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Specialty Certification in Nursing: The Influence of Nursing Faculty on Pre-Licensure Students

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ABSTRACT

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The seminal publication *To Err is Human* focused on designing healthcare processes to ensure safe patient outcomes (IOM, 2000). That report identified board certification of health professionals as one way to improve patient care quality and safety (IOM, 2000). Current discussions within the nursing profession regarding professional development have recognized value in specialty certification post-licensure, but the research on the perceived value of specialty certification has been limited among nurse educators. This study utilized the Perceived Value of Certification Tool (PVCT) to examine whether nursing faculty perceive value in certification and whether that perception is shared in the educational setting. This study utilized the Expanded Conceptual Model to explore specialty certification broadly by including the factors that influence whether a graduate registered nurse pursues certification (Needleman, Dittus, Pittman, Spetz, & Newhouse, 2014). This study was also informed by the Explanatory Model of Professional Socialization in Nursing (Edens, 1987) and The Novice to Expert Model (Benner, 1984). The study sample consisted of 122 nursing faculty who were recruited via social media and direct email to complete the PVCT and the demographic survey. The sample consisted of faculty who taught in a BSN program (n = 78, 64.9%), were certified (n = 76, 62.3%) and are members of a professional organization (n = 109,

89%). The PVCT has shown to be reliable in multiple studies, revealing a Cronbach's α = .92 to .94; the reliability in this sample was consistent, at α = 0.914. PVCT scores demonstrated that the majority of this sample of nurse educators (81%) do perceive value in specialty certification. In open ended responses, certification was also recognized as being associated with other activities of professional behavior (n = 90/134) however, it was not the primary characteristic reported by faculty. In this case, nurse faculty shared they value specialty certification, but speak to students more often about life-long learning and the importance of continuing education or professional development. This study provided an understanding that nurse educators generally perceive there is value in specialty certification and they share that information with students in both the clinical and classroom setting. Future research in nursing education could investigate perceptions of the student and the graduate nurse on the value of specialty certification. Lastly, there is an opportunity for collaboration between nurse educators and professional organizations that offer an undergraduate education toolkit to examine the use of these type of kits in nursing education or the role they might play in student outcomes.

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CHAPTER I

INTRODUCTION

Nurses are the largest segment of the healthcare workforce and are often the primary contact for patients in most care settings (Robert Wood Johnson Foundation, 2015; Institute of Medicine [IOM], 2015). The seminal publication *To Err is Human* focused on designing healthcare processes to build better care systems that ensure safe patient outcomes (IOM, 2000). That report identified board certification of health professionals as one way the healthcare system could improve patient outcomes (IOM, 2000). Furthermore, the 2011 *Future of Nursing* report focused on educating the nurse workforce, emphasizing the need for an educated and trained nursing workforce to provide care for complex patients (IOM, 2011). The report stressed that all nurses need to practice at the fullest extent of their education and training, achieve higher levels of education and training, and be full partners in the redesign of the U.S. healthcare system (IOM, 2011); the overarching goal being for all nurses to practice in a way that reflects the full extent of their education and training, thus maximizing the contributions of each to patient care outcomes (IOM, 2011). Thus, the individual credential or certification is an important aspect of the *Future Directions in Credentialing* report that sought to define and establish a research plan that includes outcomes of specialty certification (IOM, 2015). These reports all demonstrated an increased interest in certification and are advancing the research on both patient and nurse outcomes related to certification (Boyle,

Cramer, Potter, Gatua, & Strobinski, 2014; Krapohl, Manojlovich, Redman, & Zhang, 2010).

Current discussions on professional certification include nurse practice and continued competency post-licensure. The interest in certification is related to demands for safe, affordable quality care. Continued competency is not limited to only the nursing profession; much of the literature from nursing and the healthcare professions posits that specialty certification is one way to address additional education, training, and continued competency (Hurlbutt & Asadoorian, 2016; Kendall-Gallagher, Aiken, Sloane, & Cimiotti, 2011). Nurse competency is an expected level of performance by an individual that includes the integration of knowledge, skills, abilities, and judgment (American Nurses Association [ANA], 2007). The certified nurse literature supports the idea that practice specialization increases knowledge and overall competence, or the integration of knowledge, skills, abilities, and judgment that can result in a potential difference in the provision of care (Cary, 2001; Krapohl et al., 2010). Certification allows the public, employers, and third-party payers to know that practitioners are qualified in a nursing specialty or occupation (Cary, 2001; Hickey et al., 2014). Likewise, the public positively views and values treatment by nurses and other healthcare professionals who have advanced certification (Jeffries, 2013). Thus, certification is fast becoming a "gold" standard of professional performance, indicating an expert nurse or expert nursing care (IOM, 2015; Williams & Counts, 2013). Much of the published research on certification explores the value of nurse certification in practice from the perspective of outcomes by measuring either patient, nurse, organization, or population (Needleman, Dittus, Pittman, Spetz, & Newhouse, 2014).

There is limited research exploring methods to encourage nurses to achieve individual certification beyond initial licensure (Fischer-Cartlidge & Mahon, 2014; Lindgren & Lancaster, 2016; Solomon, Lahl, Soat, Bena, & McClelland, 2016). There is also little reported literature exploring the role nurse educators have in educating students on specialty practice certification. There is abundant literature that examines the acquisition of professional behaviors as part of the socialization of undergraduate nursing students (Baldwin, Mills, Birks, & Budden, 2014; Baxter, 2007; Benner, 1984; Strouse & Nickerson, 2016). Much of that literature positively associates the faculty role with early professional socialization (Price, 2008; Rose, Nies, & Reid, 2018; Seada & Sleem, 2012). The professional socialization literature broadly describes that faculty are role models and are crucial to the formation of professional identity or the internalization of professional values that are expressed as professional behaviors (Baldwin et al., 2014; Baxter, 2007; Benner, Sutphen, Leonard, & Day, 2010). However, there is a gap in the nursing education literature. Specifically, there is a lack of research examining the formal or informal messages faculty share with students (Vioral, 2011). It would be beneficial to identify whether faculty share their perception of specialty practice certification, professional organizations, and the value of life-long learning in either clinical or classroom settings. Aside from determining whether faculty perceive there is value in specialty practice certification, this research might also provide insight on the role of faculty in student socialization.

Significance of Problem

The individual nurse credential or specialty practice certification must be examined as part of the broader credentialing research agenda. Today, the individual

certification is a designation of specialized skills or training within the scope of the registered nurse license (International Council of Nurses [ICN], 2009). It is important to distinguish between a registered nurse who holds a specialty certification and an advanced practice registered nurse (APRN) who has a graduate degree. The APRN has a graduate degree and must also pass an exam that results in an advanced practice certification; whereas the registered nurse has met all the certification requirements and passed the certification exam for a specialty certification, but may or may not have an advanced degree. Much of the nurse certification research is anecdotal, but suggests that nurses who are certified demonstrate greater knowledge and skill competency, participate more often in continuing education, are more likely to utilize evidence-based care for quality practice, and demonstrate a commitment to be a lifelong learner (Boltz, Capezuti, Wagner, Rosenburg, & Secic, 2013; Boyle et al., 2014; Coleman et al., 2009; Cramer et al., 2014; Foster, 2012; IOM, 2015; Krapohl et al., 2010; Lange et al., 2009; Martin, Arenas-Montoya, & Barnett, 2015; McCorkle, 2015). Moreover, the literature on certified nurse outcomes reports that specialty practice certification demonstrates a commitment to professional growth and credibility (Boltz et al., 2013; Boyle et al., 2014; Coleman et al., 2009; Lange et al., 2009; McCorkle, 2015).

Research regarding specialty certification includes studies that examine why nurses do or do not pursue certification. The seminal certification research conducted by Cary (2001) identified early values of certification. However, it was the development and wide deployment of the Perceived Value of Certification Tool (PVCT) that allowed for consistency in the measurement and analysis of certification findings. The PVCT established value statements that can be grouped according to two factors--intrinsic and

extrinsic rewards for certification (Niebuhr & Biel, 2007). The PVCT is comprised of intrinsic and extrinsic value statements that measures individual perception of certification. These value statements have led to additional research exploring why individual nurses pursue specialty certification. Intrinsic rewards are internal individual motivators and closely aligned with personal development and self-concept values. For instance, the intrinsic value statements are grounded in personal satisfaction, specialized knowledge, professional credibility, practice standards, clinical confidence, and evidence of accountability, and indicates level of clinical competence and enhances professional autonomy (Niebuhr & Biel, 2007; Gaberson, Schroeter, Killen, & Valentine, 2003; Solomon et al., 2016). Conversely, extrinsic rewards are those motivators that are external to the individual and defined by others (Niebuhr & Biel, 2007; Gaberson et al., 2003; Solomon et al., 2016). Extrinsic rewards come from the recognition by peers, employers, and other health professionals. Other extrinsic factors or motivators are an increase in marketability, consumer confidence, and salary (Niebuhr & Biel, 2007; Gaberson et al., 2003; Solomon et al., 2016).

There is also research that has identified individual benefits and barriers to achieving specialty certification. For example, the costs associated with certification include the initial cost of the study materials and the initial exam fee and includes future costs to re-certify. Other individual barriers to certification include the time required to prepare for the exam and fear of taking the exam (Solomon et al., 2016). Commonly recognized benefits include increased practice confidence, autonomy, credibility, and enhanced job satisfaction status (Boltz et al., 2013; Boyle, Berquist-Beringer, & Cramer, 2017). The literature on the benefits of certification also cites a positive relationship with

workplace empowerment, a commitment to promoting professionalism, and an increase in professional status (Boltz et al., 2013; Boyle et al. , 2017). While it is important to understand the benefits and barriers associated with individual certification, the information reported on thus far does not shed light on *how* the nurse learned about certification or what factors affect an individual's decision to certify.

Consequently, it would be beneficial to examine whether nursing faculty value certification and whether those values are shared in the classroom or clinical setting. For instance, faculty value of certification may also be associated with other professional behaviors such as involvement in professional organizations, the opportunity for specialty practice, and continuing education post-licensure. Forward-thinking leaders in nursing education recognize that any changes in the production of nurses occur through the educational system. There have been some recent novel innovations in the process of educating nursing students to increase the number of nurses who seek certification. For instance, a Canadian nursing program planned a critical care bridging program as part of the fourth semester of an undergraduate curriculum to increase the number of nurses practicing within the intensive care setting (King, Singh, & Harris, 2009). More recently, nurse educators in British Columbia have focused on connecting intentional learning and cardiac specialty practice in an undergraduate program (Rush, Wilson, Costigan, Bannerman, & Donnelly, 2016). Understanding what message faculty communicate on professional behaviors or activities of professional development, such as specialty certification, should be of interest to nurse educators.

Professional Certification

The concept of certification has a positive connotation within the profession of nursing. The literature provides key terms and phrases that are representative of the nurse who chooses to seek certification to validate professional practice in a defined functional or clinical area of nursing (Boyle et al., 2014; Lange et al., 2009; Martin et al., 2015). The certified nurse is highly knowledgeable and provides safe, competent quality care that results in improved patient outcomes and is described as a professional, with expertise in a practice specialty (Case Di Leonardi & Biel, 2012; IOM, 2015; Lange et al., 2009; Spetz, 2014). Professional governing bodies conceptualize certification as an individual nurse qualification to practice in a defined functional or clinical area of nursing (IOM, 2015). Certification is a formal recognition of specialized knowledge or skills and experience demonstrated by the achievement of predetermined standards in a nursing specialty that promote optimal health outcomes. Certification is a mark of professionalism and a demonstration of expertise in a nursing role (American Nurses Credentialing Center, n.d.; National League for Nursing [NLN], n.d.; National Certification Corporation [NCC], n.d.).

However, these assertions of professional value have little confirmatory research that is associated with a specific certified nurse practice. The early research on certification was conducted on hospital data. For instance, in 2009 Kendall-Gallagher and Blegen conducted a secondary analysis that contemplated the proportion of certified staff nurses in a unit and a risk of harm to patients. The data represented 48 intensive care units from a random sample of 29 hospitals to examine unit certification rates and the rates of medication administration errors, falls, skin breakdown, and three-types of

nosocomial infections. The data indicated that unit proportion of certified registered nurses was inversely related to the rate of falls and the greater the number of certified nurse staff on the unit, the fewer the number of medication administration errors (Kendall-Gallagher & Blegen, 2009).

Another secondary analysis conducted by Kendall-Gallagher et al. (2011) sought to examine whether the proportion of certified nurse staff can make a difference in outcomes. The secondary analysis reviewed data from 2005-2006 that examined 652 nonfederal hospitals, included data from 28,598 nurse surveys to examine inpatient 30-day mortality, and failure to rescue (Kendall-Gallagher et al., 2011). The analysis of the risk-adjusted outcomes was positively associated with the proportion of certified staff nurses holding a specialty certification. This study was also important in that it was an early analysis that also included nurse certification and the highest degree achieved. The study reported that certification influences outcomes, but also reported that there were perceptible differences in the level of education and certification. A 10% increase in the proportion of baccalaureate nurses and certified nurses is associated with a 6% decrease in the odds of inpatient mortality and a 2% decrease in failure to rescue (Kendall-Gallagher et al., 2011). These secondary analyses looked at certification broadly and the relation, if any, to general patient outcomes. While this examination is of value, neither of these analyses identified a specific certification or specialty area of practice.

Nurse specialty certification is identified by the population of patients served or by the setting of nursing practice. For instance, the critical care registered nurse (CCRN) and the certified nurse operating room (CNOR) both practice within a defined hospital area and with a certain population of patients. There is research examining specific nurse

specialty certifications and patient outcomes. For instance, a 2009 study by Coleman et al. compared certified with noncertified nurses for symptom management of oncology patients. Data were collected from 93 nurses, and of those, 35 (38%) were certified. Participants completed a knowledge and attitude survey regarding pain and nausea management. The findings indicated that the certified nurses scored significantly higher ($p = 0.02$) than non-certified nurses on knowledge of pain management. Another study by Bliss, Westra, Savik, and Yuefeng (2013) examined patient outcomes about care provided by certified wound, ostomy, and continence-certified nurses (WOC). This research was specific to the patient population, those discharged home with a lower extremity venous ulcers or surgical wounds that received care from nurses, both certified and non-certified. This analysis identified that patients with received care from a WOC nurse demonstrated a significant improvement (Bliss et al., 2013). These analyses do indicate that certified nurses can make a difference in patient outcomes, but this line of research is episodic. There is a need for new or replication research to identify if these outcomes are substantiated and constant. Finally, it is important also to realize that the process of certification remains with the individual nurse and is internalized as part of nurse practice. Therefore, there is a need for research to examine how the process toward certification affects nurse practice within a specific practice setting or by a specific population.

Professional Role and Behaviors.

Many of the specialty practice certifications originated from within the profession. The individual nurse groups formed and collectively advocated their practice with either a specific population or a specific area (ANA, 2007; ICN, 2009). Since the

1970s, specialty-nursing organizations have acted as recognition of distinct professional practice, and early certification was a form of member recognition (Cary, 2001). Today, professional nursing organizations and practice associations use specialty certifications to draw awareness to practice and to increase membership. Many specialty organizations are also leading advancements in nursing science through collaboration, dissemination of knowledge, and ongoing professional development (Matthews, 2012). There are more associations of nursing than there are associations that also provide a specialty practice certification. Today the largest provider of specialty practice nurse certifications is the American Nurses Credentialing Center (ANCC). The ANCC offers both advanced-practice nurse certification at the graduate level and board-certification at the undergraduate level. Currently listed as board-certified practice specialties are: ambulatory care nursing, cardiac vascular nursing, gerontological nursing, informatics nursing, medical-surgical nursing, national healthcare disaster nursing, nursing case management, pain management nursing, pediatric nursing, and psychiatric-mental health nursing. This is only a partial compilation of specialty certifications that are offered and only serves to further support that the certification process is an opportunity to demonstrate a specialty knowledge or expertise in a specific nurse practice (Benner, 1984).

Professional Socialization and the Faculty Role

Important professional socialization takes place during undergraduate nursing education (Dimitriadou, Pizirtzidou, & Lavdaniti, 2013). The current model of undergraduate nursing education is one that strives to provide students with a broad array of classroom and clinical experiences during the formation of their professional identify

(Benner, 1984; Davis & Maisano, 2016). The literature supports that the role of the nurse educator is to serve as the agent to socialize the nursing student into the professional role, to ease the transition, and promote career readiness (Dinmohammadi, Peyrovi, & Mehrdad, 2013; McCain, 1985). Over the course of the nursing program, students internalize the attitudes, behaviors, and values of the profession (Benner et al., 2010; Dinmohammadi et al., 2013; Fisher, 2014). Faculty serves as an early role model of professional behaviors that includes the formation of a sense of identity and a commitment to the profession (Dimitriadou et al., 2013). The ANA identified that professional values are the foundation that informs and shapes both nursing mindset and conduct (American Association of Colleges of Nursing [AACN], 2008). Socializing the student into the profession is a process where the beginner is transformed through the integration or internalization of the values, the norms of behavior, and the symbols of the profession (Dimitriadou et al., 2013).

The literature supports that the faculty role is much more than just teaching nursing practice in the classroom and clinical setting (Dinmohammadi et al., 2013; MacLellan, Lordly, & Gingras, 2011). During the nursing program, students engage with faculty as part of the educational process resulting in ongoing professional identity construction (Johnson, Cowin, Wilson, & Young, 2012). There is research on how faculty influences the educational process as well as the transition of the new graduate (Benner, 1984; Sparacino, 2015). A grounded theory study by Sparacino (2015) investigated faculty behaviors that promote a smooth transition from the role of student to nurse and in doing so, identified that faculty can impact the professional practice of the new nurse. Researchers received 24 responses from the identified 700 potential

participants with data saturation achieved after 13 participants were interviewed. This grounded theory approach identified three general themes: caring, experience and knowledge, and professionalism. The attitude of faculty was the reported attribute and identified by the respondents as reflecting professionalism. The study participants noted how "they aligned themselves with the actions of nursing faculty they believed represented professionalism" (Sparacino, 2015, p. 42). All faculty within a program have an opportunity to influence student development by communicating professional values as part of information on professional organizations, continuing education post-licensure or life-long learning, the role of specialty practice, and nurse certification.

There remains much to learn about the role of the nursing program and educators regarding their influence on student and new graduate professional development. The Explanatory Model of Professional Socialization activates the faculty role by affirming the importance of sharing or imparting knowledge or information to undergraduate nursing students about specialty practice and certification post-licensure (Edens, 1987). There is a need for research on whether the professional behaviors of faculty can influence student professional development, professional values, and work satisfaction (Baldwin et al., 2014; Rose et al., 2018).

Process of Credentialing and Certification

It is important to understand the umbrella concept of credentialing before focusing on the role of certification within the profession. The ICN broadly defines and describes credentialing as processes used to designate that an individual, program, institution, or product have met established standards and is recognized as qualified to carry out the task (2009) (Figure 1).

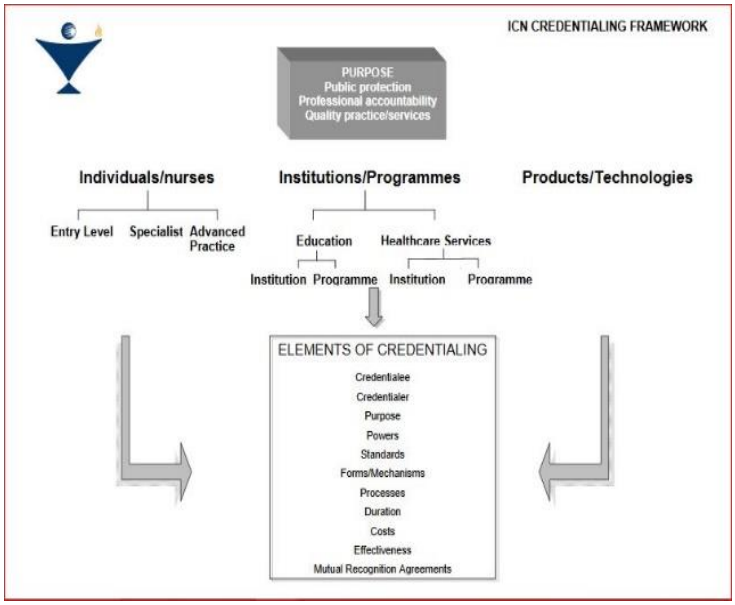

Figure 1. ICN credentialing framework. Adapted from *Credentialing* by International Council of Nurses, 2009, p .5).

The ICN Credentialing Framework distinguishes the purpose, interested parties, and elements of nurse credentialing (ICN, 2009). Standards are a critical construct of the credentialing framework and are inherent in both certification and licensure (American Board of Nursing Specialties [ABNS], 2014; ICN, 2009). Moreover, standards serve to authenticate the professional value of the certification through formal qualifications such as a minimum time spent in a specialty practice area or a predetermined number of required clinical hours or required academic degree (Cramer et al., 2014). Credentialing agencies can also withdraw accreditation if behaviors or practice standards are not met (ICN, 2009).

The *Future of Nursing, Leading Change, Advancing Health* report also identified a need for credentialing research (IOM, 2011). Researchers need a way to systematically collect workforce data for use in planning and policy development (IOM, 2011). Then, in 2012, the ANCC released another report examining the need for credentialing research

(Lundmark et al.). This report proposed the Model for Credentialing Research (Figure 2) serves to organize and identify variables that clarify main concepts to direct future research activities (Lundmark et al., 2012). The identified components of the model are standards, credentials, intervening variables, outcomes and the environment in which an individual seeks a credential (Figure 2.) (Lundmark et al., 2012). The presence of the solid and dashed bidirectional arrows depict model components that have either a significant or nonsignificant effect on credentialing. The model is built on broad generalizations that influence, impact or affect any component of the credentialing process (Lundmark et al., 2012).

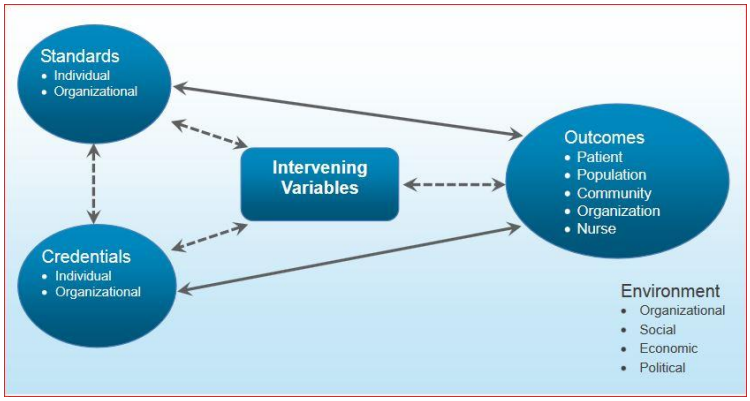

Figure 2. Model for credentialing research. Adapted from *ANCC National Agenda for Credentialing Research in Nursing* p. 9.

