THE EXPERIENCES OF NEW GRADUATE NURSES HIRED INTO ADULT INTENSIVE CARE UNITS

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DEDICATION

For my family, Joe, Chandler, and Jensen, thank you for your support, love, and shoulders. I could not have done this without you. For also my furry family Annabelle, Fiona, Lucky, Yoshi, Socks, Bob, and Zazzy for hanging around and sometimes getting in the way.

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ABSTRACT

HEATHER DEGRANDE

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It is a common practice that new graduate Registered Nurses (NGRNs) are hired into adult Intensive Care Units (ICUs) on initial entry into practice. There exists a practice readiness gap between nursing curricula and actual clinical practice expectations at adult ICU settings. This practice readiness gap can lead to negative consequences and subsequent nurse turnover, which is a concern nationwide. Nonetheless, many NGRNs survived their initial transition and continue to practice at adult ICU settings. The purpose of this study was to explore the experiences of nurses who were hired into adult ICU as NGRNs and were starting their third year of practice. Nurses hired into critical care areas tend to exhibit competence within 2 years of initial hire (Benner, Kyriakidis, & Stannard, 2011). The study used the hermeneutic phenomenology research approach. Data analysis revealed the overall meaning of the experience: coming to terms with being comfortable with being uncomfortable. The six themes associated with being comfortable with being uncomfortable were confidence and uncertainty, gaining experiences and forever learning, intuitive knowing and intuition, difficult and stressful, being courageous and assertive, and the team and persons of support. NGRNs can survive to become competent adult ICU nurses; however, the findings of this research reveal the need to promote

exposure to clinical situations, resilience and self-care, and teamwork and mentoring to ensure successful transition and overall retention of new nurses hired into in adult ICU.

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CHAPTER I

INTRODUCTION

The first 2 years of practice for new nurses are fraught with uncertainty and stress. Studies show the reality of entering actual nursing practice versus the protected environment of nursing school has consequences such as anxiety and stress, which sometimes lead to new graduate nurse turnover within the first 2 years. However, some new graduate nurses are retained beyond 2 years in their initial entry to practice setting. Retention beyond year two is important because on Benner's novice to expert continuum nurses tend to exhibit competence in the beginning of the second year of practice (Benner, Kyriakidis, & Stannard, 2011). What remains unknown is the experience of new graduate nurses who are retained beyond the second year to become competent.

Focus of Inquiry

As new nurses enter into the workforce, their practice readiness has become one of the most researched and discussed topics. There is a plethora of literature reporting on the practice readiness gap between nursing curricula and actual clinical practice expectations (Benner et al., 2011; Pellico, Brewer, & Kovner, 2009; Wolff, Regan, Pesut, & Black, 2010; Wright, 2014). The deficit in practice readiness has consequences including anxiety, fatigue, and unrelieved job stress (Benner et al., 2011; Foglia, Grassley, & Zeigler, 2010; O'Kane, 2012), which have been shown to lead to nurse turnover, a nationwide concern (Beecroft, Dorey, & Wenten, 2008; Kovner, Brewer, Fatehi, & Jun, 2014; Li & Jones, 2013). However, very few studies have explored the overall experience of those new nurses who transitioned successfully into practice.

Furthermore, studies have also shown the more complex the clinical setting, the bigger the gap between practice readiness and actual practice expectations (Baumberger-Henry, 2012; Benner et al., 2011). Intensive Care Units (ICUs) are complex clinical settings where many new nurses choose as initial entry into practice (Garrett, 2005; Halcomb, Salamonson, Raymond, & Knox, 2012). Despite the practice readiness gap and subsequent turnover, some nurses are retained at their first job as an adult ICU nurse [National Council of State Boards of Nursing (NCSBN), 2015]. Turnover has consequences that are costly in terms of staffing, recruitment, patient outcomes and emotional ramifications. Thus, it is important to understand how new nurses navigate the practice readiness gap and are retained in adult ICU settings.

Statement of Purpose

The purpose of this study was to explore the experiences of nurses who were hired into adult ICU as new graduate registered nurses (NGRNs) and were starting their third year of practice. Nurses entering the third year of practice have developed the ability to predict, plan, and respond to complex patient situations (Benner, 1984, 2004, 2013; Benner, Tanner, & Chesla, 1992). On Benner's novice to expert continuum, nurses hired into critical care areas tend to exhibit competence around 2 years of initial hire (Benner et al., 2011).

Evidence shows a disparity exists between nurses' sense of practice readiness and their actual experience after being hired into adult ICU post-graduation (Benner et al., 2011; O'Kane, 2012). The practice disparity has been shown to have consequences such as anxiety, fatigue, and unrelieved job stress (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012). These consequences have subsequently contributed to turnover in adult

ICU, which continues to be a concern nationwide (Kovner et al., 2014; Li & Jones, 2013). Nonetheless, some nurses survive the consequences of the practice readiness disparity and are retained at their first job as an adult ICU nurse (NCSBN, 2015). Thus, there was a need to research how NGRNs navigate through the practice readiness gap and become competent in adult ICU. An understanding of nurses' survival and becoming competent in the adult ICU will provide insights to NGRNs considering entering practice in adult ICUs and to nurse leaders so strategies can be developed for even better NGRN retention. The central research question was: What is the lived experience of NGRNs who have become competent in adult ICU as their first job post-graduation?

Study Rationale

An understanding of the experience of NGRNs who are retained beyond year two in the adult ICU is important because NGRNs are hired into adult ICU despite disparities in practice readiness resulting in anxiety, job dissatisfaction, and subsequent turnover (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012). Through their educational preparation, NGRNs have knowledge in the management of entry-level, non-complex nursing situations. The National Council Licensure Exam for Registered Nursing (NCLEX-RN®) measures and validates this knowledge for entry-level safe nursing practice (NCSBN, 2013). However, adult ICU nursing practice requires in-depth knowledge of advanced assessments and technologies in the face of life-threatening, complex nursing situations (American Association of Critical Care Nurses [AACN], 2015).

Despite the difference between entry-level and adult ICU practice expectations, NGRNs are hired into adult ICU and related specialty areas. A study reported 29% of

NGRNs nationwide were hired into specialty ICU areas (Kovner et al., 2007). According to the NCSBN (2015), in 2011 and 2014, respectively, 23.5% and 18.7% of NGRNs were hired into critical care areas. The trend for hiring new graduate nurses in all inpatient settings had declined from 2011 to 2014 and was attributed to the fact that two new study areas were added from 2011 to 2014, short stay and step down (NCSBN, 2015). Graduating nursing students who had at least a one-week clinical experience in ICU reported high confidence and desire to work in critical care areas (Halcomb et al., 2012). Similarly, O'Kane (2012) found new nurses believed they were confident to work in adult ICU after having had a clinical experience in ICU as a student. However, the full weight of responsibility coupled with the NGRNs' realization that they do not have the ability to fully grasp and respond to complex clinical situations resulted in feelings of apprehension and anxiety (Benner et al., 2011; O'Kane, 2012). These feelings have been shown to result in unrelieved job stress and subsequent turnover in ICUs (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012).

Nationwide, overall across all nursing settings, turnover for NGRNs was 17.5% within the first year and 33% within the second year (Kovner et al., 2014). In the Sawatzky, Enns, and Legare (2015) study, 24% of critical care nurse respondents reported intent to leave in the next year. In 2016 and 2017 respectively, Nursing Solutions Incorporated (NSI, 2017) reported a 16.7% and 17.7% turnover rate in critical care settings. The cost of turnover is high. There are fiscal, staffing, patient outcomes, and emotional ramifications to consider. The cost of recruiting and training a staff nurse can range from $36,900 to $88,000 depending on specialty (Li & Jones, 2013; NSI, 2015). In 2015, it took up to 91.3 days to fill ICU vacancies compared with 78.2 days in

2014 (NSI, 2015). Inadequate staffing in adult ICU has been shown to have adverse effects on patient mortality outcomes (West et al., 2014). Participants in the Foglia (2008) study spoke to the emotional toll of leaving a position, which included feelings of inadequacy and moral conflict.

Some researchers have explored the lived experience of novice nurses in ICU. For example, Farnell and Dawson (2006) and later Gohery and Meaney (2013) explored the experience of nurses with prior nursing experience, but new to the ICU. Davenport (2000) and later St. Clair (2013) sought to understand the experience of new graduate nurses during orientation in the ICU. Saghafi, Hardy, and Hillege (2012) used descriptive phenomenology to explore the experience of social interactions of newly graduated registered nurses with other nurses, staff, physicians, and patients in the adult ICU. Benner (1984) used phenomenology to identify and describe the attainment of clinical knowledge. Later, Benner et al. (2011) used ethnographic study to describe the clinical worlds of novice, advanced beginner, competent, proficient, and expert for nurses practicing in ICU settings. Benner et al. (2011) found consequences related to lack in preparedness for novice and advanced beginner nurses, but did not delve into the experience itself for the NGRN. To date, there are no studies that specifically explore the experiences of NGRNs who were retained beyond the second year to become competent in an adult ICU.

Assumptions

The researcher is a nurse who was hired directly as a new graduate into adult ICU and entered the third year of practice and beyond. When considering the problem of

practice disparities NGRNs face when beginning practice in adult ICU, the following assumptions apply:

1. New graduate nurses can survive the first 2 years of practice to enter the third year and beyond in adult ICU.
2. Surviving the first 2 years and becoming what Benner (2004) calls competent is not without an emotional toll.
3. Nurses who survive the first 2 years and beyond do so for some reason, which until this study remained unknown.

Philosophical Underpinnings

The philosophical perspective informing this study was interpretive phenomenology. Interpretive phenomenology emerged from Husserl's traditional phenomenological stance (Kafle, 2011). Heidegger (1962), a disciple of Husserl, was concerned with the meaning of being in relation to the process of existing over a life course in context. This was Heidegger's (1962) concept of *Dasein*: the person is put into the world and then must live, act, and exist in the world. Being and existing through time and context allows multiple realities to exist over a life course (Heidegger, 1962). Through lived experience in time and context, the reality and truth of Dasein evolves over time. Through this existence, the person comes to a different existence (see Figure 1).

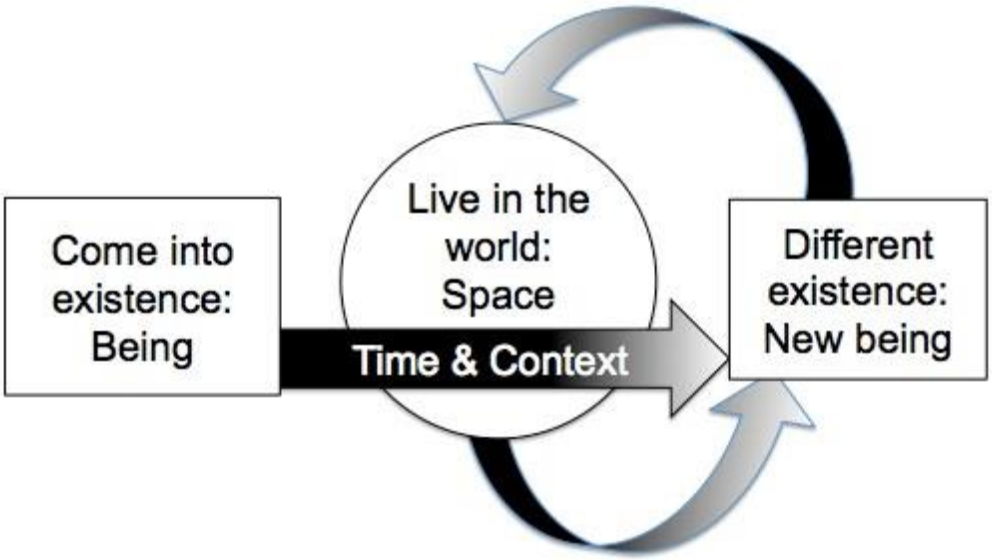

Figure 1. Graphical representation of Heidegger's (1962) Dasein.

Interpretive phenomenology is concerned with not only the meaning and hermeneutic essence of Dasein, but also the shared contextual experience of Dasein (van Manen, 1990). Thus, the context of the experience is as important as the interpretation and meaning of the experience (Callary, Rathwell, & Young, 2015). In the study of a phenomenon, Heidegger (1962) believed experience and related notions of the phenomenon should be acknowledged and embraced during the process of interpretation in concert with openness to new meanings and interpretations as they emerge. Thus, reflective interpretation via researcher reflexivity is the key to the study and understanding of the experience of Dasein in interpretive phenomenology.

Hermeneutic phenomenology is the research methodology stemming, not only from the research question, but also from the interpretive phenomenology philosophical stance. Hermeneutic phenomenology as a methodology is the interpretive exploration of an experience in the world by means of written and spoken language (Kafle, 2011; van Manen, 1990). In this study, the Dasein of the NGRN existing and becoming competent

in the world of adult ICU was interpreted toward an overall meaning of the experience as it had been lived over time and in context. Benner's (1984, 2004) novice to expert continuum provided the contextual backdrop for this study because NGRNs move from novice to advanced beginner to competent and beyond based on experiential and contextual influences over time (Benner, 1984, 2004).

Heidegger (1962) called the interpretation that occurs in hermeneutic phenomenology a circular exercise. According to van Manen (1990; 2014), hermeneutic phenomenology involves an encompassing interaction of research activities relating to a phenomenon of deep interest to the researcher. In hermeneutic phenomenology, the essence of being is a shared human contextual experience (van Manen, 1990). Thus as a methodology, hermeneutic phenomenology embraces the researcher's preconceived notions as an integral part of the interpretive process (van Manen, 1990). The experience of the researcher who was an NGRN and became competent in the context of adult ICU over time continued to exist and co-mingle via reflexivity during these interpretive research activities. Hermeneutic phenomenology involves a circular exercise of reading, reflective writing, and interpretation commonly referred to as the hermeneutic circle (Kafle, 2011). Using the hermeneutic circle, knowledge was co-created with the textual data itself, the researcher's textual interpretations, and the researcher's preconceived notions linked with resulting interpretations.

Chapter Summary

In summary, the existing state of nursing science does not provide a clear understanding of the experience of NGRNs who were retained beyond the second year to become competent in the adult ICU. Thus, the purpose of this hermeneutic

phenomenological study was to gain an understanding of the meaning of the experience of NGRNs entering their third year of practice and surviving the consequences of the practice readiness disparity in the adult ICU. With this new knowledge, insight was offered for NGRNs in adult ICUs and strategies for nurse leaders were suggested toward NGRN retention in adult ICUs.

CHAPTER II

REVIEW OF LITERATURE

In traversing Benner's novice to expert continuum, nurses develop their critical thinking and competence in relation to their ability to experientially learn. Because new graduates have little to no experience in adult ICU settings, if hired directly into adult ICU, they begin their practice as novices. Whereas new graduates entering less acute practice settings have had experiences in less acute practice settings, attained entry-level competence and critical thinking, and according to Benner (1984) begin their practice as advanced beginners. Thus, there is a disparity in practice readiness for the NGRN hired directly into adult ICU. Regardless, NGRNs are hired into adult ICU areas, which come with costly consequences such as turnover. This literature review will explore the state of the science on (a) Benner's (2004) novice to expert continuum; (b) competence, critical thinking, and experiential learning; (c) practice readiness; (d) current practices; and (e) current understanding of the experiences of novice nurses in ICU settings and advanced beginner nurses hired into less acute practice settings.

Benner's Novice to Expert

Benner's (2004) novice to expert continuum describes the process of going from novice to expert for nurses. In 1984, Benner published her seminal work on the nursing acquisition of clinical practice knowledge using the Dreyfus model of skill acquisition (Benner, 1984, 2004; Dreyfus, 2004). The Dreyfus model was originally developed to explain pilots' processes of skill acquisition that was characterized by a move from following rules of skill, to a holistic view of skill, to active engagement in the skill

whereby the skill is no longer just a skill, but rather an intuitional knowing (Benner, 2013). Benner (2004) used the term skill acquisition to mean not only clinical skill but also the skill of practice. Benner et al. (2011) described the skill of practice as the actions of the nurse based on the thinking and knowing of the nurse. According to Benner (2004), this skill acquisition occurs as the nurse transitions from novice (student nurse) to advanced beginner (new graduate nurse) to proficient, competent, and expert. Stemming from extensive research, Benner was able to detect and describe these phases on the novice to expert continuum. Benner et al. (2011) found that this transition involved not only the acquisition of knowledge from practice experience, but also the use of such knowledge in contextual situations.

