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Part 2: New Graduate Nurse Transition Into the Intensive Care Unit: Summative Insights From a Longitudinal Mixed-Methods Study

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Background and Purpose: To address the nursing shortage, it is increasingly common for hospitals to hire new graduate nurses into intensive care units (ICU). New graduates in intensive care likely experience needs beyond those of their peers outside of critical care contexts. Yet, relatively little is known about the experiences of this unique population. The purpose of this study was to explore the transition experience of a cohort of new graduate nurses in the ICU over a 2-year period. **Methods:** A longitudinal mixed-methods convergent design using a purposive and convenience sample of new graduate nurses working in an ICU. Surveys were administered and in-depth qualitative interviews were conducted at four points in time over a 2-year period. **Results:** Participants identified a number of skills that remained difficult, as well as less comfort in performing a number of nursing interventions, over the four time points. In addition, they highlighted a decline in their perception of receiving encouragement and feedback from their manager. Participants identified that a lack of confidence was a barrier to transition and that improved orientation and work environment could further support them in their journey. Certain aspects of their

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work environment, such as peer support, were identified as most satisfying, whereas the environment and system were least satisfying. **Implications for Practice:** The results provide a greater understanding of the transition experienced by new graduate nurses in the ICU. In addition, the results may provide the ICU leadership team with potential areas to further support the transition of new graduates within this critical care environment.

Keywords: new graduate nurse; transition; critical care; intensive care unit; mixed-methods

North America is experiencing a nursing shortage (American Association of Colleges of Nursing [AACN], 2017; Canadian Nurses Association [CNA], 2009; Hogan & Roberts, 2015). To account for this phenomenon, it is increasingly common for hospitals to hire new graduate nurses (NGNs) into specialized settings including intensive care units (ICUs). In ICUs, critically ill patients suffering from life-threatening trauma or illness and their families, require specialized and highly proficient nursing care (Canadian Association of Critical Care Nurses [CACCN], 2017; Canadian Institute for Health Information [CIHI], 2016). It follows that nurses in these settings require education and knowledge surpassing that acquired during their entry to practice nursing studies and licensure exams (CACCN, 2017). It is essential that NGNs working in ICUs demonstrate comprehensive knowledge, as well as high proficiency in executing necessary skills and communication techniques.

A NGN in ICUs must assimilate into the critical care environment while simultaneously adapting to their new role as a registered nurse (RN). The process of transitioning from a student to an independently practicing RN is challenging for NGNs in all settings; however, these challenges may be pronounced in the highly technical and complex critical care environment (Epp, 2012; Hiler et al., 2018; McAndrew et al., 2018; McGrath, 2008; Stayt, 2007; van Rooyen et al., 2018). Yet relatively little is known about the specific experiences and challenges encountered by this unique population of nurses (DeGrande et al., 2018; Serafin et al., 2021).

NGN TRANSITION

Both NGNs themselves and their nursing colleagues have expressed concern that NGNs lack the knowledge, skills, and competence required to provide safe client care (Berkow et al., 2009; Casey et al., 2004; Freelinga & Parker, 2015; Kavanagh & Szweda, 2017: Kovner et al., 2007; Missen et al., 2016). Reflecting the former, NGNs report feeling overwhelmed, uncertain, and insecure in their new role as an independently practicing RN and experience feelings of stress (Casey et al., 2004; Cheng et al., 2015; Feng & Tsai, 2012). Findings from previously conducted research suggest that these practice challenges may be attributable to a lack of preparation and adequate support from colleagues and nursing management (Beauregard et al., 2007; Parker et al., 2014; Phillips et al., 2014a, 2014b). With rates estimated

between 35% and 60%, NGN turnover within the first year of practice is a significant problem (Zucker et al., 2006).

To identify interventions that may reduce NGN turnover, researchers have studied factors that facilitate NGN transition to nursing practice (Boamah et al., 2016; Devey et al., 2020; Giallonardo et al., 2010; Lalonde & McGillis Hall, 2017b; Salt et al., 2008). For example, Lalonde and McGillis Hall (2017b) reported that NGNs were increasingly satisfied with their work when they clearly understood their roles and held positions in their preferred area of practice. Furthermore, after identifying that short-staffing and work-life interference predicted NGN burnout, Boamah et al. (2016) recommended that authentic leadership from unit managers, described as leaders who are ethical, honest, and respectful, might prevent NGN turnover.

Researchers have also considered how preceptorship experiences impact NGNs' transition to practice. During a preceptorship, a more experienced nurse works with a less experienced colleague to meet established learning objectives (Ke et al., 2017; Ward & McComb, 2018). NGN retention rates are highest when orientation programs utilize a preceptorship model for a duration of three to 6 months (Salt et al., 2008). Preceptor characteristics have been identified as being important in improving NGN turnover rates. For example, preceptor personality traits may influence NGNs' job satisfaction and intent to turnover (Lalonde & McGillis Hall, 2017a). In addition, when NGNs perceive their preceptors as authentic leaders (i.e., honest, ethical, and respectful) preceptorship increases NGN job satisfaction, success, and retention (Beauregard et al., 2007; Giallonardo et al., 2010; Herdrich & Lindsay, 2006; Kenny et al., 2016; Newhouse et al., 2007).

ICU Nurse Transition

While overcoming general challenges attributed to becoming an RN, NGNs in the ICU must also transition into the role of a critical care nurse. Becoming an ICU nurse is a complex and multifaceted process (Inhelfield, 2005; Kollman et al., 2007; McKane, 2004; Serafin et al., 2021). ICU nurses must acquire both breadth and depth of knowledge regarding complex pathologies and their treatment(s) (CACCN, 2017) amidst also becoming competent in highly technical skills (e.g., cardiac monitoring, mechanical ventilation; CACCN, 2017). Such technical and cognitive demands are significant contributors to nurse stress (McGrath, 2008).

ICU nurses also experience additional stress in caring for the families of critically ill patients (Stayt, 2007). Furthermore, frequent exposure to ethical challenges related to medical futility and the withdrawal of life-sustaining measures, may contribute to feelings of uncertainty and moral distress (Dodek et al., 2019; Forozeiya et al., 2019; McAndrew et al., 2018). Such chronic occupational stressors precipitate ICU nurse burnout and possible attrition (Epp, 2012; Kelly et al., 2021). For these reasons, ICU nurse turnover rates in Canada are higher than the national average at 26.7% and 19.9%, respectively (O'Brien-Pallas et al., 2008). In fact, Kovner et al. (2014) reported even higher ICU nurse turnover rates (33.5%) in the USA.

Researchers studying ICU nurse education have agreed that crucial components of successful orientation programs include didactic theoretical instruction and exposure to a variety of clinical scenarios (DeGrande et al., 2018; Inhelfield, 2005; Kollman et al., 2007; McKane, 2004; Serafin et al., 2021). As with the successful transition of NGNs to general clinical practice, mentorship programs also benefit novice ICU nurses (Edwards et al., 2015). Mentorship programs in particular are especially successful when considering each nurse's level of comfort and competence in the knowledge, skills, and social aspects of their new role (Edwards et al., 2015).

NGN Transition into the ICU

Considering the high rates of turnover reported in both NGNs and ICU nurses, it is likely that NGNs practicing in the ICU are especially at risk of leaving their first job. Further, staff working in environments with high turnover rates, report decreased job satisfaction, poorer mental health, and lower quality of clinical performance (O'Brien-Pallas et al., 2008). Notably, turnover has adverse effects on client care (Bae et al., 2009; O'Brien-Pallas et al., 2008). Patients cared for on units with high turnover rates are at an increased risk of experiencing adverse events such as falls and medication errors (Bae et al., 2009). Further, the cost associated with each nurse leaving a hospital is estimated to range between $25,727.77 CAD (O'Brien-Pallas et al., 2008) and $31,567.98 USD (Bland Jones, 2008). Given the specialized training required by ICU nurses, it is plausible that turnover in critical care results in exorbitant costs and with a significant financial impact on hospitals (CACCN, 2017).