Recently, the IOM convened nursing and healthcare leaders to discuss the need for a national research agenda on credentialing within the nursing profession (2015). Needleman et al. (2014) proposed the Expanded Conceptual Model to identify intermediate activities and potential links between the credential, the patient, and organizational outcomes. The presence of this new model indicates that credentialing within the nursing profession is a complex system that involves multiple agencies, organizations, associations, and individuals. The Expanded Conceptual Model identifies

that *factors* can influence whether an individual seeks an additional credential post-initial licensure.

Many of the specialty certification attributes are found within the general credentialing framework. Identifying characteristics of certification in the context of the nurse and professional nursing practice may provide additional clarity to the concept (IOM, 2015). In the left-upper corner of the model is the *Seek Credential* box; this is the time when the nurse chooses to pursue certification and those factors that influenced the decision (Figure 3). The *Seek Credential* box is preceded by an arrow from *Environmental Confounders and Effect Modifiers*, the factors that can influence the individual's decision on whether or not to seek a credential.

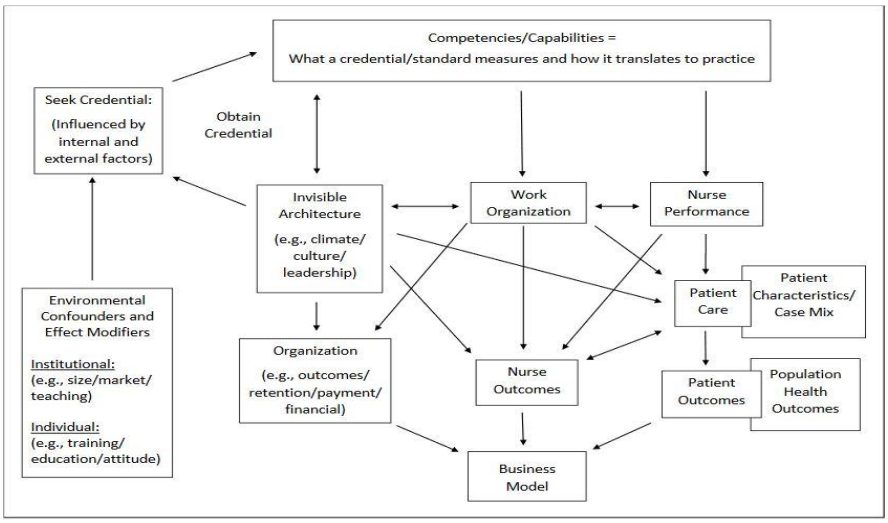

Figure 3. Expanded conceptual model. Adapted from *Nurse Credentialing Research Frameworks and Perspectives for Assessing a Research Agenda* by Needleman et al. (2014), p. 6.

Environmental confounders and effect modifiers can be institutional or individual. The model provides examples of individual and environmental factors, such as the size of the facility, the market or population served, and the sharing or teaching of information that might influence whether an individual seeks certification. There are also

environmental confounders and effect modifiers that affect the individual such as attitude, training, and level of education or additional education. The Expanded Conceptual Model acknowledges there may be environmental confounders and effect modifiers that either positively or negatively influence the decision by the individual nurse to seek and obtain a specialty practice certification (Needleman et al., 2014). Interestingly, faculty can be both an institutional and individual confounder and effect modifier. The institution requires faculty to develop and deploy an academic program; and as part of the institution, individual faculty engage with students in various educational settings. Identifying which factors might influence an individual's decision to obtain a specialty practice certification will provide important information to future researchers and educators (Needleman et al., 2014). This study seeks to learn whether faculty perceives value in certification which would be important to further understanding of the educational system as an environmental factor influencing a newly licensed nurse's (NLRN) intention to pursue specialty certification. Thus, the Expanded Conceptual Model broadens the research capacity by acknowledging internal and external factors that can influence whether an individual seeks a credential (Needleman et al., 2014).

The AACN affirms the nurse educator is responsible in the socialization of nursing students to the values of the profession in order to instill the knowledge and skills needed for competent practice (2008). The evidence concurs that attitudes and values that student nurses develop and then adopt are fostered and nurtured by the nurse educators they are exposed to throughout the program (Keeling & Templeman, 2012). In fact, in a qualitative study by Sparacino (2015), students noted that faculty attitudes affected their ability to adjust to the professional role and that they aligned themselves

with those professionalism behaviors observed. Faculty role modeling can contribute to a student adopting the view of self-discovery, self-motivation, and self-confidence in their professional development (Baldwin et al., 2014). Lastly, it is important to note that faculty influence can be either positive or negative (Johnson et al., 2012).

Specialty Certification

Specialty certification within nursing is a post-licensure voluntary credential that designates specialized skills or training within the scope of the registered nurse license. Certification demonstrates the progression of nursing expertise across a continuum that includes new or expanded practice standards and any related competencies as an effort to improve patient care (Benner, 1984; ICN, 2009; IOM, 2015). The pathways between credentials and outcomes are reliant on factors that need to be identified, explained, and explored as part of the future credentialing research (Needleman et al., 2014).

Professional socialization and specialty certification. Nursing faculty play an important role in forming a sense of belonging and serve to support the socialization of students into the profession of nursing (Maranon & Pera, 2015; Zarshenas et al., 2014). Nurse educators are an integral part of professional socialization that occurs in both the classroom and clinical setting. A literature review by Dinmohammadi et al. (2013) defined professional socialization as a "dynamic, interactive process through which attitudes, knowledge, skills, values, norms, and behaviors of the nursing profession are internalized and a professional identity is developed" (p. 32). Socialization encompasses professionalism; it is the acquisition of professional values or the development of a professional identity (Benner et al., 2010). Topics such as specialty certification and

professional organizational involvement should be presented in the context of professional development (Benner, 1984).

As part of nursing education, students learn the tenets or standards of the profession. The American Nurses Association Code of Ethics is a hallmark document that is integrated into every Nurse Practice Act across the United States. The Code of Ethics consists of nine provisions and has recently been updated to a second edition (Fowler, 2015). Explicitly referenced as part of basic nursing education, the Code of Ethics teaches the values of the profession: caring, trust, justice, professionalism, and activism (Posluszny & Hawley, 2017). Several provisions align with the purpose of this research study; that is, to identify whether nursing faculty value specialty certification and then, if that information is shared.

For instance, Provision 2 identifies the primary commitment is to the patient, whether an individual, family, group community, or population. Provision 2 is ultimately about caring and acknowledging the difference between caring about, taking care of, care-giving, and care-receiving (Fowler, 2015). As part of those caring phases, there are four corollary moral elements of caring: attentiveness, responsibility, competence, and responsiveness (Fowler, 2015). These moral elements are critical to understanding the important components of the profession. For instance, responsibility differs from obligation and that the profession is better served by focusing on the flexible notion of responsibility as "embedded in a set of implicit cultural practices, rather than a set of formal rules or series of promises" (Fowler, 2015, p. 30). For clarity, the moral argument that competent nurse practice is also viewed from the negative perspective; that it is not necessary that nurses perform competent, safe care. This statement supports the idea that

specialty nurse certification is one opportunity to demonstrate and maintain expert nursing practice (Fowler, 2015).

Provision 5 states that the nurse is essentially required to provide the same duties to self as others. Therefore, the nurse is also responsible for promoting their health and safety, preserving the wholeness of their character and integrity, maintaining competence, and continuing personal and professional growth (Fowler, 2015). The Suggested Code (1926) and the Tentative Code (1940) both identified, "professional growth and development are promoted by membership in professional organizations, both state and local, by attendance at meetings and conventions and by constant reading on professional subjects" (as cited in Fowler, 2015, p. 88). However, over the years, there have been shifts in the view of what constitutes a duty to self. This shift in professional growth was a change in the view from a duty to self to duty to the profession and duty to the patient. Moreover, Provision 5.5 identifies professional growth and competence, but clarifies that the terms are not the same. Fowler (2015) identified that competence is the "rock bottom level of acceptable practice, the level below which no practitioner should fall" (p. 89). The Code, over time, has sought to present that professional growth is necessary for competence and is important to the profession and for the individual or community receiving nursing care. The 2001 Code clarified that professional growth is not limited to the knowledge and skills required for safe practice, but also includes professional issues, concerns, controversies, and ethics (Fowler, 2015). The current 2015 rendition of the ANA Code of Ethics maintains a requirement for professional growth, but now includes personal growth--growth in the nurses' interests, knowledge, world, and self-understanding (Fowler, 2015).

Lastly, Provision 9 affirms the profession of nursing, collectively through its professional organizations' articulate nursing values to maintain the integrity of the profession and integrate principles of social justice into nursing and health policy (Fowler, 2015). The role of the professional organizations and associations is to affirm and bolster nursing values and ideals that are resolutely communicated to the public. Nursing organizations and associations engage in an ongoing formal dialogue with society on discourse that supports self-reflection, critical self-analysis, and evaluation (Fowler, 2015). Examples of societal dialogue are found in the form of foundational profession documents, published standards of nursing specialty practice, dissemination of nursing scholarship, rigorous educational requirements for entry into practice, and advancing practice with a commitment to evidence-informed practice (Fowler, 2015). Moreover, the work of professional organizations and requirements of accreditation play an integral role in the formation, education, and development of new nurses as they enter the profession. Nursing faculty play a critical role in the "modeling the profession's commitment to social justice and health through clinical content and field experiences, and critical thought" (Fowler, 2015, p. 207).

The *Explanatory Model of Professional Socialization in Nursing* by Edens (1987) activated the applicable provisions that best represent the role faculty can play to encourage and support specialty certification post-licensure (Mariet, 2016). The Explanatory Model also complemented Benner's academic model by advocating that socialization is a "learning process that takes place in a social environment" of which the learner is an important part (Mariet, 2016, p. 147). The Explanatory Model is comprised of five interacting domains or outcomes that apply to professional self-growth: self-

image, role conception, attitudes, values, and personality (Mariet, 2016). The Model supports the active participation of nurse educators in professional socialization (Mariet, 2016). Faculty can influence student internalization of the professional role by including information on the role of specialty certification within the profession (Edens, 1987).

Practice and specialty certification. The *Novice to Expert Model* supported that nursing knowledge or competency in practice increases along a continuum (Benner, 1984). The early view that nursing practice is "a simplified, linear, problem-solving process" is limiting, and the *Novice to Expert Model* was presented as a new way to think about nursing practice (Benner, 1984, p. xxii). The diversity of practice within the nursing profession is extensive. Moreover, the ability for a nurse to move within practice areas and among populations is supported by the continuum of learning that is part of the *Novice to Expert Model*. During the acquisition of nursing knowledge and through practice experiences, the student and nurse, alike, build a body of professional knowledge that can be identified in one of five levels of competency: novice, advanced beginner, competent, proficient, and expert nursing practice (Benner, 1984). Yet, the model does not "support labeling or certifying nurses as, novice, competent or expert" for *all* situations, but rather in a defined and specific situation of practice (Benner, 1984, p. 179). Certification is the formal acknowledgment of practice expertise in a specified area, but certification does not always signify competency. Furthermore, the legitimization of specialty practice occurred when groups of nurses began describing *their* practice within a specialty area as complex and significant (Benner, 1984). There is variance regarding the qualifications for specialty certifications, as some certifications specify degree and practice requirements. For instance, The Nephrology Nursing Certification Commission

(NNCC) provides oversight on certification for nephrology nursing that are specific to license type and degree of education.

The *Novice to Expert Model* acknowledges the faculty role in the professional socialization of nursing students. Faculty serve as advocates for the profession and model expert practice, the importance of life-long learning, and individual professional development (Benner, 1984). Benner (1984) identified that "environmental and internal changes in nursing" would require nursing education to include a focus on career development and nurse retention (p. 174). From this perspective, specialty practice certification has implications for individual professional development and individual career advancement. This study seeks to investigate if nursing faculty value specialty practice certification as a form of professional development and if that perceived value is communicated to students.

Value of specialty certification. Specialty certification today confers legitimacy of expert nursing practice by formally acknowledging an individual is an expert in specific nursing practice (Miller & Boyle, 2008; Williams & Counts, 2013). The certification research has addressed many variables, including nurse perception of benefit or value of a practice certification. In fact, the PVCT is most often cited in the literature to measure value of certification among nurses. For instance, an early study by Haskins, Hnatiuk and Yoder (2011) utilized the PVCT to measure medical-surgical nurses' perception of certification. That study had a large sample size, but a response rate of only 26% (Haskins et al., 2011). However, the data collected indicated that certified medical-surgical nurses have a positive perception of the value of certification (Haskins et al., 2011). Another study by McNeely, Shonka, Pardee, and Nicol (2015) examined pediatric

nurses perception of certification utilizing the PVCT. That study captured data from 737 pediatric nurses; of those that responded, 487 (66%) responded as certified (McNeely et al., (2015).

The PVCT measures perceived value of specialty certification using 18 value statements that have been identified as either intrinsic or extrinsic factors. The intrinsic subscale includes: accomplishment, satisfaction, professional growth, confidence in clinical ability, challenge, professional commitment, knowledge, accountability, practice standard, clinical competence, professional credibility, and autonomy. The extrinsic subscale includes: employer recognition, health professional recognition, salary, peer recognition, marketability, and consumer confidence (Haskins et al., 2011; McNeely et al., 2015). The intrinsic and extrinsic subscales are comprised of factors commonly viewed as environmental confounders and effect modifiers that might influence a nurse to pursue an individual credential, which would be of great interest to the greater healthcare system (IOM, 2015).

A gap exists in the certification research on whether nurse educators perceive that specialty certification adds value to nursing practice. Understanding how faculty perceive the value of certification post-licensure may provide clarity on what external or internal confounders or effect modifiers might influence an individual to seek a credential. For instance, faculty who value certification might also share their professional values on such activities as post-licensure certification, involvement in professional organizations or specialty associations, and continuing education. Additional understanding on whether faculty place value on certification may assist with future planning on how to increase the number of nurses who seek specialty practice

certification and add to the credentialing literature. The intent of this research study is to specifically add to the body of knowledge focusing on the perceptions of undergraduate nursing faculty regarding specialty certification and their communication of information about specialty certification to prelicensure students.

Problem Statement

The absence of a research infrastructure complicates the ability to demonstrate the value of specialty certification. The lack of organization and standardization within the credentialing process to achieve certification produces an inconsistent value of certification within nursing (IOM, 2015). For instance, there is variation in certification when comparing the registered nurse (RN) and the advanced practice registered nurse (APRN). A registered nurse without a graduate degree can earn a board certification post-licensure in a specialty practice, which is symbolic of specialized care for a specific patient population or area of practice (IOM, 2015). Each certification carries independent standards. Therefore, between certifications, there is variability in requirements of time in practice, type of experience, or needed specialty training. There is also variability in exam requirements and within the recertification process among the specialty certifications.

Contemporary nurse leaders are driving the credentialing research to establish that certification positively influences nurse practice (Biel, Grief, Patry, Ponto, & Shirey, 2014; IOM, 2015; Lundmark et al., 2012). There is discussion within the profession and across healthcare whether certified nurse practice or certified specialty practice improve nurse and patient outcomes. The certification literature focuses on either the patient or the nurse perspective and is classified broadly as either the hospital or community setting

(IOM, 2015). Information on the faculty view of professional behaviors could further the understanding of how the educational environment or those environmental or effect modifiers can either positively or negatively influence a newly licensed nurse choosing to pursue specialty certification (Needleman et al., 2014; Rose et al., 2018). The purpose of this study was to focus on whether nursing faculty perceive value in certification and whether that perception is shared in the educational setting.

Research Questions

The broad research question this study attempted to answer is: What role do undergraduate nursing faculty play in student awareness of specialty practice certification? This broad question contains specific related questions:

Q1 What is the perceived value of specialty certification in undergraduate nursing faculty?

Q2 How is information on specialty certification presented to students?

Q3 What do nurse educators report as the relationship between specialty certification and other characteristics of professional behavior?

Definition of Terms

The term credentialing defines and demonstrates that a recognized, entity either an institution or an individual, has met established standards (Biel et al., 2014; IOM, 2015). Conferring a credential indicates that an institution has been qualified to develop, implement, and evaluate established standards to define a scope of practice (Dickerson, 2012; ICN, 2009). Terms used to describe different credentialing processes are licensure, registration, accreditation, approval, certification, recognition, or endorsement (ICN, 2009). Accreditation includes periodic renewal of a credential as a means of assuring continued quality; moreover, a credential may also be withdrawn when established

competency standards are no longer met (ICN, 2009). The terms licensure and certification both designate an individual credential (Dickerson, 2012). Licensure is the mandatory process by which a government agency grants time-limited permission to an individual to engage in a specified occupation after verifying the individual has met predetermined, standardized criteria and offers protection to those individuals who hold that license (McHugh et al., 2014). The nurse licensure exam establishes individual competence, the established minimum knowledge or proficiency to practice safely at an expected level in an unsupervised context (ANA, 2007; Case Di Leonardi & Biel, 2012; ICN, 2009; IOM, 2015; McHugh et al., 2014; Williams & Counts, 2013).

Certification is an individual, voluntary process of a time-limited recognition and use of a credential after verifying the individual met predetermined and standardized criteria (McHugh et al., 2014). Certification is an individual credential that demonstrates "attainment of increased knowledge but does not address a legal scope of practice like licensure does" (Roux & Halstead, 2018, p. 74). Registered nurses who meet certification requirements are described as a board-certified, a certified specialty nurse, or that the nurse has an earned certification in a practice specialty (Cramer et al., 2014; ICN, 2009; IOM, 2015; Williams & Counts, 2013). This study will not be investigating the APRN role or APRN certification. However, it is important to distinguish the RN from the APRN because certification is also part of the APRN role. The RN has graduated from an accredited undergraduate nursing program and successfully passed the National Council Licensure Exam (NCLEX), whereas the APRN requires formalized training, education, certification, and legal authority to provide a specific scope of nursing practice (Parker & Hill, 2017). The APRN holds an advanced degree, at minimum a graduate

degree, and has been tested at the appropriate level for a pre-determined, specific type of practice. Conferring a credential indicates that an individual has been qualified to implement established standards within a defined scope of practice (Dickerson, 2012; ICN, 2009). Finally, it is imperative to identify that other certificates that nurses also hold are not considered specialty certifications. A few examples of additional training that are required for safe practice are cardiopulmonary resuscitation (CPR), advanced cardiovascular life support (ACLS), and pediatric advanced life support (PALS).

For this study, students are defined as individuals enrolled in a pre-licensure baccalaureate or associate degree nursing program. This study will use the term socialization to communicate "the social forces and influences" of the profession that are relevant to the formative student experiences (Benner et al., 2010, p. 86). Professional organizations or professional associations focus on nursing practice in an identified specific area within the entire field of professional nursing and provide standards and criteria to obtain certification. It is important to clarify that the professional associations can offer certifications to both the RN and the APRN as another indication of practice progression. Continued competency is the ongoing ability of the nurse to integrate and apply the knowledge, skills, judgment, and personal attributes to practice safely in a designated role and setting (Canadian Nurses Association, 2004).

Continued competency in specialty practice is an important component in the maintenance of a specialty practice certification. Maintenance of certification occurs primarily through clinical practice expertise which is "highly influenced by experience with similar patient populations" or by specialty area (Benner, 1984, p. 179). The re-certification process is a rigorous process, a recognition of dedicated learning, and

clinical expertise in a specialty practice care area or with a patient population (Sweeny, 2018).

Conclusion

Specialty certification within the nursing profession is quickly becoming normalized as part of accepted nursing practice. Faculty serve as role models of professional behavior by "transmitting their attitudes, values, and behavioral norms formally through established course structures and informally through individual advising, informal contacts, and social activities" (Edens, 1987, p. 7). Examining faculty values regarding specialty certification added to the understanding of professional behaviors that could positively or negatively influence the newly licensed nurse to seek a credential as they move along the practice continuum (Benner, 1984).

CHAPTER II

REVIEW OF LITERATURE

Recently, the ANCC (n.d.) and the IOM (2015) have both expressed the need for a national research agenda on nurse credentialing. A literature search over the last decade utilizing the search engines of CINAHL, SAGE, ProQuest Nursing and Allied Health, EBSCOhost Academic Search Premier as well as Google Scholar was conducted to ensure a broad view of literature related to specialty certification in nursing. The search terms and phrases "certification in nursing," "specialty certification in nursing," "promotion of certification in nursing," "patient outcomes and specialty nursing certification," "nurse perception of specialty practice certification," and "nursing faculty perception of specialty practice certification" were entered into each of the search engines for a comprehensive review of the literature. The search provided a diverse view on the topic of specialty practice certification within the nursing profession. The review of literature also included variables related to specialty certification, such as competence, continuing education, professional behaviors, profession role, and professional socialization. It is important to reiterate that studies related to the APRN were *not* included in this literature review as that is outside the topic for this study.

Background and Opportunities of Certification

In 2001, Cary conducted seminal research that reported on findings from a large international sample of almost 20,000 nurses, representing 23 certifying organizations.

Cary noted that there was an absence of data to substantiate, quantify, or qualify the value certification adds to nurse practice. The findings from this study provide a historical view on the early discussions of certification and its perceived value. Study findings indicated 72% of the respondents reported one or more benefits of certification, and most respondents reported that certification brought at least one change in nursing practice (Cary, 2001). This early work by Cary is the initial evidence that certification may give nurses an opportunity to improve practice and improve outcomes. For example, Cary identified that certification promotes increased confidence, competence, autonomy, credibility, and the ability to control the attributes of high-quality care (2001). Furthermore, respondents identified that certification affords professional development, financial rewards, recognition, career advancement, and improved patient satisfaction with care (Cary, 2001).

Individual nurse credentialing is one step toward practice accountability and supports the goal of certification, which is to protect the public from unsafe and incompetent providers (Cary, 2001). Cary (2001) specifically asserted that certification serves several purposes: "It protects the public from unsafe and incompetent providers, gives consumers more choices in selecting health care providers, distinguishes among levels of care and gives better-trained providers a competitive advantage" (p. 2). This seminal study identified early values of the certified nurse workforce; 40% of nurses certified for five years or less believed the certification process improved individual confidence in the ability to detect a change or a complication and the ability to rescue (Cary, 2001). The positive effect was also more noticeable in those nurses who had recently certified. This could possibly indicate that the longer a nurse is certified, the less

likely they are to recognize that their specialty practice certification is the cause of favorable changes in practice; it has become part of the individuals expected practice (Cary, 2001). The process of re-certification or the requirements to demonstrate individual competency in the specialty practice area occurs at the direction of the accrediting bodies, such as the ANCC, the Accreditation Board for Specialty Nursing Certification (ABSNC), and the Institute for Credentialing Excellence (ICE). An accrediting agency provides oversight for the specialty practice certification prescribing the type and quantity of continuing educational activities that meet certification standards. Cary (2001) also proposed that the re-certification process would evolve to include a combination of a portfolio, work-site proficiency testing, peer or self-assessment, and re-examination to maintain certification or practice competency.