In Benner's model, the novice nurse is the student nurse (Benner, 2004). Benner (2004) pointed out the student has no experience to draw upon in clinical situations and therefore is a novice. However, any nurse entering a new clinical area becomes a novice (Benner, 1984). Thus, the NGRN in adult ICU is a novice. Novice nurses are rules governed, task oriented, and have limited ability to identify potential complications (Benner, 1984, 2004, 2013; Benner et al., 1992). Garrett (2005) found new nurse clinical decision-making was based on context rather than experience. Novice nurses tended to focus on the decision itself rather than the processes needed for decision-making (Garrett, 2005).

According to Benner (2004), the advanced beginner is the new graduate nurse. Advanced beginner is a crucial stage in transition to practice (Benner, 2004). Advanced beginners remain task-oriented and rule-governed, but from experiences are able to apply knowledge in recurring situations with guidance of others (Benner, 1984, 2004; Benner et

al., 1992). New nurses on entry to practice were found to have a low ability to plan, organize, and re-evaluate new information (Halcomb et al., 2012; Lofmark, Smide, & Wikblad, 2006; Wangensteen, Johansson, Bjorkstrom, & Nordström, 2012). Most NGRNs hired directly into the adult ICU do not have critical care clinical experience to draw upon, and therefore are not advanced beginners on entry to practice. The full responsibility for acute patient care in the adult ICU has been shown to be overwhelming for advanced beginners (Benner, 2004). New graduate nurses have been shown to experience anxiety, fatigue, and tended to see themselves as observers in emergent and unfamiliar situations (Benner, 2004; Garrett, 2005; O'Kane, 2012; Ranse & Arbon, 2008; Winfield, Melo, & Myrick, 2009).

Competence develops around one to two years of practice depending upon experiential learning ability and exposure to multiple situated experiences (Benner, 1984, 2004). The competent nurse tends to know when they have or do not have a good clinical grasp of a situation. Competent nurses are able to take appropriate action based on this knowing (Benner, 2004). Benner (2004) likened proficiency to a transition to expertise. The proficient nurse is now able to look at the changing relevance of a clinical situation using past experiential knowledge (Benner et al., 1992). There are subtle, but distinct differences when compared to how competent nurses view patient situations (Benner, 1984; 2004). The proficient nurse views the situation as a whole rather than incremental parts or aspects (Benner, 1984). Expertise is characterized by the attenuation of practice (Benner, 2004, 2013). The expert is no longer governed by rules. Rather the situation governs the expert nurse's practice (Benner, 1984, 2004, 2013). The expert nurse

anticipates the evolution of clinical situations and bases decision-making and actions on the experiential grasp of the situation (Benner et al., 1992).

Nurse Competence, Critical Thinking, and Experiential Learning

According to Benner et al. (1992) nurse competence, critical thinking, and experiential learning are inter-related and essential for traversing the novice to expert continuum. Benner (2004) pointed out, transition from novice to advanced beginner to competence and eventually expert occurs as the nurse develops the ability to draw from prior experience (experiential learning) and apply critical thinking in adult ICU situations. Benner (1994, 2004) found competence for NGRNs hired into adult ICU tends to occur around 24–30 months of practice. At this time, nurses have demonstrated nurse competence, critical thinking, and experiential learning. Nurses with this level of experience tend to have accumulated a variety of clinical experiences to draw upon in their practice (Benner, 1994, 2004; Benner et al., 2011). Thus, they have developed the ability to grasp and act using critical thinking in clinical situations based on prior experiences (Benner, 1994, 2004; Benner et al., 2011).

Competence and specifically nurse competence has been cited in the literature as difficult to define (Axley, 2008; Chang, Chang, Kuo, Yang, & Chou, 2011; Lakanmaa, Suominen, Perttilä, Puukka, & Leino-Kilpi, 2014; McMullan et al., 2003; Tilley, 2008; Valloze, 2009). A review of the literature using Google Scholar with search terms ‘nurse competence’ and ‘concept analysis’ revealed three related concept analyses on nurse competence. All three identified competency a difficult concept to define, but underlying concepts revealed were knowledge, skill, and professional attributes (Axley, 2008; Tilley, 2008; Valloze, 2009). Chang et al. (2011) defined competence as an ability encompassing

skill, problem solving, critical thinking, and communication. Competence is a two-fold concept: one of behavior and one of skill. This mimics Benner's view that the nurse at the competent level has attained expected competencies toward the delivery of care; whereas those at the proficient and expert level demonstrate these competencies, but also have the salient ability to learn from prior exposure to situations and apply knowledge to new situations (Benner et al., 2011). Lakanmaa et al. (2014) contended competency in intensive and critical care nursing differs from competency in other nursing areas. Lakanmaa et al. (2014) found the domains of competence in ICU nursing include knowledge, skills, attitude/values, experience, and personal base. Experience is a part of competence (Lakanmaa et al., 2014). Lakanmaa et al. (2014) found clinical decision-making or critical thinking a subdomain of competency in ICU. According to Chang et al. (2011), critical thinking is a competency.

Benner et al. (2011) defined the habits of thought and action as the ability to identify the problem, reframe it if necessary, solve it, and anticipate and prevent other potential problems. This definition is similar to other definitions of critical thinking. Using Delphi methodology, Scheffer and Rubenfeld (2000) defined critical thinking as a process of purposeful judgment and judicious evaluation of a situation or problem including inference toward reframing the problem and anticipation of other problems.

The ability to critically think has been shown to correlate with nursing competence (Chang et al., 2011; Wangensteen et al., 2012). Chang et al. (2011) found a correlation with experience and education; however, Wangensteen et al. (2012) found this to be true only for those with prior health care experience. Newton and Moore (2013) found critical thinking, specifically inference, was higher in accelerated second degree

BSN students than generic BSN students conjecturing that experience plays a role in critical thinking.

Experiential learning is the ability to draw upon a variety experiences and based on those experiences, knowingly act in a given situation (Benner, 2004). Nurses move through Benner's phases of novice to expert based on their ability to critically think and experientially learn. Benner (2004) contended "techne" (p. 189) and "phronesis" (p. 189) are needed in order for the nurse to navigate the complex differences certain patient situations may present on the continuum from novice to expert. According to Benner (2004), phronesis is the action based on judgment that comes from critical thinking and experiential learning and techne is the formal knowledge base of the nurse. Experiential learning has been found to correlate with critical thinking and clinical reasoning in occupational health students (Coker, 2010; Scaffa & Wooster, 2004). Experiential learning allows the nurse at the competent stage to plan for and predict patient situations and responded accordingly (Benner, 2004).

Thus, as Benner et al. (2011) asserted, critical thinking, competence, and experiential learning are interrelated. Each is necessary on the continuum from novice to expert. The three intertwine toward overall transition in practice for the novice, advanced beginner, competent, and eventually expert nurse.

Practice Readiness in the Adult ICU

Benner (1984, 2004) affirmed new graduate nurses are at the advanced beginner level, and this stage is most crucial in the transition to practice. Through their educational preparation, NGRNs have knowledge and have had exposure to entry-level, non-complex nursing situations. The NCLEX-RN® measures and validates this knowledge for entry-

level safe nursing practice (NCSBN, 2013). However, adult ICU nursing practice requires in-depth knowledge of advanced assessments and technologies in the face of life-threatening, complex nursing situations (AACN, 2015). According to the AACN, acute and critical care nursing is the management patients with problems that have the potential to be life threatening (AACN, 2015). The AACN (2015) uses the AACN synergy model to define competencies of the critical care nurse. These include "Clinical Judgment, Advocacy and Moral Agency, Caring Practices, Collaboration, Systems Thinking [sic]" (AACN, 2015, p. 6). Each of these competencies as defined by the AACN mimic Benner's (1984, 2004) competence level. Therefore, the NGRN, a novice in adult ICU, is entering a practice area that expects practice at the competence level (see Figure 2).

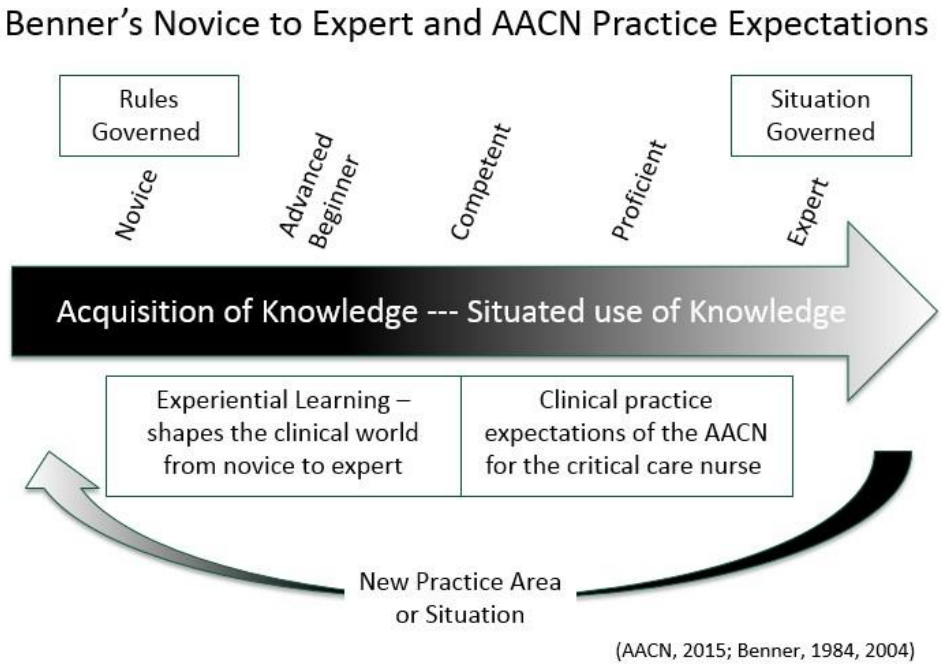

Figure 2. Benner's (1984, 2004) novice to expert in relation to clinical practice expectations of the AACN (2015) for the critical care nurse.

Evidence shows a disparity between new nurses' sense of practice readiness and their actual experience after being hired into adult ICU post-graduation (Benner et al.,

2011; O'Kane, 2012). According to O'Kane's (2012) findings, experienced nurses believed new graduate nurses were more prepared for practice in the ICU if they had had prior clinical experience in the ICU. However, the new graduates thought having been in the ICU as a student nurse gave them a false sense of security (O'Kane, 2012) consistent with Wright's (2014) findings. Wright (2014) found new graduates had higher perceptions of preparedness than the perceptions of hospital leadership and nurse educators. This false sense of security has been termed the 'honeymoon' phase on entry into nursing practice (Wright, 2014). Therefore, while those entering practice had critical thinking skill, their perceptions of clinical competence and experiential learning were likely to be inflated.

Varying definitions of what it means for a new graduate nurse to be practice ready further confounds the issue of readiness. Wolff et al. (2010) studied the meaning of readiness from the perspectives of experienced nurses, faculty, and the nursing regulatory sector. Wolff et al. (2010) found to be ready means to have a general foundation with work related capabilities in the provision of safe patient care. The expectation was new graduates should be able to have the ability to grasp changing situations and intervene accordingly (Wolff et al., 2010).

As Benner (2004) found, the full weight of responsibility for patients coupled with the NGRNs' false sense of security in feeling well prepared in a hospital environment that views them as unprepared has led to feelings of anxiety. As a result, new graduate nurses have been found to have fatigue, unrelieved job stress, and subsequent high turnover rates in a variety of ICU settings (Beecroft et al., 2008; Benner, 2004; Foglia et al., 2010; Pellico et al., 2009). Unrelieved job stress was a major factor in

nurse turnover in a pediatric ICU setting (Foglia et al., 2010). Three issues were found to be contributory: nature of the job, insufficient resources, and negativity of leadership (Foglia et al., 2010). Considering these were competent PICU nurses (greater than 2 years experience), it is of concern that leadership negativity played a role in turnover. In light of the Foglia et al. (2010) findings, if nursing leadership has a pre-conceived notion of new graduate nurse lack of preparedness, this negative perception might permeate the transition to practice for new graduate nurse with possibly detrimental consequences to new graduate nurses becoming competent and their patients. The perception of preparedness to practice varies among new graduates, nurse educators, and hospital leadership.

Current Practice and Effects

Regardless of the current disparity in practice readiness and practice expectations between entry-level and adult ICU nursing practice, NGRNs are hired into adult ICU and related specialty areas. A study reported 29% of NGRNs nationwide were hired into specialty ICU areas (Kovner et al., 2007). According to the NCSBN (2015), in 2011 and 2014, respectively, 23.5% and 18.7% of NGRNs were hired into critical care areas.

The novice NGRN hired directly into an adult ICU experiences certain sequelae: fatigue, anxiety, and unrelieved job stress leading to retention and turnover issues for organizations. Nationwide, overall across all nursing settings, turnover for NGRNs was 17.5% within the first year and 33% within the second year (Kovner et al., 2014). NSI (2015) reported a 16.8% turnover rate in adult ICUs in 2015 nationwide. There are fiscal, staffing, patient outcomes, and emotional ramifications to consider. The cost of recruiting and training a single staff nurse can range from $36,900 to $88,000 depending on specialty (Li & Jones, 2013; NSI, 2015). In 2015, it took up to 91.3 days to fill ICU

vacancies compared with 78.2 days in 2014 (NSI, 2015). Inadequate staffing in adult ICU has been shown to have adverse effects on patient mortality outcomes (West et al., 2014). Participants in the Foglia (2008) study spoke to the emotional toll of leaving a position, which included feelings of inadequacy and conflicted emotions.

In answer to the call for improved transition to practice and decreased new graduate turnover, hospital systems have implemented a variety of programs designed to ease the transition. However, nomenclature and characteristics of these programs vary across settings with varying objectives and interventions for transition to practice. Numminen, Leino-Kilpi, Isoaho, and Meretoja (2015) found there are factors other than practice environment, ethical climate, and actual organizational commitment that play a role in NGRN development of competence and empowerment during transition to practice. Therefore, while transition programs have been implemented, study of outcomes is complicated because there are so many confounding variables as in length of orientation, number and quality of preceptors, and class versus clinical time to name a few. There is little evidence on program outcomes. Further, transition to practice programs tend to not take into consideration the individual needs of the NGRN (Pellico et al., 2009).

Current Understanding of the Novice Experience in ICU

Some researchers have explored the lived experience of novice nurses in ICU. For example, Farnell and Dawson (2006), and later Gohery and Meaney (2013), explored the experience of nurses with prior nursing experience. but new to the ICU. Participants in the Farnell and Dawson (2006) study cited two reasons for transferring to ICU nursing: knowledge acquisition and nurse to patient ratios. Farnell and Dawson (2006) pointed out the participants entered ICU nursing to escape the stressors of ward nursing. In the study,

participants were interviewed about their experiences in adult ICU, specifically factors influencing their experiences. Four key themes were revealed in the study: support, knowledge and skills, socialization, and moving on. Farnell and Dawson (2006) found those nurses with less prior experience, either in years or variety of clinical practice areas, were more likely to have difficulty transitioning from novice to advanced beginner. Farnell and Dawson (2006) pointed out this may have influenced these nurses' ability to move on to advanced beginner and competent. Farnell and Dawson (2006) also pointed out socialization to the ICU environment is an important part of transitioning to practice. The new nurse's expectations may have been inflated and the nurses tended to set unrealistic goals in their transition to practice (Farnell & Dawson, 2006).