Given the unique challenges associated with becoming an ICU nurse, NGNs in the ICU likely experience needs beyond those of their peers outside of critical care. Recently, DeGrande et al. (2018) found that NGNs could successfully transition into ICU environments, especially if exposed to a variety of clinical situations early in their preceptorship-based orientation. DeGrande et al. (2018) emphasized the importance of a supportive team environment encouraging self-care and resilience beyond the orientation period. Furthermore, Friedman et al. (2011) identified that a Critical Care Nurse Fellowship Program lasting 1 year, resulted in better retention of NGNs when compared to a standard 15-week orientation.

Conceptual Underpinnings

Duchscher (2009) conceptual understanding of the stages of transition experienced by NGNs as they enter clinical practice informed this research. Duchscher (2009) identified three stages of transition: *doing, being*, and *knowing*. Typically, during their first 3–4 months after orientation, NGNs in the *doing* phase rely heavily on the assistance of their colleagues and focus primarily on the acquisition of practical and organizational skills. In the *being* phase, NGNs develop a sense of self-awareness and trust while learning to accept their imperfections (Duchscher 2009). At this stage, they begin to search for stability in their professional role as a nurse while

becoming more fully orientated to their environment. There is an increased focus on patient-centered care, rather than merely the completion of tasks. Finally, the *knowing* phase is characterized by NGNs acquiring critical thinking skills while accepting their professional identity as a nurse.

Duchscher (2009) emphasized that the first 18 months of independent practice as a nurse can be exhausting. Burnout is not uncommon during the transition process, and NGNs often experience *transition shock*. This shock encompasses feelings of disorientation and discouragement associated with transitioning from the familiar and comfortable role of a student to that of a professional RN. Duchscher (2008) also emphasized that the stages of transition do not necessarily occur in a linear trajectory, with NGNs often moving between phases during their first 18 months of practice.

Despite what is known regarding NGN transition in ICU, little has been reported on the needs of NGNs at different time points in their transition by engaging in longitudinal research. In this study, we seek to address this knowledge gap. Therefore, the aim of this study was to explore the transition experience of a cohort of NGNs within the ICU context over a 2-year period.

METHODS

Design

A longitudinal mixed-methods convergent study design, comprised of surveys and interviews, was used to explore NGNs' transition experiences in intensive care. This design was chosent because it allowed for quantitative and qualitative data to be collected separately at each of the four time points and separately analyzed; finally, both types of data are combined to obtain an integration of both types of data (Creswell & Clark, 2018). This design allowed the research team to collect "different but complementary data" (Morse, 1991, p. 122) to gain a greater understanding of new graduates' transition experiences in intensive care. The qualitative findings obtained through interviews at Time 0, 1, and 2 were previously published (manuscript blind for review); this current manuscript builds upon a this previously published article and presents the result of the study in their totality from both the survey and interview data across all four time periods.

Specified time points for data collection were identified a priori and were consistent with the conceptual articulation of transition as described by Duchscher (2009). *Time 0* was considered to be on hire/beginning of their ICU orientation. *Time 1* was approximately 1 month after completing orientation. *Time 2* was a 1-year posthire and *Time 3* was 2-years posthire. These times captured the NGNs' transition from student nurse/NGN without formal licensure (note, all participants practiced initially with a temporary nursing license from their regulatory body), through a preceptored orientation and finally to working independently as RNs in the ICU.

Sample and Setting

Using both purposive and convenience approaches, a sample of NGNs was recruited from a cohort of new graduates hired into two ICUs across two separate campuses from one academic, tertiary quaternary care hospital center in Canada. The authors have purposefully not reported the sample size to ensure the confidentiality of the participants given that reporting the sample size would be sufficient to identify the cohort of participants. However, it can be reported that two-thirds of the new graduates' cohort participated in the study. The inclusion criteria were: (a) a NGN in their first job as a RN; (b) employed in the ICU of the hospital study site; and (c) ability to read and write in either official languages (English or French). RNs new to the ICU, but with previous experience as a nurse were excluded.

Study sites were described in detail in a previously published manuscript (Vanderspank-Wright et al., 2019). In brief, Site A is a medical-surgical ICU and Site B is a medical-surgical ICU as well as the Center's designated trauma unit. The NGN orientation process at both sites consists of 2 weeks of classroom theory content and a minimum of 12, 12-hour preceptored shifts.

Recruitment and Data Collection

NGNs were recruited through various strategies, including an emailed information letter, and informal introductory presentations on site by the researchers. Data were collected at designated time points. At each of these four times points (Time 0 through Time 3), participants were sent a reminder email with a link to the online survey, and a prompt for them to provide a time they could participate in an interview.

Survey Instrument

An online survey via the SurveyMonkey platform was completed at each of the four time points. The survey was an adaptation of the Casey-Fink Graduate Nurse Experience Survey and consisted of 44 items using different response formats (e.g., open ended, multiple choice, and Likert type questions, with scales ranging from 1 to 4 and 1 to 5). Casey et al. (2004) report the results of a factor analysis of the instrument which yielded a five-factor solution (Support, Patient Safety, Stress, Communication/ Leadership, and Professional Satisfaction) that accounts for 46% variation in total scores.

Reliability estimates for the factors ranged from 0.71 to 0.90 (Casey et al., 2004). Permission to adapt the survey was received and included only minor modifications (e.g., adding terminology related to nursing roles reflective of the study context and skills that were reflective of the patient populations cared for in these units).

Qualitative Interviews

Face-to-face, semistructured interviews were conducted. The initial interviews at Time 0 explored NGNs' interests in pursing their nursing career in ICU and what they thought working in the ICU would be like. Questions included: (a) Why did you

decide to pursue a nursing career in the ICU?; (b) What do you think working in ICU as a RN will be like?; (c) What challenges do you foresee?; (d) What rewards do you foresee?; and (e) What type of support do you think you'll need as a NGN in the ICU?

Next, interviews for Time 1 focused on their experiences during their first few months of practice and included the following questions: (a) Describe your experiences in the New Graduate Guarantee; (b) What were the most positive aspects of the experience?; (c) What were the most challenging aspects of the experience?; (d) Describe your transition from the New Graduate Guarantee to independent practice as a nurse in the ICU; (e) What have been the most significant challenges and facilitators?; (f) What type of support have you needed during this transition?; and (g) What type of support do you anticipate needing in the next year?

The interviews from Time 2 and 3 explored their experiences (including their transition from students to NGNs, as well as positive and negative elements), challenges, facilitators, support, and anticipated needs moving forward. The questions included the following: (a) Describe your experiences in your first (or second) year as an independently practicing RN in the ICU; (b) What have been the most significant challenges and facilitators?; (c) What type of support have you needed during this transition?; (d) What type of support do you anticipate needing in the next year?

Interviews were audio recorded and lasted between 30 and 80 minutes in length. Interviews were conducted at a time and place identified as ideal for the participant. Interviews were transcribed verbatim and verified for accuracy against the original recording.

ETHICAL CONSIDERATIONS

Approval to conduct this study was obtained by the Research Ethics Boards of the hospital, as well as the affiliated University. Eligible participants met with one of the members of the research team to discuss the project and time commitment. Once eligible participants indicated their interest in participating in the study, a member of the research team met with each of them to obtain written consent; participants provided written informed consent (for interviews) and implied consent (for surveys) prior to participating in the study. Prior to starting each of the interviews, verbal consent was obtained by the member of the team conducting the interview.