In 2008, the Triple Aim called for future healthcare to include balance in the delivery of healthcare services by allowing health professionals to practice at the highest level of individual education and training (Berwick, Nolan, & Whittington, 2008; Salmond & Echevarria, 2017). Contemporary healthcare delivery models are meant to offer quality services and greater efficiency through coordinated team care with a focus on population health, community-based specialty care, chronic disease management, and prevention (Salmond & Echevarria, 2017). Moreover, the nursing workforce is poised to make significant contributions in any new healthcare delivery models. The *Future of Nursing* report indicated continuing education enables nurses to "gain, preserve and measure" the skills needed in community-based, outpatient, long-term care, primary care and ambulatory settings" (National Academies of Sciences, Engineering, and Medicine, 2016, p. 9). A thorough examination and exploration on the impact of nurse

credentialing in the form of a specialty certification could influence scope of practice, collaboration, and leadership and improve the design of care delivery (National Academies of Sciences, Engineering, and Medicine, 2016).

Nurses are vital to increasing value within the health and care service sectors. Forward-thinking healthcare organizations recognize nurses are leaders and innovators in the improvement of health care services. There is a significant body of literature that affirms that certification matters to patient, nurse, community, and system outcomes. Certification is a demonstration of professional expertise and indicates an individual has achieved predetermined requirements as set by the issuing agency. Research on nurse credentialing is critical because specialty practice certification offers an opportunity to advance the non-advanced practice nurse. Future research should focus on clarifying the scope of practice for the generalist nurse who also holds a specialty practice certification (Bauer & Bodenheimer, 2017). Certification is an opportunity to expand the role of the nurse to improve quality and add to the capacity of the primary care workforce (Bauer & Bodenheimer, 2017). Nurse certification may disrupt the current healthcare system and influence new delivery models that includes the registered nurse managing chronic disease care and coordinating chronic care management (Bauer & Bodenheimer, 2017). There is evidence of these nurse advancements already in practice. In 2016, the American Association of Heart Failure Nurses released a position paper on a new certification, the Certified Heart Failure Nurse--Knowledge (CHN-K) (Trupp, Penny, & Prasun, 2016). This certification confirms heart failure knowledge and commitment to quality care, but without the requirement for hospital clinical practice. The CHN-K

certification introduces an innovation in the nursing profession that may inform practice change and influence future delivery models.

Furthermore, certification provides an additional mechanism to measure outcomes and possibly a way to establish profession value within healthcare. Nurse certification also provides nurse researchers with a specific population to then examine certain patient, nurse, or community outcomes. For instance, the Wound, Ostomy and Continence (WOC) Nurses Society has research that demonstrates that certified WOC nurses positively impacted outcomes by measuring actual health outcomes, not the services delivered (Bauer & Bodenheimer, 2017). Future nurse research on certification must intentionally focus on outcomes of the patient, the nurse, and the system to establish improvements in care delivery (Porter, 2010).

Theoretical Perspectives

Credentialing Model

This study will reference the Expanded Conceptual Model to explore specialty certification among the generalist nurse population, those nurses that are *not* APN (Needleman et al., 2014). The Expanded Conceptual Model broadens the research view of certification by including the factors that influence whether an individual pursues certification. Internal or external factors that might influence a newly licensed nurse to pursue certification early in their professional career are those factors that influence individual agency, such as the health of the nurse, professional satisfaction, and the ability to practice nursing (Needleman et al., 2014). The model identifies factors like education, training, and individual attitude as environmental confounders or effect modifiers that can influence whether to seek a specialty practice certification. Finally,

once an individual nurse is certified, there are additional intrinsic and extrinsic factors that can impact the decision to re-certify (Needleman et al., 2014). The individual post-licensure certification is an expression of nurse performance, as a specialist in practice, capable of affecting outcomes (Needleman et al., 2014). Nurse satisfaction with practice performance affects the nurse outcome of retention within the profession (Needleman et al., 2014).

Professional Socialization

This study references the Explanatory Model of Professional Socialization in Nursing which is made up of "five interacting domains of potential self-growth" that are relevant and applicable to the concept of professional socialization (Edens, 1987, p. 3). Edens speculated there was a need to identify factors that cause or prohibit students' professional development (1987). This study will focus on the domain of role conception or how the internalization of the rights and responsibilities of the nurse educator role can influence the development of a professional self-image (Edens, 1987). Professional socialization of student to nurse occurs as part of the nursing education process. Yet, there remains a lack of understanding on how nursing education provides exposure to professional organizations, specialty practice, and certification, or how faculty role model professional development or foster socialization (Vioral, 2011).

There is a broad repository of literature on professional socialization within the nursing profession and nursing education. Nursing faculty are referenced as professional culture brokers and play a role in the formation of a professional identity (Benner, 1984; Strouse & Nickerson, 2016). Specifically, there is recent research on the role of the nursing education system to influence professional socialization or the process by which

nursing students internalize professional nursing values (Baldwin et al., 2014; Posluszny & Hawley, 2017; Rose et al., 2018). An integrative literature review conducted by Baldwin et al. (2014) surveyed the literature from 2000 and onward to assess what was currently known about faculty role modeling of undergraduate nursing students. Thirty-three articles were selected for analysis that produced two themes, that nurse clinicians serve as role models during clinical experiences and that nurse academics also serve as role models in the academic setting (Baldwin et al., 2014). Moreover, the review found an imbalance in the recognition of role modeling of professional behaviors in the clinical versus academic setting (Baldwin et al., 2014).

Research conducted by Rose et al. (2018) identified two research questions: one, was there an increase in the demonstration of values-based behaviors over the course of the program; and two, what factors influenced the internalization of nursing values. This study utilized a single university within the western United States with five independent campus sites that all shared a common curriculum. The researchers utilized the Nurses Professional Values Scale--Revised (NPVS-R) to collect data on professional values such as caring, activism, trust, professionalism, and justice. The study was open to all nursing students across the five campuses: 105 total students participated; 44 sophomores (42%), 33 juniors (28%), and 31 seniors (29%). The data did not support the hypothesis that baccalaureate nursing students internalize or demonstrate professional values at an increased rate across the curriculum (Rose et al., 2018). The second research question utilized a single-item question, “What factors influence the internalization of nursing values?,” to allow for open-ended responses (Rose et al., 2018, p. 26). Response analysis identified nine categories, but there were three responses that occurred most frequently.

The first influencing factor was past experiences in health care; the second factor was personal ethics and morals; and the third influencing factor was educational experiences and activities (Rose et al., 2018). Another recent study by Posluszny and Hawley (2017) also utilized the NPVS-R to collect data from a convenience sample of 69 graduating nursing students and 67 new nursing students from a single university. The purpose of that study was to examine if any differences exist in professional values between student sets. The data indicated that both sophomores and seniors had well-developed professional values overall. The data did indicate that time in program, or exposure to nursing faculty, may make a difference in one factor, activism (sophomores' activism mean = 3.5; seniors' activism mean = >4). Utilizing the findings of the NPVS-R as a quality improvement process suggests that that specific college was preparing baccalaureate generalists with strong professional values (Posluszny & Hawley, 2017).

The role of faculty and the nursing program in relation to the professional socialization of students will always be of interest. It is feasible that nursing faculty, formally as well as informally, share their professional ideals, values, and behaviors including personal opinions on professional organizations or associations, or a commitment to practice excellence through individual development (Johnson et al., 2012; Keeling & Templeman, 2012; Price, 2008; Sibandze & Scafide, 2017; Strouse & Nickerson, 2016). In fact, there is a strong consensus in the published literature that faculty play a significant role in the socialization of nursing students to the profession. A study by Strouse and Nickerson (2016) sought to identify nursing faculty perceptions of nursing culture and the faculty role in student formation. That qualitative study conducted 16 interviews and identified four themes that support that nursing faculty

perceive their role is to facilitate the transition, or movement, to becoming a nurse which includes teaching the required knowledge and skills of the profession (Strouse & Nickerson, 2016). There is also literature on faculty as role models and facilitators of socialization into the nursing profession as part of general nursing education (Baldwin et al., 2014; Benner et al., 2010; Rose et al., 2018).

For instance, a cross-sectional study by Shinyashiki, Mendes, Trevizan, and Day (2006) examined the adoption of standards and changes in professional values that are a result of professional socialization developed as part of the nursing education process. This international study sample consisted of 278 students from two public nursing colleges in Brazil. The researchers developed a six-part questionnaire to gather demographics, vocational, socioeconomic data, nurse professional values, and socialization into the health professions (Shinyashiki et al., 2006). This study also utilized the NPVS to examine professional values, norms, and behaviors acquired during nursing education. The study was open to all students within the program; the student participation rate was 22.7% who were second semester, 32.4% who were fourth semester, 25.9% who were in the sixth semester, and 19.1% in their eighth semester. This study utilized a section of 18-items from the original 54-item set to measure professional socialization. The 18 items had an alpha coefficient of 0.8365, indicating reliability among the four dimensions of professional socialization: career values, personality characteristics, professional competence, and professional values. Professional socialization is a process through which individuals "change people's attitudes, values, beliefs and self-image" (Shinyashiki et al., 2006, p. 603). Professional socialization is in addition to providing instruction on skills and knowledge and suggests

the importance of faculty role (Shinyashiki et al., 2006). Through factor analysis, the four dimensions examined were extracted with a reported alpha coefficient of 0.84, which indicates reliability (Shinyashiki et al., 2006). The researchers also used the Mann Whitney Test to compare the data across cohorts. Data across cohorts indicated that there is a difference between first and second semesters on career values. The development of professional values was even more evident between the first and fourth semester on professional image-integrity. The change between the second and fourth semester was notable on professional socialization, professional image. These findings indicated the length of time a student is enrolled in a program is reflected in the professional values assumed by the student (Shinyashiki et al., 2006).

Another international qualitative study by Zarshenas et al. (2014) collected data from 43 nurses through 16 semi-structured interviews on professional socialization. The researchers conducted thematic analysis to identifying major themes that contribute to professional socialization such as a sense of belonging *and* a formation of professional identity (Zarshenas et al., 2014). The themes had sub-categories for analysis: theory-practice incongruence, educational experiences, tacit knowledge, relatedness, internal motivation, and role model. The analysis found that part of forming a professional identity is the process of socialization or finding the meaning of "being a nurse" (Zarshenas et al., 2014, p. 436). Faculty serve as role models in the formation of professional identity and can increase the sense of belonging in the nursing profession that contributes to positive socialization such as the ability of students to see themselves as a certified nurse.

Finally, an international study by Condon and Sharts-Hopko (2010) interviewed eight students and two nursing faculty for their perspective on socialization. From the analysis, six themes emerged: openness to others, communication, team building, reflection, extracurricular networking, and focused education. The students and the faculty agreed that professional socialization is related to experiences and activities that take place outside of the formal program curriculum (Condon & Sharts-Hopko, 2010). In this international study, research found that faculty are viewed to have little impact or influence on the socialization of these students outside of encouraging communication and self-reflection (Condon & Sharts-Hopko, 2010). The differences of these three studies support the need for additional research on faculty perceptions of professional socialization, such as the value of specialty certification as a professional behavior.

Novice to Expert

The Novice to Expert Model allows for nursing practice to be described from a perspective of increasing complexity and significance (Benner, 1984). The model demonstrates professional development and increased competency through the advancement of identified levels: novice, advanced beginner, competent, proficient to expert in nursing practice. Nurses make life-and-death decisions, they possess an increasingly specialized body of practice knowledge, yet general nursing practice is not widely recognized as highly responsible, complex, or significant work (Benner, 1984). The Novice to Expert Model asserts that nursing expertise takes time to develop, and it is impractical to believe or expect formal educational programs alone produce practice expertise. The nursing education system is responsible for providing broad classroom and clinical learning experiences to develop a graduate nurse who successfully passes the

NCLEX; the predetermined standardized criteria that establishes minimum knowledge or proficiency to practice safely at the expected level (ANA, 2007; Case Di Leonardi & Biel, 2012; ICN, 2009; IOM, 2015; McHugh et al., 2014; Williams & Counts, 2013). The Novice to Expert Model speaks to the development of the new nurse, the ongoing practice of the registered nurse, and the attainment of expertise, which could include the acquisition of a specialty practice certification.

For example, a study by Morphet, Plummer, Kent, and Considine (2017) utilized the Novice to Expert Model to develop a standardized approach in the educational preparation of novice emergency nurses by creating a specialty practice program. The goal of developing the transition to specialty practice (TSP) program was to design a course to prepare the novice emergency nurse to earn a practice specialty certification in emergency nursing (Morphet et al., 2017). The researchers utilized Benner's framework to level the College of Emergency Nursing Australia (CENA) specialty practice standards (Morphet et al., 2017). This TSP program leveled learning outcomes of emergency specialty practice to mirror the Novice to Expert Model. A recent Canadian study investigated building a high-quality oncology nursing workforce through lifelong learning (Esplen, Wong, Green, Richards, & Li, 2018). The authors of this study held the perspective that there is a need to align the educational system to ease the transition from the formal academic setting into care settings with a philosophy of life-long learning (Esplen et al., 2018). The de Souza Institute in Canada planned and implemented a structured oncology education and training program based on the Novice to Expert Model. The literature indicated that the path toward specialization is individual, may take two or three years in the same role, and often includes systematic, structured

continuing education with a mentoring component to achieve expertise in a specialty practice (Esplen et al., 2018; Morphet et al., 2017).

Contemporary Certification Research

The research on the individual practice credential or certification focuses almost exclusively on the outcomes, for either the patient or the nurse. Generally, measuring patient outcomes in relation to certification is inherently challenging due to facility characteristics and the level of data--patient, nurse, or system varies between hospitals, floors, and even units. The literature on certification and nurse outcomes is centralized on identified intrinsic or extrinsic factors that influence individual decision-making to pursue a post-licensure credential. Research on outcomes of either the nurse or the patient is complicated by the ability to collect data that can be both systematically and consistently measured.

Certification and Patient Outcomes

There is established and new literature that examined how certification is associated with patient outcomes. However, it is vital to note that research on certification and patient outcome is dependent upon whether the nurse is or is not specialty certified. Therefore, there is a need to examine the process by which nurses are influenced to seek certification, such as effect modifiers and environmental confounders (Needleman et al., 2014). The patient outcome literature consists of mixed results on the type and role of the specialty practice of the certified nurse and the impact of that certification.

A retrospective secondary analysis by Boyle et al. (2017) utilized the National Database of Nursing Quality Indicators (NDNQI) data from 2012 to 2013 to examine the

relationship of WOC certified hospital nurses and healthcare-acquired conditions. The researchers chose benchmarks measured as part of the NDNQI data, such as certified nurses, participating hospitals, and specific clinical units to examine outcomes of WOC certification in the hospital setting (Boyle et al., 2017). Only 33.6% of hospitals that participated in the study employed certified nurses. The study examined rates of hospital acquired pressure injury (HAPI) and catheter-associated urinary tract infections (CAUTI) and the effectiveness of WOC certified nurses with respect to lowering HAPI and CAUTI incidence. Certified WOC nurses have had additional education in training to improve the level and quality of care for patients in acute care and rehabilitation settings for people with disorders that involve the skin, genitourinary, and gastrointestinal system. The data analysis indicated that hospitals employing wound care specialty certified nurses reported lower HAPI rates and better pressure injury risk assessment and prevention practices (Boyle et al., 2017). For example, reported Stage 3 and 4 HAPI occurrences in hospitals that employed wound care certified nurses (0.27%) were nearly half the rate of those hospitals without wound care certified nurses (0.51%). Yet, the analysis did not find any significant relationships between nurses with specialty certification and continence care, ostomy care, or CAUTI cases (Boyle et al., 2017). This means that the type of certification matters and must be considered in future certification research.

Another study by Boyle et al. (2014) also utilized NDNQI data and examined the relationship between direct-care specialty certified nurses and surgical patient outcomes. This study measured specific specialty certifications commonly held by perioperative nurses including certified postanesthesia nurses (CPAN), certified nurse operating room

(CNOR), and certified registered nurse first assistant (CRNFA). For this secondary analysis, the researchers controlled for certain variables that could be measured through the NDNQI quality indicator data sets. The data sets of direct-care, specialty-certified nurses in perioperative units were compared with collected patient outcomes or quality indicators (Boyle et al., 2014). For the surgical intensive care unit (SICU), the analysis found that lower CLABSI rates ($p = .05$) were associated with higher rates of CPAN and CNOR and CRNFA ($p = .00$) in perioperative units. Although not statistically significant, there was a notable association between higher rates of specialty certified nurses and lower CAUTIs (Boyle et al., 2014). An unexpected finding was that even when a CNOR or CRNFA are present, higher rates of pressure ulcers (HAPI) in surgical units remained. This could be related to nurse practice autonomy within the operating room setting (Boyle et al., 2014). However, this one critical finding should not discount the overall study results; the research supports promoting specialty certification among nurses caring for surgical patients (Boyle et al., 2014).

A second study of WOC-certified nurses did find certification made a difference when researchers examined patient outcomes, but in the home health setting (Bliss et al., 2013). In this descriptive comparative study, the researchers collected nurse survey data and then compared it to the Medicare and Medicaid data sets. The data on nurse characteristics, including type of certification, was then compared to patient outcomes. For this study, the outcome was "no worse than at discharge" (p. 36). In the analysis of improvement or stabilization of a pressure ulcer or surgical wound, patients assigned a WOC nurse had significantly more wounds than those not assigned to a WOC nurse (Bliss et al., 2013). The effectiveness of the WOC nurse in patient outcomes is notable,

as the research demonstrated that despite the greater number of wounds, the patients assigned a WOC nurse significantly improved ($p < .001$) (Bliss et al., 2013). This study adds to the findings supporting the benefit of care by certified specialty nurses.

A study by Boltz et al. (2013) examined the relationship between nurse certification and unit level outcomes in hospital units that primarily served older adults. This study utilized 25 NICHE (Nurses Improving Care for Healthsystem Elders) certified hospitals and sampled 44 medical and medical-surgical units. This was a retrospective descriptive design that utilized regression to isolate factors of interest. Specifically, data endpoints on patient falls, injury falls, restraint, and pressure ulcer prevalence were analyzed (Boltz et al., 2013). A significant relationship between certification in any specialty practice and falls ($p = 0.05$) was identified using binary regression. The data showed the relationship between higher certified nurses and lower fall rates, yet no relationship with injury falls, unit acquired pressure ulcer, or restraint prevalence (Boltz et al., 2013). Despite the small sample size, study results suggested nurse certification is a worthy investment for hospitals that want to improve safety outcomes for older adults (Boltz et al., 2013).

A study by Krapohl et al. (2010) examined whether the number of certified nurses on a unit was associated with the rate of occurrence for specific nurse-sensitive patient outcomes. This was a correlational descriptive design that surveyed 450 nurses working in 26 intensive care units in southeast Michigan for analysis. Outcome data were collected and aggregated at the unit level on three nurse-sensitive patient outcomes: CLABSI, VAP, and HAPIs. There was no statistically significant relationship identified between the number of certified nurses on a unit and any of the three nurse-sensitive

patient outcomes. A weak relationship that was not statistically significant was identified with the number of certified nurses and the prevalence of HAPI and CLABSI. There was also a marginal positive direction associated with the rate of VAP and certification, but it was not statistically significant. The most interesting finding from this study was the positive association between workplace empowerment and certification ($p = 0.5$) (Krapohl et al., 2010).

Coleman et al. (2009) compared certified with noncertified oncology nurses on symptom management (nausea and pain), patient satisfaction, and nurse satisfaction to examine the effect of certification. The study sample consisted of 93 nurses, 35 (38%) of them certified in oncology, and 270 patient surveys. This prospective descriptive study collected patient data through chart audits on two inpatient oncology units, two outpatient oncology clinics, and two infusion centers. The researchers found that certified nurses scored slightly higher on the knowledge of pain management (77.5% certified versus 72.5% uncertified) (Coleman et al., 2009). The results indicated that certified nurses compared to noncertified nurses participated in more continuing education and were members of the professional organization, the Oncology Nursing Society (ONS) ($p < 0.01$). These findings provide some support that specialty certification in oncology nursing may improve patient outcomes and care quality.

Finally, a study in 2009 by Kendall-Gallagher and Blegen examined competence and certification of registered nurses and safety of patients in the ICU. This secondary analysis examined 48 adult ICU (31 medical-surgical, 17 cardiac) outcomes from 29 hospitals. This data analysis was done to explore the relationship between the number of certified staff nurses in a unit and risk of harm to patients. The researchers conducted

this study with the assumption that specialty certification is one way to validate nurse knowledge in a specific area of practice or with a specific population. The researchers used safe, quality care in relation to the number of certified nurses on a unit as the description of competence. Rates of adverse events were the markers for safe, quality care and included medication administration errors, total falls, skin breakdown, and three types of nosocomial infections (CLABSI, CAUTI, HAPI) (Kendall-Gallagher & Blegen, 2009). Descriptive analysis found no significant correlations between certification and outcomes, nor was certification related to rates of medication administration errors, skin breakdown, or central catheter infections. Finally, Kendall-Gallagher and Blegen (2009) identified that it was difficult for the registered nurse to assign a value to certification and that additional research was needed.

The nurse certification and patient outcome literature is significant and is included to add to the understanding of the dimension of certified nurse practice. Utilizing the Expanded Conceptual Model provides a framework to guide, identify, and collect research on certification as it relates to patient outcomes. The variation in the reported study findings supports the need for additional research on certified nurse practice. Yet, it is also important to acknowledge that there is an over-arching need for general research that supports credentialing within the profession. Moreover, this research may be helpful to further understand the value and significance of specialty certification which then can be more consistently communicated to students and nurses in practice.

Certification and Nurse Outcomes

The Expanded Conceptual Model provides a view of non-advanced practice specialty certification that is influenced by intrinsic or extrinsic values or effect modifiers

and environmental confounders that can influence why an individual nurse decides whether to pursue a post-licensure certification (Needleman et al., 2014). Bell-Kotwall, Frierson, and Kuiper (2012) conducted a secondary analysis to examine differences between certified and noncertified nurse demographics. Specifically, the researchers considered level of education, contact hours, completion of clinical ladder or research project, and service on a practice committee (Bell-Kotwall et al., 2012). The study sample size was n = 1,022, and descriptive analysis identified 415 (41%) certified nurses who were also likely to work full-time, have more experience, have an advanced degree (at least a BSN), and be more likely to have met contact hour requirements. These findings make sense, as most certifications require a specific amount and type of practice to be eligible for certification or re-certification.

A recent study by Boev, Xue, and Ingersoll (2015) examining the relationship between nursing job satisfaction and healthcare-associated infections (HAIs) in adult critical care also captured certification data. This secondary analysis found ICUs with a higher proportion of CCRNs reported lower rates of both central-line associated bloodstream infections (CLABSI) ($p < 0.001$) and ventilator-associated pneumonia (VAP) ($p = 0.037$) (Boev et al., 2015). A study by Schuelke, Young, Folkerts, and Hawkins (2014) investigated the relationship between nurse characteristics, nurse intensity (number of nurses on the unit), and the occurrence of patient adverse events and patient satisfaction rates. This correlational descriptive study identified certification as a nurse characteristic that may influence patient outcomes (Schuelke et al., 2014). For that study, patient outcomes were described as part of performance improvement reports on HAPI, VAP, CLABSI, and CAUTI. The study sample consisted of 213 bedside practice

nurses on one of four medical/surgical units. Data analysis on certification found no statistically significant differences in adverse patient outcomes related to certification (Schuelke et al., 2014), further supporting the need for research on how credentialing functions within the profession.