Davenport (2000) and later St. Clair (2013) sought to understand the experience of new graduate nurses during orientation in the ICU. Davenport (2000) explored the experiences of eight nurses beginning practice in adult ICU. Davenport (2000) specifically sought to understand the experience of orientation. Ten themes were revealed: finding a home, hardest things, family care, relationships, socialization, teamwork, questions, emergencies and deaths, being watched, and moving on (Davenport, 2000). St. Clair (2013) sought to study the experiences of 10 new graduate nurses on entry into orientation in ICU practice and again at completion of orientation. According to St. Clair (2013), only six nurses remained in ICU nursing at the completion of orientation. St. Clair (2013) identified two stages of transition: beginning and moving on. The first was fraught with feelings of being overwhelmed and concern for harming the patient. The second was fraught with anxiety, but also a sense of confidence in learning and gaining experience.

Saghafi et al. (2012) used descriptive phenomenology to explore the experience of social interactions of 10 newly graduated (less than 1 year) registered nurses with other nurses, staff, physicians, and patients in the adult ICU. Saghafi et al. (2012) found NGRNs either had supportive or challenging interactions. Being an outspoken, but approachable, accepted member of the team tended to result in supportive interactions (Saghafi, et al., 2012).

Using ethnographic study, Benner described the clinical worlds and characteristics of nurses as they transverse through the stages of novice to expert (Benner, 1984, 2004; Benner et al., 2011). Benner's phenomenological work speaks to the consequences of lack in preparedness for NGRNs: anxiety and unrelieved job stress (Benner, 1984, 2004; Benner et al., 2011). However, Benner but did not delve into the NGRN's experience of becoming competent.

Moving on is a theme across the extant of the literature with regard to the experiences of NGRN's in adult ICU. Moving on has been associated with acquiring knowledge and skills as well as gaining experiences (Davenport, 2000; Farnell & Dawson, 2006; St. Clair, 2013). These associations are similar to what is also required, according to Benner, to traverse the novice to expert continuum (Benner, 1984, 2004; Benner et al., 2011). To date, there are no studies that specifically explore the experience of NGRNs hired directly in adult ICU areas who have remained, were retained, and moved on to become competent during their time working in adult ICU.

Literature Review Summary

The state of the science with regard to (a) Benner's novice to expert continuum (Benner, 2004; Benner et al., 2011); (b) competence, critical thinking, and experiential

learning; (c) practice readiness; (d) current practice; (e) and current understanding of the experiences of novice nurses in ICU is extensive; however, it does not provide a clear understanding of the experience of retained ICU nurses who had become competent from NGRN in the adult ICU. Benner's (1984, 2004) work speaks to the lack of competence and related consequences to NGRNs, but does not delve into the experience of the NGRN. NGRNs have critical thinking abilities and thus the ability to develop competence. NGRNs have a perception of being prepared to practice when they are not. This has led to stress, anxiety, and subsequent turnover. NGRN transition efforts only address what educators and hospital systems think NGRNs need for successful transition. What remains unclear in the literature is the experience of the NGRN becoming competent in the adult ICU. Only when we know this can quality, NGRN centered, targeted transition to practice programs be developed. Thus, the focus of this study was to explore the NGRN experience of being and having become competent in adult ICU rather than how competence was obtained.

CHAPTER III

PROCEDURE FOR COLLECTION AND TREATMENT OF DATA

This research used a qualitative design with hermeneutic phenomenology as the methodology. Hermeneutic phenomenology was an appropriate methodology stemming from the interpretive philosophical stance because it allowed for an exploration of the meaning of being in context and time (Heidegger, 1962). The purpose of this study, to explore the lived experience of nurses who were hired into adult ICU as NGRNs and were starting their third year of practice was also consistent with hermeneutic phenomenology. These nurses existed in the context of adult ICU and over time came to a different existence: novice to competent (Benner, 2004). The procedures for sampling, data collection, data analysis, and scientific rigor are described below.

Methodology

This study was of the qualitative approach. Hermeneutic phenomenology was the research methodology stemming, not only from the research question, but also from the interpretive phenomenology philosophical stance. van Manen (1990) described the methodology, hermeneutic phenomenology as the interpretive exploration of an experience in the world by means of written and spoken language. In Heidegger's (1962) view, multiple realities can exist as a person becomes and exists over time and through context over a life course: Dasein. Through lived experience in time and context, the reality and truth of Dasein changes over time (Heidegger, 1962). In this study, the Dasein of the new nurse existing, beginning the third year of practice, and becoming competent in the world and context of adult ICU was interpreted toward an overall meaning of the

experience as it had been lived over time and in context. Heidegger (1962) called hermeneutic interpretation a circular exercise. According to van Manen (1990, 2014), hermeneutic phenomenology involves an encompassing interaction of research activities relating to a phenomenon of deep interest to the researcher. In hermeneutic phenomenology, the essence of being is a shared human contextual experience (van Manen, 1990). Thus as a methodology, hermeneutic phenomenology embraces the researcher's preconceived notions as an integral part of the interpretive process (van Manen, 1990). The experience of the researcher who was an NGRN who entered the third year of practice and beyond, and moved from novice to competent and beyond in the context of the adult ICU continued to exist and co-mingled via reflexivity during these interpretive research activities. Using the hermeneutic circle, knowledge was co-created with the textual data itself, the researcher's textual interpretations, and the researcher's preconceived notions linked with resulting interpretations.

Methods

Setting

The study setting was in Texas. Potential participants were nurses who worked in adult ICUs in the state of Texas. Participants worked at varying types of hospital systems including teaching, community, not-for-profit, and/or for-profit. Length of orientation, number of ICU beds, shift types, and frequency of in-service days of continuing education varied. Such setting information was collected with the demographic data.

Participants

This study used a combination of purposive and snowball sampling strategies. The target sample came from the population of NGRNs hired into and working in adult

ICUs in Texas. Participants were telephone screened (see Appendix C) for the following inclusion criteria: NGRNs who (a) were hired into the adult ICU as first job post-graduation within 3–6 months of graduation; (b) had attained and retained Registered Nurse licensure; (c) had 24 to 30 months' experience; (d) were still working in the same unit of hire at the time of the study; (e) worked in trauma, cardiovascular, medical, or surgical adult ICUs in Texas, and (f) had an associate's or bachelor's degree in nursing. According to Benner et al. (2011), most nurses attained competence within two years; thus the 24 – 30 month window. Exclusion criteria were NGRNs who (a) had prior nursing licensure, as in as in Licensed Vocational Nurses (LVN) or RN to BSN graduates; (b) had practiced as a nurse in any other practice setting; and (c) had an encumbered license with the Texas Board of Nursing. The focus of interest for this study was NGRNs with no other exposure to nursing other than their initial and current experience in an adult ICU. The stated inclusion and exclusion criteria ensured the sample came from the population of NGRNs in an adult ICUs in keeping with Benner's (1984, 2004) novice to expert framework. Other hermeneutic phenomenology sample sizes ranged from 8 to 14 (Davenport, 2000; Farnell & Dawson, 2006). The sample size for this study was 11 as data saturation was achieved. Participants' demographic data is outlined in Table 1.

Table 1

Setting and Demographic Characteristics

	Age	Gender	Currently enrolled	Hospital Type	Orientation Length (Months)	# of ICU Beds	Length of Service (Months)	Type of ICU
175	33	F	MSN	Not for profit Teaching Community	6	14	25	CV
188	29	M	CRNA - DNP	Not for profit Community	4	24	25	S/N
268	32	M	MSN	Not for profit Teaching Community	3	12	24	T II
289	45	M	No	For profit Teaching	3	22	24	M/S
407	25	M	No	For profit Teaching	4	22	24	CV/N
476	27	M	MSN/ MBA	Not for profit Community	4	32	26	M
545	45	M	MSN	Not for profit Teaching	3	24	24	CV
689	29	F	No	Not for profit Community	1.5	12	24	M
787	37	F	No	Not for profit Teaching Community	2.5	14	30	CV
814	29	F	No	For profit	4	12	24	T II/N
928	41	M	No	Not for profit Community	6	14	24	T II

*CV = cardiovascular; M = Medical; N = Neurological; S = Surgical; T II = Level II Trauma

Study recruitment began after Institutional Review Board (IRB) and graduate school approval in December 2017 and concluded in July 2017. The researcher networked via professional association with the AACN to contact adult ICU managers,

nurse educators, and AACN chapter presidents. With permission, informal presentations were conducted with potential participants at unit staff meetings and AACN monthly meetings to explain the study purpose. Attendance at these meetings was conducted in person, via face-time, or conference call. Recruitment fliers were provided. The recruitment plan was conducted with the understanding that the adult ICU contacts may have no interest. Some contacts did not return researcher phone calls or emails. Secondary recruitment involved snowball techniques whereby current recruited participants were asked to share the research flier with other potential participants.

At no point during recruitment did the researcher ask for potential participant contact information. Rather, potential participants were asked to contact the researcher. When potential participants contacted the researcher, a telephone appointment was made to screen for inclusion and exclusion criteria via phone screening script (see Appendix C). There were 16 responses to recruitment overall. During the telephone screening, the purpose for the study was discussed and my experience having been a NGRN hired directly into ICU was explained. During screening, three did not meet inclusion/exclusion criteria. Two potential participants met screening criteria, but did not sign or return the consent form for reasons unknown to the researcher. The final sample size was 11 and responses to recruitment did not exceed the proposed sample size. In order to ensure benefits of participation, all participants and potential participants were offered a report of the study's findings as well as an explanation of the potential benefits of the research to others during the consent process.

Protection of Human Subjects

IRB approval for Texas Woman's University (TWU) and from Texas A&M University – Corpus Christi (TAMUCC; see Appendix A) was obtained before recruitment of participants. All rules and regulations of both IRBs were followed over the course of this study. Potential risks to human subjects in this study included coercion, loss of anonymity, loss of confidentiality, loss of time, and fatigue. To minimize these risks protection interventions were implemented.

To minimize the risk of coercion, participants were informed participation in the study was completely voluntary and participants may stop the interview and/or drop out of the study at any time without consequence. Anonymity could not be guaranteed because the researcher knew the participant's identity. Participants were informed to minimize the risk of anonymity; the researcher would use unique identifiers, known only to the researcher. Most interviews were conducted via Skype® in the researcher's home office. Participants were asked to choose a private room for the interview. Three interviews were conducted in a private office at the university during off hours.

Confidentiality was protected to the extent that is allowed by law. There is a potential risk of loss of confidentiality in email communication. The researcher only accessed emails on her computer. The researcher's computer is password protected and uses security software. Confidentiality was maintained by assigning a three-digit unique code to participant study documents and audio recordings. Transcriptions were typed into a word document and participant names were replaced with the unique identifier as assigned. Signed consent forms were the only paper documents with the participants' names. These were stored in a secure drawer in the researcher's private home office. The

results of the study may be reported in scientific magazines or journals, but participants' names or any other identifying information (job title or role) will not be included. To minimize the risk of loss of time, the researcher informed participants of the time commitment of no more than 1 hour and 40 minutes. The researcher took steps to keep the interview time short via the use of interview and demographic data collection guides (see Appendix D). Telephone screenings were less than 5 minutes and interviews were on average 30 minutes. During interview there was a risk of fatigue. Participants were offered breaks and informed they may also stop answering questions at any time and end the interview. Participants chose the time of interview. The researcher made every attempt to ensure participants' comfort during the interview. These risks and protection mechanisms were disclosed to participants during the consent process.

During data analysis, confidentiality was maintained by using the unique three-digit code assigned to participant study documents and audio recordings during data collection. The only document linking participant codes to identifying participant information was an electronic password protected master list document stored separately from all other research documents. All other study related documents including informed consent forms were stored in a locked file cabinet in the researcher's home office. All electronic files including transcripts, NVivo 11® files, and digital audio recordings were stored on a password-protected drive located in a locked file cabinet in the researcher's home office. All study related documents and files will be retained for 3 years at which time they will be destroyed (permanently deleted). The participant names will not be used in study papers or publications and will not be made public.

After telephone screening, appointments for interview were made with each participant. For participants at a distance (8) the consent form (see Appendix B) was emailed with instructions to contact the researcher via the provided telephone number in the event there were questions. These consent forms were received via email and were printed and stored accordingly. The electronic copy and the emails were deleted per IRB protocol to protect the participant. For participants requesting in-person interviews (3), consent was obtained at the time of interview before interview. In-person participants were given time to read the consent form and ask questions. These consent forms were transported to the researcher's home office and stored accordingly. A copy of the signed consent form was given to each participant. Prior to interview, the consent form was reviewed again and each participant was afforded an opportunity to ask questions or refuse to participate.

Data Collection

Data collection was conducted via one-on-one interview and verbal response to demographic questions. According to van Manen (1990), the purposes of interview in hermeneutic phenomenology are (a) to gather written (transcribed) material for developing an understanding of the phenomenon and (b) to conversationally immerse the participant and the researcher in the experience. Conversational interview is essential toward exploring the story or experience of the participant as it was lived. Thus, interview questions were geared toward learning about the experience (van Manen, 1990, 2014). The overall interview conversation focused on the question: Can you tell me about your experiences of having become competent (survived) as an NGRN hired directly into an adult ICU?

The one-on-one open-ended, conversational interview was scheduled and conducted via Skype® or in person as feasible at a time convenient to the participant when the participant was not scheduled to work. In-person interviews were conducted discretely in an office at the university during off time. Interviews via Skype® were conducted from the researcher's home office and participants were requested to choose a private location for the Skype® interview. Demographic data was collected via data collection guide (see Appendix D) verbally via Skype® or in person prior to the interview.

Demographic data collected included age, gender, ethnicity, English as a second language, level of education, current educational status, prior experience (healthcare versus non-healthcare), type of hospital (not for profit, for-profit, magnet status), length of orientation, number of ICU beds, shift type and part-time or full-time status at the time of hire and at the time of the study, length of service, and frequency of in-service days for continuing education. After collection of demographic data, the interview guide (see Appendix D) was used to loosely guide the conversation to maintain focus on the overall phenomenon of interest: the experiences of having become competent (survived) as an NGRN hired directly into an adult ICU.

Participants were comfortable and relaxed during the interviews. Their responses were forthcoming and they were eager to share their experiences during the interviews. van Manen (2014) suggested guiding the interview around the phenomenon of interest.

In the early interviews, the first question geared toward getting at the overall meaning of having become competent tended to create an uncomfortable long pause. In keeping with van Manen's (2014) suggestion to let the silence exist, these pauses were

respected. However, in some cases further prompting was needed. When pauses became exceedingly long, the second interview question was used as a prompt to the first. Having participants choose a word or metaphor as suggested by van Manen (1990) to get at meaning tended to serve as the jumping stone toward specific experiences as the participants had lived through them. In subsequent and later interviews, the first question was prefaced with the research purpose, which served to decrease long pauses. In order to ensure the experience was explored to its fullest in time, space, and context, the interview guide (see Appendix D) was referred to during the interview.

Data Management

Prior to data analysis, all collected data was saved and stored on a password protected flash drive. Interview audio recordings were MP3 files on the researcher's password protected digital audio recording device. The password protected, digital audio recording device was transported, if needed, as in the case of the three in-person interviews, to the home office of the researcher. Next, the MP3 audio recordings were saved to a password protected flash drive. The name of the saved file was the assigned three-digit participant code and had no participant identifying information. Once this saving was verified (downloaded and listened to briefly), the MP3 recording was deleted from the digital audio recording device. Until transcription and data analysis, the flash drive was stored in the researcher's locked home office. As soon as possible after the interview, each audio recording was transcribed into a Word document for interview data. Each file was named and saved with the corresponding participant code. During transcription, no identifying data was transcribed. Demographic data was entered into an

Excel spreadsheet and similarly saved on a separate password protected flash drive with no identifying data.

Data Analysis

Data analysis employed hermeneutic phenomenology methods as described by van Manen (1990, 2014). The whole was read for overall interpretation and essential phrases were identified with sentence clusters toward emerging themes (van Manen, 1990). As a circular exercise, these data analysis activities came full circle as in the hermeneutic circle toward an overall interpreted understanding of the phenomenon.

For this study, the researcher transcribed each interview and considered this part of the data analysis process because the researcher was able to re-live the experience of the interview with each participant. After transcription, preliminary notes were made in a researcher reflective journal on overall impressions and meanings as interpreted by the researcher.