DATA ANALYSIS

Quantitative data gathered from the survey were entered into SPSS v26. This study was descriptive in nature and so descriptive statistics (i.e., means, medians, and standard deviations [*SD*]) were conducted. Cronbach's alpha for the Casey-Fink New Graduate Nurse survey was completed.

Data analysis for the qualitative interviews was modelled on Thorne's (2016) Interpretive Description. Elements of theoretical forestructure included engagement with relevant literature and an articulation of the theoretical underpinnings of the study (see Conceptual Underpinnings).

Tracy's (2010) elements of methodological rigor (e.g., a worthy topic, sincerity, credibility, resonance), which are congruent with Thorne's (2016) Interpretive Description, were considered in this study. The study team consisted of experts in both quantitative and qualitative methods, as well as well as experts in transition, critical care, and human resources. The members of the research team who engaged in the qualitative data analysis have experience conducting qualitative studies, in-depth individual interviews, as well as having experience using Thorne's (2016) Interpretive Description.

Following the analysis of the quantitative and qualitative data, the data were integrated; results were compared for common and diverging findings, as well as how the data might "expand each other" (Creswell & Clark, 2018, p. 224). Finally, the merged results are presented in the integrated discussion to provide a comprehensive understanding of the findings (Creswell & Clark, 2018).

RESULTS—QUANTITATIVE

In total, two-thirds of the NGN cohort participated in the study (note, exact numbers have not been reported to maintain the anonymity and confidentiality of the participants). The majority (66.7%) were employed at campus A and the remainder at campus B (33.3%). The mean age was 25.2 years old (*SD* 4.0) with a range of 22–32 years of age. All the participants had recently graduated from an undergraduate nursing degree program with a BScN. Certain demographics, for example, gender, have not been reported to ensure the confidentiality and anonymity of the participants. The length of orientation ranged from 8 to 16 weeks. Fifty percent of the participants reported having one preceptor for the duration of their orientation; one participant reported having two primary preceptors and subsequently worked with approximately 15 other nurses, one reported working with three preceptors, while one had six preceptors. The Cronbach alpha for the Casey-Fink New Graduate Nurse survey was 0.80, which is considered satisfactory (George & Mallery, 2003).

Performance on Skills and Procedures

Of a list of 27 skills for participants to choose from, 10 skills were identified by the NGNs as being uncomfortable to perform: ventilator care, patient/ family communication and teaching, chest tube care, code/ emergency response, continuous renal replacement, death, dying and end of life care, intracranial pressure (ICP) monitoring, peritoneal dialysis, intravenous starts, electrocardiogram (ECG) and telemetry care, and blood product administration. At Time 0 and Time 1, the most common skills identified as being uncomfortable to perform were continuous renal replacement, ICP monitoring, and peritoneal dialysis. Of note, not all of the participants completed the survey at time 0; however, the type of skills identified as "difficult" remained similar over time, with chest tube care, code/emergency response, continuous renal replacement, death, dying and end of life care, ICP monitoring, peritoneal dialysis, and ECG and telemetry care continuing over all four time points.

Comfort and Confidence

Participants were asked to rate their comfort and confidence on 24 items of the Casey-Fink survey at Time 0, Time 1, Time 2, and time 3. The means across the four time points increased over time and ranged from 2.77 (*SD* .03) to 3.19 (.21) on a scale from 1 to 4, with higher scores reflecting greater comfort and confidence (Table 1). Although the range of scores was similar between Time 2 and Time 3, the mean was highest at Time 3, 2 years after hire. When looking at the scores on each of the items, the mean scores on four of the 24 items remained 3.0 and under over the four time points (Table 2). These items were related to communicating with patients and families, delegating to personal support workers, opportunities to practice skills and procedures on more than one occasion, and comfort in making suggestions to changing the nursing care plan. These scores indicate that the participants reported less comfort and confidence on those items.

TABLE 1. Casey-Fink Comfort and Confidence Subscale Across Three Time Points

	Range	Mean (*SD*)
Casey-Fink Transition at Time 0 (Scale range from 1 to 4)	2.75–2.79	2.77 (0.03)
Casey-Fink Transition at Time 1 (Scale range from 1 to 4)	2.46–3.29	2.97 (0.37)
Casey-Fink Transition at Time 2 (Scale range from 1 to 4)	2.92–3.33	3.08 (1.7)
Casey-Fink Transition at Time 3 (Scale range from 1 to 4)	2.96–3.33	3.19 (0.21)

Note. *SD* = standard deviation.

TABLE 2. Casey-Fink Individual Items on the Comfort and Confidence Subscale Across Three Time Points

	Time 0 Mean (*SD*)	Time 1 Mean (*SD*)	Time 2 Mean (*SD*)	Time 3 Mean (*SD*)
I feel confident communicating with physicians	2.00 (0)	3.33 (0.52)	3.33 (0.52)	3.25 (0.50)
I am comfortable knowing what to do for a dying patient	3.00 (0)	3.33 (0.82)	3.00 (0)	3.50 (0.58)
I feel comfortable delegating tasks to the Personal Support Worker	2.50 (0.70)	2.50 (0.84)	2.50 (0.84)	2.25 (0.96)
I feel at ease asking for help from other RNs	3.00 (0)	3.50 (0.55)	3.50 (0.55)	3.75 (0.50)
I am having difficulty prioritizing patient care needs	3.00 (0)	2.17 (0.41)	2.00 (0)	1.33 (0.58)

(*Continued*)

TABLE 2. Casey-Fink Individual Items on the Comfort and Confidence Subscale Across Three Time Points (*Continued*)

	Time 0 Mean (*SD*)	Time 1 Mean (*SD*)	Time 2 Mean (*SD*)	Time 3 Mean (*SD*)
I feel my preceptor provides encouragement and feedback about my work	3.00 (0)	3.67 (1.03)	4.00 (1.10)	–
I feel staff is available to me during new situations and procedures	3.00 (0)	3.17(0.75)	3.50 (0.55)	3.25 (0.50)
I feel overwhelmed by my patient care responsibilities and workload	3.00 (0)	2.33 (0.82)	2.17 (0.41)	2.00 (0.82)
I feel supported by the nurses on my unit	3.00 (0)	3.50 (0.55)	3.83 (0.41)	4.00 (0)
I have opportunities to practice skills and procedures more than once	2.00 (1.4)	2.67 (0.82)	3.17 (0.75)	2.25 (0.96)
I feel comfortable communicating with patients and their families	2.50 (0.70)	2.83 (0.41)	2.83 (0.41)	3.00 (0)
I am able to complete my patient care assignment on time	3.00 (0)	3.17 (0.41)	3.33 (0.52)	3.00 (0)
I feel the expectations of me in this job are realistic	2.50 (0.70)	3.20 (0.45)	3.20 (0.41)	3.00 (0)
I feel prepared to complete my job responsibilities	2.50 (0.70)	2.80 (0.41)	3.20 (0.41)	3.25 (0.50)
I feel comfortable making suggestions for changes to the nursing plan of care	2.50 (0.70)	2.80 (0.41)	2.70 (0.52)	2.75 (0.50)
I am having difficulty organizing patient care needs	3.00 (0)	3.17 (0.42)	3.17 (0.42)	2.00 (0)
I feel I may harm a patient due to my lack of knowledge and experience	3.00 (0)	2.00 (0.63)	1.67 (0.52)	1.75 (0.50)
There are positive role models for me to observe on my unit	4.00 (0)	3.67 (0.52)	3.83 (0.41)	3.75 (0.50)
My preceptor is helping me to develop confidence in my practice	4.00 (1.4)	3.50 (1.22)	3.80 (1.10)	-
I am supported by my family/ friends	4.00 (0)	3.67 (0.52)	3.67 (0.52)	3.75 (0.50)
I am satisfied with my chosen nursing specialty	4.00 (0)	3.50 (0.55)	3.33 (0.52)	3.25 (0.50)
I feel my work is exciting and challenging	4.00 (0)	3.33 (0.82)	3.17 (0.75)	3.25 (0.50)
I feel my manager provides encouragement and feedback about my work	3.00 (0)	2.17 (0.98)	2.00 (0.89)	1.75 (0.50)
I am experiencing stress in my personal life	3.00 (0)	2.50 (0.55)	2.67 (0.52)	2.50 (0.58)

Note. RN = registered nurse; *SD* = standard deviation.