A study by Zulkowski, Ayello, and Wexler (2007) tested 460 nurses with the Pieper Pressure Ulcer Knowledge Tool and collected nurse characteristic data. The mean score on the knowledge exam for non-certified nurses (76.5%) was compared with wound certified nurses (89%) at ($p < .00$). Of the 460 RNs that completed both the survey and the exam, 36% reported some type of certification and of those certified responses, 39 (8%) were certified in wound care. The demographic data included comparisons between the certified and noncertified respondents relative to level of education: BSN degree (54% vs. 33%), master's (30% vs. 4%), diploma (8% vs 10%), or associate (3% vs. 49%) (Zulkowski et al., 2007). There was also a notable difference between the certified and noncertified samples related to time in practice, with 87% of certified nurses compared to 63% of noncertified nurses reporting 10 or more years in practice. Lastly, the survey also collected data on specific professional behaviors, pressure ulcer lecture attendance, reading books or articles, internet use, and familiarity with the Agency for Healthcare Research and Quality clinical practice guidelines on prevention and treatment of pressure ulcers (PrUs) (Zulkowski et al., 2007). The data identified a slight difference between certified and noncertified nurses regarding two specific professional behaviors--attending lectures (90% vs. 35%) and reading literature (100% vs. 63%) on wound care. A long-term assumption of specialty practice certification is that it increases topic knowledge. This assumption was supported by a

significant correlation ($p < .05$) among professional behaviors and knowledge scores (Zulkowski et al., 2007). These findings supported the need to include information on post-licensure specialty certification to increase student awareness during initial nursing education.

Certification and Educational Level

A secondary analysis of nurse survey data by Kendall-Gallagher et al. (2011) examined specialty certification, inpatient mortality, and failure to rescue. The researchers also investigated specialty certification and other nurse characteristics. The descriptive statistics found that the mean percentage of certified BSN nurses was slightly higher than the mean percentage of combined diploma and ADN nurses who were certified (38% vs. 35%). The data analysis indicated there was only a significant effect ($p < .001$) with a higher percentage of BSN prepared nurses who were also certified (Kendall-Gallagher et al., 2011). Specifically, for every 10% increase in BSN staff, there was an associated 6% decrease in the chances of dying, and for every 10% increase in BSN certified staff, an associated 2% decrease in the odds of hospital death (Kendall-Gallagher et al., 2011). That study noted that ADN and BSN-educated nurses differ in their perspectives regarding preparation related to evidence-based practice and teamwork that could affect the quality of care. Ultimately, the data did not indicate that specialty certification had a positive effect on patient outcomes without a baccalaureate education (Kendall-Gallagher et al., 2011). These findings support the need for additional broad research on specialty certification (Aiken, Clarke, Cheung, Sloane, & Silber, 2003).

Conclusion

The majority of nurse credentialing research is from primarily two views of specialty certification, the outcomes of both the patient and the nurse. However, it is still open to debate whether certification translates to better care at the bedside and improved patient outcomes (Kendall-Gallagher et al., 2011). A goal of credentialing research is to further examine and identify characteristics of nurse certification. Additionally, future research should include the nurse education process to gain a better understanding of why newly licensed registered nurses (NLRN) seek or do not seek certification (Boyle, 2017; Cary, 2001). One way to study the nursing educational process is to examine nursing faculty and their views regarding specialty certification. Understanding how nurse faculty value post-licensure nurse certification may provide insight into why NLRNs pursue certification and whether faculty messaging influences student perception of certification, such as professional behaviors.

CHAPTER III

METHODOLOGY

The ANCC and the IOM set a broad research agenda on credentialing that includes systems, organizations, and individuals. One type of nurse credential is the individual, voluntary post-licensure specialty practice certification. The intent of this study was to focus on the nurse educators' perceived value of the individual specialty certification. This chapter presents the methodology, sample, and setting as well as includes a review of the instrument. This study utilized the PVCT to examine faculty perceptions of specialty certification. Examining the faculty view of certification helps to advance research on student perceptions of specialty practice, professional organizations, and nurse certification.

Study Model

This study utilized the Expanded Conceptual Model of credentialing to recognize patient and organizational links, outcomes, and intermediate variables that may impact certification (Needleman et al., 2014). The Expanded Conceptual Model acknowledges there is a multitude of variables that can influence whether to seek a credential. Additionally, the model offers that both internal and external factors can positively or negatively influence the decision to seek a credential (Boyle, 2017; Vioral, 2011). Needleman and colleagues (2014) supported emphasizing different components of the expanded model for individual research; therefore, this study examined whether faculty

use professional socialization activities to influence the student view of nurse certification, professional organizations, or specialty practice.

Participants

Nurse educators are essential components in the socialization of students into the profession. The student adopts professional behaviors or becomes socialized into the role of the nurse over the course of the academic program. For this study, nurse educators were defined as those faculty members who serve to educate undergraduate nursing students enrolled in either a traditional baccalaureate or associate degree program at either a public or private institution. The undergraduate student was enrolled in a traditional nursing program that culminated in an individual credential that indicates the student is prepared for initial licensure. Faculty who taught exclusively in either a fast-track, accelerated program, second-degree, graduate program, or students who were licensed were not eligible to participate in the study. However, none of these study limitations prohibited the solicitation of a group of diverse faculty participants who taught in either an associate degree or traditional baccalaureate program within the US.

Sampling Plan

The purpose of this descriptive study was to examine the perceptions of undergraduate nursing faculty regarding the value of specialty certification (Polit & Beck, 2012). Therefore, the sampling plan for this research study was a non-probability purposive sample of undergraduate nurse educators. Nursing faculty voluntarily participated in the study by completing the 18-item Perceived Value of Certification Tool (PVCT) and the additional investigator-created demographic questions (Appendix B & C). The demographic questionnaire was intended to measure faculty perceptions or

values of certification and professional behaviors (Appendix B). Understanding whether faculty value certification and if that perceived value is shared may influence how certification is viewed by the undergraduate nursing student.

There is no absolute way to confirm the exact number of faculty in public and private undergraduate nursing programs within the U.S. However, the American Association of Colleges of Nursing (AACN) 2017 Faculty Vacancy Survey does provide a way to logically estimate the population, as the Faculty Vacancy Survey collects data on funded vacant faculty positions. The Faculty Vacancy Survey went out to 965 schools, and 821 responded at a rate of 85.7% (AACN, 2017-2018). This survey reported the number of full-time faculty positions at 19,830. For this research to be meaningful, a statistical expression of magnitude must be expressed in the relationship between two variables, or as effect size (Polit & Beck, 2012). The Competency and Credentialing Institute (CCI) has established a minimum sample size for tool use at 100 participants (Carissa L. Homme, PhD; Manager of Test Development and Certification, personal communication, November 15, 2018). Therefore, recruitment efforts used were both robust and innovative to garner faculty participation.

Sample Size

Gpower 3.2 was used to determine the sample size based on level of significance, effect size magnitude, and desired power. Significance level was set at .05, effect size magnitude was set at medium, and desired power level was set at a minimum of 0.70. For testing the significance of the difference between two groups (educational qualification, pre-licensure program, specialty practice certification, and institution type), the required sample size was n = 114 when the ratio of the sample sizes in the two groups

are set at 2:1. When the ratio was set at 1:1, that is, equal sample size for the two groups, the required sample size was n = 102. Figure 4 is the power curve for 2:1 sample size ratio, while Figure 5 is the power curve when the ratio of sample sizes in the two groups was set at 1:1. For comparison of scores across the three groups (length of nursing career), the required sample size was n = 117. Figure 6 is the power curve for the comparison of score across the three groups. For assessing the significance of association between place of communication and selected demographic variables, the required sample size was n =122. Figure 7 is the associated power curve.

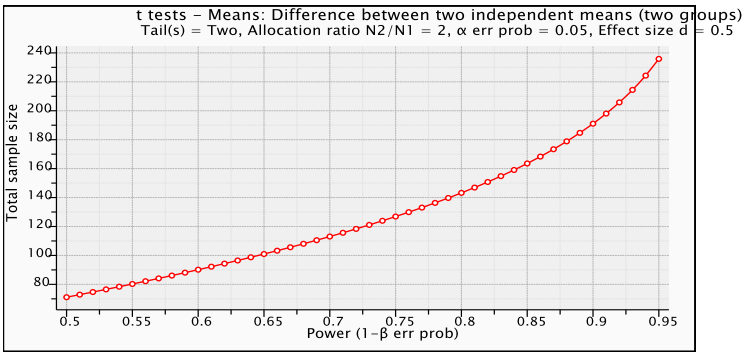

Figure 4. Power curve for comparison of PVCT and professional practice score across two groups with ratio of sample sizes in two groups set as 2:1.

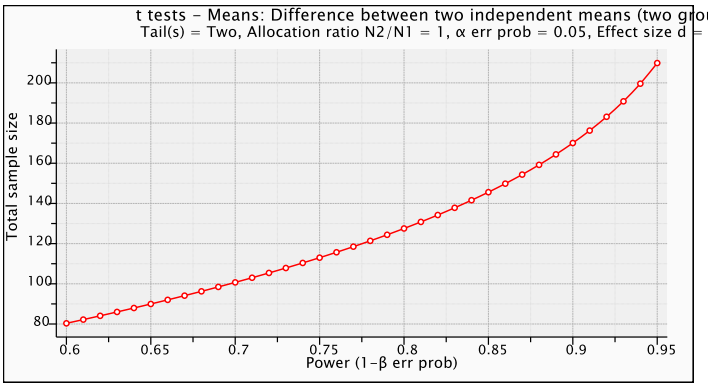

Figure 5. Power curve for comparison of PVCT and professional practice score across two groups with ratio of sample sizes in two groups set as 1:1.

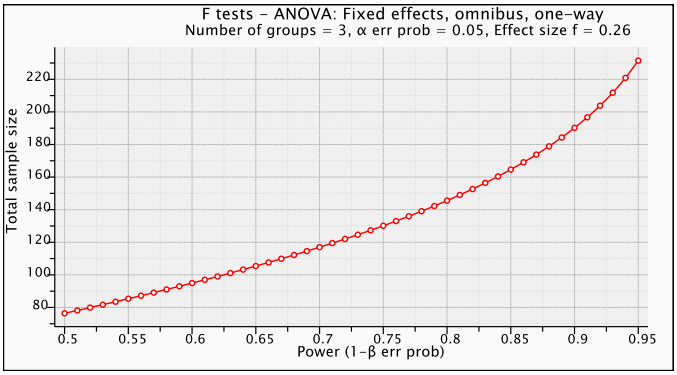

Figure 6. Power curve for comparison of PVCT and professional practice score across three groups.

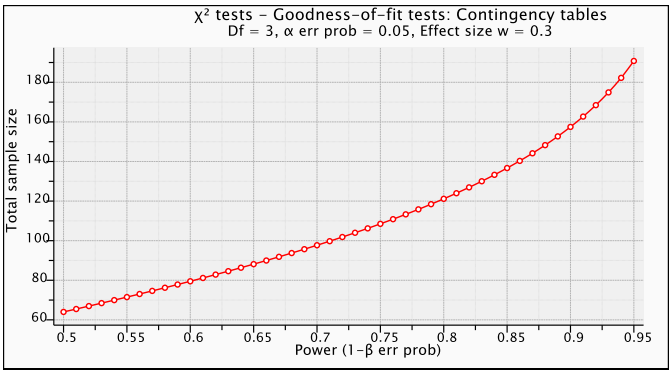

Figure 7. Power curve for comparison of place of communication and demographic variables.

Instruments

The PVCT is an established survey instrument that examines the individual perceived value in relation to certification (Gaberson et al., 2003). The PVCT is a copyrighted instrument, and permission was obtained from the CCI to use the tool without alteration (Appendix A). This research used the PVCT to examine nurse faculty perceptions of value about certification. The study examined total response on the tool and then the three scales independently, but also investigated the relationships with the professional practice scale. This scale includes questions on clinical competence, practice standard, knowledge, and professional creditability in relation to perceived value of certification. This study also used an investigator-developed set of specific demographic questions to describe the participants and furthers the understanding of how the perceived value of certification is formally or informally communicated to students within the nursing education program (Appendix B).

Reliability

The PVCT was initially developed in 2003 by the Competency Credentialing Institute (CCI), which was formerly the Certification Board of Perioperative Nursing (CBPN) (Byrne, Valentine, & Carter, 2004). The PVCT was developed through a series of member focus groups to understand perceptions of and value of specialty practice certification (Byrne et al., 2004). The 18-item PVCT is based on a series of value statements (Appendix C). The first large pilot study of the PVCT was conducted to measure the perioperative nurse value of certification to establish tool reliability (Gaberson et al., 2003). That study sampled 1,398 perioperative nurses who had earned either the certified nurse operating room (CNOR), the certified nurse first-assistant (CRNFA), or both. Initial analysis of all 18 value statements identified a Cronbach's $\propto$ of .924, indicating internal consistency. The initial analysis identified three factors or scales that accounted for 61% of the total tool variance: personal value (26.5%), recognition by others (19.8%), and professional practice (14.8%) (Gaberson et al., 2003). The analysis identified three scales, but also determined there were broad differences in the value statements that could also be classified as either intrinsic or extrinsic. The original analysis found that all intrinsic-value items reported > 80% agreement, except for the value statement of professional autonomy (69.9%). The extrinsic-value items did not demonstrate any agreement greater than 76% with salary (30.7%) and consumer confidence (50.5%) performing at the lowest value (Gaberson et al., 2003). Study results indicated that the perceived value of the professional practice is captured in behaviors needed for certification: clinical competence (.799), practice standard (.726), specialized knowledge (.725), and professional credibility (.519) with no value-items factoring at <

0.50 (Gaberson et al., 2003). Finally, analysis of the survey data found 90% of respondents indicated overall agreement with the tool value statements (Gaberson et al., 2003).

Additionally, two early studies confirmed tool reliability. First, a study by Sechrist, Valentine, and Berlin (2006) further confirmed the tool with another large study of peri-operative nurses, but also identified a simpler two-factor structure, either intrinsic or extrinsic factors that explained 59.2% of the total variance. This study sampled 2,323 nurses, with participants self-identifying as certified (1,236) or non-certified (1,737). Data analysis identified that the extrinsic factor items mirrored the Gaberson et al. (2003) study, with the remaining 12 items combined to represent intrinsic value statements (Sechrist et al., 2006). This two-factor analysis by Sechrist et al. (2006) demonstrated an alpha coefficient of .94, indicating a high inter-correlation between the two subscales. Lastly, Sechrist and Berlin (2006) conducted a study that compared the three-factor and the two-factor solutions and came to a solution with intrinsic and extrinsic factors that were identical to the Sechrist et al. (2006) study. The Sechrist and Berlin (2006) study found the factor structure was stable across groups of certified nurses and non-certified nurses as well as nurse administrators. This study also applied confirmatory factor analysis (CFA) to the total sample and found that the two-factor model provided an acceptable fit for the data.

Validity

The degree to which the PVCT measures value of certification between nurses who are and are not certified indicates tool validity and has been demonstrated within the literature. For instance, a study by Messmer, Hill-Rodriguez, Williams, Ernst, and

Tahmooressi (2011) explored whether the pediatric nurse population valued certification and if there were differences in those who were certified and not certified. Researchers solicited 160 certified and non-certified participants to share their perceptions on a national pediatric nursing certification (Messmer et al., 2011). Of those 160 responses, only 96 (60%) were certified nurses. A principal factor analysis utilized the two-factor structure to identify clusters of related variables with a reported excellent internal consistency, α 0.951 (Messmer et al., 2011). This study found certified pediatric nurses perceived certification as having greater value than those not certified utilizing factor scores at a conventional level of statistical significance ($p \leq .05$) that certification improves the perception of professional growth, professional autonomy, and professional recognition.

The Medical-Surgical Nurses Association (MSNA) conducted a study to assess membership perceptions of the value and behaviors related to certification using the PVCT (Haskins et al., 2011). This study sampled the MSNA membership; 1659 members responded (26% response rate) and of that number, 68.9 % identified as certified. This study analysis utilized the two-factor structure and demonstrated an instrument reliability coefficient (α 0.93) for the 18 survey items, indicating a high-degree of internal consistency (Haskins et al., 2011). This study is significant in that it utilized a specific population of nurses, medical-surgical nurses who are affiliated by membership in a professional organization. Furthermore, this study includes a discussion on the concept of professional behavior and the relevance of certification.

The PVCT has been successfully used in 17 studies since 2003, with a total of more than 25,000 respondents. The 18 value statements have consistently shown

reliability and validity over the course of multiple uses with multiple populations. This evidence of reliability and validity is supported by a consistent reporting of a Cronbach's α .92 to .94 (Byrne et al., 2004; Gaberson et al., 2003; Sechrist et al., 2006). Yet, the PVCT has not been tested with nurse educators. Therefore, it is important to establish the validity of the tool with a pool of participants. It is standard practice to establish content validity with a minimum of three experts; thus, a group of six nurse educators, three from each program type, served as experts to establish a content validity index (CVI) prior to deploying the research study (Polit & Beck, 2012). Calculating the scale of the CVI (S-CVI) is commonly done as an average, and a value of 0.90 is set as the standard for establishing excellent content validity (Polit & Beck, 2012). In this instance, the "relevant" options of the scale were collapsed to reflect nominal data, either relevant or not relevant. The findings for this sample was 1.0, or relevant to both program types.

Research Using the Perceived Value of Certification Tool

A study by McNeely et al. (2015) sampled 48 ICUs in 29 hospitals; 737 pediatric nurses returned the PVCT, reflecting 66.1% certified and 33.9% noncertified nurses. This study utilized a two-factor analysis with the reliability value identified at intrinsic (> .90) and extrinsic (> .80) factors to signify influence on why nurses chose to certify. Measurement and comparison of certified vs. noncertified responses indicated significant differences ($p < .05$) on four intrinsic value statements that have been identified as representative of professional practice (McNeely et al., 2015). This study is valuable in that it added to the certification research by including the identification of professional development activities: join a professional organization, committee involvement, precepting/teaching, quality improvement, enroll in future education, evidence-based

practice activities, and research. Items of interest included that the most frequently selected reason for certification across all age-groups was professional development (McNeely et al., 2015).

Furthermore, when age was factored as part of the analysis, respondents' ≤ 30 years of age indicated professional development (≥ 90%) was the reason for certification. Another relevant demographic was the time in practice. Those in practice less than five years predominantly selected professional or personal development as reasons for certifying; in contrast, greater than 50% of MSNA members with 10 to 29 years in practice reported certification was required for the position (McNeely et al., 2015). Finally, all respondents, both certified and noncertified (59% versus 51%), agreed that certification impacts patient outcomes (McNeely et al., 2015). This study does provide some support that age, years in practice, and certification may be related.

Lastly, a study by Solomon et al. (2016) specifically set out to use the tool to determine when and why nurses certify and which characteristics are associated with a nurse's likelihood to certify in the future. This large cross-sectional correlational design was used to measure nurse perception of the value of certification for the purpose of Magnet© research (Solomon et al., 2016). This study used the PVCT as designed, without alterations, and identified a significance level of 0.05 for analysis. Findings included that certified nurses were older than noncertified, and certified nurses reported greater membership in a professional organization (79% versus 50%). This study also reported that clinical, non-advanced practice nurses reported lower valuation of certification when compared to advanced-practice nurses (APN), consultants, or RNs in leadership roles ($p \leq 0.003$). This difference in value may be because of position; for

example, APNs may be required to be certified, and nurses in a leadership position may because of academic preparation see value in an individual credential. This study is important in that it identified characteristics commonly associated with nurses likely to certify: have taken a review course, were a member of a professional organization, and knew a certified nurse on the unit (Solomon et al., 2016).

Research Design

This non-experimental, cross-sectional, descriptive study design explored faculty value of specialty certification in relation to self-reported demographic data. More specifically, this descriptive correlational design utilized a non-probability purposive sample of undergraduate nursing faculty within the US. The purpose of this research was to gather data on the perceived value of certification among the pre-licensure faculty population. This study used the PVCT tool without alterations or modifications to examine nurse faculty perceptions of value related to specialty practice certification. This study examined data to understand nurse faculty perception of certification value. This research reviewed the responses by categories, but also examined the professional practice scale to understand perceptions and values of nursing faculty.

Procedures

Participant recruitment for large quantitative studies must take into consideration that the practical constraints of time, cost, available resources, and participant cooperation could limit sample size (Polit & Beck, 2012). Electronic email and social media increase recruitment of a diverse sample of individuals to participate in the study. A potential benefit of utilizing these electronic methods is the chance for a snowball sampling effect through the sharing of the study link.

Participant recruitment took place via two methods: direct email requests and the use of social media. A direct email inquiry to participate included faculty-to-faculty emails and an email to Deans of Nursing requesting support, asking them to share the survey with faculty (Appendix D). This study utilized the Facebook application, a social media platform, to potentiate spread of the survey. Support was solicited and received from Tim Bristol of NurseTim© to post the participant letter and study link on a Facebook Nurse Educator group he administers (Appendix E). This public Nurse Educator Group Facebook page has 2,800-member opportunities to participate in the research study.

The use of these resources provided the best chance to recruit a national representative sample of undergraduate nursing faculty. The study letter preceded the instrument and informed the participant about the study, and that activation of the electronic link demonstrated informed consent (Appendix F). The participant letter was the mediating factor that ensured potential participants understood eligibility requirements, the purpose of the research, and safeguards to respondent confidentiality. The survey link was located at the bottom of the participant letter to provide all study information up front, facilitating informed consent. The PVCT electronically deployed once the faculty member "volunteered" to participate and share their perceived value of certification. The hyperlink took participants to a secure website that allowed only one survey attempt per email address. The survey deployed during a predetermined time frame to allow for as much participation as possible. Lastly, participant demographic data described and categorized the sample. These categories were compared with the findings of the tool factor analysis. The data were collected via an electronic data capture

system and then analyzed as directed by the tool copyright restrictions. The time to complete the PVCT and the demographic questionnaire was estimated to be 30 minutes.

Study Limitations

There are disadvantages to using novel electronic methods of data solicitation, such as surveys. There can be errors in the data collection methods or in the resulting sample population. For instance, there are limitations and barriers to survey deployment that are specific to the nurse faculty population. There are certain times during the academic calendar when the faculty role may serve as a barrier to study participation, causing a sampling error. Essentially, sampling college faculty at the beginning and end of the academic semester could be prohibitive to study participation.

Another concern of the electronic method is the risk of data fraud or malicious intent to disrupt the survey (Waltz, Strickland, & Lenz, 2010). The number of demographic questions can also be problematic. Too many questions, and faculty may not complete those items after completing the 18-item PVCT. Demographic questions that are vague or too few may fail to elicit any significant correlation of value related to certification and professional behaviors. The "self-report" aspect of demographic questions was both a challenge and a limitation of this study. Specifically, this study requested participants to self-disclose their perception of the messages they are conveying to students on topics of professionalism, such as specialty practice certification, membership in professional organizations, and life-long learning behaviors.