The transcripts were uploaded to a password protected NVivo 11® project file. Each was read in entirety and an interpretive overarching draft phrase capturing the meaning of the text, as a whole, was written as an NVivo 11® memo per transcript. Then, transcripts were read selectively to determine themes that may be essential to the phenomenon. Selections seeming essential were preliminarily coded in Nvivo 11® nodes. Each transcript was then read line by line to extract repetitive phrases. Repetitive phrases were highlighted and preliminarily coded in Nvivo 11® nodes. Each thematic decision was documented using the Nvivo 11® annotation feature as an audit trail. The result was a thematic list of repetitions seeming essential to the phenomenon. Each theme was reviewed to determine essentiality. That is, could the phenomenon exist without the

theme in question? The process of determining essentiality involved an interpretive inductive reasoning thought process whereby the researcher used several questions such as ‘can one imagine having become competent in adult ICU without this theme?’ or ‘if we delete this theme, does the phenomenon still exist?’ This thought process was reviewed with an expert phenomenologist who came to the same conclusions regarding essentiality in the data analysis phase. Using NVivo 11®, exemplar quotes for the essential themes were highlighted. These data analysis phases are outlined in Table 2.

Table 2

Data Analysis Phases

	Reading and Interpreting Action	Writing and Interpreting Product
	Transcribe Interviews Upload transcripts to NVivo 11®.	Preliminary written interpretation with reflexivity.
Overall View Approach	Read the transcript without doing any mark-ups on the document. Write an overall interpretation as an NVivo 11® Memo.	A written overall phrase capturing the interpreted meaning of the text as a whole.
Selective and Detailed reading to Isolate Thematic Statements	Read line by line, highlighting preliminary exemplars. Classify repetitions as themes (nodes) in NVivo 11®.	A list of repetitious phrases seeming essential to the phenomenon.
Essential v. Incidental	Can the phenomenon exist without this theme?	Essential themes to the Phenomenon.
Hermeneutic Circle	Review and verify identified themes. Repeat phases until interpretation saturation occurs.	An overall interpretive meaning statement of the phenomenon.

As a circular exercise, these data analysis activities came full circle as in the hermeneutic circle (see Table 2) toward an overall interpreted understanding of the phenomenon in time, space, and context. This continued until knowledge about the phenomenon was as saturated as possible with the underlying awareness that the interpretive process in hermeneutic phenomenology is limitless. Demographic data were explored using Excel features for descriptive statistics. Average age, orientation length, and length of service were analyzed. Other data reviewed were hospital type, number of ICU beds, and higher education enrollment.

Scientific Rigor

Several strategies were used to strengthen the trustworthiness of the interpretations. According to Lincoln and Guba's framework (1984), trustworthiness in qualitative inquiry can be established via credibility, confirmability, dependability, transferability, and authenticity. Credibility refers to the truth of the findings. Dependability means there is accuracy of the findings over time. Confirmability has to do with data representation of the information provided by the participants. Transferability refers to extent of extrapolation of findings and authenticity means the experience as it was portrayed is evident through the written description.

According to Polit and Beck (2012), criteria can be met by integrating several strategies into the research design. Researcher reflexivity and use of an audit trail were strategies employed toward truth and accuracy to the interpretations. The researcher made note of reflexive thoughts through the recruitment, data collection, and data analysis phases in a word document and using the memo feature of NVivo 11® software. A researcher audit trail was conducted using NVivo 11® annotations for the tracking of the

decision-making process with regard to creation of themes throughout the data analysis process. Transcription was verified with the audiotape to ensure accuracy as well as data representation. After and during data analysis, consultation with a hermeneutic phenomenology expert was conducted to verify themes. Member checking was conducted to verify themes in order enhance credibility, confirmability, and authenticity. Six participants agreed to member checking and all six confirmed the resulting themes resonated with their experiences. Demographic data were collected and reviewed for transferability. The sample was rather homogenous with regard to race and education and therefore the results are not transferable, a limitation in this study. Data was collected and analyzed until data saturation occurred with the understanding that the interpretive process in hermeneutic data analysis is boundless. During the presentation of the findings, a rich interpretive writing style including a note of reflexivity as described by van Manen (1990) was used in effort to support the authenticity of interpretative findings.

Chapter Summary

In summary, this research was of the qualitative design with hermeneutic phenomenology as the methodology. Hermeneutic phenomenology was an appropriate methodology stemming from the interpretive phenomenology philosophical stance and the study purpose to explore lived experience. The procedures for sampling, data collection, data analysis, and scientific rigor described here are consistent with the hermeneutic phenomenology methodology.

CHAPTER IV

THE EXPERIENCES OF NURSES HIRED AND RETAINED IN ADULT INTENSIVE CARE UNITS

A Paper Submitted/ To Be Submitted for Publication in

Intensive and Critical Care Nursing

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Summary: It is a common practice that new graduate Registered Nurses (NGRNs) are hired into adult Intensive Care Units (ICUs) on initial entry into practice. There exists a practice readiness gap between nursing curricula and actual clinical practice expectations at adult ICU settings. The practice readiness gap has negative consequences and subsequent nurse turnover, a concern nationwide. Nonetheless, some NGRNs survived their initial transition and continue to practice at adult ICU settings. The purpose of this study was to explore the experiences of nurses who were hired into adult ICU as NGRNs and survived their transition, starting the third year of practice. The study used the hermeneutic phenomenology research approach. Data analysis revealed the overall meaning of the experience: coming to terms with being comfortable with being uncomfortable. The six themes associated with being comfortable with being uncomfortable were confidence and uncertainty, gaining experiences and forever learning, intuitive knowing and intuition, difficult and stressful, being courageous and assertive, and the team and persons of support. NGRNs can survive to become competent adult ICU nurses. This research reveals the need to promote exposure to a variety of clinical situations early, to promote resilience and self-care, and to foster unit teamwork

and mentoring to ensure successful transition and overall retention of new nurses hired into in adult ICU.

Implications for Clinical Practice

Exposure to many and various clinical situations: Preceptorships and orientation programs should be intentionally designed to expose NGRNs to a variety of real-life clinical situations.

Resilience and Self-Care: Preceptorships and orientation programs should include a resilience and self-care component.

The team & persons of support: NGRNs need to enter the practice setting in a good team and have strategic plans for persons of support that will take them beyond the orientation timeframe.

Keywords: Critical care nursing, intensive care nursing, new graduate nurses, hermeneutic phenomenology, competence.

New graduate Registered Nurses (NGRNs) are hired into adult ICUs on initial entry into practice. According to the National Council of State Boards of Nursing (NCSBN, 2015), 23.5% and 18.7% of NGRNs were hired into critical care areas in 2011 and 2014, respectively. Through their educational preparation,

NGRNs have knowledge in the management of entry-level, non-complex nursing situations. The NCLEX-RN® validates entry-level nursing knowledge (NCSBN, 2013). Adult ICU nursing practice requires in-depth knowledge of advanced assessments and technologies in the face of life-threatening, complex nursing situations (AACN, 2015).

There is a plethora of literature reporting on the practice readiness gap between nursing curricula and actual clinical practice expectations (Benner et al., 2011; Pellico et al., 2009; Wolff et al., 2010; Wright, 2014). The practice readiness gap has fiscal, staffing, and emotional consequences (Baumberger-Henry, 2012; Benner et al., 2011; O'Kane, 2012), leading to nurse turnover, a nationwide concern (Kovner et al., 2014; Li & Jones, 2013). In 2015 and 2016 respectively, NSI (2017) reported a 16.7% and 17.7% turnover rate in critical care settings. However, some NGRNs are retained in critical care settings.

Prior studies on new nurses in adult ICUs have focused on experiences of experienced nurses new to ICU (Farnell & Dawson, 2006; Gohery & Meaney, 2013); new graduate nurses during orientation in adult ICU (Davenport, 2000; St. Clair, 2013); and new graduate nurses' experiences of social interaction in the adult ICU (Saghafi et al., 2012). Benner et al. (2011) identified and described the clinical worlds of novice, advanced beginner, competent, proficient, and expert. Benner found consequences related to lack in preparedness for novice and advanced beginner nurses, but did not delve into

the experience itself for the NGRN (Benner, 1984, 2004; Benner et al., 2011). To date, there are no studies that explore the experience of those NGRNs retained beyond the second year to become competent in the adult ICU practice setting.

Purpose

The purpose of this study was to explore the experiences of nurses who were hired into adult ICU as NGRNs who survived their transition into the third year of practice. Nurses entering the third year of practice have developed the ability to predict, plan, and respond to complex patient situations (Benner, 1984, 2004, 2013; Benner et al., 2011; Benner et al., 1992). On Benner's novice to expert continuum, nurses hired into critical care areas tend to exhibit competence within 2 years of initial hire (Benner et al., 2011). The central research question was: What is the lived experience of NGRNs who have become competent in adult ICU as their first job post-graduation?

Methods

Design

This study used a qualitative hermeneutic phenomenology design. Hermeneutic phenomenology is an exploration of meaning of being in context and time (Heidegger, 1962). According to Heidegger's (1962) concept of Dasein, the person is put into the world and must live and act in the world to come to a different existence. Through lived experience in time and context, the reality and truth of Dasein changes (Heidegger, 1962). The context of the experience is as important as the interpretation and meaning of the experience (Callary et al., 2015). The essence of being is a shared human contextual experience. Hermeneutic phenomenology embraces the researcher's preconceived notions as an integral part of the interpretive process (van Manen, 1990, 2014). The

experience of the researcher, who was an NGRN and became competent in the adult ICU, continued to exist and co-mingled via reflexivity in the interpretive process. Hermeneutic phenomenology involves a circular exercise of reading, reflective writing, and interpretation of experience by means of written and spoken language commonly referred to as the hermeneutic circle (Kafle, 2011; van Manen, 1990, 2014). Knowledge can be co-created with the textual data itself, the researcher's textual interpretations, and the researcher's preconceived notions linked with resulting interpretations.

Ethics

Institutional Review Board approval was obtained from the authors' affiliated universities. Prior to each interview, the purpose of the interview was explained to participants. Informed consent was obtained.

Participants and Procedure

Participants were recruited across Texas via purposive and snowball-sampling. Informal presentations were conducted with potential participants at unit staff meetings and AACN monthly meetings to explain the study and distribute recruitment fliers. The focus was nurses who were hired into adult ICU as NGRNs starting their third year of practice. Telephone screening was conducted with potential participants self-identifying with 24 to 30 months experience hired directly into adult ICU after graduation. The average length of service was 24.82 months. Average age was 33.82 years. There were seven males and four females. Ten of the 11 identified as White, not of Hispanic origin and one reported as Asian Indian. All participants' native language was English. All participants held a BSN and five were working on higher degrees at the time of interview. All participants were working full-time at the time of hire. Nine remained full time at the

time of interview with two reporting working part-time, less than 30 hours. Seven had prior health care experience. Nine had prior work experience outside of health care. The average length of orientation was 3.73 months and varied from 1.5 to 6 months. ICUs were 12–32 beds. The types of ICUs included Cardiovascular (3), Medical (2), Level II Trauma (2); Medical – Surgical (1); Medical – Neurological (1); Cardiac – Neurological (1); and Level II Trauma – Neurological (1). Five participants were working night shift at the time of hire and six were working days shift at time of hire. There was no change in shift type from time of hire to time of interview.

Data Collection

Demographic data was collected prior to the interview. One-on-one open-ended interviews were conducted via Skype® or in-person. Hermeneutic phenomenology interview serves to gather written (transcribed) material and to immerse the participant and the researcher in the experience (van Manen, 1990). Interview questions were geared toward learning about the experience (van Manen, 1990, 2014). An interview guide was used to focus on: Can you tell me about your experiences of having become competent (survived) as an NGRN hired directly into an adult ICU? The interviews were transcribed verbatim and a researcher reflexive journal was kept throughout the study. To minimize risks of loss of anonymity and confidentiality, participants were assigned a three-digit unique code.

Data Analysis

Data analysis employed hermeneutic phenomenology methods as described by van Manen (1990). The transcripts were read and an initial interpretive overarching draft phrase was written intending to capture the meaning of the text as whole. Then,

repetitious phrases were isolated and preliminarily coded using NVivo 11® software. Exemplars seeming essential to the phenomenon were identified. According to van Manen (2014), essential phrases are those that could not exist without the phenomenon of interest. From an interpretive, inductive stance, the transcripts were read as a whole to identify the collective meaning of becoming a competent ICU nurse from a novice NGRN. As in the hermeneutic circle, the data analysis activities continued circularly via reading, reflective writing, and interpretation until knowledge about the phenomenon was as data saturated as possible with the underlying awareness that the interpretive process in hermeneutic phenomenology is limitless (Kafle, 2011; van Manen, 1990).

Results

The overall meaning of the experience of having become competent from novice in adult ICU is coming to terms with being comfortable with being uncomfortable. Themes stemming from being comfortable with being uncomfortable include confidence and uncertainty, gaining experiences and forever learning, intuition and intuitive knowing, difficult and stressful, courage and assertiveness, and the team and persons of support.

Confidence and Uncertainty

NGRNs entering adult ICU as their first practice area were confident in their abilities; however the reality of caring for patients, people with life-threatening situations, led to uncertainty and subsequent lack of confidence. In reflecting on the experience of going from NGRN to entering the third year of practice, most participants in this study alluded to a type of reality shock. Male Participant 476 explained:

> In nursing school you know by the time you graduate, your like oh I'm so I'm so ready for this, this is so good, everything is so great… …you start getting… ...real hands on experience and you've got a preceptor that's down your throat whose like why are you doing it this way. Why are you doing it this way?…nursing school… It's not (laughs) necessarily like the real world.

Even participants with prior health care experience expressed becoming uncertain and uncomfortable when they realized their lack of knowledge. Participant 545 spoke of coming to the realization even with his prior experience as a flight paramedic, he was not competent in the beginning:

> …it also helped me realize how much I didn't know (voice raised). There's a lot… …that I, (stuttered) quickly learned that um, (laughs) I ah, I ah wasn't wasn't that competent in the beginning.

While the realization of not knowing was uncomfortable, coming to such a realization was an essential step for these participants.

> It was very stressful the first, ya know, couple months until you got to know what you were doing (voice raised and cracked). And you got to see a lot of things you've never seen before so it makes it kinda difficult to be comfortable. (Participant 928).

Even with 2 years experience, participants were confident and uncertain simultaneously. Participants described recent situations as they entered their third year of practice where they felt uncertain, but yet were comfortable in their knowledge. Participant 175 described an experience that occurred in her 24th month of practice.

> I gave more Ativan that day than I ever gave. She finally fell asleep, but um… And even though, I knew what was goin' on and what to do about it, when all said and done, I was still worried about the Ativan (sighed and shrugged shoulders).

Male Participant 476 recalled a similar recent situation.

> I just remember I had a moment where I was looking at him and I was like what did I miss, (repeated three times) and I was like please don't, (repeated four times) die, um and I was just saying that in my head repeatedly, please don't die... ...thinking of what did I miss?

Several participants mentioned still seeking opinions from others in patient care decisions. In the reality and context of the adult ICU practice setting, a nurse may never become totally comfortable. These nurses over time had to come to terms with being comfortable with being uncomfortable.

Gaining Experiences and Forever Learning

Gaining experiences and forever learning was pivotal in adult ICU nurses becoming confident in uncertain situations over time. Participant 787 reflected on an uncomfortable moment and how gaining experiences was important for her.

> I felt so responsible (word said slowly with voice raised and teary)… um for not being able to think ahead and that's the difference between a new grad and experience, you can't learn that in school.

In the above excerpt, she was recalling an incident where she missed a critical change in patient status during the first few months of practice.

> There's nothing you can to go back, except for learn and that's what experience teaches you, it teaches you to learn from the things. (Participant 787)

Lack of exposure to complex clinical situations resulted in increased uncertainty and lack of confidence. After her 6-month orientation, Participant 175 described a practice that delayed her exposure to more complex clinical situations until after getting off of orientation.

