility for the reader</p>

<b>Believability and Robustness Score:</b> <b>Quantitative 15.5</b> <b>Qualitative 14.5</b> <b>Combined 15/20</b>		program titled " <i>The Emergency Department Fellowship Program</i> " (EDFP) across 4 different emergency departments within the Crozer Keystone Health System.  <b>The program:</b> A 6 month long comprehensive orientation program for NGs in their EDs. The program is comprised of a combination of didactic/lecture, clinical, and alternate experiences.	investigators, and participants contacted by email to validate findings. An audit trail was established to ensure data integrity.		
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Appendix E

Revised Concept Map from Data Analysis Stage



## Appendix F

## General Recommendations for Orientation that Support New Graduate Transition

Transition Stage by Month	Recommendations for orientation that support NGN transition	Targeted Example from a Primary Source	Supporting Research Data by Study
DOING STAGE  Approximately Month 1-4	<i>Provide simple content for rapid application to practice and stage the content complexity during this stage</i>	Spacing critical care content over the course of the entire orientation period rather than front-loading the NGNs in the first few months (Patterson et al., 2009)	Delaney, 2003; McKenna & Green, 2004; O'Malley et al., 2005; Patterson et al., 2009
	<i>Ensure constant and consistent clinical support during this stage</i>	Assigning a single, designated preceptor to each NGN for the preceptorship period of the orientation process (Rosenfeld et al., 2004)	Delaney, 2003; Dyess & Sherman, 2009; Johnstone et al., 2004; Loiseau et al., 2003; McKenna & Green, 2004; Nugent, 2008; O'Malley et al., 2005; Patterson et al., 2009; Rosenfeld et al., 2004
	<i>Ensure frequent contact with leadership during this stage</i>	Scheduling regular meetings with leadership throughout orientation process (Eigsti, 2009)	Dyess & Sherman, 2010; Eigsti, 2009; Johnstone et al., 2008; O'Malley et al., 2005; Rosenfeld et al., 2004
	<i>Provide opportunities for NGs to socialize with colleagues during this stage</i>	Introducing new nurses to the units staff or hosting celebrations of new NGN cohorts at the beginning of the orientation process (Rosenfeld et al., 2004)	Blanzola et al., 2004; Delaney, 2003; Eigsti, 2009; Johnstone et al., 2008; Nugent, 2008; O'Malley et al., 2005; Rosenfeld et al., 2004
	<i>Provide opportunities for NG peer engagement during this stage</i>	Planning and scheduling interactive NGN development days over the course of the orientation program (Krugman et al., 2006)	
	<i>Ensure unit staff are aware of the NG program goals and expectations</i>	Debriefing the staff on the NGN orientation program prior to commencement (Patterson et al., 2009)	Nugent, 2008; Patterson et al., 2009
BEING STAGE  Approximately Month 4-8	<i>Consider using simulated learning opportunities during this stage</i>	Providing simulated lab sessions using high-fidelity patient simulator dolls to practice critical care case scenarios (Kaddoura, 2010)	Dyess & Sherman, 2010; Kaddoura, 2010; Patterson et al., 2009
	<i>Consider a formalized mentorship: ensure opportunities for mentees and mentors to meet regularly and support NGNs in the mentor selection process</i>	Providing NGNs instruction on and support selecting a mentor during classroom sessions in the stage of orientation prior to the mentorship and scheduling regular meetings between mentors and mentee (Beecroft et al., 2006)	Beecroft et al., 2006; Blanzola et al., 2004; Eigsti, 2009; Krugman et al., 2006

	<i>Consider putting NGNs on the same shift rotation as their preceptor during this stage</i>	Putting NGN on the same shift rotation as their preceptor at the end of the formal 1:1 preceptorship (Kowalski & Cross, 2010)	Johnstone et al., 2008; Kowalski & Cross, 2010; Rosenfeld et al., 2004; Winslow et al., 2009
<b>KNOWING STAGE</b>  Approximately Month 8-12	<i>Incorporate professional development activities into orientation during this stage</i>	Providing professional development sessions that allow for career planning and introducing resources that would be available to NGNs after the orientation program was complete (Krugman et al., 2006).	Krugman et al., 2006