Data Analysis

This study utilized the findings of the PVCT and the information collected from the demographic questionnaire to generate data. This research utilized descriptive and

inferential statistics to test and synthesize the data in a report of the study findings. Previous PVCT research provided confidence that the tool can be meaningfully evaluated as a total score or as three subscales: *Personal Value*, *Recognition of Others,* and *Professional Practice*; this study was interested in the professional practice scale in relation to the faculty role (Gaberson et al., 2003; Sechrist & Berlin, 2006; Sechrist et al., 2006). This study deployed the tool utilizing a 4-point Likert-type scale: s*trongly disagree, disagree, agree*, *strongly agree,* and *no opinion*.

Multiple uses of the PVCT has established that when random sampling is used, the PVCT has been shown to be a reliable and valid tool with minimal sampling bias. Individual PVCT items can be interpreted as nominal data, as percent agreements, and used to conduct appropriate parametric and nonparametric tests for comparisons between and across groups. Since this research compared the results of certified and non-certified nurses, it was important to consider homogeneity of variance. There is a potential that the certified respondents of this study had a higher mean and possibly a larger standard deviation on subscales. This finding is typical and is an issue when the sample is confined to a closed population, such as a hospital system, but may suggest a violation of homogeneity of variance assumption. A data analysis plan ensured a complete and robust analysis for this study that began with a content validity index.

Content Validity Index

Prior to deploying the PVCT, a group of six expert nurse educators established content validity. The group was comprised of three associate degree and three baccalaureate faculty. These faculty voluntarily completed the PVCT and rated each item of the PVCT for content validity utilizing a 4-point scale of relevance: 1 = *not*

relevant, 2 = *somewhat relevant*, 3 = *quite relevant*, and 4 = *highly relevant* (Polit & Beck, 2012). Best practice of analysis for content validity is to average the responses, and a 0.90 indicates excellent content validity (Polit & Beck, 2012). The findings for the internal consistency can serve to either support or challenge the internal consistency and reliability of the PVCT (Polit & Beck, 2012). The options, 2 = *somewhat relevant*, 3 = *quite relevant*, and 4 = *highly relevant*, are all supportive of relevancy and allows a category to be collapsed to represent relevant versus not relevant. In this instance, the experts identified all the content statements were relevant, with an identified validity index of 1.00 (Polit & Beck, 2012).

Plan for Data Analysis

This study deployed the PVCT utilizing a 4-point Likert-type scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *agree*, 4 = *strongly agree*, and *no opinion* = missing data. Initial data analysis of the distribution and the nature of the data directed the type of testing required. The 18 items of the PVCT have a high internal consistency by an established overall Cronbach's alpha of 0.92 to 0.94 (McNeely et al., 2015; Messmer et al., 2011; Sechrist & Berlin, 2006). As part of the analysis, this study calculated the internal consistency from this data set for instrument reliability. Additionally, it was important to examine the variance among the three subscales; previous research identified the total variance between the scales at 61% (McNeely et al., 2015; Messmer et al., 2011; Sechrist & Berlin, 2006).

Appropriateness of exploratory factor analysis (EFA) was assessed using two methods; (a) Kaiser–Meyer-Olkin Measure of Sampling adequacy, and (b) Bartlett's test. Kaiser–Meyer–Olkin (KMO) Measure of Sampling Adequacy varies between 0 and 1. A

value of 0 indicates that the sum of partial correlations is large relative to the sum of correlations, indicating diffusion in the pattern of correlation (hence, factor analysis is likely to be inappropriate). A value close to 1 indicates that the patterns of correlations are relatively compact, and so factor analysis should yield distinct and reliable factors. Kline (2011) recommended accepting values more than 0.7, values between 0.7 and 0.8 as good, values between 0.8 and 0.9 are great, and values above 0.9 are superb. Bartlett's' test of sphericity tests the null hypotheses that the original correlation matrix is an identity matrix. For factor analysis to be considered appropriate, the relationships between variables and the correlation matrix needs to be a nonidentity matrix. Therefore, for factor analysis to be appropriate, the test has to be significant.

Initial examination of the data included a comparison of the certified and non-certified nurse educator responses to determine if a difference exists (p-value $\leq .05$) between the two groups. Previous use of the PVCT set the reliability of the three scales--personal value, recognition by others, and professional practice--with a percent scale at > .80 (McNeely et al., 2015; Sechrist & Berlin, 2006). The demographic questions afford researchers an opportunity to examine any relationships with the perceived value of certification score. Analysis of the demographic variables in relation to the findings of the PVCT were examined for statistical significance at a level of $p \leq .05$ (McNeely et al., 2015; Messmer et al., 2011).

The overarching research question of interest was whether undergraduate nursing faculty play a role in student awareness of specialty practice certification. This question was based on the hypothesis that nurse educators who value specialty certification as a form of professional behavior or role characteristic are also more likely to share that

information. Three research questions were developed to elicit the information to provide understanding of the over-arching question of interest. The first research question posed was:

Q1 What is the perceived value of specialty certification in undergraduate nursing faculty?

The alternative H_a hypothesis to this question was:

H_{a1} Nurse educators who are certified, have higher-level of education, more time as an educator, and employed in a BSN program would have higher PVCT total score and higher subscale scores than those who are not certified, have less education, less time as a nurse educator and employed in an ADN programs.

The null hypothesis to this question was:

H_{01} There is not a significant difference in the perceived value of certification, as measured by the PVCT, between nurse educators based on their own certification status, education, rank in the nurse educator role, or type of pre-licensure program and institution.

The first research aim was to test whether there is a difference in PVCT scores based on: certification status, education level, tenure, type of pre-licensure program, and type of institution. Since all variables used for comparison of PVCT score are categorical, the research aim essentially translates into a statistical testing of difference in mean score of PVCT scale across categories of the selected demographic variables. If the number of categories is two, then independent samples *t* test is the most appropriate. If the number of categories is more than two, then one factor ANOVA test is the most appropriate statistical test (Hair et al., 2010). Both t and ANOVA tests are parametric tests, and they assume normality of the distribution of the dependent variable, that is, PVCT score. However, when the sample size is reasonably large (more than 100), independent samples *t* test and ANOVA test give robust results even if the distribution of

the dependent variable is skewed based on the central limit theorem (Hair et al., 2010).

The second research question asked:

Q2 How is information on specialty certification presented to students?

The alternative H_a hypothesis to this question was:

H_{a2} Nurse educators who are certified, have higher-level of education, have more time as an educator and employed in a BSN program would be more likely to communicate information about specialty certification both formally and informally to pre-licensure students.

The null hypothesis to this question was:

H_{02} There is no significant difference in the communication to students regarding specialty certification between nurse educators based on their own certification status, education, rank in the nurse educator role, or type of pre-licensure program and institution.

The second research aim was to analyze whether there is any difference in PVCT *Professional Practice* scores based on: certification status, education level, tenure, type of pre-licensure program, or type of institution. Using the same logic as outlined above for the first research aim, independent sample *t* tests and ANOVA tests were used to test the study hypothesis under the second research aim. Specifically, independent samples *t* test was used to test the significance of the difference in the mean of professional practice score between the groups of educational qualification (Master's vs Doctoral), type of institution (public vs private), and specialty practice certification (holds certification vs does not hold). Lastly, the third research question was a broad open-ended question:

Q3 What do nurse educators report as the relationship between specialty certification and other characteristics of professional behavior?

The alternative H_a hypothesis to this question is:

H_{a3} Nurse educators who are certified, have a higher-level of education, have more time as an educator and employed in a BSN program would have higher a PVCT score, specifically, in the *Professional Practice Scale* than

those who are not certified, have less education, less time as a nurse educator and employed in an ADN program.

This question was based on the null hypothesis:

H_{03} There is no significant difference between the personal value scale scores of the PVCT and the nurse educators' own certification status, education, rank, time, or type of institution.

The third research aim was to test whether there are associations between how communication occurs (clinical, classroom, both or neither) and certification status, education level, tenure, type of pre-licensure program, or type of institution. This question explored the relationship between a nurse's specialty certification status and other characteristics of professionalism. Chi-square test of independence was used to test the significance of the association between the categorical variables of how the communication takes place and selected demographic variables of certification status, educational level, tenure, type of pre-licensure program, and type of institution. The information from this testing was compared with the findings generated from the individual comments.

The open-ended question afforded participant nurse educators to enter their thoughts on specialty certifications and professional organizations. The responses provided context to: "other" characteristics of professional behavior. The researcher analyzed the responses for categories or patterns within the narrative content. Establishing categories allowed the researcher to review the comments and identify the frequency of response by category, pattern of professional behavior, or role characteristic that nurse educators value (Polit & Beck, 2012). A group of nurse educators reviewed the responses utilizing pre-established Value Categories (Appendix H) to apply rigor to

the process, therefore ensuring the process was not arbitrary, but was consistent, systematic identification of major and minor categories, or statements of interest.

Conclusion

This research study was focused on identifying whether faculty perceive that specialty practice certification is valuable. This study utilized the PVCT, a well-established reliable and valid instrument that has consistently measured the perceived value of certification across nurse practice. This study may add to the research base and add information about the use of this tool with the nurse faculty population. Therefore, the focused findings from a nurse faculty sample might also increase tool generalizability and may also advance the credentialing research agenda. Moreover, the clearly defined inclusion criteria of the faculty sample may generate a base of evidence for future research on faculty perceptions related to specialty certification (Polit & Beck, 2012). Finally, the study findings explored and reported whether professional values or role socialization was shared, either formally or informally, by faculty within nursing programs.

CHAPTER IV

RESULTS

The data were analyzed using both descriptive and inferential statistical methods. Descriptive statistics were used to present and summarize the distribution of the variables in the study. The study focused on the nurse educators' perceived value of the individual specialty certification. This study utilized the PVCT to examine faculty perceptions of specialty certification. This chapter presents the analysis of study data, including explanation of tests for significance. Additionally, this study examined the PVCT factor of *Professional Practice* in relation to collected demographic and professional data.

The survey was deployed on February 4, 2019 with emails directly to schools of nursing, soliciting support from both deans and faculty. The recruitment letter with the link was posted in Nurse Educator Facebook® group on February 14, 2019. The study link was shared and passed across the country by nursing colleagues through either a direct email, a forwarded email, or via social media. The survey was submitted 148 times, but after analysis for PVCT completion, the final sample size is reported at 122, from 31 states; Oklahoma and Michigan, respectively, had the two greatest participant rates. There were three additional states--Alabama, Colorado, and Pennsylvania--that had 10 participants each.

Preliminary Data Assessment and Actions

A typical initial activity when preparing data for analysis is to first do a thorough review. The goal of survey research is to have complete data sets, but often, and in this case, the data set presented with missing data (Polit & Beck, 2012). The assessment found there were no missing values for response to the PVCT survey scale items (dependent variable). The missing values were identified in two questions on the demographic profile. The missing values were identified in Question 3 which had one missing value for institution type, and in Question 4, which had two missing values for highest degree. The third variable where the total was less than 122 was in Question 1 on pre-license program that had three options: associate degree, diploma, or baccalaureate. For the instance of the diploma option, there was only one observation reported.

Once missing data were identified, the next step was to understand whether there was a value or effect of the missing data. The data set for the PVCT (dependent variable) was complete with no missing values. Since the missing values were found in the demographic variables, imputation analysis cannot be conducted (Polit & Beck, 2012). The sample size is reasonably large at 122, and the number of missing values is very low, only one for "institution type*" and two for "highest degree*". Therefore, it was best to exclude the missing observations as the difference in responses did not alter the power of or any other accuracy standard of the design (Polit & Beck, 2012).

Next was to address the single diploma response in relation to the main question, *What type of program does the participant teach?*. In this instance, one observation cannot be used for any statistical analysis (Polit & Beck, 2012). The only other option was to include the response in one of the other categories. Since each type of program or

category is unique, the researcher opted to exclude the single observation. Therefore, the diploma category was excluded from all the analyses involving pre-license program type. In all the tables of comparison that include the pre-license diploma program, the total reported will remain at 121 in all analysis (Tables 1, 3, 4, 6, and 7).

Lastly, there was a discrepancy in the wording in Question 5 on the demographic questionnaire (Appendix B). The question asked: *How many years employed as a nurse educator?* This question was intended to examine tenure status. However, that was not what the question asked, and participants responded appropriately with years in position. The data set consisted of numbers entered that ranged from 1 to 31. Therefore, to ensure meaningful use, the responses were clustered into categories that could be tested. The researcher utilized information from the Federal Leadership Development Programs to identify that mid-career is approximately 10 to 15 years (U.S. Office of Personnel Management, n.d.). Consequently, the time prior to 10 years would be categorized as early-career and the time after would be considered late-career. This information was compared with the information presented in the NLN's Mentoring of Nursing Faculty Tool Kit©. These guidelines also supported the timeline toward expert put forth by Benner (1984). The researcher identified three career time frames: ≤ 5 years early-career; 6 -16 years mid-career, and >16 years late-career (Mentoring of Nurse Faculty, n.d., Retrieved from: http://www.nln.org/professional-development-programs/teaching-resources/toolkits/mentoring-of-nurse-faculty). The data set was revised to three categories, the data was analyzed, and descriptive statistics were run, along with tests for normality.

Descriptive Statistics

The sample was comprised of 76 (62.2%) certified and 46 (37.7%) not certified nurses. It is not possible to specifically identify how participants were exposed to the study link, via direct emails, shared emails, or the nurse educator Facebook© page. The Competency Credentialing Institute (CCI) guidelines for tool use has set a minimum of 100 participants. Therefore, once the study exceeded 100 survey submissions, CCI made the data available for analysis.

Table 1 presents the demographic profile of the collected faculty sample. Almost two-thirds of the nurse educators (n = 78, 64.9%) were employed in a bachelor's pre-licensure program, while 35.2% (n = 43) employed in an associate degree program. More than two-thirds of nurse educators (n = 82, 67.8%) were working in public institutions and 32.2% were working in private institutions. More than half of the nurse educators (n = 64, 53.3%) in the sample had a master's degree as their highest educational qualification with the remaining (n = 56, 46.7%) reporting a doctoral degree. Of those who reported a terminal degree, the majority held a Doctor of Philosophy in Nursing (31/56 or 55%), followed by the Doctor of Nursing Practice (22/56 or 39%), and with few responses (n = 3/56), the Doctor of Education (EdD). Approximately one-third of the nurse educators (n = 41, 33.6%) were in the early stage of their nursing career ($\leq$5 years), more than half of them (n = 64, 52.5%) identified as in mid-career (6-16 years), and 13.3% identified as in the late stage of their career ($>$17 years). Approximately 6 out of 10 nurse educators (n = 76, 62.3%) reported holding specialty practice certification, and 9 out of 10 (n = 109, 89.3%) reported holding a membership in a professional organization.

Table 1

Demographic Profile of Nurse Educators

Demographic	Faculty Profile Area	*n*	%
Employment by program type	Associate degree	43	35.2
	Diploma	1	0.9
	Baccalaureate degree	78	64.9
Institution type*	Public	82	67.8
	Private	39	32.2
Highest degree of nurse educator*	Master's degree	64	53.3
	Doctoral degree	56	46.7
Length of time as nurse educator	Early career (≤ 5 years)	41	33.6
	Mid-career (6-16 years)	64	52.5
	Late career (≥17 years)	17	13.9
Hold a special practice certification	Yes	76	62.3
	No	46	37.7
Membership in professional organization	Yes	109	89.3
	No	13	10.7
Post-licensure specialty certification	Yes	76	62.3
	No	46	37.7
Lifelong or continuing education (perception of professional behavior)	Yes	116	95.1
	No	6	4.9
Informal sharing of professional values	Yes	100	82.0
	No	22	18.0
Provide information on specialty certification	Yes	90	74.4
	No	3	25.6
Provide information on professional nursing organizations or associations	Yes	112	93.3
	No	8	6.7

*Indicates missing value

The certified survey participants (n = 76) reported a variety of individual certifications. The responses reflected the nurse educators sampled, with the Certified Nurse Educator (CNE) as the most frequently reported (n = 28, 36%) certification. The next most frequently reported certifications are as follows: the certified critical care nurse (CCRN) at (n = 14, 18%), emergency certified nurses (n = 5), medical-surgical nursing

certification (n = 3), and certified nurse operating room (CNOR) (n = 3). Lastly, the obstetric nurses association represented several offered certifications: RNC-MMN (maternal newborn nurse) and RNC–NIC (neonatal intensive care).

Almost all nurse educators in the study (95.1%) indicated that life-long learning or participating in continuing education programs reflected their perception of professional behaviors or values or as part of role socialization. A large proportion of educators (n = 100, 82%) indicated sharing personal professional values on professional organizations, post-licensure specialty certification, or the need for continuing learning as part of student socialization into the nursing profession. Lastly, more than 90% (n = 109) nurse educators reported membership in a professional nursing organization or association.

Results

Table 2 shows the measures of PVCT reliability; internal consistency was measured using Cronbach's alpha. Initially, the whole tool was tested and then as the three subscales or factors; *Professional Practice*, *Personal Value* and *Recognition by Others*. All the scales reported Cronbach's alpha greater than 0.70, indicating high reliability of scales. For all the scales, analysis revealed no suggestions any of the items in the scale could be deleted advantageously to increase the value of Cronbach's α.

Table 2

Reliability Measured by Cronbach's Alpha for PVCT and Professional Practice Scale

Scale	*n*	Cronbach's Alpha
PVCT score	18	0.914
Professional practice score	3	0.758
Personal value	8	0.873
Recognition by others	7	0.817

This study addressed the broad question: *What role do undergraduate nursing faculty play in student awareness of specialty practice certification?* This broad question contains specific related questions that served to provide context and understanding on the role undergraduate nursing faculty serve in student awareness of specialty certification.

Question One

Q1 What is the perceived value of specialty certification in undergraduate nursing faculty?

The alternative H_a hypothesis to this question was:

H_{a1} Nurse educators who are certified, have higher-level of education, more time as an educator, and employed in a BSN program would have higher PVCT total score and higher subscale scores than those who are not certified, have less education, less time as a nurse educator and employed in an ADN programs.

The null hypothesis to this question is:

H_{01} There is not a significant difference in the perceived value of certification, as measured by the PVCT, between nurse educators based on their own certification status, education, rank in the nurse educator role, or type of pre-licensure program and institution.

Table 3 presents descriptive statistics of PVCT scores across categories of demographic variables and the associated test for the significance of the difference in PVCT scores across these categories. The results indicated that there was no significant difference by certification status, employment by program type (degree, public, or private), nurse educator level of education, and length of time in nurse educator position.

Table 3

Comparison of PVCT Score across Demographic Variables

Variable	Categories	*n*	Mean	*SD*	*t*	*p*	η^2
Specialty practice certification	Yes	76	61.59	8.214	4.45	<.001	0.796
	No	46	53.59	11.592			
Employment by program type	Associate	43	61.47	8.66	2.389	.018	0.470
	Baccalaureate	78	56.86	10.88			
Institution type*	Public	82	58.40	10.92	0.31	.759	.062
	Private	39	59.03	9.52			
Highest degree of nurse educator*	Master's	64	58.73	10.11	0.29	.772	.053
	Doctoral	56	58.18	10.80			
Length of time as a nurse educator	Early career	41	59.41	10.27	.264*	.768	.004
	Middle career	64	58.36	10.09			
	Late career	17	57.35	11.87			

*F statistic

The mean PVCT score for nurse educators who also have a specialty certification was 61.59 (SD = 8.21). The mean PVCT score for nurse educators without a specialty certification was 53.59 (SD = 11.59). Levene's test indicates significant difference in variance of PVCT score across the two groups (F = 10.359, p = .002). Results of independent samples *t* test (assuming unequal variance) indicated that there *was* a significant difference in the mean PVCT score between the two groups (t (72.491) = 4.410, p = <.001). Specifically, nurse educators with a specialty certification had

significantly higher mean PVCT score compared with those educators with no specialty certification. Furthermore, the effect size was also large ($\eta^2 = 0.796$).

The mean PVCT score for nurse educators employed in an associate pre-licensure program was 61.47 (SD = 8.66). The mean PVCT score for those employed in a bachelor's program was 56.86 (SD = 10.88). Levene's test showed no significant difference in the variance of PVCT score across these two groups of nurse educators (F = 3.991, p = .05). However, results of independent samples *t* test indicated that there *was* a significant difference in the mean PVCT score between the two groups (t (119) = 2.39, p = .018). Specifically, nurse educators employed in an associate degree pre-licensure program had significantly higher mean PVCT score compared with those employed in a bachelor's pre-licensure program. The effect size was medium ($\eta^2 = 0.47$).

The mean PVCT score for nurse educators working in public institutions was 58.40 (SD = 10.92). The mean PVCT score for those working in private institutions was 59.03 (SD = 9.52). Levene's test indicated no significant difference in variance of PVCT score across the two groups (F = .885, p = .349). Results of independent samples *t* test indicated that there was no significant difference in the mean PVCT score between the two groups (t (119) = 0.31, p = .759).

The mean PVCT score for nurse educators with master's degree qualification was 58.73 (SD = 10.11). The mean PVCT score for those with doctoral-level qualification was 58.18 (SD = 10.80). Levene's test indicated no significant difference in the variance of PVCT score across the two groups (F = .006, p = .936). Results of independent samples *t* test indicated that there was no significant difference in mean PVCT score between the two educational qualification groups (t (118) = 0.29 p = .772).

The mean PVCT score for nurse educators who identified as early (≤ 5 years) in their career was 59.41 (SD = 10.27). The mean PVCT score for those who reported in mid-career (6–16 years) was 58.36 (SD = 10.09), and the mean PVCT score for those who identified as in the late stage (> 16 years) of their career was 57.35 (SD = 11.87). Levene's test indicated no significant difference in the variance of PVCT score across the three groups (F = .6691, p = .503). Results of one-way ANOVA indicated that there is no significant difference in the mean PVCT score among the three career stage groups (F (2, 119) = 0.26, p = .768).

Comparison of PVCT scores across the three sub-dimensions of the PVCT scale was also conducted. Table 4 presents a summary of the results of testing the difference across the levels of the demographic variables using *t* test and ANOVA test. The results consistently matched those reported in Table 3 above which presents the overall PVCT scale score. With respect to type of institution, educational qualification, and length of nursing career, no significant difference was found for any of the three dimensions of *personal value* or *recognition by others* and *professional practice* (p = >.05). However, with respect to employment by program type and nurse educator specialty practice certification status, significant differences were found (p < .05).