> I would take the least sick patient and she would take the other two and pretty much I was on my own taking care of one least sick patient, so I kinda missed out on learning about the sicker patients and then before I knew it, (snapped fingers) I was off orientation and on my own (sighed).

For many participants, getting exposure to new situations and forever learning happened contextually in the ICU setting and over time.

> I think it takes time to learn and assimilate things. Ya gotta have that time. Um, I also think exposure to situations. Like not just formally learning, but being exposed to it to. I, I guess. (Participant 928)

For male Participant 289, forever learning was important during the first two years toward gaining confidence in unfamiliar clinical situations.

> …forever learning…Like almost every shift your building some type of rock in the foundation and your forever getting better at and forever learning.

The more exposure to varying clinical situations, the more these nurses were able to forever learn and become comfortable with managing the life-threatening patient situations, uncomfortable situations, inherent in adult ICU nursing practice.

Intuitive Knowing and Intuition

Intuitive knowing and intuition for these adult ICU nurses developed over time and in context of having gained experiences in the adult ICU. Intuitive knowing

encompassed knowing what to look for, knowing what to do, and knowing your resources, reminiscent of nursing process. Many of the same exemplar quotes transcended intuitive knowing and intuition. For example, Participant 175 described a recent experience in which she intuitively knew there was a problem, she knew what to look for, and subsequently knew what to do.

> *Knowing what to look for*: But I donna [don't know], something *intuitively* wasn't right, ya know... ...Well, I'm thinking here we go... ...GI bleed, maybe DTs happening or maybe just ICU confusion.
>
> > *Knowing what to do*: She starts pulling at lines and such and I'm thinking I'm going to have to put her in restraints. I hate (voice raised, almost ruefully) doing that, but I knew I needed to protect her [IV] line.

In another example, Participant 476 described a situation where he *intuitively knew* something was wrong, and also knew what to look for and what to do.

> And, for whatever reason, I stopped eating, I immediately got up, ran down the hallway to the room. And I walk in the room and he was agonal breathing, ah unresponsive, and... ...pulseless and in v-fib. Um, And in that moment I knew like, this is a code (voice raised in anticipation) ya know, and hit the code blue button, you know start CPR, start giving oxygen.

Even though these experiences were uncomfortable, the nurses intuitively knew what to look for and what to do making the situation manageable. The nurses' use of intuitive knowing and intuition from having gained experiences over time were essential in the first 2 years of practice in adult ICU. Six participants spoke about how gaining experiences led to intuitive knowing. These nurses with 2 years experience described

uncomfortable situations becoming manageable for them secondary to having gained experiences, intuitive knowing, and intuition over time.

Difficult and Stressful

Nine participants described the first 2 years of practice in adult ICU as difficult. Of those, eight associated the difficult with stress and three described the experience as sometimes overwhelming.

> Just probably very difficult…Just questioning myself and that was difficult. (Participant 188).

While the participants described the experience as difficult and stressful, seven also expressed feeling successful and accomplished.

> Yeah, um ...accomplished, but it is more than that… um... rewarding? Maybe? It's not easy, some days are really difficult, but um… just knowing that I got this (raised voice in happiness and confidence), I know what to do and I like that. That is kind cool… for me anyway. (Participant 814)

Two participants did not mention experiencing difficulty and stress. Participant 289 was a 45-year-old with 24 months on a medical surgical ICU at the time of interview. He described two near miss medication situations that "scared the (obscenity) outta..." him, but did not describe the experiences being difficult. He had no prior health care experience, but many years of experience as an industrial worker. Participant 476 was a 27 years old with 26 months experience in a medical ICU who also was working on his MSN/MBA at the time of interview. While he did not call the experience difficult, some situations were overwhelming.

> …all of the sudden the decision was made to… you know extubate the patient withdraw life support. It was definitely very very um… overwhelming.

Seven participants mentioned decompressing as a method for coping with the stressors involved in of becoming competent. Participant 175 mentioned decompressing strategies during and after work.

> …this is probably kinda bad, but, um... she would… she smoked, see? so she would get off the unit for 5 minutes to smoke and take me with her, which was good cuz we could decompress from things and then go back to the unit fresh.

Participant 545 made mention of after shift coping strategies.

> No matter how tired I am or how late I get out. I do something... ...just something that's non-medical related has nothing to do with the hospital……try to get myself out of that to kinda decompress.

Even though Participants 289 and 476 did not describe the experience of becoming competent as difficult or stressful, they also employed decompressing strategies after those near-miss situations. The participants engaged in diversional activities to disengage and cope with the difficult situations and related stress.

Courage and Assertiveness

Nine of the participants attribute personality traits as a factor involved with being able to deal with difficult situations and eventually stay in adult ICU. Participants 268, 289, 407, 545, 814, and 928 consistently used the words "don't be shy" and Participants 175, 188, 289, 787, and 814 consistently used the words "jump in" when discussing what it takes to survive the first 2 years of practice in the adult ICU setting.

> …some of our nurses that were supposed to be hired on as ICU nurses (tone of voice escalated with a questioning tone) end up having to back out their ICU position… …People who are shy don't really... tend to do so well (tone of voice escalated)… in the ICU or critical care setting (tone of voice escalated, volume did not) because they won't ask for help. (Participant 407)

Having courage or the ability to not be shy and jump in while being humble was important in participants' experiences. Nurses in adult ICU have to have a personality and courage to be able to speak up regardless of whether things clinically look right or if they are unsure.

The Team and Persons of Support

The team and persons of support emerged as important for these adult ICU nurses in their gaining experiences and learning, dealing with difficult and stressful situations, and building confidence. Even with the shortest orientation of 1.5 months, Participant 689, a 37-year-old nurse, who had been working in a medical ICU for 24 months, attributes her successful transition with the good team.

> I love the matrix [team] I work with… …I like how we're sooo we're, it's all about teamwork.… …I think that you should be able to go to whatever you know, you will learn. It depends on honestly, it all depends on what facility or hospital your gonna work for and how great the teamwork is there too.

When speaking of the team, having an expert team member was also an important in adult ICU nursing practice. Participant 814 described how NGRNs coming off orientation are paired with an expert team member.

> …so the orientation was short, but after that we are never really alone. So each new sort of patient you get, if it is new to you, then you are also paired with an experienced nurse. So the patient is in your care, but you have that experienced nurse back up.

All 11 participants made mention of persons of either formal or informal support. In some cases, the formal person of support eventually became an informal confidant or friend. Participant 689 recalled how persons of support, both formal and informal were essential in light of her short orientation.

> *Formal support*: ...my preceptor …and so seeing how calm and how well she manages... ...in the beginning, it's like, why can't I just like, I was really hard on myself. I was like why can't I just get there. And she would tell me, she was like, it's not going to happen over night, ya know, like you're doing good.
>
> *Informal support*: …cuz your nervous as a new grad. I still like bein' um one of the girls that started the program together, internship, ya know she's also new grad… …it's like know(ing) that someone's else with you and experiencing that.

Peer support emerged as a large part of her experience.

In discussing things they would change with their experience, three participants discussed the need for a confidant.

> …someone to talk to about things… …I had no one, I really had no one to talk to after that lady had passed away. (Participant 476)

Persons of support, both informal as in peers and friends and formal as in preceptors were important for these participants. The lack of having a person to confide in was something noted as missing.

Discussion

The overall meaning of becoming competent in adult ICU is being comfortable with being uncomfortable. Becoming comfortable with being uncomfortable occurred in the context of adult ICU over time. In the beginning, novice nurses were confident in their abilities, but when faced with the contextual daily life-threatening situations of adult ICU nursing, novice nurses became uncertain. As novice nurses evolved over time into competent nurses by gaining experiences and forever learning, they developed an intuitive knowing that built confidence. The evolution to competent nurse was difficult and stressful; however, a personality of courage and assertiveness coupled with a good team and persons of support eased the struggles involved in coming to the new existence of being a competent adult ICU nurse: being comfortable with being uncomfortable.

The nurses in this study were confident in their abilities on initial entry to practice in adult ICU but the reality of actual practice expectations lead to uncertainty. Senior level nursing students and new graduate nurses reported the self-perception of being well prepared to work in acute care settings (Garrett, 2005; Halcomb et al., 2012). However, the reality of caring for actual adult ICU patients, people with life-threatening situations, resulted in feelings of uncertainty and self-doubt reducing confidence. The honeymoon phase (Wright, 2014) of feeling confident and subsequent reality shock (Kramer, 1974) for new nurses transitioning to actual nursing practice is well documented. The reported consequences of the reality shock in transition to practice were anxiety, fatigue,

unrelieved job stress (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012) and subsequent turnover (Kovner et al., 2014; Li & Jones, 2013). The participants in this study experienced similar feelings of uncertainty early in their careers and yet in context of the adult ICU practice setting, over-time, persisted into their third year and became competent. Even as competent nurses, these participants were confident and uncertain simultaneously. The nurses in this study through time, context, and existing demonstrated Heidegger's (1962) concept of Dasein by coming to a new being comfortable with being uncomfortable existence. The evolution from uncertain to confident continues to occur circularly over time through gaining experiences and forever learning in the context of the adult ICU practice setting.

The participants' descriptions of gaining experiences and forever learning serve to further expand the understanding of how nurses traverse Benner's novice to expert continuum (Benner, 2004; Benner et al., 1992; Benner et al., 2011). Benner et al. (2011) found traversing the novice to expert continuum required exposure to and learning from clinical situations. These adult ICU nurses developed situated knowing (Benner, 2004) over time. The nurses in this study were entering their third year of practice and demonstrated in their conversations the ability to predict, plan, and respond to complex patient situations supporting Benner's et al. (2011) view, competence occurs around year two in adult ICU practice settings.

The repeated exposure to a variety of clinical situations developed nurse intuitive knowing and intuition. These nurses instinctively knew there was a problem and knew what to look for and what to do. According to Benner (2013), a move from novice to competent and so forth is related to active intuitive engagement in the clinical situation.

While the concept of intuition has not been largely studied, intuition has been cited as guiding nurses in knowing how to proceed in situations and cannot exist without experience and knowledge (Hill, 2010; Robert, Tilley, & Peterson, 2014). Intuitive knowing and intuition were evident in these nurses' descriptions of how they managed acute situations in the adult ICU.

The process of going from day one to the third year, developing competence, for these nurses was difficult and stressful. Stress, being overwhelmed, and difficult transition are well documented in the literature and have also been cited as reasons for nurse turnover (Benner, 2004; Garrett, 2005; O'Kane, 2012; Ranse & Arbon, 2008; Winfield et al., 2009). Some participants in the St. Clair (2013) study resigned their positions secondary to being overwhelmed and stressed. The nurses in this study were able to manage the difficulty and stress and were entering the third year of practice in the adult ICU setting.

These nurses endured and survived possessing a personality of courage and assertiveness. These NGRNs were resilient. According to Mealer et al. (2012), resilience is the ability to survive or even thrive in difficult situations. Resilience can be inherent or acquired (Mealer et al., 2014). These participants inherently employed coping methods toward stress and in the end considered themselves successful and accomplished. However, the journey was difficult and stressful, therefore the idea of resiliency training incorporated early will have benefits toward alleviating stress as well as decreasing turnover. Such resilience programs exist and are feasible (Mealer et al., 2014).

These NGRNs recognized the need for self-care. Even though the need for self-care may not have been addressed in orientation programs, these nurses knew to care for

themselves. The idea of self-care for nurses is not new and dates back to Florence Nightingale's (1969) discussion on loss of efficiency without nurse self-care. In recent years, self-care or care of the provider has become a topic of interest. According to Bodenheimer and Sinsky (2014), the Institute for Healthcare Improvement Triple Aim initiative toward optimizing health care performance should include a quadruple aim. The quadruple aim argues optimal patient care also requires care of the provider (Bodenheimer & Sinsky, 2014). The American Nurses Association's initiative for 2017 was Year of the Healthy Nurse. According to Blum (2014), nurses are better able to deal with stressors of their work when they engage in healthy coping mechanisms. The nurses in this study inherently engaged in diversional activities after the shift in ways often similar to a debrief. The participants also discussed doing something fun and distracting after work.

Becoming competent in adult ICU for these nurses did not occur in a silo. These nurses sought persons of support and described being a part of a good team. Socialization and collaboration among the ICU nursing team was an important facet in nurse transition and professional competence (Camelo & Chaves, 2013; Farnell & Dawson, 2006; Meyer, Bjørk, & Eide, 2012). Beecroft et al. (2008) found turnover intent among new graduate nurses was related to lack of social support. Formal persons of support as in the preceptor, the expert team member, and the unit manager as resources were important. Expert ICU nurses have the situated knowing that is lacking in the novice to competent nurse (Benner et al., 2011). So having that expert nurse to consult with was important for these nurses as they gained experiences and confidence.

In the Foglia et al. (2010) study, lack of supportive leadership at the unit manager level was a contributing factor in nurse turnover. The ICU nurses in this study entering their third year of practice, described the unit manager as supportive. Adams et al. (2015) found the lack of consistent preceptors during orientation and lack of persons of support after orientation led to feelings of anxiety for NGRNs. The participants in this study discussed the difficulty and stress of becoming competent, but did not attribute these feelings to lack of persons of support even in the case where one participant had multiple preceptors and a rather short orientation.

Conclusion

The limitation to this study is transferability secondary to a small homogeneous sample. However, the study findings lend insight into the experiences of nurses who were hired into adult ICU as NGRNs and were starting their third year of practice. NGRNs can successfully navigate the initial uncertainties and reality shock, gain experience and knowledge over time, and develop intuitive knowing and intuition. The experience is difficult and stressful; however, resilience and self-care eased the struggles in surviving into the third year of practice. Having a good team and persons of support including supportive leadership are essential for nurses' evolution from novice to competent. These nurses persevered to become competent. Their experience should guide further research and intentional interventions for NGRNs hired directly into adult ICUs.

Nurse managers, administrators, and educators should focus on creating an environment of support for NGRNs entering practice in the adult ICU setting. Nurse educators should consider not necessarily lengthening orientation programs, but perhaps with intentionality enhancing the NGRNs persons of support network and coping support

to extend beyond the orientation timeframe. Nurse educators should consider ways to promote exposure to a variety of clinical situations during orientation so novice nurses can experientially learn under the safety net that is orientation. Nurse managers, administrators, and educators need to consider ways to teach and promote resilience and self-care for all nurses. Hospital and academic nurse educators should consider ways to teach and promote resilience. Nurse managers and administrators need to consider unit level activities promoting team building toward a good and effective team that is able to support new nurses as they enter practice.

Contributions

Study design: HD; FQL; PG; JS Data collection: HD

Drafting the manuscript: HD, FQL Supervisor for the study: FQL

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CHAPTER V

SUMMARY OF THE STUDY

NGRNs are hired into adult ICUs on initial entry into practice. However, evidence shows a disparity exists between nurses' sense of practice readiness and their actual experience after being hired into adult ICU post-graduation (Benner et al., 2011; O'Kane, 2012). The practice disparity has been shown to have consequences such as anxiety, fatigue, and unrelieved job stress (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012). These consequences have subsequently contributed to turnover in adult ICU, which continues to be a concern nationwide (Kovner et al., 2014; Li & Jones, 2013). Nonetheless, some nurses survive the consequences of the practice readiness disparity and are retained at their first job as an adult ICU nurse (NCSBN, 2015).

The purpose of this hermeneutic phenomenological study was to gain an understanding of the meaning of the experience of NGRNs entering their third year of practice and surviving the consequences of the practice readiness disparity in the adult ICU. Most nurses entering the third year of practice have developed the ability to predict, plan, and respond to complex patient situations (Benner, 1984, 2004, 2013; Benner et al., 1992). On Benner's novice to expert continuum, nurses hired into critical care areas tend to exhibit competence within two years of initial hire (Benner et al., 2011). The central research question was: What is the lived experience of NGRNs who have become competent in adult ICU as their first job post-graduation?