Two of the items remained over 3.5 on four across the four time points. These items were having positive role models on the unit and support from family and friends; these scores indicate that the participants reported greater comfort and confidence on those items. Other items scored similarly includes satisfaction with chosen specialty, belief that their work is exciting and challenging, and that their preceptor is helping them develop their confidence in their practice. Participants attributed consistently increasing scores on feeling supported by their nurse colleagues and feeling at ease asking other RNs for help items.

Participants consistently reported improving comfort and confidence over time on five items: prioritizing patient care needs, feeling overwhelmed by patient responsibilities and workload, feeling prepared to complete job responsibilities, organizing patient care needs, as well as feeling that their lack of knowledge and experience may harm a patient. By contrast, participants highlighted a decline across the four time points in their perception of receiving encouragement and feedback about their work from their manager and their satisfaction with their chosen nursing specialty.

Job Satisfaction

Participants were asked to rate their satisfaction on nine items related to different aspects of their job satisfaction. The means across the four time points ranged from 3.60 (*SD* .24) to 3.30 (*SD* .52) on a scale from 1 to 5, with higher scores reflecting greater job satisfaction (Table 3). The mean for job satisfaction was higher at hire with less variability than at the other three time points. Reported job satisfaction was lowest at Time 3 (3.19, *SD* .21).

Transition

The transition subscale included four questions seeking to identify the workplace barriers and facilitators to NGNs' transition. Each of these four questions asked participants to choose the response that most reflected their experiences. The first question was: "*What difficulties, if any, are you currently experiencing with the transition from the "student" role to the "RN" role?*" (Table 4). The item identified as the most problematic across Time 1 and 2 was related to participants' lack of confidence. At Time 3, although only 50% of the sample answered this question, the 50% that did choose the item related to fears about patient safety.

TABLE 3. Casey-Fink Job Satisfaction Subscale Across Three Time Points

	Range	Mean (*SD*)
Satisfaction at Time 0 (Scale range from 1 to 5)	3.40–3.80	3.60 (0.24)
Satisfaction at Time 1 (Scale range from 1 to 5)	2.70–4.20	3.30 (0.69)
Satisfaction at Time 2 (Scale range from 1 to 5)	2.60–3.90	3.30 (0.52)
Satisfaction at Time 3 (Scale range from 1 to 5)	2.96–3.33	3.19 (0.21)

Note. *SD* = standard deviation.

TABLE 4. What Difficulties, if Any, Are You Currently Experiencing With the Transition From the "*Student*" Role to the "*RN*" Role?

	Item	Time 0	Time 1	Time 2	Time 3[a]
a.	Role expectations	50%	20%	20%	–
b.	Lack of confidence	–	40%	60%	–
c.	Workload	50%	–	–	–
d.	Fears (e.g., patient safety)	–	40%	20%	50%
e.	Orientation issues	–	–	–	–

Note. RN = registered nurse.
The results are presented as a percentage of the sample.
[a]50% of the sample did not respond to this question.

TABLE 5. What Could Be Done to Help You Feel More Supported or Integrated Into the Unit?

	Item	Time 0	Time 1	Time 2	Time 3
a.	Improved orientation	50%	50%	40%	25%
b.	Increased support	50%	17%	20%	25%
c.	Unit socialization	–	–	–	–
d.	Improved work environment	–	33%	40%	50%

Note. The results are presented as a percentage of the sample.

TABLE 6. What Aspects of Your Work Environment Are Most Satisfying/ Less Satisfying?

What aspects of your work environment are most satisfying?					
	Item	Time 0	Time 1	Time 2	Time 3
a.	Peer support	50%	50%	60%	75%
b.	Patients and families	–	33%	–	25%
c.	Ongoing learning	50%	–	20%	–
d.	Professional nursing role	–	17%	40%	–
e.	Positive work environment	–	–	–	–
What aspects of your work environment are less satisfying?					
a.	Nursing work environment	–	33%	40%	25%
b.	System	50%	33%	60%	50%
c.	Interpersonal relationships	50%	–	–	–
d.	Orientation	–	17%	–	25%

Note. The results are presented as a percentage of the sample.

The second question was "*What could be done to help you feel more supported or integrated into the unit*?" (Table 5). Although participants did not identify issues surrounding orientation as problematic in relation to their transition in question one, they did identify that an improved orientation (N at T0 = 50%; N at

T1 = 50%; N at T2 = 40%; and N at T3 = 25%), increased support (N at T0 = 50%; N at T1 = 17%; N at T2 = 20%; and N at T3 = 25%), work environment (N at T1 = 33%; N at T2 = 40%; and N at T3 = 50%) could make them feel more supported or integrated within the unit. The importance of the work environment increased over the four time points.

The third and fourth questions seek to identify aspects of the work environment that are most and least satisfying (Table 6). Participants consistently identified that peer support (N at T0 = 50%; N at T1 = 50%; N at T2 = 60%; and N at T3 = 75%) was the most satisfying aspect of their work environment. These graduates also identified that nursing work environments (N at T0 = 0; N at T1 = 33%; N at T2 = 40%; and N at T3 = 25%) and the system (N at T0 = 50%; N at T1 = 33%; N at T2 = 60%; and N at T3 = 50%) were the least satisfying aspects of their work environments.

RESULTS—QUALITATIVE

Analysis of the qualitative data from Times 0 through 2 revealed five main themes specific to the transition experiences of these NGNs into critical care: *an emotional transition, a social transition, a transitioning mind set, transitioning through firsts, and transitioning with confidence* (see Manuscript Blind for Review for more detail). Through these themes, *doing, knowing*, and *being*, as articulated by Duchscher are clearly evident. The NGNs initially focused on skill development and refinement as well as social and relational aspects of their early role transition such as being able to get help and knowing who to go to for help. However, as they approached the end of their first year as independently practicing RN in the ICU, their skill horizons broadened—they focused on communicating with patients and families as a unit of care, they socialized with the intent of becoming a part of the unit culture and began to define who they wanted to be as critical care nurses. Many contemplated how their career in critical care could be developed.

In moving forward to Time 3—which was the last data collection point, the NGNs were approaching or had just completed 2 years of continuous full-time employment in their unit(s). In considering the five previously identified themes, their experiences continued to be reflective of the established thematic analysis structure. NGNs continued to experience an emotional transition. As their exposure to more challenging clinical contexts became part of their nursing practice, this brought forward new emotional experiences. At Time 3 their emotional experiences were often reflective of difficult patient and/or family experiences they had encountered and they highlighted that the support they received from colleagues was essential in helping them to move forward. After a particularly difficult shift, one participant reflected, "*I seriously contemplated . . . the day I went home . . . when I slept and when I woke up. I was like, 'Can I go back? Can I walk back into that?' Every time I go back to that bedside I picture . . . I still picture that woman there struggling to breathe . . .*". Emotional support was found in their colleagues. A participant emphasized, *"Talking with other staff in our unit is, like a godsend . . . .we do very minimal*

formal debriefing . . . but talking with other staff . . . we have a very good group. My line is very supportive."