Table 4

Comparison of PVCT Dimension Level Score across Demographic Variables

Demographic Variable	Dimension of PVCT Scale	Category	Mean	*SD*	*t*	*p*
Nurse educator certification status	Personal value	Yes	29.17	3.78	4.032	<.001
		No	25.73	4.97		
	Recognition by others	Yes	21.86	4.34	3.449	.001
		No	18.77	5.49		
	Professional practice	Yes	10.57	1.78	3.982	<.001
		No	9.09	2.30		
Employment by program type	Personal value	Associate degree	28.95	3.63	2.193	.030
		Baccalaureate	27.23	4.92		
	Recognition by others	Associate degree	22.19	3.92	2.533	.013
		Baccalaureate	19.82	5.38		
	Professional practice	Associate degree	10.33	2.03	1.297	.197
		Baccalaureate	9.81	2.14		
Type of institution*	Personal value	Public	27.84	4.79	0.091	.927
		Private	27.92	4.14		
	Recognition by others	Public	20.65	5.23	0.256	.798
		Private	20.89	4.60		
	Professional practice	Public	9.91	2.19	0.704	.483
		Private	10.20	1.96		
Highest degree of nurse educator*	Personal value	Master's degree	27.67	4.40	0.390	.697
		Doctoral degree	28.00	4.81		
	Recognition by others	Master's degree	21.02	4.64	0.868	.387
		Doctoral degree	20.21	5.47		
	Professional practice	Master's degree	10.05	1.98	0.212	.832
		Doctoral degree	9.96	2.29		
Length of time as a nurse educator	Personal value	Early	27.95	4.46	0.054*	.954
		Middle	27.76	4.72		
		Late	28.12	4.47		
	Recognition by others	Early	21.32	4.68	0.785*	.458
		Middle	20.59	4.85		
		Late	19.53	6.35		
	Professional practice	Early	10.15	2.04	0.260*	.771
		Middle	10.00	2.14		
		Late	9.71	2.23		

*Note: *=F statistic*

Employment by program type showed nurse educators in a bachelor's program had significantly higher mean scores across all the three dimensions of the PVCT scale compared with those employed in an associate degree. Also, nurse educators that reported any specialty practice certification had a significantly higher mean score for the dimensions of *Personal Value* and *Recognition by Others* compared with those who did not have a specialty practice certification. Lastly, there was no significant difference found in the *Professional Practice* dimension of PVCT scale.

Question 2

Q2 How is information on specialty certification presented to students?

The alternative H_a hypothesis to this question is:

H_a Nurse educators who are certified, have higher-level of education, have more time as an educator and employed in a BSN program would be more likely to communicate information about specialty certification both formally and informally to pre- licensure students.

The null hypothesis to this question is:

H_{02} There is no significant difference in the communication to students regarding specialty certification between nurse educators based on their own certification status, education, rank in the nurse educator role, or type of pre-licensure program and institution.

To answer this question, the PVCT was analyzed utilizing the *Professional Practice Scale* and tested across the identified demographics. The exploratory factor analysis conducted on this collected data set produced three factors that were similar to previously reported factors with the exception of two items. For this study, the *Professional Practice* factor was comprised of the items: practice standard, professional credibility, and clinical competence. Previous *Professional Practice* factors have also included a fourth item, practice knowledge. Nevertheless, this factor was identified as

the best option to identify a common message of professionalism in relation to certification. The findings of this test were compared to the categories expressed in the individual comments and responses.

The participant responses provide descriptors of "how" the nurse educator communicated or shared information on specialty practice certification or professional behaviors and the location of that communication: in the clinical, classroom, or both. Table 5 presents a cross table comparing employment by program type and location of communication. Chi-square test of independence was used to test the significance of the association between employment by program type and location of communication. Results of a Chi-square test of independence indicated that there is no significant association between employment by program type and location of communication ($\chi 2$ (3) = 5.136, p = .162).

Table 5

Cross Table of Employment by Program Type and Location of Communication

Employment by Program Type	Neither Classroom nor Clinical (N, %)	Classroom (N, %)	Clinical (N, %)	Both Classroom and Clinical (N, %)	Total (N, %)
Associate degree	8 (18.6)	9 (20.9)	0 (0.0)	26 (60.5)	43 (100.0)
Baccalaureate degree	24 (30.8)	18 (23.1)	3 (3.8)	33 (42.3)	78 (100.0)
Total	32 (26.4)	27 (22.3)	3 (2.5)	59 (48.8)	121 (100.0)

Table 6 presents a cross table examining the type of institution (by degree, public, or private) nurse educator employment and location of communication. A Chi-square test for independence was used to test the significance of the association between

institution type and place of communication. Results of the Chi-square test for independence indicated that there is no significant association between type of institution in which nurse educators were working and location of communication ($\chi 2$ (3) = 2.487, p = .478).

Table 6

Cross Table of Type of Institution Nurse Educators Work and Location of Communication

Institution Type*	Neither Classroom nor Clinical (N, %)	Classroom (N, %)	Clinical (N, %)	Both Classroom and Clinical (N, %)	Total (N, %)
Public	19 (23.2)	17 (20.7)	2 (2.4)	44 (53.7)	82 (100.0)
Private	12 (30.8)	11 (28.2)	1 (2.6)	15 (38.5)	39 (100.0)
Total	31 (25.6)	28 (23.1)	3 (2.5)	59 (48.8)	121 (100.0)

Table 7 presents a cross table comparing length of time as a nurse educator nursing career and location of communication. A Chi-square test of independence was used to test the significance of the association between career stages or time as a nurse educator and the location of communication reported. Results of the Chi-square test of independence indicated that there is no significant association between the nurse educator career stage and location of communication ($\chi 2$ (6) = 8.343, p = .214).

Table 7

Cross Table of Length of Nursing Career and Place of Communication

Nursing Career	Neither Classroom nor Clinical (N, %)	Classroom (N, %)	Clinical (N, %)	Both Classroom and Clinical (N, %)	Total (N, %)
Early career (≤5 years)	15 (36.6)	7 (17.1)	1 (2.4)	18 (43.9)	41 (100.0)
Mid-career (6-16 years)	11 (17.2)	19 (29.7)	1 (1.6)	33 (51.6)	64 (100.0)
Late career (≥17 years)	6 (35.3)	2 (11.8)	1 (5.9)	8 (47.1)	17 (100.0)
Total	32 (26.2)	28 (23.0)	3 (2.5)	59 (48.4)	122 (100.0)

Table 8 presents a cross table of comparison of nurse educators who have any specialty practice certification and location of communication. A Chi-square test for independence was used to test whether there was significance in nurse educator certification status and location of communication. Test results indicated that there is no significant association between holding a specialty practice certification and the location of communication (χ^2 (3) = 2.787, p = .426).

Table 8

Cross Table of Specialty Practice Certification and Communication

Specialty Practice Certification Status	Neither Classroom nor Clinical (N, %)	Classroom (N, %)	Clinical (N, %)	Both Classroom and Clinical (N, %)	Total (N, %)
Yes	17 (22.4)	16 (21.1)	2 (2.6)	41 (53.9)	76 (100.0)
No	15 (32.6)	12 (26.1)	1 (2.2)	18 (39.1)	46 (100.0)
Total	32 (26.2)	28 (23.0)	3 (2.5)	59 (48.4)	122 (100.0)

Table 9 is a cross table comparing the educational qualification of nurse educators and location of communication. A Chi-square test for independence was used to test the significance of association between certification status education and place of communication. Results of the Chi-square test for independence indicated that there is no significant association between educational qualification and place of communication (χ^2 (3) = 3.009, p = .390).

Table 9

Cross Table of Educational Qualification and Communication

Highest Degree	Neither Classroom nor Clinical (N, %)	Classroom (N, %)	Clinical (N, %)	Both Classroom and Clinical (N, %)	Total (N, %)
Master's	18 (28.1)	11 (17.2)	2 (3.1)	33 (51.6)	64 (100.0)
Doctoral	13 (23.2)	17 (30.4)	1 (1.8)	25 (44.6)	56 (100.0)
Total	31 (25.8)	28 (23.3)	3 (2.5)	58 (48.3)	120 (100.0)

Question Three

Q3 What do nurse educators report as the relationship between specialty certification and other characteristics of professional behavior?

The alternative H_a hypothesis to this question is:

H_{a3} Nurse educators who are certified, have a higher-level of education, have more time as an educator and employed in a BSN program would have higher a PVCT score, specifically, in the Professional Practice Scale than those who are not certified, have less education, less time as a nurse educator and employed in an ADN program.

This question is based on the null hypothesis:

H_{03} There is no significant difference between the *Professional Practice* scores of the PVCT and the nurse educators' own certification status, education, rank, time, or type of institution.

Table 10 presents descriptive statistics of the *Professional Practice* score and the associated test for the significance of the difference in the *Professional Practice* score across the categories or demographic variables. The mean of the *Professional Practice* score for nurse educators with a specialty certification was 10.57 (SD = 1.78). The mean of the *Professional Practice* score for those with no specialty certification was 9.09 (SD

= 2.29). Results of the Levene's test showed a significant difference in the variance of the *Professional Practice* score across these two educator groups (F = 3.327, p = .071). Results of the independent samples *t* test showed that there *was* a significant difference in the mean of the *Professional Practice* score between the two groups (t (120) = 3.982, p = <.001). Specifically, nurse educators with a specialty practice certification had significantly higher mean of the *Professional Practice* score compared with those with no specialty certification. Furthermore, the effect size was large (η2 = 0.722).

Table 10

Comparison of Professional Practice Factor across Demographic Variables

Variable	Categories	*n*	Mean	*SD*	*t*	*p*	η^2
Specialty practice certification	Yes	76	10.57	1.78	3.98	<.001	0.722
	No	46	9.09	2.29			
Employment by program type	Associate	43	10.32	2.03	1.29	.197	0.244
	Baccalaureate	78	9.81	2.14			
Institution type* (public vs. private)	Public	82	9.92	2.19	0.70	.483	0.139
	Private	39	10.21	1.96			
Highest degree of nurse educator*	Master's	64	10.05	1.98	0.21	.832	0.042
	Doctoral	56	9.96	2.29			
Length of time as a nurse educator	Early career	41	10.15	2.04	.26*	.771	0.004
	Middle career	64	10.00	2.14			
	Late career	17	9.71	2.23			

*F statistic

The mean of the *Professional Practice* score for nurse educators employed in an associate pre-licensure program was 10.32 (SD = 2.03). The mean of the *Professional*

Practice score for those employed in a bachelor's program was 9.81(SD = 2.14). Results of the Levene's test indicated no significant difference in the variance of the *Professional Practice* score across these two groups (F = .289, p = .592). Results of the independent samples *t* test indicated that there was no significant difference in the mean of the *Professional Practice* score between these two groups (t (119) = 1.29, p = .197).

The mean of *Professional Practice* score for nurse educators working in a public institution was 9.921 (SD = 2.19). The mean the *Professional Practice* score of those educators working in private institution was 10.211 (SD = .96). Results of the Levene's test indicated no significant difference in the variance of the *Professional Practice* score across the two groups (F = .279, p = .599). Results of the independent samples *t* test indicated that there was no significant difference in the mean *Professional Practice* score between these two groups of nurse educators (t (119) = 0.704, p = .483).

The mean of the *Professional Practice* score for nurse educators with master's degree qualification was 10.05 (SD = 1.98). The mean *Professional Practice* score for those with a doctoral-level qualification was 9.96 (SD = 2.29). Results of the Levene's test indicated no significant difference in the variance of the *Professional Practice* score across the two groups (F = 1.236, p = .239). Results of independent samples *t* test indicated that there was no significant difference in the mean of the *Professional Practice* score between these two groups and their educational qualifications (t (118) = 0.212 p = .832).

The mean *Professional Practice* score of nurse educators who identified as early (≤ 5 years) in their career was 10.15 (SD = 2.04). The mean of the *Professional Practice* score of educators who identified as mid-career (6–16 years) was 10.000 (SD = 2.14).

The mean of the *Professional Practice* score of those who identified as late (> 16 years) in their career was 9.71 (SD = 2.23). Results of the Levene's test indicated no significant difference in the variance of the *Professional Practice* score across the three career level groups (F = .260, p = .771). Results of the one-way ANOVA indicated that there is no significant difference in the mean of the *Professional Practice* score across the three career stage groups (F (2, 119) = 0.26, p = .771).

Content Analysis

This study sought to examine the faculty perception of specialty certification and whether that information is shared with students and in what settings. The survey was submitted 148 times, but after review for tool completion, the final sample size was 122. However, the researcher opted to include in the review all the comments left by the nurse educators who submitted the survey because this study was also interested in the relationship between faculty perception of specialty certification and "other" characteristics of professional behavior. There were five opportunities for faculty to provide feedback to questions, beyond the *yes* or *no* response. Specifically, Questions 6 through 9 and 11 all afford the participant a chance to provide feedback. The demographic questionnaire (Appendix B) includes an opportunity to:

6. Provide insight on the type of certification(s) held by faculty;
7. Identify activities that represent professional behaviors, values or as part of role socialization;
8. Provide insight on faculty personal and professional values on professional organizations, post-licensure specialty certification or the need for

continuing learning as part of student socialization into the nursing profession through *informal* information sharing;

9. Provide insight on program curriculum about specialty certification, professional values, lifelong learning and involvement in professional organizations. Faculty have the chance to indicate where the information sharing occurs and whether they would like to share a syllabus or formalized lesson plan or learning activity in which this information is discussed;
11. Provide insight on the relationship between a nurse's specialty certification status and other characteristics of professionalism, please explain.

A content analysis is a "data analysis strategy" that measures, describes and discerns categories or patterns (Waltz et al., 2010, p. 279). In quantitative research, the content analysis involves a systematic and objective simplification of the recorded comments into a set of categories with similarly expressed descriptions or values. In this instance, the recorded comments provided context to the faculty view. The quantitative analysis is a more structured process and the components or categories are generally expressed numerically (Waltz et al., 2010).

Questions 6 through 9 and 11 were identified as having the potential to collect participant feedback. The process for handling participant responses was the same across all five questions. Initially, the participant responses were extracted, and a word document was created with the individual responses formatted and numbered. Questions 8, 9, and 11 were identified for peer review. The researcher reviewed the participant responses for each of the questions in a way that was not arbitrary, it was consistent, systematic, and standardized (Waltz et al., 2010). The responses were reviewed and

analyzed based on the question. This analysis identified categories, topics, descriptors, or patterns that repeatedly presented in the words, phrases, or sentences recorded. The quantitative nature of this review prohibited the exploration or discussion of latent content (Waltz et al., 2010). To ensure a rigorous and systematic review process, the researcher created a form that included the pre-identified categories, topics, descriptors, or patterns from the initial review. Thus, Questions 8 and 11 each had a corresponding peer-review form. As part of the review process, each question was reviewed by a group of nurse educators using the appropriate peer-review form. The peer reviewers received instruction that the form was to facilitate a systematic review and count of the identified words, phrases, or sentences.

Question 8. Question 8 asked faculty if they *informally* share their personal professional values on professional organizations, post-licensure specialty certification, or the need for continuing learning as part of student socialization into the nursing profession? The survey requested that faculty provide descriptions of how they share their personal professional values. This survey item received 84 comments (Appendix H); the recorded words, phrases, and sentences provided information on the thoughts, ideas, and beliefs of nurse educators on the topics of certification, professional organizations, or associations.

Three nurse educators and the researcher utilized the peer-review form to review and then count participant comments (Appendices G and H). Thus, the peer review findings were expressed numerically for the total instances of word, phrase, or sentence use (Appendix G). On items where the reviewers count totals did not match, an average number of instances is presented. The first category, and initial area of interest, is faculty

communication; specifically, the methods or format of faculty communication. The term *discussion* was identified as the most common descriptor (n = 27) of how faculty share or communicate information to students. Other reported methods of sharing information included: talking, explaining, sharing, encouraging, and story-telling. Lastly, one participant responded that social media was also a format for informal sharing of information.

The second item asked the reviewers to categorize the individual entry as either related to: (a) specialty certification, (b) professional organizations, or (c) both. This designation of specialty certification, professional organizations, or both provide context to the topics that faculty share. The reviewers all identified that while certification was mentioned (n = 5), the primary topic of discussion was professional organizations or associations (n = 18), and there were statements that included both (n = 9). The third item had the reviewers classify where the communication took place. The most reported location for informal sharing of information with students was the classroom setting (n = 21). The terms lecture and course were included in the grouping of classroom methods. One finding of interest, the clinical setting, had no reported or reported at a very low rate (n = 1) as a location for faculty discussions. However, several faculty entries (n = 8) identified both the classroom and clinical setting as locations for sharing information.

A closer inspection of the topics *certification* and *professional organization* provided additional insight into faculty views. For instance, the reviewers measured how many participants reported (n = 8) sharing their personal certification status, current or past. The review also inquired if participants mentioned either a benefit or value of certification. There was more variability among these totals (3, 5, 7, 9) and may be

related to reviewer interpretation of the statement. Additional comments categorized as being aligned with *certification* related to the value of certification as: (a) a way to address practice options after graduation, (b) a form of professional development, (c) a part of the Magnet© journey, (d) a way to establish expertise in a specialty practice, and (e) growth of the profession.

The review of the topic *professional organizations or associations* identified a pattern of inclusion. Faculty (n = 6) reported informally encouraging or promoting student attendance or participation in local meetings or events held by professional organizations or associations. Faculty (n = 5) reported sharing information on the benefits of membership in a professional organization or association as part of discussions. There was also a discrete recognition of the types of opportunities of membership. Examples provided of professional opportunities associated with membership in an organization or association included: (a) holding office, (b) participating in committees, (c) leadership roles, and (d) networking during meetings and sponsored educational offerings.

Question 9. Question 9 asked faculty *if* their program curriculum provided information about specialty certification, professional values, lifelong learning, and involvement in professional organizations. There were 125 responses and of those, 94 (75%) answered yes, their program provided information about specialty certification, professional values, lifelong learning, and involvement in professional organizations. This question also asked where the information was shared, in the classroom or clinical setting. The response rate for both (n = 61) far exceeded the rate for the classroom

setting (n = 29) and the clinical-only response rate was similar to the *informal* question, low numbers (n = 4).

The second part of the question asked if faculty would be willing to provide a syllabus or formalized lesson plan or learning activity in which this information is discussed. There were four examples submitted for review (Appendix K). The first item submitted was a set of five class objectives, item four addressed professional organizations and the impact on nurses. The second item was a PowerPoint presentation (23 slides) from an adult health course. Slide 4 of the presentation addressed the critical care environment and the critical care nursing certification. There was also an accompanying list of other certifications. The third item was a partial PowerPoint presentation (four slides) in which two slides addressed professional organization and two address specialty certifications. The second slide on specialty certification provided eligibility requirements, time requirement, and exam information. This faculty also included personal and professional statements of satisfaction often seen in the literature. The fourth and last item was a gerontological nursing syllabus (seven pages). After careful review of the document, a statement that education is "life-long" was found on page five within a statement regarding the philosophy of the program.

Question 11. The researcher utilized the same method, without deviation, to review and analyze the responses to Question 11. This review was also conducted with three nurse educators and the researcher. All reviewers utilized the researcher-created peer-review form to review and count participant comments (Appendices G and H). The peer review findings were expressed numerically, the total instances of word, phrase, or sentence use (Appendix G). The reviewer findings were handled the same as those

identified for Question 8. On items where the reviewers count totals did not match, an average number of instances is presented.

Question 11 asked, *What do nurse educators report as the relationship between specialty certification and other characteristics of professional behavior*? This was a free-text response that allowed participants to leave a comment, and 95 participants opted to leave a comment. Moreover, there were two descriptors identified that were not seen as equivalent to the other comments, *don't know* (n = 9) and *none* (n = 7). After the initial review, the researcher utilized both the comments and the question to identify categories with descriptor options that were prominent and repeating for the count. There were three categories identified: specialty certification, "other" characteristics of professionalism, nurse characteristics and the contrary case, or those responses that were negative in nature. Each category was then filled in with those most commonly repeating words, phrases, or sentences (Appendix I).

Three reviewers systematically reviewed the document and provided a count by category of the words, phrases, and sentences using the peer-review form (Appendix I). Each list of category descriptors included an "other" option. The first category identified was specialty certification with two lists of patterns of description. The first pattern was certified practice, and the highest (n = 30) reported descriptor of specialty certification was *standards of care* or *excellence in care*. This was closely (n = 29) followed by a *specific type or area of clinical practice*. The remaining two other descriptors, *EBP* or *informs practice* (n = 6), and autonomy or *scope of practice* (n = 5) performed very low. The second pattern was competence or proficiency in certified practice. There were five descriptors identified, and the most frequently (n = 65) reported description was *expert* or

expertise in practice. The next most frequently (n = 34) reported descriptors were *specialization,* and *specialty knowledge*. The three remaining descriptions had two tied at (n =12) *quality care* and *increased knowledge*. The least-identified (n = 10) descriptor was *competence*.

The second category identified was "other" characteristics of professionalism and included two lists of descriptors. The first pattern was professionalism, and the most frequently (n = 39) reported descriptor by the reviewers was *professionalism* and *professional behavior*. The descriptors 'professional development,' (n = 16) 'leadership,' (n = 11) 'professional attitude' and 'career performance' (n = 7) had noticeably fewer responses. The second pattern was professional development and the most frequently recorded response was *life-long learning* (n = 61). The second most frequently identified descriptors were *advanced learning* and *additional or continued education*.

The next category was nurse characteristics, and there was only one pattern identified, the description of certification as individual nurse development. This pattern identified nine applicable descriptors that were easily discernible as three high and six low performers. The three most frequently identified (n = 30) were *dedication, engaged,* or *commitment to profession*. The next most frequently reported (n = 24) were *serve as role model* or *mentor*. The next frequently reported descriptors were *increased work satisfaction, advancement,* and *pay incentives*. The six low performers were: *internal (personal) satisfaction* or *growth or care about practice abi*lities (n = 9); *respected* or *stand out* (n = 8); *prestige, external validation,* and *peer recognition* (n = 7); *personal drive* or *performance* (n = 7); and the lowest performer was *networking* (n = 2).

The last identified category was the opposing case and included one pattern, descriptors of barriers to certification. Those who did not view specialty certification positively or find value in it identified four descriptors. The most frequently reported option was *does not "make" professionalism* (n = 23). The three remaining descriptors, *is expensive to attain and maintain*, *disagree with certificate as a practice*, and *requires continuing education*, performed much lower (n = 7, n = 6, and n = 3, respectively), but were no less valuable to answer the research questions.

Perceived Value of Certification Tool Analysis

Inferential statistical methods were used to test the study hypotheses related to PVCT score, PVCT professional practice score, and collected demographics. Factor structure of the PVCT scale was explored using exploratory factor analysis (EFA). The number of factors in the EFA were decided based on the percentage of variance explained and eigen value criterion. Factors extracted in EFA were expected to explain at least 50% of the total variance. Total variance that explained more than 50% is generally considered as satisfactory (Hair et al., 2010). Eigen value in EFA is a measure of the variance explained by a factor. Factors having eigen values more than 1.0 were considered for common factors. An Eigen value of more than 1.0 provides a guideline that the factor extracted is capable of explaining more variance than a single item in the original scale, which is desirable in EFA.

Factor structure of Perceived Value of Certification Tool scale.