This study used a qualitative hermeneutic phenomenology design stemming from the philosophical perspective, interpretive phenomenology. Interpretive phenomenology

emerged from Husserl's traditional phenomenological philosophy. As a methodology, hermeneutic phenomenology is an exploration of meaning of being in relation to time and space in context. According to Heidegger's (1962) concept of Dasein, the person is put into the world and must live and act in the world to come to a different existence. This study explored Heidegger's (1962) Dasein of nurses becoming competent from novice in the context of the adult ICU practice setting over time. Thus, Benner's (1984, 2004) novice to expert continuum served as the contextual backdrop for this study.

Hermeneutic phenomenology is the research methodology stemming, not only from the research question, but also from the interpretive phenomenology philosophical stance. In this study, the Dasein of the NGRN existing and becoming competent in the world of adult ICU was interpreted toward an overall meaning of the experience as it had been lived over time and in context. Using the hermeneutic circle, knowledge was co-created with the textual data itself, the researcher's textual interpretations, and the researcher's preconceived notions linked with resulting interpretations.

Summary

The overall meaning of the experience of having become a competent nurse from novice nurse in the context of the adult ICU practice setting is coming to terms with being comfortable with being uncomfortable. Coming to the existence of being comfortable with being uncomfortable occurred over time and in context with themes evident to the experience. For example, NGRNs initially had confidence, but when faced with the contextual reality of actual adult ICU practice expectations became uncertain.

Over time, after living in the world of adult ICU and gaining experience and forever learning, nurses acquired confidence and intuitive knowing and intuition. The

evolution to competent nurse was difficult and stressful; however, a personality of courage and assertiveness coupled with a good team and persons of support eased the struggles involved in coming to the new existence of being a competent adult ICU nurse: being comfortable with being uncomfortable.

Discussion of the Findings

The nurses in this study were confident in their abilities on initial entry to practice in adult ICU but the reality of actual practice expectations led to uncertainty. Senior level nursing students and new graduate nurses reported the self-perception of being well prepared to work in acute care settings (Garrett, 2005; Halcomb et al., 2012). Further, Halcomb et al. (2012) found prior clinical experiences during nursing school in critical care led to increased confidence. Increased confidence was evident in the three participants in this study who had prior experiences in adult ICU during nursing school. However, the reality of caring for patients, people with life-threatening situations, resulted in feelings of uncertainty.

As the realization that these NGRNs had a practice readiness gap, they developed a type of uncertainty and self-doubt, which reduced their confidence. NGRNs have a sense of practice readiness that differs from their actual experience (Benner et al., 2011; O'Kane, 2012). Benner (2004) found the full weight of responsibility of caring for acutely ill patients coupled with NGRNs' false sense of security led to feelings of anxiety. The honeymoon phase (Wright, 2014) and reality shock (Kramer, 1974) for new nurses transitioning to actual nursing practice is well documented. The reported consequences of the reality shock in transition to practice were anxiety, fatigue,

unrelieved job stress (Benner et al., 2011; Foglia et al., 2010; O'Kane, 2012) and subsequent turn over (Kovner et al., 2014; Li & Jones, 2013).

However, the participants in this study described similar feelings of uncertainty early in their careers and yet persevered into their third year of nursing practice in the adult ICU setting. Even as competent nurses, these participants were confident and uncertain simultaneously. Prior research has looked at novice to expert nurse decision-making in adult ICU (Benner et al., 2011; Hughes, 2012); however, there is limited study with regard to uncertainty among competent, proficient, and expert adult ICU nurses. In the reality and context of the adult ICU practice setting, a competent nurse may never totally become comfortable with every situation in the adult ICU practice setting. The nurses in this study through time, context, and existing demonstrated Heidegger's (1962) concept of Dasein by coming to a new comfortable with being uncomfortable existence. The evolution from uncertain to confident occurs and continues over time by gaining experiences and forever learning contextually in the adult ICU practice setting.

The participants' descriptions of gaining experiences and forever learning serve to further validate the work of Benner (Benner, 2004; Benner et al., 1992; Benner et al., 2011). Benner et al. (2011) found traversing the novice to expert continuum requires exposure to and learning from clinical situations. Benner (2004) called this experiential learning. From experiential learning and knowing, the nurse at the competent level plans, predicts, and responds accordingly based on prior exposure to clinical situations (Benner, 2004). St. Clair (2013) described developing a sense of confidence in learning and gaining experience in transitioning nurses.

The participants in this study identified exposure to clinical situations and forever learning as important in their experience. These adult ICU nurses developed situated knowing (Benner, 2004) over time. The nurses in this study were entering their third year of practice and demonstrated in their conversations the ability to predict, plan, and respond to complex patient situations consistent with and further validating Benner et al.'s (2011) competence.

For the participants in this study, exposure to clinical situations resulted in intuitive knowing and intuition. The nurses instinctively knew there was a problem and knew what to look for and what to do. According to Benner (2013), a move from novice to competent and so forth is related to a move from following rules of skill to a holistic view of skill to active engagement in the skill whereby the skill is no longer just a skill, but rather an intuitional knowing. Hill (2010) found that often, intuition was what guided nurses in knowing how to proceed in a given situation. According to Robert, Tilley, and Peterson (2014), intuition cannot exist in the absence of knowledge and experience. The participants in this study were not consciously aware of intuitive knowing, while it was evident in their descriptions of how they managed acute situations in the adult ICU.

The process of going from day one to the third year, developing competence, for these nurses was difficult and stressful. Sometimes the stress was related to specific situations and three participants referred to particular experiences as overwhelming. Stress, being overwhelmed, and difficult transition are well documented in the literature and have also been cited as reasons for nurse turnover (Benner, 2004; Garrett, 2005; O'Kane, 2012; Ranse & Arbon, 2008; Winfield et al., 2009). St. Clair (2013) studied the experiences of NGRNs during a 6-week orientation program. In the beginning, the nurses

experienced being overwhelmed and stressed, such that four participants resigned their ICU positions. However, nurses retained until the end of the six-week orientation were gaining experiences and confidence (St. Clair, 2013). The nurses in this study were able to manage the difficulty and stress and were entering the third year of practice in the adult ICU setting.

The nurses in this study persevered. They possessed a personality of courage and assertiveness and were socialized as a part of the unit team. These NGRNs were resilient. According to Mealer et al. (2012), resilience is the ability to survive or even thrive in difficult situations. Further, Mealer et al. (2012) found resilience in ICU nurses was associated with less post-traumatic stress and burnout symptoms. The participants in the present study employed coping methods toward stress and in the end considered themselves successful and accomplished. However, the journey was difficult; therefore, the idea of resiliency training incorporated early in transition to practice may have some benefits toward alleviating stress as well as decreasing turnover. Such training programs exist and are feasible. A 12-week resilience-training program was found to be feasible and acceptable to adult ICU nurses (Mealer et al., 2014).

These NGRNs recognized the need for self-care. Even though the need for self-care may not have been addressed in orientation programs, the nurses in this study inherently knew to care for themselves. The idea of self-care for nurses is not new and dates back to Florence Nightingale's (1969) *Notes on Nursing*. In recent years, self-care or care of the provider has become a researched topic of interest. According to Bodenheimer and Sinsky (2014), the Institute for Healthcare Improvement Triple Aim initiative toward optimizing health care performance should include a quadruple aim. The

quadruple aim argues optimal patient care also requires care of the provider (Bodenheimer & Sinsky, 2014). The American Nurses Association's initiative for 2017 was Year of the Healthy Nurse. According to Blum (2014), nurses are better able to deal with stressors of their work when they engage in healthy coping mechanisms. The nurses in this study inherently engaged in coping mechanisms such as decompressing after the shift in ways similar to a debrief. The participants also discussed doing something fun and distracting after work.

Becoming competent in adult ICU for these nurses did not occur in a silo. All eleven participants mentioned persons of support and the team as an important part of their experience. The nurses in this study sought persons of support both formally and informally. This is consistent with the findings in the literature. Socialization and collaboration among the ICU nursing team was an important facet in nurse transition and professional competence (Camelo & Chaves, 2013; Farnell & Dawson, 2006; Meyer et al., 2012). Saghafi et al. (2012) found being an outspoken, but approachable, accepted member of the team tended to result in supportive interactions. Socialization was a factor in transition from novice to advanced beginner for participants in the St. Clair (2013) and Davenport (2000) studies.

Formal persons of support as in the preceptor, the expert team member and the unit manager as resources were important. Expert ICU nurses have the situated knowing that is lacking in the novice to competent nurse (Benner et al., 2011). So having that person, that expert who just knows, was important for these nurses in their gaining experiences and confidence. In the Foglia et al. (2010) study, lack of supportive leadership at the unit manager level was a contributing factor in nurse turnover. Whereas,

the ICU nurses in this study entering their third year of practice, described the unit manager as supportive.

The literature showed lack of persons of support and untrained preceptors was inhibiting to transition to practice. Adams et al. (2015) found the lack of consistent preceptors during orientation and lack of persons of support after orientation led to feelings of anxiety for NGRNs. The participants in this study discussed the difficulty and stress of becoming competent, but did not attribute these feelings to lack of persons of support even in the case where one participant had multiple preceptors and a rather short orientation. Beecroft et al. (2008) found turnover intent among new graduate nurses was related to lack of social support. Supportive persons were also important for nurses new to ICU, but not new to nursing (Gohery & Meaney, 2013). The participants in the O'Kane (2012) study indicated having a 'good' or 'bad' day was highly dependent upon the support persons available on a given day. An area for improvement would be assisting and encouraging new nurses to identify someone in which to confide as an informal person of support.

Limitations

According to Lincoln and Guba's framework (1984), trustworthiness in qualitative inquiry can be established via credibility, confirmability, dependability, transferability, and authenticity. Integrating strategies in the research design can minimize threats to trustworthiness (Polit & Beck, 2012). While several strategies were used to strengthen the trustworthiness of the interpretations, the limitation to this study is transferability. While data saturation was achieved, the sample size was small which may limit transferability. The demographics of participants revealed a rather homogenous

sample, which also limits transferability. Despite these threats, the study findings lend insight into the experience of nurses who were hired into adult ICU as NGRN starting their third year of practice.

Conclusions and Implications

The study findings lend insight into the experiences of nurses who were hired into adult ICU as NGRNs and were starting their third year of practice. NGRNs can navigate the practice readiness gap and become competent in the context of the adult ICU practice setting per Benner's (2004) novice to expert continuum. Nurses entering practice are confident, but in the face of actual practice expectations, became uncertain. Nurses entering their third year of practice in adult ICU still experienced uncertainty in some situations, however, were comfortable with being uncomfortable. Intuitive knowing developed from exposure to clinical experiences and learning over time. The experience was difficult and stressful, but NGRNs can survive to become comfortable with being uncomfortable. NGRNs can successfully navigate the initial uncertainties and reality shock, gain experience and knowledge over time, and develop intuitive knowing and intuition. Resilience and self-care play a major role in NGRNs survival into the third year of practice. Having a good team and persons of support including supportive leadership are essential for nurses evolution from novice to competent. The nurses in this study persevered to become competent. Their experience should guide further research and intentional interventions for NGRNs hired directly into adult ICUs.

Nurse managers and administrators should focus on creating an environment of support for NGRNs entering practice in the adult ICU setting. Unit level team building should be implemented as an intervention. Nurse educators should consider not

necessarily lengthening orientation programs, but perhaps with intentionality enhancing the NGRNs persons of support network and coping support to extend beyond the orientation timeframe. Nurse educators should consider ways to promote exposure to a variety of clinical situations during orientation from which novice nurses can learn under the safety net that is orientation. Nurse managers, administrators, and educators need to foster self-care for new nurses and all nurses. Hospital and academic nurse educators should integrate ways to teach and promote resilience among their nurses.

Recommendations for Further Study

This study presents several opportunities for further study. The participants in this study demonstrated characteristics of Benner's (1984, 2004) competence; however, empirical evidence of Benner's model in critical care areas is still lacking. Meretoja, Numminen, Isoaho, and Leino-Kilpi (2015) used the Nurse Competence Scale, developed based on Benner's work, to study competence across Finnish nurses and found competence scores increased with experience, but did not identify specific experience ranges. A similar study should be conducted in adult ICU practice settings to further extend and validate Benner's (1984, 2004) work empirically.

Benner et al. (2011) found experiential learning is a crucial component on the continuum from novice to expert. Gaining and learning from experiences (experiential learning) was foundational in this study. According to Benner et al. (2011), a nurse may never achieve expert if unable to engage in experiential learning. Experiential learning has been found to correlate with critical thinking and clinical reasoning in occupational health students (Coker, 2010; Scaffa & Wooster, 2004), but there is limited empirical

study on experiential learning among ICU nurses. Future study should focus on concept analysis and instrument development toward measurement of experiential learning.

For the participants in this study, length of orientation was not as important as gaining experiences, resilience, self-care, and having a good team and persons of support. Nurse educators should implement strategies to improve and increase NGRN exposure to various critical care clinical situations as well as develop and promote self-care. The twelve-week resiliency program tested by Mealer et al. (2014) is promising and further study should explore its efficacy in building resilience in academia for nursing students and for nurses in the hospital settings. In the Mealer et al. (2014) study the average length of service was 5.34 years. Therefore an intervention study earlier in the nursing career is warranted and worth the investment. New interventions are prime opportunities for future outcomes research.

This study revealed times of uncertainty among the competent critical care nurse participants even in familiar situations. Prior research has looked at novice to expert nurse decision-making in adult ICU (Benner et al., 2011; Hughes, 2012). However, there is limited study with regard to the concept and experience of uncertainty among competent, proficient, and expert adult ICU nurses.

Having a good team and persons of support was essential in becoming competent. In nursing practice, further study in team building interventions and outcomes is worthwhile toward retention. Much can be done in hospital and academic nursing education programs toward team building. Longitudinal study on existing persons of support relationships at the time of orientation and thereafter would lend insight into how these persons of support and relationships should be intentionally selected and cultivated.

Chapter Summary

This chapter discussed the results of the study. This study found NGRNs becoming competent means coming to terms with being comfortable with being uncomfortable. Going from new nurse to competent and entering the third year of practice occurred through the time, space, and context of the adult ICU. Therefore, hermeneutic phenomenology was the appropriate methodology. Nurses' journey to competence is fraught with uncertainty tempered by gaining knowledge and forever learning. Their resilience, self-care, having a good team, and persons of support were essential to successfully becoming competent. Interventions and areas for future research were discussed.

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APPENDIX A

IRB Approval Letters

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378
email: IRB@twu.edu
http://www.twu.edu/irb.html

DATE: November 17, 2016

TO: Ms. Heather DeGrande
Nursing

FROM: Institutional Review Board (IRB) - Denton

Re: Approval for The Experience of New Graduate Nurses Hired into Adult Intensive Care Units (Protocol #: 19304)

The above referenced study has been reviewed and approved by the Denton IRB (operating under FWA00000178) on 11/17/2016 using an expedited review procedure. This approval is valid for one year and expires on 11/17/2017. The IRB will send an email notification 45 days prior to the expiration date with instructions to extend or close the study. It is your responsibility to request an extension for the study if it is not yet complete, to close the protocol file when the study is complete, and to make certain that the study is not conducted beyond the expiration date.

If applicable, agency approval letters must be submitted to the IRB upon receipt prior to any data collection at that agency. A copy of the approved consent form with the IRB approval stamp is enclosed. Please use the consent form with the most recent approval date stamp when obtaining consent from your participants. A copy of the signed consent forms must be submitted with the request to close the study file at the completion of the study.

Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any adverse events or unanticipated problems. All forms are located on the IRB website. If you have any questions, please contact the TWU IRB.

cc. Dr. Anita Hufft, Nursing
Dr. Fuqin Liu, Nursing
Graduate School

FOR COMPLIANCE OFFICE USE ONLY:	
IRB#	HSRP #24-17
Date Received:	

Institutional Review Board (IRB) Authorization Agreement

Texas A&M University-Corpus Christi

TEXAS A&M UNIVERSITY CORPUS CHRISTI
RESEARCH & GRADUATE STUDIES

Name of Institution or Organization Providing IRB Review *(Institution/Organization A)*	Texas Woman's University
IRB Registration #	IRB00000829
Federalwide Assurance (FWA) #	00000178

Name of Institution or Organization Relying on the Designated IRB *(Institution/Organization B)*	Texas A&M University - Corpus Christi
IRB Registration #	#IORG0000876
Federalwide Assurance (FWA) #	FWA #00011281

The Officials signing below agree Institution/Organization B may rely on the designated IRB for review and continuing oversight of the human subjects research described below: (*check one*)

☒ This agreement is limited to the following specific protocol(s):

Name of Research Project:	The Experience of New Graduate Nurses Hired into Adult Intensive Care Units
Name of Principal Investigator:	Heather DeGrande
Sponsor or Funding Agency:	(n/a)
Award Number, if any:	

☐ Other

Describe:

The review performed by the designated IRB will meet the human subject protection requirements of Institution B's OHRP-approved FWA. The IRB at Institution A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the Terms of its OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

(Institution/Organization A)

Signature of IRB Official:	Jennifer Martin
Typed Name:	Jennifer Martin, PhD
Title:	Interim Provost and Vice President for Academic Affairs
Date:	12/15/16

(Institution/Organization B)

Signature of IRB Official:	
Typed Name:	Luis Cifuentes, Ph.D.
Title:	VP for Research, Commercialization and Outreach
Date:	12 · 16 · 16

APPENDIX B

Consent Form

TEXAS WOMAN'S UNIVERSITY
CONSENT TO PARTICIPATE IN RESEARCH

Title: The Experiences of New Graduate Nurses Hired into Adult Intensive Care Units

Investigator: Heather, DeGrande, MSN, RN ..... hdegrande@twu.edu 361/774-2661
Advisor: Fuqin Liu, PhD, RN .....fliu@twu.edu 940/898-2420

Explanation and Purpose of the Research

You are being asked to participate in a research study to fulfill the requirements of Ms. DeGrande's dissertation at Texas Woman's University. The purpose of this research is to explore the experiences of new graduate Registered nurses who have become competent in the adult Intensive Care Unit (ICU). You have been asked to participate in this study because you were hired directly into adult ICU as new graduate nurse and are now an ICU nurse who has 24 - 30 months' experience in adult ICU.

Description of Procedures

The researcher will ask you demographic questions and will ask you about your experience as an new graduate nurse who started out in adult ICU.

As a participant in this study you will be asked to spend no more than 100 minutes of your time. You will spend 5 – 10 minutes answering demographic questions. You will be asked to spend no more than 60- 75 minutes in an interview with the researcher in person if feasible or via Skype. The researcher will ask you questions about your experiences as an adult ICU nurse. The interview will be digitally audio recorded to maintain the authenticity of your words, and then typed into a Word document. Only the researcher will have access to the audio recordings. Audio recordings will be permanently deleted upon study completion. If you provide your telephone information below*, I will contact you about one month after interview to verify results with your experience. This process will take about 10 – 15 minutes.

Potential Risks

Possible risks associated with this study include: coercion, loss of anonymity, loss of confidentiality, emotional discomfort, loss of time, and fatigue.

A potential risk in this study is coercion. Participation in this study is completely voluntary. I will not inform anyone that you participated in this study. You do not have to answer any questions you do not wish to. You may also stop the interview anytime and/or drop out of the study at any time. I will not inform anyone if you choose to drop out of the study.

_____
Initials

Another potential risk in this study is a loss of anonymity. Your anonymity cannot be guaranteed because the researcher will know your identity. If the interview is in person, I will choose a location that is discrete and private. If interview is via Skype, no one will be present on my end and I suggest/request that you please choose a private room. Your identity will be protected as much as possible through the use of unique identifiers.

Loss of confidentiality is a risk associated with this study. Confidentiality will be protected to the extent that is allowed by law. There is a potential risk of loss of confidentiality in all email, downloading, electronic meetings, and Internet transactions. The researcher will only access emails on her computer. The researcher's computer is password protected and uses security software. All email communications will be deleted after reading. Please do the same. The interview will either be in person or via Skype from my private home office. You should be in a private room where no one can hear. The researcher will type the recorded words onto a Word document. Your name will be replaced with a unique identifier. This signed consent will be the only paper document study material containing your name. It will be stored in a secure drawer in my private home office. All electronic study materials will be stored on a password protected USB Flash Drives and stored in locked drawers or cabinets in my private home office. All study materials will be destroyed within three years after the interview. The results of the study may be reported in scientific magazines or journals, but your name or any other identifying information (job title or role) will not be included.

Because we will be discussing your experiences as an adult ICU nurse, you may experience emotional discomfort. You may take a break at any time or withdraw from the study without question. I have provided you a list of counseling resources during this consent process (see attachment).

A possible risk in this study is a loss of your time. Your time in this study will be no more than 100 minutes. During the interview I will ask some demographic questions. This should take 5 – 10 minutes. The interview will take approximately 60 - 75 minutes. If you provide your telephone information below*, I will contact you about one month after interview to verify results with your experience. This process will take about 10 – 15 minutes. Participation is voluntary. The researcher will take steps to keep the interview time short by preparing interview questions ahead of time.

During the interview session, there is a risk of fatigue. If you become tired, you may take a break at any time. You may also stop answering questions at any time and end the interview. The researcher will do everything possible to make sure you are comfortable during the interview session.

The researchers will try to prevent any problem that could happen because of this research. You should let the researchers know at once if there is a problem and they will help you. However, TWU does not provide medical services or financial assistance for injuries that might happen because you are taking part in this research.

_____
Initials

Participation and Benefits

If you decide to participate, there are no direct benefits to you. Knowledge gained from this study will provide potential benefits to others towards providing insight to graduating nursing students as they make career decisions, nurse leadership as they plan transition to practice programs in adult ICU settings, and nurse educators as they mentor and advise nursing students on career decisions

Your involvement in this study is completely voluntary and you may withdraw from the study at any time. There may be no benefits to you for participating in this study. Approximately one month after interview, you have the option to be contacted via telephone to verify if resulting themes resonate with your experience. If you are interested in being a part of this process, please provide your telephone number*. If you would like to know the results of this study, we will mail or email them to you**.

Questions Regarding the Study

You will be given a copy of this signed and dated consent form to keep. If you have any questions about the research study you should ask the researchers; their phone numbers are at the top of this form. If you have questions about your rights as a participant in this research or the way this study has been conducted, you may contact the Texas Woman's University Office of Research and Sponsored Programs at 940-898-3378 or via e-mail at IRB@twu.edu.

_____ _____

Signature of Participant Date

* If you would like to be a part of theme verification, please provide your telephone number:

_____

**If you would like to know the results of this study tell us where you want them to be sent:

Email: _____
or
Address:

_____

_____

_____

APPENDIX C

Phone Screening Tool

Phone Screening Tool for Inclusion/Exclusion Criteria

Thank the participant for contacting you with their interest in participating in the research study. Explain to the potential participant that you will now screen them for eligibility to participate.

Inclusion/Exclusion Criteria	Response	Results
Have you ever been licensed as a vocational nurse (LVN) or practical nurse (LPN)?	Y N	If yes, ineligible
Did you graduate from a RN – BSN program?	Y Y N N	If yes, ineligible If yes, ineligible
Have you practiced in any other practice setting as a licensed nurse?	Y N	If yes, ineligible
Have you ever been licensed as a vocational nurse (LVN) or practical nurse (LPN)?		
Do you have an unencumbered Registered Nurse (RN) license to practice in the state of Texas?	YN	If no, ineligible
Were you hired directly into an adult ICU within 3 – 6 months of graduation?	YN	If no, ineligible
Have you worked as a licensed nurse prior to being hired directly into an adult ICU?	YN	If no, ineligible
Do you still work in the same adult ICU?	YN	If no, ineligible
Do you work in a trauma, cardiovascular, medical, or surgical adult ICU in Texas?	YN	If no, ineligible
Do you have 24 – 30 months experience working as a licensed RN in adult ICU?`	YN	If no, ineligible
Do you have an associates or bachelor's degree in nursing?	YN	If no, ineligible

If the participant meets all criteria for eligibility, explain this and ask them if they would still like to participate. If so, obtain their preferred mode for signing the consent form.

APPENDIX D

Data Collection Tools

Demographic Data Collection Guide

1. What is your age? _____
2. Race/Ethnicity
   1 African American 1 Asian Indian 1 Asian Other 1 Hispanic
   1 Native American 1 Pacific Islander 1 White – Not of Hispanic Origin 1 Other
3. Gender: 1 Male 1 Female
4. What is your primary language?
   1 English 1 English and another language: Specify _____
   1 Another language: Specify _____
5. Level of education: 1 Diploma Nurse 1 ADN 1 BSN
6. Are you currently enrolled in any other education program?
   1 Yes 1 No
   If so what type of program?
   1 ADN 1 RN-BSN 1 BSN 1 MSN
   1 Other: Specify: _____
7. Do you have prior healthcare experience?
   1 Yes 1 No Job Title: _____
8. Do you have another type of prior work experience? 1 Yes 1 No
   Job Title: _____
9. Hospital Type: (select all that apply)
   1 Magnet 1 Non-Magnet 1 For profit 1 Not-for-profit
   1 Teaching/University Medical Center 1 Community 1 Other: Specify _____
10. How long was your orientation to ICU? _____ months
11. How many ICU beds are in your unit? _____
12. Unit Type:
    1 Trauma 1 Cardiovascular 1 Medical 1 Surgical

(Level 1 1 1 2 1 3) 1 Other: Specify _____

13. Shift Type at the time of Hire:
    1 Days 1 Nights 1 Other: Specify: _____

14. Shift Type Currently:
    1 Days 1 Nights 1 Other: Specify: _____

15. Status (full time, part-time) at the time of hire:
    1 Full time (≥ 36 hrs/week) 1 Part-time (< 36 hrs/week)
    1 Other: Specify _____

16. Current status:
    1 Full time (≥ 36 hrs/week) 1 Part-time (< 36 hrs/week)
    1 Other: Specify _____

17. What is your current length of service? _____

18. How often does your hospital provide in-service days? _____

Interview Guide

Interview Guide: Experiences of new graduate nurses hired into adult ICUs		
Interviewer:	Date: Time:	Begin recording: End Recording:
Participant #:		

Today, I would like to learn about your experience of becoming a critical care nurse. This will be more of a guided conversation to talk about and understand your experiences having been a new graduate nurse hired into adult ICU who survived to become competent.

1. What does it mean to you to have become a critical care nurse from a new graduate nurse in the adult ICU?

   Additional probing question: Can you think of any adjectives or metaphors that you might use to describe the experience of having become competent?

2. Can you describe a particular situation when you felt (from what was said above)?

3. Given your experience as a competent critical care nurse, can you describe recent situation at work that stands out?

   Additional Probing Questions: how did you feel in that example? What was going through your head in that moment? Who else was there and how were others an important part of the experience? How do you think your former self – the new graduate new to critical care would have felt?

4. How did the idea of being a critical care nurse first arise for you?

   Additional Questions depending on answer: What drew you to ICU nursing as a new graduate nurse?

5. What sort of preparation do you think new graduate nurses should have when entering critical care nursing as their first job post–graduation?

6. If there was one thing you could change about your experience, what would it be and why?
7. Has anyone stood out or had an impact on you as you became competent? Can you tell me a little bit about that?

8. Is there anything else you would like to tell me about your experience of becoming a competent critical care nurse?

Thank the participant and provide an opportunity for the participant to ask questions.

APPENDIX E

A Paper Submitted/To Be Submitted for Publication in

Intensive and Critical Care Nursing

DEVELOPING PROFESSIONAL COMPETENCE AMONG CRITICAL CARE NURSES: AN INTEGRATIVE REVIEW OF LITERATURE

A Paper Submitted/To Be Submitted for Publication in

Intensive and Critical Care Nursing

Heather DeGrande, Fuqin Liu, PhD, Pam Greene, PhD, JoAnne Stankus, PhD

Summary: A competent nurse is one who is able to base clinical decisions on prior experiences with particular clinical situations. Becoming competent is a crucial step for nurses working in intensive or critical care (ICUs) units. The purpose of this paper is to present an integrative review of the literature using the methodology of Whittemore and Knafl (2005). The guiding question is: What is the extent and nature of the published academic literature on critical care nurses developing professional competence? This review analyzed 21 peer-reviewed articles obtained from electronic databases and included professional competence and adult intensive care nurses. The three main domains of professional competence were decision-making, teamwork and communication, and managing situations. Professional and clinical competence may co-mingle. There are instruments that measure professional and clinical competence. There are demographic factors that influence development of professional competence in intensive care nurses. Perception of self-competence, seeing beyond the technical to the patient, and intensive care patients and their families are other facets of professional competence that should also spur further study. Limitations are 21 review articles and integration of professional and clinical competence as one entity.

Implications for Clinical Practice

- The domains of professional competence in adult ICU are decision-making, teamwork and communication, and managing situations. Professional and clinical competence may co-mingle.
- Factors that influence the development of professional competence in adult ICU include geographic location and certification status, years of experience, and repeated exposure to situations.
- Self-perception of professional competence, seeing beyond technical, and intensive care patients and their families are other aspects of professional competence that should also spur further study.

Keywords: Critical Care Nurse; Professional Competence; Intensive Care Nursing;

Decision-making

A competent nurse is someone who has the ability to base clinical decisions on prior experiences with particular clinical situations (Benner, 1984, 2004). As new graduate nurses and novice nurses are continually hired into ICU [National Council of State Boards of Nursing (NCSBN), 2015], it is important to guide new ICU nurses to acquire competence, which includes clinical competence and professional competence (Ääri, Tarja, & Helena, 2008). Professional competence is based on judgment or decision-making that comes from critical thinking and experiential learning, whereas clinical competence is the formal knowledge and skill base of the nurse (Benner, 2004). Thus, professional competence is especially important for critical care nurses because it has to do with the judgment or decision-making behind the skill or action.

The purpose of this integrative review is to synthesize the literature on developing professional competence among critical care nurses. This review also identifies areas for further study concerning the development of professional competence among critical care nurses. Such knowledge is of interest to various stakeholders, particularly for critical care nursing management.

Methods

The integrative review methodology outlined by Whittemore and Knafl (2005) was used to guide this review. Integrative reviews are inclusive of qualitative, quantitative, and theoretical sources. The review phases include problem identification, methodological literature search, data evaluation, data analysis, and discussion of the findings (Whittemore & Knafl, 2005). The integrative review method provides for a broad review toward a greater understanding of issues of interest (Whittemore & Knafl, 2005), as in nurses' developing professional competence in ICU.

Search Method

The focus of this review is the development of nurses' professional competence in ICU. The integrative review search should begin with the identification of variables of interest and involve a preliminary search of those variables (Whittemore & Knafl, 2005). Based on the preliminary search and the topic of review interest, search terms were professional competence, critical care nurse, and/or intensive care nursing depending on specific database thesaurus, MeSH, and major headings terms. The search was limited to January 2006 – January 2017, English, and peer reviewed articles. Individual searches were conducted in CINAHL, Science Direct, ProQuest for Nursing and Health Sciences, Scopus, Academic Search Complete, PsycInfo, and PubMed.

Search Results

Articles were assessed for relevance and quality using the sort by relevance feature, review of the abstracts, and review of the reference lists. This was a two-part process: preliminary review and detailed review. Studies relating to nursing education and clinical skills competencies were excluded during preliminary review resulting in 31 articles for secondary review. After secondary review, only 21 articles were included. Using the guidelines for integrative review as outlined by Whittemore and Knafl (2005), the 21 articles were read and reviewed to identify recurring themes and trends.

Data Evaluation

The data evaluation stage involves grouping the studies by research design and evaluating quality for each study (Whittemore & Knafl, 2005). Articles are not excluded based on quality in integrative review, but take quality into consideration during the data analysis phase (Whittemore & Knafl, 2005). Of the 21 remaining studies, 11 were

quantitative, four were qualitative, two were literature reviews, one was a Delphi Method, and three were instrument development.

Data Analysis

Data analysis was conducted in a step-by-step process. After each reading, the sources were mapped and data reduced. The studies were then organized by groups of data as suggested by Whittemore and Knafl (2005). Trends across the findings were highlighted and further reduced via concept mapping.