Social transitions remained relevant, but these interactions were often intricately woven into experiences with clinical assignments. Participants reflected on wanting to speak up about their assignments but feeling they could not. Some of the NGNs had also taken on roles where they shifted between the two ICUs. Their experiences were somewhat reflective of not having a place in either and not even being recognized—but when they were—it brought them a sense of belonging. In speaking up about assignments, a participant stated, *"The charge nurse calls and says, 'I need one of you to pick up this patient in CT.' . . . my heart just dropped. And I'm like, 'How am I not worth better than this?' . . . 'I'm going to be a patient on this bed very soon.'"* (For additional context, the request from the charge nurse came while the participant was doing most-mortem care on their third patient of the night). In reflecting on shifting between sites, a participant stated, *" . . . I can't get to know them [staff] as well, I guess . . . I know them, but they don't recognize me. So . . . I don't feel like I'm welcomed by the staff there . . . "*. However, the influence of their initial preceptors played a positive part in their socialization experiences. A participant noted, *" . . . my nurse was . . . she was really, really good . . . she was really welcoming and introduced me to people in the unit . . . "*. This participant added that their positive experiences with their preceptor would be 'paid forward' when they themselves became a preceptor, *"I want to share that with someone else . . . my nurse made it really . . . easy to ease into the unit . . . so I would like to do that for someone else."*

While initial "firsts" were clinical experiences like being present during a code blue, firsts continued at Time 3, but again, were related to increasingly complex patient assignments and additional skills. One participant reflected, *"I'm always having floor patients . . . having super easy days and then all of a sudden you're admitting this crash[ing patient] and you're overwhelmed, because it's not what you're used to . . . and you're like 'I don't know what I'm doing.'"* Other firsts were challenging interactions with families. One participant reflected on working through a particularly difficult situation, *"Then the patient's mother is videotaping the seizing, I asked one of our doctors to address this . . . twice . . . I finally said, ' . . . I'm really sorry, but it's not appropriate when we're all working on this . . . not everyone in the room has consented to being on [video]."* However, despite the challenges, participants also readily acknowledged how they had learned from their many firsts. One reflected, *"I've gotten better at realizing . . . 'hey, I know this like the back of my hand!' And then, 'hey, I still don't know exactly what I'm dealing with here; and you know, 'maybe just extra education and looking things up needs to happen."* They also reflected on having their peers and educators as important sources of information and support.

With respect to a transitioning mindset, participants at Time 3 reflected frequently on being more focused and being in the situation. For example, one participant described being the ICU nurse at a Code Blue on the floor, *"[it was] really exciting because I had never actually gone upstairs, but this this was my first time where it was just me going up by myself. I was the cardiac arrest nurse in there. I was pushing meds . . . you kind of just jump in and you're like 'where's my line' . . . like you know what to do all of a sudden . . . ."* The NGNs, now well-seasoned in the critical care

environment could think forward to what they would do. A participant remarked on wanting to share their knowledge with other, *"[it] kind of makes me want to learn more so if I have a student . . . I'm prepared to teach them whatever comes our way . . . why I'm doing what I'm doing."* Being able to manage their time and their own personal expectations enabled them to be more present with patients and families as well. A participant added, *"I'm able to manage my time at work . . . so I'm able to have a better rapport with my patient and family."*

The confidence of the NGNs was also evident, even though there we always "firsts" and "unknowns." They provided evidence of knowing themselves well—whether it was in the context of skills or their emotional health and well-being. One participant eloquently stated, *"Where we work is a tough place sometimes that gets to me, but I cope with it in healthy ways . . . I've been able to recognize that throughout the past two and a half years . . . If I feel, 'man this was a hard day, I need to get out of the house or something' . . . I'll for a run . . . or . . . I'll call people just to vent a little."* Others remarked on giving advice to NGNs, *"I would just say, 'stick with it.' Because the first year to year and a half are hard . . . hard on yourself . . . thinking you might not be good enough, or smart enough . . . I think when you stop learning that's when you have a problem. That's when you should get out."* Another remarked on the opportunity being in the IC has afforded them, *"It is an opportunity that can learn so, so much . . . and to not give up on yourself."*

INTEGRATED DISCUSSION

These survey results complement the findings from the interviews across all four time points, including the qualitative findings of the study that are previously published, and specifically, demonstrate four key areas of transition for NGNs: performance of skills, comfort and confidence, transition into the role of the RN, and job satisfaction.

Many of the skills that are typically more difficult for NGNs, such as prioritization and time management, ventilator care, and cardiac and hemodynamic monitoring (Fink et al., 2008), for example, were not highlighted as problematic for participants of this study. This finding likely reflects local practices where NGNs are taught specialized knowledge and advanced skills to monitor and manage multiple medical therapies for patients with life-threatening illnesses (Critical Care Secretariat, 2006; Critical Care Services Ontario [CCSO], 2017). Interestingly, ICP monitoring, continuous renal replacement therapy (CRRT), and peritoneal dialysis were consistently identified by participants over time as most uncomfortable skills to perform. Yet, it is important to note that in both study sites, the two latter skills would have required extra education (i.e., outside their initial orientation) and would not have been an expectation for NGNs to meet within (at minimum) the first year of practice (personal communication, source blind for anonymity of research site). Ramritu and Barnard (2001) described how NGNs viewed competency to include having adequate knowledge, being able to perform clinical skills, as well as being able to practice safely and prevent injury or harm to patients. It is possible that participants interpreted their lack of knowledge and training in CRRT and peritoneal dialysis

as a significant barrier for performance. Furthermore, participants may not have had many opportunities to carry out ICP monitoring during either their orientation, clinical, critical care course or afterwards, and as such, they might have perceived themselves unable to perform this skill safely. Also, due to differences in patient populations across the study sites it is also possible that participants employed at Site A would have minimal exposure to this intervention.

Over time, participants gained increasing comfort and confidence in their role as professional nurses. This finding is consistent with other studies that have found NGNs' comfort and confidence to increase with clinical experience, and to be higher after the first year of practice than at 6 months' time (Casey et al., 2004; Correale, 2017; Pfaff et al., 2014). High scores of comfort and confidence were attributed to the areas of participants' satisfaction in the nursing work, as well as positive social support particularly from their preceptor and other role models in the unit. The latter finding upholds current literature indicating that support from preceptorship (one-to-one) and the wider nursing team improves NGNs' confidence and competence in their transition to practice (Haggerty et al., 2009; Innes & Calleja, 2018; Irwin et al., 2018). For example, in a mixed-methods study, Marks-Maran et al. (2013) found one-to-one preceptorship to increase NGNs' overall confidence (78%), to help them with their skills development (75%), and to better manage their stress (73%). Similarly, in DeGrande et al. (2018), NGNs in adult ICUs shared the importance of having colleagues that they could confide in, especially with their new experiences.

In the current study, there were also a number of different areas which were rated at lower levels of comfort and confidence, with a primary area being communication. Whereas Casey et al. (2004) found almost all NGNs (99%) to be comfortable communicating with patients and families, the participants in this study felt otherwise. In some ways, this was not surprising given that communication is a complex skill, and in certain situations, such as death and dying, can be challenging (Belcher & Jones, 2009; Saghafi et al., 2012). For example, in Thompson et al. (2010) NGNs shared their "first" experiences of death in the ICU and expressed some of the difficulties in interacting with family members, particularly in communicating expectations of the patient's dying process. As such, it is possible that participants in this current study perceived their communication skills with patients and families to be still developing.