Exploratory factor analysis was carried out on the 18 items of the PVCT scale to assess the latent factor structure of this sample of nurse educators. The principal

component method of extraction of factors was employed, and the varimax method of rotation of factor loading matrix was used. The varimax method maximizes the factor loading of an item with one factor resulting in clearer interpretation of factors extracted (Hair et al., 2010). Box's (year) test for sphericity of the correlation matrix indicated that it is not proportional to an identity matrix and, therefore, factor analysis is appropriate (χ^2 (153) = 1169.474, p = <.001). The KMO measure of sampling adequacy was more than 0.70 (KMO = 0.898). Further, the communality values for each item in the PVCT scale was more than 0.40. These results of Box's test, KMO measure of sampling adequacy, and communality values indicate the correlation matrix of the PVCT scale items is appropriate to carry out factor analysis.

The factors were extracted using eigen value, and percentage variance explained criteria. Consistent with the results reported in the literature about the factor structure of the PVCT scale, three factor structure was reported with respective eigen values 7.970, 1.589, and 1.209. Three factors explained 59.819% of the variance in the data. Figure 8 is the scree plot of the factor analysis. The scree plot also indicates an elbow bend at three components, indicating that the three-factor solution is appropriate.

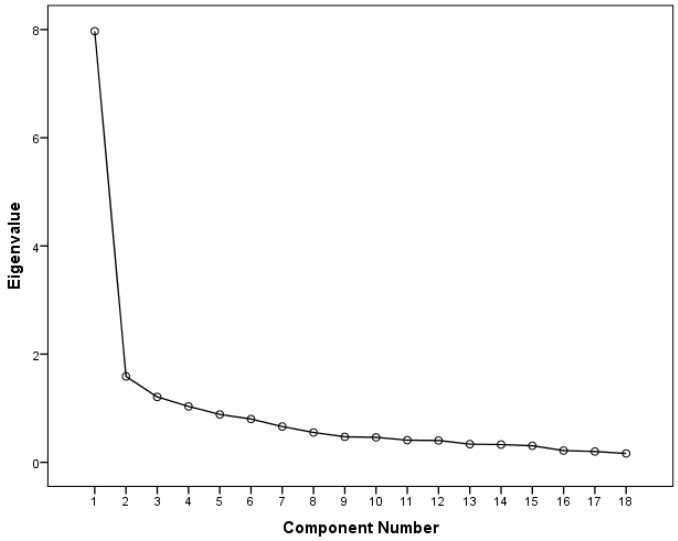

Figure 8. Scree plot of eigen value plotted against the factor number.

Conclusion

This research study focused on identifying whether nurse educators perceive that specialty practice certification is valuable. This chapter presented the data collected, the handling process, the methods of analysis, and the findings. This research utilized the PVCT to measure the perceived value of certification by nurse faculty within the United States. This study added to the published tool research and provided information about the nurse faculty population. The PVCT can be scored as a single, 18-item tool or as series of factors. This study compared the *Professional Practice* factor in relation to the demographic questionnaire; inferential statistics were used to identify faculty values or perceptions of value with specialty certification or professional organizations in relation to demonstrating professional nursing behaviors. Finally, the study explored the text responses submitted by participants. A quantitative content analysis of the comments shared by participants added context through numerical expression of values. Finally, the findings from this study reported on the relationships between faculty certification status and other perceived characteristics and relationships of professionalism.

CHAPTER V

DISCUSSION

This research study examined whether undergraduate nursing faculty played a role in student awareness of specialty practice certification. This question was based on the hypothesis that nurse educators who valued specialty certification as a form of professional behavior or role characteristic were also more likely to share that information. The underpinning for this hypothesis stemmed from the Expanded Conceptual Model which demonstrates the potential links among credentialing, patient and organizational outcomes, and the intermediate activities. This study sought to investigate those mediating, environmental confounders or effects that can affect the *seek credential* process of future nurses. Moreover, this study sought to expand the view of Needleman et al. (2014) that including the nurse educator and the system of nursing education may increase rates of certification. This research study offered insight into whether faculty may be an early, or preliminary, influencer to how nursing students view the value of specialty practice.

Three research questions were developed to identify the perceived value of specialty certification, whether that information is shared with students, and in what location--either class, clinical, or both. A corresponding demographic questionnaire (Appendix B) was developed to provide additional context to the research questions and allowed participant responses beyond just scaled options. This study served to provide

insight on the perceived value of certification held by undergraduate nurse educators in relation to identified professional values.

Summary and Interpretation of Findings

Question 1

Question 1 asked study participants, "What is the perceived value of specialty certification in undergraduate nursing faculty?" This research study utilized the PVCT to identify if nurse educators perceived value in specialty certification. This sample of nurse educators (n = 122) agreed there was value (81.8%) in specialty certification. It is important to note that this is the first study utilizing the PVCT with the nurse educator population. Comparison of this study's results to previous tool performance identified similarities with this sample. For instance, this nurse educator sample had a favorable perception of certification, and this finding supports that nurses as a population place higher value on certification status (Gaberson et al., 2003; Haskins et al., 2011; McLaughlin & Fetzer, 2015; Sechrist et al., 2006).

Additionally, this sample had similarities in the rating of whether certification is viewed as a way to *increases salary* with established tool findings. In fact, for this sample *increases salary* was the lowest scoring (33.6%) item. This low performance of the value *increases salary* was a common finding across previous studies without regard to nurse population or practice location. The earliest use of the tool by Gaberson et al., (2003) with the certified operating room nurses recorded a salary agreement rating of 30.7%. Further review of tool results found that on subsequent uses, nurse respondents indicated they did not value certification as a way to increase salary (Niebuhr & Biel, 2007; Byrne et al., 2004; Messmer et al., 2011).

Further comparisons of the PVCT by factors in relation to the demographic information provided additional insight. The *Personal Value* scale was the highest (87.8%) rated PVCT scale for this study. This finding was also evident in previous samples of both certified and not certified nurses (Sechrist et al., 2006; Straka et al., 2014). One finding of significance was with those nurse educators who teach in the associate programs. These participants produced higher mean scores on the PVCT and across all three factors: *Personal Value, Professional Practice,* and *Recognition from Others* when compared with the baccalaureate degree educators. This is of interest because the associate degree nurse educators (n = 43) were underrepresented compared with those who teach in a bachelor's degree program (n = 78). The remaining variables--*faculty level of education, faculty career-stage,* or *institution type*--were not significantly related to the perceived value of certification for most respondents.

This study found that, in general, this nurse educator sample expressed value with specialty certification. Regarding the null hypothesis and this nurse educator sample, the null hypothesis was rejected based on program type. There was a significant difference identified in those nurse educators who taught in an associate degree program, but not in those respondents who taught in a BSN program. The null hypothesis was accepted for the remaining demographic variables of *certification status, education level, time in profession,* and *type of institution.* Further demographic comparison was not an option as there was no available research utilizing the nurse educator population.

Question 2

Question 2 asked nurse educators how information on specialty certification is presented to students. This question was initially answered using the *Professional*

Practice scale of the PVCT. The *Professional Practice* scale for this study is comprised of the values: attainment of practice standard, enhances professional credibility, and indicates level of competence. This study compared the findings of the *Professional Practice* scale to the demographic variables. There was no significance difference in *Professional Practice* scores of nurse educators by education level, type of program, type of institution, or the career-stage. However, there was a significant difference in the *Professional Practice* score by the nurse educator's own certification status. Nurses who were certified or previously certified recorded higher scores on the *Professional Practice* scale, including the associated values of attainment of practice standards, enhances professional credibility, and indicates level of competence. Yet, this does not fully answer the question of *how* nurse educators present information to students.

Therefore, the data from Question 2 was explored to elicit the context of *how* undergraduate nurse educators presented information on specialty certification to students. This question was answered from the perspective of formality, location, and presentation using Questions 8 and 9 on the demographic questionnaire (Appendix B). From the perspective of formality, the question was answered based on whether information was presented to students formally, as part of the curriculum, or informally, not part of the curriculum or class. Question 8 of the demographic questionnaire specifically asked participants if they *informally* shared information on certification (Appendix B). The options provided were *yes*, *no*, or *other* which allowed free-text entries. This question recorded a total of 148 entries, of those collected there were 29 *no* options, 19 *yes* options, and 106 participants who chose the *other* option.

Question 9 of the demographic form asked nurse educators to determine whether the information was presented *formally* as part of their program curriculum (Appendices B and G). A large portion of the recorded responses (94/148, or 63%) identified that yes, they presented information on certification, professional values, life-long learning, and involvement in professional organizations to students as part of the formal nursing program.

This question was also examined from the perspective of location of, or *where*, the sharing occurred. Both demographic Questions 8 and 9 were referenced to identify where nurse educators communicated with students (Appendix B). Question 8 queried the identified location by asking nurse educators to describe ways they shared their values on professional organizations, certification, or the need for life-long learning with students (Appendix G). The review of comments identified that the classroom, clinical, or both settings (n = 30) were reported as locations of sharing information with students (Appendix H). Question 9 provided further insight by asking respondents to specifically identify *where* formal sharing of information occurred (Appendix I). This nurse educator sample indicated that sharing took place in the classroom (n = 29), the clinical setting (n = 4), or both locations (n = 61).

Additionally, the location of communication was examined for nuances within the nurse educator sample by certification status, career-stage, or education level. For this analysis, the options that nurse educators responded with were classroom, clinical, or both and were considered to indicate sharing. This allowed the items to be collapsed into two groups, sharing and not sharing, which was the contrary option, of neither the classroom or the clinical setting. This concentration of responses was able to clearly

demonstrate that nurse educators who reported as certified (77.6%) also reported sharing more often in both the classroom and clinical settings compared with the responses from those who were not certified (67.4%). Additionally, career-stage and location of communication did demonstrate discrete differences. For instance, with regard to career-stage, those who identified as mid-career (82.9%) indicated more sharing than those in the early (63.4%) or late (64.8%) stages of their career. Furthermore, the mid-career nurse educators also reported fewer instances (17.2%) of not sharing in *neither classroom or clinical* compared with their early- (36.6%) and late-career (35.3%) colleagues.

Lastly, the question of *how* included the methods and formats to present information on certification and professional behavior. The content analysis of demographic Question 8 found that nurse educators who identified as informally sharing information did so most commonly in a discussion format (Appendix B). Given these findings, this study identified that some nurse educators do share information on certification, professional values, life-long learning, and involvement in professional organizations with students. The sample responses indicated that most of the nurse educators (n = 94/122, or 77%) informally share information with students in both the classroom and clinical settings. Yet, many of those respondents also reported presenting information as part of the planned curriculum, course, or class.

Finally, it is important to reiterate that this was the first known study utilizing the PVCT and the nurse educator population. Therefore, the ability to compare this study's findings with the published PVCT literature is limited to the findings related to the tool. It is not possible to compare findings of the PVCT and the associated nurse educator demographics with any of the published uses of the PVCT.

Question 3

Question 3 asked, "What do nurse educators report as the relationship between specialty certification and other characteristics of professional behavior?" To answer this question, the *Professional Practice* dimension was compared to the demographics. Levene's test indicated there was a significant difference, and a subsequent *t* test also showed a significant difference in the mean *Professional Practice* score between the two groups ($p = <.001$). The nurse educators who are also certified had a higher mean score on *Professional Practice*. Yet, there was no significant difference in any of the other criteria: nurse educators' education level, time as an educator, type of program or institution.

Further exploration of the question was needed to determine whether nurse educators perceive and report a relationship between specialty certification and professional behaviors. This question was answered by nurse educators directly in Question 11 of the demographic form (Appendix B). Question 11 asked participants to explain their view on whether there was a relationship between a nurse's certification status and other characteristics of professionalism (Appendix I). The participants most commonly described specialty certification as pertaining to a *specific type* or *area of practice* and as *best practice* or *current in clinical practice*. Similarly, participants described competence or proficiency in certified practice as *expert* or *expertise* and as s*pecialization* of practice or *specialty knowledge*. Characteristics of professionalism were also explored and identified in the descriptions provided by participants as *professionalism* or *professional behavior*. Likewise, participants also identified

professional development as *life-long learning*, *advanced learning*, or *continued education.*

Nurse characteristics were also explored in relation to certification as individual nurse development. The most identified descriptions of certified nurse characteristics included *dedication*, *engaged*, and *commitment to profession*. The second most frequently recurring characteristics were *serving as a role model* or *mentor*, and the third most recurring responses were associated with *increased work satisfaction*, *advancement*, or *pay incentives*. The comment of *pay incentives* was recorded, but it is unclear if this was specifically related to certification status and income. Yet, this study sample did not support that certification status positively affected salary (33%).

There was some disagreement among participants as to the value of specialty certification and provided an opposing view. A few nurse educators provided dissenting feedback that included descriptions of *does not "make" professionalism*, *is expensive to attain and maintain*, and *disagree with certification as a practice*. This sentiment, that specialty certification is expensive to achieve and maintain, is congruent with the certification literature. The cost of certification, materials, and recertification are frequently cited by nurses as a barrier to certification (Bell-Kotwall et al., 2012; Sechrist et al., 2006). Lastly, it is important to again reiterate that this was the first known study utilizing the PVCT and the nurse educator population. It is not possible to compare findings of the PVCT and the associated nurse educator demographics with any of the published uses of the PVCT to determine the outcome of the null hypothesis.

Theoretical Framework

Credentialing Model

The theoretical approach for this study was the Expanded Conceptual Model (Needleman et al., 2014). The model provides a space for this examination in the origin box in the bottom left hand corner, *Environmental Confounders and Effect Modifiers* (see Figure 3, Chapter I). Needleman et al. identified confounders and modifiers as anything that influences the individual to seek, attain, and maintain certification (Needleman et al., 2014). For this study, the nurse educator role was identified as a potential external factor of influence. The model provided the opportunity to explore the nurse educator role as an external factor influencing whether a NLRN would pursue a specialty certification. The model offered a chance to examine what messaging nurse educators may be sharing with students in relation to certification.

This study found evidence that nurse educators share their personal and professional values, which may influence student professional growth and development. For instance, demographic Questions 8 and 9 sought to determine whether the sharing was informal or formal and part of the curriculum. This study found that nurse educators overwhelmingly (75%) indicated they share information on specialty certification, professional values, life-long learning, and involvement in professional organizations in both settings. This is important information to understanding why some nurses may pursue certification, join a professional organization, and are life-long learners. However, the identification of an additional model to guide the exploration of the nurse educator role was necessary to relate the *activities* of certification and other associated professional behaviors.

Professional Socialization

The *Explanatory Model of Professional Socialization in Nursing* by Edens (1987) was identified as complementary of the nurse educator role. This model was chosen because it had a focus on self-growth which included professional development. Edens (1987) identified that nurse educators are important and can influence or prohibit student thought on professional development. Professional socialization is the process by which the nurse educator influences or changes the student attitude, values, beliefs, and self-image in relation to the role of the nurse (Shinyashiki et al., 2006). The professional socialization literature also supports the role of the nurse educator to influence the development of student values which may include the values of professional development (Baldwin et al., 2014; Benner, 1984; Rose et al., 2018).

Professional development includes additional learning to advance nurse practice that may also include certification or degree progression (Benner, 1984; Condon & Sharts-Hopko, 2010; Johnson et al., 2012; Strouse & Nickerson, 2016). Therefore, it is possible that at program completion, students may have already internalized a set of identified career values and professional values that include characteristics of professional competence (Shinyashiki et al., 2006). The purpose of professional development is to improve nurse practice in order to ensure safe, quality care. Professional development is associated with practice improvement, but it is often associated with competency in practice. The *Novice to Expert Model* by Benner (1984) identified that nursing students must have an understanding that nurse professional practice is always improving, that the nurse is always learning.

This study did identify that nurse educators may share their personal and professional values with students. Moreover, this personal sharing of expectations may influence student attitude, values, beliefs, and self-image in relation to the role of the nurse (Shinyashiki et al., 2006). In fact, when provided with an option to select behaviors that are representative of professionalism, the highest-reported option was life-long learning (n = 134), then membership in professional organizations (n =126), followed by specialty certification (n = 90). This provides additional insight on how nurse educators may act as an external factor that may influence whether a NLRN pursues certification.

Implications of Findings

Education

This study sought to explore the role of the nurse educator as a conduit of influence on the formation of student professional values. The nurse educator role is critical to ensure that future nurses are practicing at the "top" of their license (IOM, 2011). The need for nurses to be active in professional development and continual learning is critical to safe, quality practice. For this study, professional behaviors and values were identified as: (a) membership in a professional organization, (b) specialty certification, and (c) life-long learning. This study found that nurse educators' perceptions of professional behaviors includes: (a) life-long or continuing education (n = 134); (b) membership in a professional organization (n = 126); and (c) certification (n = 90). These perceptions were being shared both formally and informally with nursing students in either the classroom or clinical setting. This study also adds the perspective of the nurse educator role to the socialization literature.

The professional socialization literature includes such activities as role-modeling and mentoring as part of the nurse educator's role (Baldwin et al., 2014). There is an interest in identifying faculty behaviors that facilitate growth of the student's professional identity (Baldwin et al., 2014). This study found that some nurse educators (n = 8) are sharing their own certification status as a demonstration of professional development and by sharing this information in the clinical setting may influence the student's professional identify and values. The scores on the PVCT (81%) indicated support for specialty certification, but it was chosen least often as a perception of professional behaviors (n = 90). This may indicate that nurse educators as a group are not as likely to share certification information with students. This may also demonstrate that nurse educators are not certain of whether specialty certification improves patient outcomes (Kendall-Gallagher & Blegen, 2009).

Practice

Nurse credentialing is of interest to all stakeholders--nurses, healthcare systems, communities, and individuals--for the opportunity it provides to improve outcomes. The Expanded Conceptual Model presents a framework to explore those outcomes (Needleman et al., 2014). Nurse practice is an important aspect of patient outcomes, and this is driving much of the discussion on continuing education, professional development, and credentialing. The responses in this study support that nurses in practice are discussing the need to maintain practice, but there is no consensus within the profession on exactly what that means. Certification has been cited as a mechanism for improving practice and enhancing patient safety (Boltz et al., 2013; Boyle et al., 2014).

Certification has been cited as a mechanism for deliberate practice and improved nurse performance (Bathish, Wilson, & Potempa, 2018). This nurse educator sample (n = 29) supported the identification of certification as a mechanism for individual nurse development (Appendix I). However, there is no system in place by which to assess and measure the outcomes of certification (Bliss et al., 2013). Furthermore, the recent proliferation of certifications serves to create more uncertainty as to their validity (IOM, 2015). Recently, the ANCC commissioned a research study to examine how certification is conceptualized in the North American literature (El Chamaa, Jeong, Chappell, Lundmark, & Kitto, 2019). This further demonstrates the inconsistent view of certification within the profession. There needs to be a system in place by which to measure certifications, whether by either a standardized set of outcomes or a specialty practice (Bliss et al., 2013; Boyle et al., 2017; Wilkerson, 2011).

Future Research

The need for additional credentialing research is being addressed. The ANCC's research study has proposed a single-sensitizing definition of certification in nursing for research purposes:

> Certification in nursing acts as a mechanism for validation or formal recognition by documenting individual nurses' knowledge, skills, and abilities specific to their specialty. To become certified nurses are required to meet predetermined eligibility criteria and achieve standards identified by a nursing specialty, including sufficient practical experience and passing a certification examination that provides external validation of knowledge and judgement. The intended outcomes of certification in nursing is to validate competence with the overall

> goal of improving safety, quality care, and health outcomes for people who use health services. (El Chamaa et al., 2019, p. 2)

This definition provides standards, expectations, and limitations of specialty certifications. Part two of this study establishes a vocabulary or list of key terms that are broadly used to describe or explain nurse certification (El Chamaa et al., 2019). This definition from the ANCC is needed and does address one of the challenges in certification research, how to measure outcomes (El Chamaa et al., 2019). According to this definition, the specialty nursing organizations should have a vested interest in measuring achievement of specialty practice standards and, thus, increasing their value. As the certification literature grows, it may raise the profile of specialty certification post-licensure.

The value of certification has been established through multiple uses of the PVCT and evidence in this study. This study found that nurse educators value certification (81%), yet there was no consensus that the message they shared was exclusive to certification. This study sample indicated that certification was included in the message of professional behaviors and activities, but was not the primary message. This ambiguity within the nurse educator view and message supports the need to investigate the student view of certification.

There is a need to examine the student view of specialty certification in relation to practice. According to this study, there is a greater chance that students are learning about professional organizations than about certification. Yet, most specialty certifications are associated with a professional organization or association. Therefore,

understanding the student view would be beneficial to these organizations. Furthermore, examining the student view may also inform the professional socialization literature.

Discussion of Limitations

This study is not without limitations. The review of study findings identified issues with the design and implementation of the study. This study was designed with a demographic questionnaire that collected participant responses for evaluation, but this aspect of the study design proved to be a challenge on several fronts. There was some redundancy within the questions by topic; for instance, Question 5 on the demographic form asked participants who identified as certified to list their personal certification(s). Unfortunately, there were many acronyms that were not identifiable and certifications that were either state-specific or not nationally recognized or supported by one of the large accrediting bodies.

Additionally, the researcher identified that there was an overlap in the demographic questions that could have been a limitation. The question of membership in a professional organization was similarly phrased in both Questions 7 and 10 of the demographic form. There was a difference in the question presentation; Question 7 asked about perceptions of the activities of professionalism, and Question 10 asked for the nurse educator's membership status. There is a chance, since this information was previously captured in Question 7, that it could have discouraged survey participants, causing them to exit the study. There could have been ambiguity in the term *life-long learning*. It would have been more informative if participants would have had a specific a list of activities from which to select.

Another limitation was the lack of previous studies of the PVCT with the nurse educator population. This limitation prohibits the researcher from making a comparison of the nurse educator's identified *other* demographics: type of program, level of education, time in teaching position, and type of institution. Even though this study exceeded the minimal required sample for tool administration, a larger sample might have produced additional demographic items with a statistical significance. Likewise, the Expanded Conceptual Model had no published uses for comparison.

Finally, the ability to solicit participants was a challenge and limitation. It was also a challenge to ensure a balanced sample of ADN and BSN degree faculty. The researcher utilized social media to share the survey, but there is no way to measure whether it impacted response rates. Therefore, the researcher utilized state boards of nursing to locate nursing programs across the U.S. and then emailed either the program dean or individual faculty.

Conclusion

This study was conducted to examine whether nursing faculty perceive value in certification and whether that perception is shared in the educational setting. This study was keenly interested in whether nurse educators valued specialty certification as a characteristic of professional behavior. The PVCT demonstrated this sample of nurse educators (81%) do perceive value in certification. Certification was also associated with the activities of professional behavior (90/134), but it was not the primary characteristic. Membership in professional organizations was identified as the primary professional behavior (n =134). This may be explained by the fact that many specialty certifications are linked to a professional organizations or associations. This inconsistency supports the

need for additional research on the nurse educator population and certification. Furthermore, the certification research that the ANCC is currently conducting will provide new insight, but may also produce a new research agenda (El Chamaa et al., 2019).