Findings

Developing professional competence involves the ability to make nursing judgments and decisions in the complex life-threatening situations in ICU. Literature on professional competence is multi-faceted. Articles relating to professional competence describe (a) domains that comprise professional competence, (b) measures of professional competence, (c) influential factors in the development of competence, (d) others' perceptions of professional competence, (e) seeing the patient beyond the technology as a professional competence, and (f) ICU patients and their families in relation to developing professional competence.

Domains of Professional Competence

While this literature review focused on development of professional competence; however, two of the domain-based articles (Ääri et al., 2008; Lakanmaa et al., 2014) included clinical and professional competence. The Lakanmaa et al. (2012) Delphi study used the Ääri et al. (2008) literature review as the theoretical basis for the study, therefore the domains were similar; however Lakanmaa et al. (2012) found that personal base was a new professional competence domain that included humanity, ethicality, way of

working, and work motivation. According to Lakanmaa et al. (2012), way of working has to do with dealing with stressful situations and adapting to different situations. This new domain seemed to overlap with other domains across the studies. Indeed, the domains for competences needed for ICU nurses tended to connect (Hadjibalassi et al., 2012). Specific domains are outlined in Table 1. Regarding professional competence, there were three domains consistent across the 10 articles: decision-making, teamwork and communication, and managing situations. [Insert Table 1 about here from Appendix]

Decision-making was identified as a component of professional competence in eight of the articles (Ääri et al., 2008; Camelo, 2012; Copnell, 2008; Hadjibalassi et al., 2012; Lakanmaa et al., 2012; Lakanmaa et al., 2014; Lindberg, 2006; Pietro Pereira Viana et al., 2014). Decision-making involved critical thinking and other influential factors such as experience, knowledge, and intuition (Ääri et al., 2008; Camelo, 2012; Hadjibalassi et al., 2012; Lakanmaa et al., 2012). While organizational culture and behavioral factors can facilitate decision-making (Camelo, 2012), a lack of teamwork can become barriers for some nurses to engage in the decision-making process (Copnell, 2008). The development of creative decision-making skills may also be related to and perhaps depend upon the teamwork skills of the ICU nurse (Camelo, 2012; Camelo & Chaves, 2013).

Teamwork was considered essential to developing professional competence in eight of the articles (Ääri et al., 2008; Camelo 2012, Camelo & Chaves, 2013; Kamel, Fakhry, & Ibrahim, 2011; Lakanmaa et al., 2012; Lakanmaa et al., 2014; Lindberg, 2006; Pietro Pereira Viana et al., 2014). The term teamwork was not used consistently across the different articles. For example, collaboration was the term used in three of the articles

(Ääri et al., 2008; Lakanmaa et al., 2012; Lakanmaa et al., 2014); whereas interpersonal relationships were the terminology in the Kamel et al. (2011) study. Lindberg (2006) used the term cooperation, which involved the two-way role of listening with attention. Collaboration and interpersonal relations were concepts connected to teamwork and all three were identified as necessary for professional competence (Camelo & Chaves, 2013; Lindberg, 2006). The respondents in the Lindberg (2006) and the Camelo and Chaves (2013) studies considered the professional competent critical care nurse as one who can collaborate through communication. Communication was clearly identified as a professional competency in six of the articles (Ääri et al., 2008; Camelo, 2012, Camelo & Chaves, 2013; Lakanmaa et al., 2012; Lakanmaa et al., 2014; Lindberg, 2006).

Managing situations was a domain from seven of the articles, generally defined as knowing what to do in a given situation in the adult ICU (Ääri et al., 2008; Hadjibalassi et al., 2012; Kamel et al., 2011; Lakanmaa et al., 2012; Lakanmaa et al., 2014; Lindberg, 2006; Pietro Pereira Viana et al., 2014). However, there were some discrepancies with regard to classification of managing situations as a professional versus clinical competence. For example, in three articles, the management of situations was classified under the nursing interventions, which was a sub-domain of clinical competence (Ääri et al., 2008; Lakanmaa et al., 2012; Lakanmaa et al., 2014). Ääri et al. (2008) found managing situations tended to be specific to particular situations, as in the management of a patient receiving mechanical ventilation. The domain managing situations was neither a professional nor a clinical competence in the Hadjibalassi et al. (2012), Kamel et al. (2011), and Lindberg (2006) studies. In the Pietro Pereira Viana et al. (2014) study, managing situations was considered a professional competence. Kamel et al. (2011)

identified situation management as management of technical situations and management of workflow situations. Management of a situation and decision-making are closely related (Hadjibalassi et al., 2012).

Instruments Measuring Competence

This review identified three instruments measuring professional competence pertaining to ICU nurses. First, the Critical Care Competency Assessment (CCCA) instrument (Hadjibalassi et al., 2012) determines the expected competencies for ICU nurses. Specific to ICU nurses in Cypress, the CCCA has 72 items with four dimensions. The internal consistency was high with Cronbach's $\alpha = .96$ for the total instrument. Dimensions ranged from Cronbach's $\alpha = .90$ to 97. Kamel et al. (2011) developed the second instrument, the Self-Assessment Competence Tool (SACT) for ICU nurses in Egypt. The 79-item SACT measures both clinical and professional competence across nine dimensions. The SACT has overall high internal consistency with a Cronbach's $\alpha = .98$ and dimensions ranged from .81 to .96. Third, the Intensive and Critical Care Nursing Competence Scale (ICCN-CS-1) measures self-assessed professional and clinical competence (Lakanmaa et al., 2014). The 144-item ICCN-CS-1 has seven factors, three pertaining to clinical competence and four pertaining to professional competence. The total internal consistency is high with a Cronbach's $\alpha = .98$ with factors ranging from .83 – .98.

Factors that Influence the Development of Professional Competence

Factors studied that may influence the development of professional competence include experience, level of education, ICU certification status, age, gender, and location. However, there are conflicting findings on these factors. For example, in one of the

studies, age was not a factor in competence development (Newman, Doran, & Nagle, 2014); whereas, in two studies age correlated with nurse competence (O'Leary, 2012; Salonen, Kaunonen, Meretoja, & Tarkka, 2007). Several studies did not differentiate factors that influence professional versus clinical competence but rather discussed competence in general including level of education and gender. Level of education (Gundrosen, Solligård, & Aadahl, 2014; Newman et al., 2014) was not a factor in the development of competence, whereas, gender was a factor in knowledge and perceived competence. Fulbrook, Albarran, Baktoft, and Sidebottom (2012) found that male nurses had significantly (t = 2.38, = 0.017) higher perceived competence scores than female nurses. In the Copnell (2008) study, the perception of competence was valued more than actual competence and male nurses were perceived by others as having greater competence than female nurses.

Location and certification status were influential on developing professional competence. For example in Cypress (Hadjibalassi et al., 2012) and Egypt (Kamel et al., 2011) critical care nurses are required to become formally certified through a critical care certification program in order to be considered qualified to enter practice into adult ICU areas. Certification was considered a factor in the development of professional competence in these countries (Hadjibalassi et al., 2012; Kamel et al., 2011). In the United States (US), Critical Care Registered Nurse (CCRN) certification through the American Association of Critical Care Nurses (AACN) is considered a hallmark of clinical and professional competence (AACN, 2017), but has not been studied as a factor that influences competence (Kendall-Gallagher & Blegen, 2009). In the US, certification is not a requirement for entry into practice in ICU. A requirement of CCRN credentialing

calls for at least 2 years of experience practicing in adult ICU areas (AACN, 2017). There are differences internationally in preparation requirements for entry into adult ICU nursing practice (Fulbrook et al., 2012).

Years of experience in ICU was a major factor influencing professional competence (Fulbrook et al., 2012; Lakanmaa et al., 2015; Meyer, Bjørk, & Eide, 2012; O'Leary, 2012; Salonen et al., 2007) with the exception of two studies (Newman et al., 2014; Yurdanur, 2016). Newman et al. (2014) specifically looked at situations of information seeking, one domain of professional competence, among nurses with prior ICU experience. The mean years experience in the Newman et al. (2014) study was 15.6 years (standard deviation was not reported). In the Yurdanur (2016) study, respondents had low critical thinking dispositions, one domain of professional competence. However, the mean age was 25 years and more than half of the respondents had less than 5 years of experience in adult ICU (Yurdanur, 2016). Kendall-Gallagher and Blegen (2009) did not specifically study years of experience with professional competence, but rather with patient outcomes and found no correlation to patient outcomes and certification status.

Prior experience with situations was found to improve decision-making, ability to manage situations, and nurse competence scores (Fulbrook et al., 2012: Lakanmaa et al., 2015; Meyer et al., 2012; O'Leary, 2012). In the Lakanmaa et al. (2015) study, work experience, and autonomy were associated with competence and its development. Meyer et al. (2012) found that nurses who had prior experience with the organ donor process had higher perceptions of professional competence. O'Leary (2012) and Salonen et al. (2007) found that length of work experience was associated with higher nurse competence scores. Further, Salonen et al. (2007) found the more often competencies were used in

practice, the higher the competence scores. These findings were attributed to the fact that nurses with longevity in the adult ICU had been exposed to a greater variety of clinical situations to draw upon in decision-making and management of situations (Fulbrook et al., 2012; Lakanmaa et al., 2015; Meyer et al. 2012; Salonen et al., 2007). These findings are consistent with the work of Benner (Benner, 1984, 2004; Benner, Kyriakidis, & Stannard, 2011).

Others' Perceptions

Two studies reported on professional competence as perceived by self and others (Copnell, 2008; Monks & Flynn, 2014). Copnell (2008) found being seen by others as competent was more important that actual competence. Further, this perceived competence could be influenced either positively or negatively by others' actions (Copnell, 2008). For example, adult ICU nurses who were perceived as being competent were included in collaborative communication regarding their patients; whereas, those who were not seen as competent were excluded. Interestingly, male ICU nurses were usually seen as competent (Copnell, 2008). Monks and Flynn (2014) found that adult ICU nurses' self-perception of professional competence was threatened by family presence during resuscitation events.

Disregard the Technical

Two studies identified the ability to manage the technical as important in the development of professional competence (Lindberg, 2006; Monks & Flynn, 2014). The ability to look beyond the technical to see the patient was identified as a professional competence domain in the Lindberg (2006) study. Participants in the Lindberg (2006) study recognized the importance of patient assessment that goes beyond the technical.

The participants in the Monks and Flynn (2014) study described professional competence as a balance between making nursing judgments and delivery of compassionate care while also maintaining technical competence.

ICU Patients and Their Families

Three studies identify the perceptions and views of ICU patients and their families as important when considering professional competence (Hadjibalassi et al., 2012; Lakanmaa et al., 2012; Salonen et al., 2007). Hadjibalassi et al. (2012) and Lakanmaa et al. (2012) contend that perceptions of ICU patients and their families should be considered in future ICU nurse competence (professional and clinical) instrument revision and/or development. One study reported ICU patients and their families as important in the development of professional competence (Monks & Flynn, 2014). Participants in the Monks and Flynn (2014) study identified bonding with the family in resuscitation events as a component of professional competence. Family bonding was also important in the delivery of compassionate care (Monks & Flynn, 2014).

Implications for Future Research

This integrative review revealed several areas for further study. Areas for further study are identified in integrative review through outliers and inconsistencies across the literature (Whittemore & Knafl, 2005). For example, one study found male ICU nurses might be treated differently from female nurses based on other's perceptions of nurse competence (Copnell, 2008). There were conflicting findings with regard to length of experience and competence. Further validation of instrumentation including is warranted. Decision-making, teamwork, collaboration, and managing situations were important in developing professional competence. ICU nurses and nurse educators should consider

interventions that include decision-making strategies, team building, and strategies for managing situations.

Clearly, more study is needed with regard to the differences between professional and clinical competence including the idea that perhaps one cannot be separated from the other. As Lakanmaa et al. (2014, 2015) claimed competence is multi-dimensional and perhaps measures need to include scales across both domains of professional and clinical competence. The AACN (2015) uses the AACN synergy model to define competencies of the critical care nurse. According to the AACN (2015), competence for ICU nursing practice is defined through eight provisions: clinical judgement, advocacy and moral agency, caring practices, collaboration, systems thinking, response to diversity, facilitation of learning, and clinical inquiry (p. 6). This mingling and synergy of competence in adult ICU warrants further study.

Conclusion

Integrative review was conducted to explore the development of professional competence among ICU nurses as presented in 21 peer-reviewed articles. The three main domains of professional competence were decision-making, teamwork and communication, and managing situations. Professional and clinical competence may co-mingle. Instruments for professional competence measure competence expectations and self-perception of competence. Demographic factors that influence the development of professional competence include length of experience, certification status, and location. Professional competence can be influenced by self perception and perception of others.

Being able to see the patient beyond the technical is a characteristic of professional competence. ICU patients and their families are important when measuring

and considering professional competence. Limitations were a low sample size and integration of professional and clinical competence as one entity. This integrative review on developing professional competence of nurses practicing in adult ICUs compels further study including domain based theoretical work, instrument refinement, and interventional studies toward developing professional competence.

Contributions

Review methods: HD; FQL Data collection and analysis: HD

Drafting the manuscript: HD, FQL; PG; JS Supervisor: FQL

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Appendix

Table 1

Domains Based Citations

Authors	Design	Purpose/Question	Domains of Professional Competence
Ääri et al. (2008)	Literature Review	To define and describe the concept of competence. To determine the domains of competence that have been investigated.	2 Main Domains Clinical competence: Knowledge base Skill base Sub domains: nursing, clinical guidelines, and nursing interventions Professional competence: Attitude and value base Knowledge base Sub domains: ethical activity, decision-making, developmental work, and collaboration
Camelo (2012)	Literature Review	To identify and analyze professional competencies in ICUs.	Organization and planning of care Complexity of care Decision-making Leadership in a situational context (teamwork) Communication (teamwork) Continuing education Human management Material management

Camelo & Chaves (2013)	Qualitative	To determine how ICU nurses perceive teamwork as a professional competency.	Teamwork as a managerial tool (as in the management of patient care) Communication Interpersonal relations
Copnell (2008)	Qualitative Post-structural inquiry	To understand nurse perceptions of knowledgeable practice in ICU and how this relates to being a good nurse.	Two entities: Knowing reasons for interventions Knowing how to perform activities
Hadjibalassi et al. (2012)	Instrument Development Qualitative & Quantitative	To develop and test an instrument to determine competencies of ICU nurses in Cypress.	Leadership/management Decision-making & management of emergencies Provision of care and professional practice Ethical practice
Kamel et al. (2011)	Instrument Development Qualitative & Quantitative	To develop and test an instrument for ICU nurses to self-assess their competence in Egypt.	Personal and professional Professional and ethical Safety and injury prevention Comprehensive nursing care Interpersonal relationships Managing technical equipment Critical thinking and research utilization Teaching and coaching Work management

Lakanmaa et al. (2012)	Delphi method - based on Aari et al. (2008)	To identify competence requirements for ICU nursing	Knowledge base Skill base Attitudes & values base Experience base Sub domains: nursing care, clinical guidelines, nursing interventions, ethical activity, decision-making, development work, collaboration Personal base Subdomains: humanity & ethicality, way of working, & work motivation
Lakanmaa et al. (2014)	Instrument Development Qualitative & Quantitative	To develop and test a scale to assess basic competence in ICU nursing competence in this sense is preliminary competence to practice in an ICU.	Clinical competence Nursing care Clinical guidelines Nursing interventions Professional competence Ethical & Legal activity Decision-making Development work Collaboration
Lindberg (2006)	Qualitative	To understand competence from a staff point of view.	5 ways of understanding: Ability to cooperate Being able to perceive situations correctly Being aware of limitations and abilities Being able to act accordingly Being able to disregard technology when necessary to see the patient 2 ways of development: Personal traits Organizational climate

Pietro Pereira Viana et al. (2014)	Quantitative	To identify and describe sociodemographic and academic profile of ICU nurses, but also asked about professional skills needed to work in ICU.	Knowledge Leadership teamwork Managing situations Caring Cognitive Skills Decision-making