Participants also consistently identified a lack of confidence as a barrier to the transition from student to RN role, especially in terms of interprofessional communication, delegation, knowledge, and critical thinking. This was likewise seen in Fink et al. (2008), whereby NGNs felt it was challenging to ask assistants "to perform tasks" (p. 344), and to have the assertiveness to communicate with physicians. Interestingly, most participants felt that improved orientation and work environment would better their transition into the RN role, even though they were not originally identified as problematic areas. This result also differs from Pfaff et al. (2014), where they found support (accessibility/proximity) of the educator and manager, as well as the number of team strategies and different disciplines, to increase NGNs' confidence with engaging and collaborating with other healthcare professionals.

In the present study, participants' length of orientation ranged from 8 to 16 weeks, which is consistent with current province of Ontario, Canada standards of a minimum of 300 hours (8 weeks) in critical care training (CCSO, 2017). However, it is important to note that half of the participants (50%) reported working with more than two preceptors during their orientation. Cubit and Ryan (2011) described how personality clashes during preceptorship and having multiple preceptors to be difficult for NGNs to receive timely and quality assessment and feedback of their skills and role development. As such, improving orientation by having consistent one-to-one preceptorship could have benefited participants of this study with their lack of confidence in the areas previously mentioned.

Job satisfaction scores in this study were rated moderately, and did not change between the time of orientation to 2 years of practice. However, these scores were overall comparatively lower than recently reported findings by Laschinger et al. (2016), which found NGNs in various settings across Canada to have mean job satisfaction of 4.05 at 1 year of practice. Variance in job satisfaction scores may be due to a number of factors including the current study's sample size and only one clinical setting of critical care. Positively, participants did identify peer support and professional role as most satisfying aspects of the work environment; the participants consistently reported at each time point the importance of their coworkers and peer support. This aligns with extant literature, and emphasizes its importance against experiences of negative workplace behaviors (i.e., bullying and incivility) leading to job turnover (Fink et al., 2008; Laschinger, 2012; Laschinger et al., 2016).

On the contrary, participants felt the least satisfying aspects were the system and the nursing work environment, with the work environment taking on more importance over the four time points. Poor staffing levels, unsafe patient to nurse ratios, and low work engagement have been associated with NGNs' burnout and leaving the profession (Fink et al., 2008; Kenny et al., 2016; Laschinger, 2012; Laschinger et al., 2016). While these aspects are not unique to critical care and should be addressed at various organizational levels, some researchers suggest to also look at resiliency as an integral part of improving NGNs' transition into practice, as well as responding to workplace adversity (Jackson et al., 2007; Meyer & Shatto, 2018). Specifically, Jackson et al. (2007) recommend personal resilience to be strengthened by building nurturing relationships, maintaining positivity, developing emotional insight, achieving life balance and spirituality, and becoming more reflective. It is possible that building resilience, as well as making changes in the system/ work environment may improve future NGNs' job satisfaction.

STRENGTHS AND LIMITATIONS

There are several strengths limitations to this study. The sample size was small and purposive, which can bring selection bias and limit the generalizability of the results. Although the purpose of this study was exploratory, the small sample size did prevent further statistical analysis between the four time points. In addition, we are aware that refraining from reporting the sample size may limit the interpretation of the results; however, we strongly believe it was necessary to ensure

the confidentiality of our participants. The design allowed for the research team to follow this cohort over a prolonged time frame with multiple data collection points which led to rich data across interviews and surveys. Another limitation is that not all of the participants completed the survey at Time 0 (33%) due to the timing of recruitment; they were enrolled in the study after the Time 0 data collection point. The participants who did complete the survey at this time point were from the same site. However, one of the strengths of this study is that it is one of few studies to collect data on a specific cohort of NGNs in the critical setting over multiple time points over the course of their first 2 years of practice. This study was conducted in one organization at two sites. A larger, multiorganization study would provide results that may be more generalized and transferable.

CONCLUSION

Survey results from this study confirm that participants experience transition in their skill and role acquisition, comfort and confidence, and job satisfaction. Furthermore, a number of facilitators and barriers were identified in participants' transition from the time of hire to 2 years of practice. With the increasing nursing shortage, hospital leadership is more actively recruiting NGNs within settings not traditionally accessible to new nurses, such as ICUs. The results of this study provide a greater understanding on the transition of NGNs within the complex area of the intensive care setting and provide the leadership team with potential areas to further support NGN transition.

REFERENCES

American Association of Colleges of Nursing. (2017). *Fact sheet: Nursing shortage*. https://www.aacnnursing.org/Portals/42/News/Factsheets/Nursing-Shortage-Factsheet-2017.pdf

Bae, S. -H., Mark, B., & Fried, B. (2009). Impact of nursing unit turnover on patient outcomes in hospitals. *Journal of Nursing Scholarship*, *42*(1), 40–49. https://doi.org/10.1111/j.15475069.2009.01319.x

Beauregard, M., Davis, J., & Kutash, M. (2007). The graduate nurse rotational internship: A successful recruitment and retention strategy in medical-surgical services. *Journal of Nursing Administration*, *37*(3), 115–118. https://doi.org/10.1097/01.NNA.0000262730.76004.dd

Belcher, M., & Jones, L. K. (2009). Graduate nurses' experiences of developing trust in the nurse–patient relationship. *Contemporary Nurse*, *31*(2), 142–152. https://doi.org/10.5172/conu.673.31.2.142

Berkow, S., Virkstis, K., Stewart, J., & Conway, L. (2009). Assessing new graduate performance. *Nurse Educator*, *34*(1), 17–22. https://doi.org/10.1097/01.NNA.0000339477.50219.06

Bland Jones, C. (2008). Revisiting nurse turnover costs: Adjusting for inflation. *Journal of Nursing Administration*, *38*(1), 11–18. https://doi.org/10.1097/01.NNA.0000295636.03216.6f

Boamah, S. A., Read, E. A., & Spence-Laschinger, H. K. (2016). Factors influencing new graduate nurse burnout development, job satisfaction and patient care quality: A time-lagged study. *Journal of Advanced Nursing*, *73*(5), 1182–1195. https://doi.org/10.1111/jan.13215

Canadian Association of Critical Care Nurses. (2017). *Standards for critical care nursing practice* (5th ed.). Author.

Canadian Institute for Health Information. (2016). *Care in Canadian ICUs*. Author.

Canadian Nurses Association. (2009). *Tested solutions for eliminating Canada's registered nurse shortage*. https://cna-aiic.ca/~/media/cna/ page-content/pdf-en/rn_highlights_e.pdf

Casey, K., Fink, R., Krugman, M., & Propst, J. (2004). The graduate nurse experience. *Journal of Nursing Administration*, *34*(6), 303–311. https://doi.org/10.1097/00005110-200406000-00010

Cheng, C.-Y., Liou, S.-R., Tsai, H.-M., & Chang, C.-H. (2015). Job stress and job satisfaction among new graduate nurses during the first year of employment in Taiwan. *International Journal of Nursing Practice*, *21*, 410–418. https://doi.org/10.1111/ijn.12281

Correale, V. (2017). *The perceived comfort/confidence of new graduate nurses participating in a dedicated education unit over time*. Doctoral dissertation, The William Paterson University of New Jersey.

Creswell, J. W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

Critical Care Secretariat. (2006). *Critical care nurse training standards task group final report*. https://www.caccn.ca/files/mohltc_report_ccn_stds.pdf

Critical Care Services Ontario. (2017). *Critical care workforce profile. Provincial report*. https://www.criticalcareontario.ca/EN/Library/Pages/default.aspx

Cubit, K. A., & Ryan, B. (2011). Tailoring a graduate nurse program to meet the needs of our next generation nurses. *Nurse Education Today*, *31*(1), 65–71. https://doi.org/10.1016/j.nedt.2010.03.017

DeGrande, H., Liu, F., Grene, P., & Stankus, J. (2018). The experiences of new graduate nurses hired and retained in adult intensive care units. *Intensive & Critical Care Nursing*, *49*, 72–78. https://doi.org/10.1016/j.iccn.2018.08.005

Devey, R., Stacey, D., Backman, C., Donia, M., & Lalonde, M. (2020). Exploring pairing of new graduate nurses with mentors: An interpretive descriptive study. *Journal of Clinical Nursing*, *29*(15–16), 2897–2906. https://doi.org/10.1111/jocn.15360

Dodek, P. M., Norena, M., Ayas, N., & Wong, H. (2019). Moral distress is associated with general workplace distress in intensive care unit personnel. *Journal of Critical Care*, *50*, 122–125. https://doi.org/10.1016/j.jcrc.2018.11.030

Duchscher, J. B. (2008). A process of becoming: The stages of new nursing graduate professional role transition. *The Journal of Continuing Education in Nursing*, *39*(10), 441–450.

Duchscher, J. B. (2009). Transition shock: The initial stage of role adaptation for newly graduated registered nurses. *Journal of Advanced Nursing*, *65*(5), 1103–1113. https://doi.org/10.1111/j.1365-2648.2008.04898.x

Edwards, D., Hawker, C., Carrier, J., & Rees, C. (2015). A systematic review of the effectiveness of strategies and interventions to improve the transition from student to newly qualified nurse. *International Journal of Nursing Studies*, *52*, 1254–1268. https://doi.org/10.1016/j.ijnurstu.2015.03.007

Epp, K. (2012). Burnout in critical care nurses: A literature review. *Dynamics*, *23*(4), 25–31. https://caccn.ca/wp-content/uploads/2020/05/2012AwardsRec.pdf

Feng, R. F., & Tsai, Y. F. (2012). Socialisation of new graduate nurses to practising nurses. *Journal of Clinical Nursing*, *21*(13–14), 2064–2071. https://doi.org/10.1111/j.1365-2702.2011.03992.x

Fink, R., Krugman, M., Casey, K., & Goode, C. (2008). The graduate nurse experience: Qualitative residency program outcomes. *Journal of Nursing Administration*, *38*(7–8), 341–348. https://doi.org/10.1097/01.NNA.0000323943.82016.48

Forozeiya, D., Vanderspank-Wright, B., Bourbonnais, F. F., Moreau, D., & Wright, D. K. (2019). Coping with moral distress – The experiences of intensive care nurses: An interpretive descriptive study. *Intensive & Critical Care Nursing*, *53*, 23–29. https://doi.org/10.1016/j.iccn.2019.03.002

Freelinga, M., & Parker, S. (2015). Exploring experienced nurses' attitudes, views and expectations of new graduate nurses: A critical review. *Nurse Education Today*, *35*, e42–e45. http://dx.doi.org/10.1016/j.nedt.2014.11.011

Friedman, M. I., Cooper, A. H., Click, E., & Fitzpatrick, J. J. (2011). Specialized new graduate RN critical care orientation: Retention and financial impact. *Nursing Economic$*, *29*(1), 7–14. http://www.nursingeconomics.net/

George, D., & Mallery, P. (2003). *SPSS for windows step by step: A simple guide and reference. 11.0 update* (4th ed.). Allyn and Bacon.

Giallonardo, L. M., Wong, C. A., & Iwasiw, C. L. (2010). Authentic leadership of preceptors: Predictor of new graduate nurses' work engagement and job satisfaction. *Journal of Nursing Management*, *18*(8), 993–1003. https://doi.org/10.1111/j.1365-2834.2010.01126.x

Haggerty, C., McEldowney, R., Wilson, D., & Holloway, K. (2009). Growing our own: An evaluation of nurse entry to practice programmes in New Zealand 2006–2009. *Contemporary Nurse: A Journal for the Australian Nursing Profession*, *43*(2), 162–171. https://doi.org/10.5172/conu.2013.43.2.162

Herdrich, B., & Lindsay, A. (2006). Nurse residency programs: Redesigning the transition into practice. *Journal for Nurses in Staff Development*, *22*(2), 55–62. https://doi.org/10.1097/00124645-200603000-00003. http://journals.lww.com/jnsdonline/pages/default.aspx

Hiler, C. A., Hickman, R. L., Reimer, A. P., & Wilson, K. (2018). Predictors of moral distress in a US sample of critical care nurses. *American Journal of Critical Care*, *27*(1), 59–66. https://doi.org/10.4037/ajcc2018968

Hogan, A., & Roberts, B. (2015). Occupational employment projections to 2024. *Monthly Labor Review*. https://doi.org/10.21916/mlr.2015.49

Inhelfield, J. T. (2005). Hiring and mentoring graduate nurses in the intensive care unit. *Dimensions of Critical Care Nursing*, *24*(4), 175–178. https://doi.org/10.1097/00003465-200507000-00006

Innes, T., & Calleja, P. (2018). Transition support for new graduate and novice nurses in critical care settings: An integrative review of the literature. *Nurse Education in Practice*, *30*, 62–72. https://doi.org/10.16/j.nepr.2018.03.001

Irwin, C., Bliss, J., & Poole, K. (2018). Does preceptorship improve confidence and competence in newly qualified nurses: A systematic literature review. *Nurse Education Today*, *60*, 35–46. https://doi.org/10.1016/j.nedt.2017.09.011

Jackson, D., Firtko, A., & Edenborough, M. (2007). Personal resilience as a strategy for surviving and thriving in the face of workplace adversity: A literature review. *Journal of Advanced Nursing*, *60*(1), 1–9. https://doi.org/10.1111/j.1365-2648.2007.04412.x

Kavanagh, J. M., & Szweda, C. (2017). A crisis in competency: The strategic and ethical imperative to assessing new graduate nurses' clinical reasoning. *Nursing Education Perspectives*, *38*(2), 57–62. https://doi.org/10.1097/01.NEP.0000000000000112

Kelly, L. A., Gee, P. M., & Butler, R. J. (2021). Impact of nurse burnout on organizational and position turnover. *Nursing Outlook*, *69*(1), 96–102. https://doi.org/10.1016/j.outlook.2020.06.008

Kenny, P., Reeve, R., & Hall, J. (2016). Satisfaction with nursing education, job satisfaction, and work intentions of new graduate nurses. *Nurse Education Today*, *36*, 230–235. https://doi.org/10.1016/j.nedt.2015.10.023

Ke, Y. T., Kuo, C. C., & Hung, C. H. (2017). The effects of nursing preceptorship on new nurses' competence, professional socialization, job satisfaction and retention: A systematic review. *Journal of Advanced Nursing*, *73*(10), 2296–2305. https://doi.org/proxy.bib.uottawa.ca/10.1111/jan.13317

Kollman, S., Liedl, C., Johnson, L., Elwood, T., Munday, L., & Shue, J. (2007). Rookies of the year: Successfully orienting new graduate registered nurses to the cardiovascular surgical intensive care unit. *Critical Care Nursing Clinics of North America*, *19*(4), 417–426. https://doi.org/10.1016/j.ccell.2007.07.007

Kovner, G. T., Brewer, C. S., Fairchild, S., Poornima, S., Kim, H., & Djukic, M. (2007). Newly licensed RNs' characteristics, work attitudes, and intentions to work. *American Journal of Nursing*, *107*(9), 58–70. https://doi.org/10.1097/01.NAJ.0000287513.08135.47

Kovner, C. T., Brewer, C. S., Fatehi, F., & Jun, J. (2014). What does nurse turnover rate mean and what is the rate? *Policy, Politics, & Nursing Practice*, *15*(3-4), 65–71.

Lalonde, M., & McGillis Hall, L. (2017a). Preceptor characteristics and the socialization outcomes of new graduate nurses during a preceptorship programme. *Nursing Open*, *4*, 24–31. https://doi.org/10.1002/nop2.58

Lalonde, M., & McGillis Hall, L. (2017b). The socialisation of new graduate nurses during a preceptorship programme: Strategies for recruitment and support. *Journal of Clinical Nursing*, *26*(5–6), 774–783. https://doi.org/10.1111/jocn.13563

Laschinger, H. K. S. (2012). Job and career satisfaction and turnover intentions of newly graduated nurses. *Journal of Nursing Management*, *20*(4), 472–484. https://doi.org/10.1111/j.1365-2834.2011.01293.x

Laschinger, H. K. S., Cummings, G., Leiter, M., Wong, C., MacPhee, M., Ritchie, J., Wolff, A., Regan, S., Rhéaume-Brüning, A., Jeffs, L., Young-Ritchie, C., Grinspun, D., Gurnham, M. E., Foster, B., Huckstep, S., Ruffolo, M., Shamian, J., Burkoski, V., Wood, K., & Read, E. (2016). Starting out: A time-lagged study of new graduate nurses' transition to practice. *International Journal of Nursing Studies*, *57*, 82–95. https://doi.org/10.1016/j.ijnurstu.2016.01.005

Marks-Maran, D., Ooms, A., Tapping, J., Muir, J., Phillips, S., & Burke, L. (2013). A preceptorship programme for newly qualified nurses: A study of preceptees' perceptions. *Nurse Education Today*, *33*(11), 1428–1434. https://doi.org/10.1016/j.nedt.2012.11.013

McAndrew, N. S., Leske, J., & Schroeter, K. (2018). Moral distress in critical care nursing: The state of the science. *Nursing Ethics*, *25*(5), 552–570. https://doi.org/10.1177/0969733016664975

McGrath, M. (2008). The challenges of caring in a technological environment: Critical care nurses' experiences. *Journal of Clinical Nursing*, *17*(8), 1096–1104. https://doi.org/10.1111/j.1365-2702-2007.02050.x

McKane, C. L. (2004). Clinical objectives: A method to evaluate clinical performance in critical care orientation. *Journal for Nurses in Staff Development*, *20*(3), 134–139. https://doi.org/10.1097/00124645-200405000-00006

Meyer, G., & Shatto, B. (2018). Resilience and transition to practice in direct entry nursing graduates. *Nurse Education in Practice*, *28*, 276–279. https://doi.org/10.1016/j.nepr.2017.10.008

Missen, R., McKenna, L., & Beauchamp, A. (2016). Registered nurses' perceptions of new nursing graduates' clinical competence: A systematic integrative review. *Nursing & Health Sciences*, *18*(2), 143–153. https://doi.org/10.1111/nhs.12249

Morse, J. M. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*, *40*, 120–123. https://doi.org/10.1097/00006199-199103000-00014

Newhouse, R. P., Hoffman, J. J., Suflita, J., & Hairston, D. P. (2007). Evaluating an innovative program to improve new nurse graduate socialization into the acute healthcare setting. *Nursing Administration Quarterly*, *31*(1), 50–60. https://doi.org/10.1097/00006216-200701000-00013

O'Brien-Pallas, L., Murphy, G., & Shamian, J. (2008). *Understanding the costs and outcomes of nurses' turnover in Canadian hospitals (nursing turnover study)*. Canadian Institutes of Health Research.

Parker, V., Giles, M., Lantry, G., & McMillan, M. (2014). New graduate nurses' experiences in their first year of practice. *Nurse Education Today*, *34*(1), 150–156. https://doi.org/10.1016/j.nedt.2012.07.003

Pfaff, K., Baxter, P., Jack, S., & Ploeg, J. (2014). An integrative review of the factors influencing new graduate nurse engagement in interprofessional collaboration. *Journal of Advanced Nursing*, *70*(1), 4–20. https://doi.org/10.1111/jan.12195

Phillips, C., Kenny, A., Esterman, A., & Smith, C. (2014a). Does the choice of pre-registration paid employment impact on graduate nurse transition: An Australian study. *Nurse Education Today*, *34*(4), 532–537. https://doi.org/10.1016.j.nedt.2013.06.024

Phillips, C., Kenny, A., Esterman, A., & Smith, C. (2014b). A secondary data analysis examining the needs of graduate nurses in their transition to a new role. *Nurse Education in Practice*, *14*(2), 106–111. https://doi.org/10.1016/j.npr.2013.07.007

Ramritu, P. L., & Barnard, A. (2001). New nurse graduates' understanding of competence. *International Nursing Review*, *48*(1), 47–57. https://doi.org/10.1046/j.1466-7657.2001.00048.x

Saghafi, F., Hardy, J., & Hillege, S. (2012). New graduate nurses' experiences of interactions in the critical care unit. *Contemporary Nurse*, *42*(1), 20–27. https://doi.org/10.5172/conu.2012.42.1.20

Salt, J., Cummings, G. G., & Profetto-McGrath, J. (2008). Increasing retention of new graduate nurses: A Systematic review of interventions by healthcare organizations. *Journal of Nursing Administration*, *38*(6), 287–296. https://doi.org/10.1097/01.NNA.0000312788.88093.2e

Serafin, L., Pawlak, N., Strząska-Klias, Z., Bobrowska, A., & Czarkowska-Pączek, B. (2021). Novice nurses' readiness to practice in an ICU: A qualitative study. *Nursing in Critical Care*, 1–9. https://doi.org/10.1111/nicc.12603

Stayt, L. C. (2007). Nurses' experiences of caring for families with relatives in intensive care units. *Journal of Advanced Nursing*, *57*(6), 623–630. https://doi.org/10.1111/j.1365-2648.2006.04143.x

Thompson, G., Austin, W., & Profetto-McGrath, J. (2010). Novice nurses' first death in critical care. *Dynamics*, *21*(4), 26–36.

Thorne, S. (2016). *Interpretive description: Qualitative research for applied practice* (2nd ed.). Routledge.

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. *Qualitative Inquiry*, *16*, 837–851. https://doi.org/10.1177/1077800410383121

Vanderspank-Wright, B., Lalonde, M., Smith, C. A., Wong, S., & Bentz, J. A. (2019). New graduate nurse transition into the intensive care unit: Qualitative insights from a longitudinal study – Part 1. *Research and Theory for Nursing Practice*, 33(4), 428–444. https://doi.org/10.1891/1541-6577.33.4.428

van Rooyen, D. R. M., Jordan, P. J., Ten Ham-Baloyi, W., & Caka, E. M. (2018). A comprehen-sive literature review of guidelines facilitating transition of newly graduated nurses toprofes-sional nurses. *Nurse Education in Practice*, 30, 35–41.

Ward, A. E., & McComb, S. A. (2018). Formalising the precepting process: A concept analysis of preceptorship. *Journal of Clinical Nursing*, *27*(5–6), e873–e881. https://doi.org/10.1111/jocn.14203

Zucker, B., Goss, C., Williams, D., Bloodworth, L., Lynn, M., Denker, A., & Gibbs, J. D. (2006). Nursing retention in the era of nursing shortage: Norton navigators. *Journal for Nurses in Staff Development*, *22*(6), 302–306. https://doi.org/10.1097/00124645-200611000-00006

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