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APPENDIX A

PERMISSION TO USE THE PERCEIVED VALUE OF CERTIFICATION TOOL

CCI
COMPETENCY & CREDENTIALING INSTITUTE
Personal Commitment to Extraordinary Care

March 9, 2018

Christina George,

Thank you for submitting the materials required to receive permission to use the CCI Perceived Value of Certification Tool (PVCT©). We reviewed the information and are pleased to grant you permission to use the instrument.

As a reminder, this permission is granted with following conditions:

- You will use the instrument without modifications.
- You will include the necessary copyright statement at the bottom of all photocopies.
- You will use the instrument only for the purposes of the research project you originally submitted.
- You will provide CCI with any validity and reliability data you derive from the PVCT© based on your sample.
- If the work is published, you will provide a copy of the article to CCI.

Thank you for your interest in the PVCT©, and best of luck with your work. We look forward to hearing from you.

Sincerely,

James X Stobinski
PhD RN CNOR
Director of Credentialing and Education

APPENDIX B

DEMOGRAPHIC QUESTIONNAIRE

DEMOGRAPHIC QUESTIONAIRE

1. Pre-licensure Program Type
    - Associate degree
    - Diploma
    - Baccalaureate degree
2. State where program resides
    - *Drop-down selection
3. Institution Type
    - Public
    - Private
4. Select your highest degree
    - Master's Degree
    - Doctoral Degree
        - PhD
        - DNP
        - EdD
        - Other_____
5. How many years employed as a nurse educator?
    - *Fill in the blank

6. Do you currently hold a specialty practice certification?
    - Yes
    - No
    - *If yes, please indicate the full name of the certification
7. What activities presented are representative of your perception of professional behaviors, values or as part of role socialization (select all that apply)
    - Membership in professional organizations
    - Post-licensure specialty certification
    - Life-long learning or continuing education
    - Other_____
8. Do you informally share your personal professional values on professional organizations, post-licensure specialty certification or the need for continuing learning as part of student socialization into the nursing profession?
    - Yes
    - No
    - *If yes, please describe an example of ways you share your personal professional values on these topics
9. Do you, as part of the program curriculum provide information about specialty certification, professional values, lifelong learning and involvement in professional organizations?
    - Yes
    - No
    - If Yes - Where is that information shared?

i. Classroom

ii. Clinical

- *<u>If Yes, would you be willing to provide an example, such as syllabus statement, formalized lesson plan or learning activity in which this information is discussed</u>

10. Do you belong to a professional nursing organization or association?

- Yes
- No

11. In your view, what is the relationship between a nurse's specialty certification status and other characteristics of professionalism, please explain

_____

APPENDIX C

PERCEIVED VALUE OF CERTIFICATION TOOL (PVCT)

PERCEIVED VALUE OF CERTIFICATION TOOL (PVCT)©

DIRECTIONS: Below are statements that relate to perceived values of certification. Please indicate the degree to which you agree or disagree with the statements by circling SA for strongly agree, A for agree, D for disagree, SD for strongly disagree, or NO for no opinion.

	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
Validates specialized knowledge	SA	A	D	SD	NO
Indicates level of clinical competence	SA	A	D	SD	NO
Indicates attainment of a practice standard	SA	A	D	SD	NO
Enhances professional credibility	SA	A	D	SD	NO
Promotes recognition from peers	SA	A	D	SD	NO
Promotes recognition from other health professionals	SA	A	D	SD	NO
Promotes recognition from employers	SA	A	D	SD	NO
Increases consumer confidence	SA	A	D	SD	NO
Enhances feeling of personal accomplishment	SA	A	D	SD	NO
Enhances personal confidence in clinical abilities	SA	A	D	SD	NO
Provides personal satisfaction	SA	A	D	SD	NO
Provides professional challenge	SA	A	D	SD	NO
Enhances professional autonomy	SA	A	D	SD	NO
Indicates professional growth	SA	A	D	SD	NO
Provides evidence of professional commitment	SA	A	D	SD	NO
Provides evidence of accountability	SA	A	D	SD	NO
Increases marketability	SA	A	D	SD	NO
Increases salary	SA	A	D	SD	NO

APPENDIX D

REQUEST TO CONDUCT SURVEY

UNIVERSITY OF NORTHERN COLORADO

To the Dean of Nursing:

Greetings.

My name is Christina N. George and I am a doctoral student at The University of Northern Colorado. I am conducting research for my dissertation on faculty perception of the value of specialty nursing certification and would like to request your support for my research study.

My research focuses on non-advanced practice certification and my focus stems from a broader interest in the advancement of nursing practice. Since early 2012, profession leaders have indicated there is a national need for research on nurse credentialing. This study is interested in the individual credential, a post-licensure specialty practice certification. Specifically, this research aims to identify whether nursing faculty perceive that post-licensure certification has value.

This research study utilizes the Expanded Conceptual Model to examine the individual practice credential - specialty certification (Needleman et al., 2014). The research design utilizes the Perceived View of Certification Tool© that consists of 18-value statements to identify what values are positively associated with certification. There is also a short demographic section included and the data analysis is meant to identify clusters of mediating variables that could signal why a nurse chooses to become certified.

I humbly request that you support and encourage faculty to participate in this study to advance the credentialing research agenda within nursing. The amount of time to complete the questionnaire is less than 30 minutes. If you are interested in this research and would like the final study results I will happily provide them at study conclusion. Please note, all data, including the demographic data will be presented in aggregate form without any identifying information except for participant program type and location by state. This study has been approved by the Institution Review Board (1372053-1) at the University of Northern Colorado.

If you have any questions about this study, please do not hesitate to contact myself or my chair. My contact information is: geor9696@unco.edu and my dissertation committee chair's contact information is jeanette.mcneill@unco.edu

Thank you,

Christina N. George PhD(c), RN, CNE

APPENDIX E

PERMISSION TO POST ON NURSE EDUCATORS FACEBOOK PAGE

Greetings Tim Bristol,
My name is Christina N. George and I am a doctoral student at The University of Northern Colorado. I am conducting research for my dissertation on whether faculty perceive there is value in specialty nursing certification and would like to request that you include my participant request on your private Nurse Educators Facebook page.

This research is being conducted to determine the degree of value awarded to specialty certification by nursing faculty. Study participants are undergraduate nursing faculty employed full-time in an associate or baccalaureate degree at either a public or private academic institution. Teaching in either a fast-track, accelerated program, second-degree or graduate program and with those that are licensed are *not* eligible to participate in the study. This study has been approved by the Institution Review Board at the University of Northern Colorado.

Since early 2012, profession leaders have indicated there is a national need for research on nurse credentialing. This study is interested in the individual credential, a post-licensure specialty practice certification. Specifically, this research aims to identify whether nursing faculty perceive that certification has value. This research study utilizes the Expanded Conceptual model to examine the individual practice credential - specialty certification (Needleman et al., 2014). This research is designed to utilize the Perceived View of Certification Tool© that consists of 18-value statements to identify what values are positively associated with certification. The data analysis is meant to identify clusters of mediating variables that could signal why a nurse chooses to become certified. A demographic section is also included with a focus on professional socialization. The amount of time to complete the questionnaire is less than 30 minutes.

If participants are interested in this research and would like the final study results I will happily provide them at study conclusion. Please note, all data, including the demographic data will be presented in aggregate form without any identifying information except for participant program type and location by state. I humbly request that you participate in this study to advance the credentialing research agenda within nursing. Your support would allow for my study to have a realistic chance of achieving a nationally representative sample.

Once I have your approval of my request I will add the participant survey letter and study link. If you have any questions about this study, please do not hesitate to contact myself or my chair. My contact information is: geor9696@unco.edu and my committee chair's contact information is jeanette.mcneill@unco.edu

Thank you,

Christina N. George PhD(c), RN, CNE

Response –

From: Tim Bristol [tim@nursetim.com]
Sent: Thursday, June 07, 2018 12:50 PM
To: Christina N. George
Subject: Re: Request for assistance - now with attachments

Great work!
Ok post and then email me and I will approve.
Thanks

Tim J. Bristol, PhD, RN, CNE, ANEF, FAADN
Faculty Development, Owner
NurseTim, Inc.
Voice/Fax 866.861.2896
Email - tim@nursetim.com
Web - http://www.nursetim.com
facebook® - NurseTim
Youtube - http://www.youtube.com/user/NurseTimTube
LinkedIn - http://www.linkedin.com/in/nursetiminc
Partnering with over 900 programs/20,000 faculty internationally.

APPENDIX F

LETTER OF INFORMED CONSENT

UNIVERSITY OF
NORTHERN COLORADO

To All Undergraduate (BS & AD) Nursing Faculty:

Greetings.

My name is Christina N. George and I am a doctoral student at The University of Northern Colorado. I am conducting research for my dissertation on faculty perception of the value of specialty nursing certification and would like to request your participation in my study.

I am inviting undergraduate nursing faculty employed full-time in an associate or baccalaureate degree at either a public or private academic institution to participate. If you teach in either a fast-track, accelerated program, second-degree or graduate program exclusively or with students already licensed, you are *not* eligible to participate in the study.

Since early 2012, profession leaders have indicated there is a national need for research on nurse credentialing. This study is interested in the individual credential, a post-licensure specialty practice certification. Specifically, this research aims to identify whether nursing faculty perceive that certification has value.

This research utilizes the Perceived View of Certification Tool©, 18-value statements that has shown to identify values that are positively associated with certification. There is also a short demographic section included and the data analysis is meant to identify clusters of mediating variables that could signal why a nurse chooses to become certified. The amount of time to complete the questionnaire is approximately 30 minutes.

If you are interested in this research and would like the final study results I will happily provide them at study conclusion. Please note, all data, including the demographic data will be presented in aggregate form without any identifying information except for participant program type and location by state. This study has been approved by the Institution Review Board (1372053-1) at the University of Northern Colorado.

Your participation in this study is entirely voluntary and consent will be implied if you choose to launch the survey by activating the link below. If you have any questions about this study, please do not hesitate to contact myself or my chair. My contact information is: geor9696@unco.edu and my dissertation committee chair's contact information is jeanette.mcneill@unco.edu

This is the link to the survey –

Thank you,

Christina N. George PhD(c), RN, CNE

APPENDIX G

DEMOGRAPHIC QUESTIONNAIRE--QUESTION 8

Demographic Questionnaire – Q. 8

***If yes, please describe an example of ways you share your personal professional values on these topics: Do you informally share your personal professional values on professional organizations, post-licensure specialty certification or the need for continuing learning as part of student socialization into the nursing profession?**

1. disscussion

2. I actively invite and encourage students to participate in all professional activities I participate in. Regional professional organization meetings and volunteer opportunities are the most common. Students participate with me as their mentor, then are more likely to participate as a professional.

3. I discuss the importance of nurses being politically active because the nursing knowledge is needed when health care related bills are being considered. I discuss this topic with colleagues and nursing students.

4. I discuss the importance of these when discussing policy and evidence based research

5. Emphasize oblligation to advance nursing / nursing practice through all of the above

6. Professionalism, nursing ethics, morals, and integrity in lectures, post conference discussions

7. Since I am CCRN certified, I talk to my students in the critical care course about the value of certification. Additionally, I expose them to the American Association of Critical-Care Nurses (AACN) organization webpage/social media accounts, and I encourage attendance at local AACN events.

8. I share my own certification and my participation in my local chapter.

9. Talk about it in class

10. Membership in professional organizations access to scholarship opportunities for students through professional organizations

11. I talk about my certifications and the value that they bring to the students

12. Explain APRN,encourage joining societies, invite to educational offerings present at conferences, participate in committees in ANA, CNA and AWHONN

13. I encourage students to join specialty organizations once they are working

14. discussion and assignments for students to explore both professional org and certification

15. I teach in the leadership course and we talk about both certification and professional organizations

16. I have a unit in my foundations course and give them examples of the associations I belong to and the certifications I hold

17. Storytelling

18. through individual talks and lectures to the class.

19. i share my experiences in practice as I still practice part-time

20. Discuss these with students during classes or in the lab/clinical setting

21. Encourage students to pursue continuing their education; act as a role model for continuing education in nursing; highlight past students who have achieved success with higher education in nursing.

22. Encourage students to participate in professional organizations

23. Scholarship

24. Use information from continuing educational learning to supplement class learning.

25. I share my experiences in classroom and other conversations

26. Post conference at clinical sites; lectures regarding my specialty area (OB)

27. In lecture and clinical discuss the latest information

28. Informally in conversation

29. During introduction, I include my certification, and that I am a doctoral student specializing in Nursing Education.

30. Give examples of area in health care and social setting where nurse have an active voice in being change agents

31. I describe to the students options when they graduate

32. Meeting and with students during presentations

33. Discuss the ongoing and ever changing healthcare world. Nurses need to be abreast of changes, trends and evidence

34. Discuss my CMSRN certification and participation in AMSN and STTI

35. Lecture discussions

36. I discuss why I belong and what I perceive to be the benefits of professional organizations to the profession.

37. during bio

38. Importance of continuing to achieve a terminal degree

39. I speak to them in class, I give examples of what options they have after graduation, encourage professional development

40. AHEC

41. Storytelling in class

42. Through presentations

43. Serve as a student mentor, discuss the importance of professional organization membership

44. In professionalism class throughout curriculum

45. In clinical and in first semester orientation course

46. I currently mentor many students and new grads and talk with them about joining organizations etc.

47. Integrating information I've learned from my own coursework into the classroom/clinical setting.

48. Require students to attend professional organization meetings

49. Discussions in class and clinical, role modeling

50. I always tell my students that learning never ends, it is their professional duty to stay current, albeit through journals, organizations, or conferences

51. When I talk to students 1:1, talk to prospective students, participate in career day

52. SNA contacts

53. Discussing Magnet requirements, encouraging RN to BSN progression and graduate studies, encouraging students to seek specialty certification

54. Remain in contact with former graduates and encourage/support their pursuit of higher education

55. Encouragement to join sigma, formally in class when we discuss the importance of obtaining certification and why nursing organizations are import and the need for life long learning

56. Lectures and Social Media

57. Communication classes, I teach the beginning fundamental and theory courses discuss importance of nurses having a voice in policy, reinforcing that not every nurse will want to become politically active, etc.

58. Invite students to attend professional conferences with me.

59. I encourage students to always consider future education. I encourage them to get involved with professional organizations to expand their knowledge and influence.

60. To pre-nursing students

61. Talk about in context of "transition to professional practice"course, also in advising appointments and work with students around resume development

62. Encourage the value of belonging to a professional organization

63. I teach an Intro to Nursing course and it's part of the class

64. Discuss the need for continuous learning

65. I explain how conferences are a wealth of information and that organization membership provides opportunities to network

67. Discussion

68. Maintain memberships, hold office, provide poster/podium presentations, faculty sponsor SNA

students, faculty

69. As part of teaching OB to undergraduate students, I discuss the benefits of post-licensure certifications, professional organizations and leadership roles. I incorporate this into various situations surrounding patient care and being a life long learner.

70. Lectures and seminars

71. I invite students who are interested in peri-OP nursing to AORN meetings, tell students to join professional organizations

72. I discuss my sepcialty certification with students on the first day of class.

73. Discuss certification as well as honors society

74. Eduaction is never wasted; helps us grow as a person, as a professional

75. I invite students to our meetings and CEU events

76. Lecture, discussion with students

77. lecture, clinical discussions

78. Discussion on history & development of professional nursing organizations; encouraging students to explore networking and "tools" on professional organization sites.

79. Discussion

80. I let my students know that I have certifications and when I am attending classes. I also place my credentials on presentations as well as my business cards.

81. I teach fundamentals of nursing and we talk about the ANA, and malpractice insurance and the Nurse Practice Act. I talk about my own involvement in the ANA and about the need to be a lifelong learner as a nurse.

82. I practiced 14 years as a CRNP in oncology. I held certification OCN and then AOCN. I explain to students that certification is a way to establish expertise in your speciality

83. Discussi0on of organizations nurses can belong, discussion about what certification can mean to the practicing nurse

84. In speaking to nursing students about how to succeed in practice

85. Member of ONS, discuss the importance of networking with like specialities

APPENDIX H

PEER REVIEWER DOCUMENT: DEMOGRAPHIC QUESTIONNAIRE—QUESTION 8

Demographic Questionnaire – Q. 8

*If yes, please describe an example of ways you share your personal professional values on these topics: **Do you informally share your personal professional values on professional organizations, post-licensure specialty certification or the need for continuing learning as part of student socialization into the nursing profession?**

Categories		Total
Methods or Formats of Communication or Faculty Sharing	Discussion	
	Talk	
	Explain	
	Share	
	Storytelling	
	Encourage	
	Other:	
Primary Categorization	Specialty Certification	
	Professional Organizations-Associations	
	Both	
	Other:	
Location of Communication	Classroom (lecture, course)	
	Clinical (Post-conference)	
	Both	
Certification Themes	Value or benefit of certification	
	Shared certification status with students	
	Other:	

Professional Organizations-Associations	Encourage or promote student attendance or participation at local organization-association meetings	
	Benefits of membership	
	Professional opportunities of membership: • Participate in committees	
	• Holding Office	
	• Networking	
	• Leadership roles	
	• CEU's; conference opportunities	
	• Policy and activism	
	• EBP	
	Life-long learning or continuing education • RN-BSN progression or graduate studies	
	SNA membership	
	Other:	
Descriptors of faculty behaviors	Mentor	
	Role model(ing)	
	Other:	

Comments:

APPENDIX I

QUESTION 11—PARTICIPANT RESPONSES

Question 11 - Participant Responses

In your view, what is the relationship between a nurse's specialty certification status and other characteristics of professionalism, please explain -
1.
2.
3. Increased professionalism
4. Specialty certification not only exhibits proficiency in a knowledge base post RN licensure, but also exhibits a commitment to life long learning, leadership, and scholarship within the nursing profession.
5. success of the student
6. There are many wonderful nurses that do not have specialty certification, but having such certification does show that a nurse is willing to go above and beyond in his or her career.
7. Obtaining the certification leads to greater education for that person that can be shared when teaching other healthcare personel.
8. It shows dedication and ambition
9. Mandated adherence to current standards of clinical practice
10. It shows the desire to improve, move forward, better your expertise
11.
12. demonstrates a commitment to life long learning, obtaining additional education to meet higher standard of competence
13. I feel that holding specialty certification affirms a nurse's dedication to that specialty and allows the nurse to be viewed as a role model and mentor for that specialty
14. A nurse who is specialized demonstrates his/her comittment to ongoing education and knowledge in a particular practice area.
15. board certification in one's specialty area indicates dedication to the profession in reaching the highest possible nursing role
16. Acknowledges continuous learning and verification of specific skill sets. Additionally, increases work satisfaction.
17.
18. Being current on active practice issues, knowing the EBP relating to the practice, and as you siad, the life long learning associated with it
19. give nursing a voice, educational, research, presentations
20. Specialty certification demonstrates a commitment to on going education, life long learning and specialty knowledge
21. It is incumbent upon us to continue learning in order to provide optimal care
22. donr know
23.
24. Increased satisfaction, self confidence, autonomy, potential for advancement
25.
26.
27.

28.
29. Specialty certification demonstrates the willingness to continue to learn and meet the needs of the population. Professionally specialty certification helps provide more direct care to patients or more accurate education.
30.
31. advanced learning, expert
32.
33. I don't think they are related
34. I don't believe certification in a specialty area is necessary for a profession, I have it as a challenge for myself to accomplish and maintain, most of the specialty certifications don't really make the person a better nurse in their field. At least from all of the individuals I know have not had a better understanding or higher level of functioning because of it.
35. I believe that specialty certifications are one way for a nurse to show her commitment to continuing education in nursing.
36. Certification denotes a commitment to the profession
37. I believe cretification does show professionalism on the part of hte nurse, but it has to be for self-satisfaction becasue it is seldom acknowledge in teh healthcare environment.
38. Paradigm parallelism
39.
40. Role Model
41. Specialty certification demonstrates commitment to the profession by being willing to spend the time and money to attain and maintain certification.
42.
43. It is part of life-long learning and staying current on issues within your specialty area to inform evidence-based practice.
44. It confirms that you are an expert in the field.
45. It informs your practice
46. It is required to demonstrate competency
47. The relationship is that as a nurse we have an obligation to obtain the highest level of education in their specialty as well as to become active in policy writing for health care.
48. Remain up to date with the current practice changes.
49.
50. Specialty certification makes a nurse stand out among his/her peers and this helps with characteristics of professionalism
51. Without support it won't happen
52. By hold a specialty certification nurses are demonstrating the area of specialization within the nursing profession. In addition, the certification demonstrates expertise in knowledge and practice
53.
54.
55. Fosters development

56. I feel my certification makes me an expert clinician in medical-surgical nursing and provides me with a network of colleagues and professionals to discuss ideas, practice, and research.
57.
58.
59.
60.
61. I don't believe that specialty certification influences levels of professionalism at all. They may demonstrate educational preparation in specialty areas, but I do not view them as having a correlation with professionalism.
62. Signifies value of life long learning.
63. life long learninng, novice to expert
64. Certification denotes excellence in practice
65. Speciality status in my opinion influence a more professional attitude
66. I believe having a specialty certification allows the professional to engage in more formal activities and provides a better expertise in the area of certification
67.
68.
69.
70. A nurse who cares enough to be certified cares about their abilities and profession.
71.
72.
73. Commitment to life long learning
74.
75. It shows a commitment to learning & being an expert in the field
76.
77.
78. A certification demonstrates competence and expertise as well as continuing education in a specialty area.
79. I currently do it have a certificate but am working on a DNP. I'm not sure having a certification would increase my professionalism but I do know it is sought after in resumes
80. Nurses as lifelong learners and educators of health behaviors to patients, students, and communities manifest the essence of learning for the greater good through pursuing a specialty certification status.
81. Maintaining and building on professional standards of care
82. I don't think they are related. A nurse can have characteristics of nursing professionalism by learning them in school and on the job, does not mean someone with an R.N.C or RN-BC are better
83.
84. A doctorate should be enough without additional expensive certification
85. Certification represents expertise and emphasizes a nurses passion for the particular specialty
86.
87. That nurse should be viewed as a content expert and should be willing to share.

88.
89. Ongoing commitment to lifelong learning and quality
90. It shows comittment to best practices, and excellence in practice.
91. Specialty certification indicates a commitment to expert practice and the study that the exam requires. One must study to be prepared for an exam and then maintain ongoing immersion in the special field to maintain certification. Also I promote certification to my peers, particularly the CNE.
92.
93.
94. scholarship nd integrity
95. In my experience, the relationship is not clear. Certification often appears to be related to professional commitment; however it may also be driven by other motivators such as job advances or pay incentives.
96.
97.
98.
99. Prestige
100.
101. Certification provides both the client and the nurse concrete proof that they are an expert in their field.
102.
103.
104. Additional exposure and expertise
105. Nurse specialty indicates to me a certification in clinical practice. Although I believe that certification can be beneficial, being certified as a Nurse Educator is more valuable to me.
106. In a rapidly changing environment, staying abreast of current practice is a key professional behavior. Specialty certification is one way to demonstrate that your practice is current.
107.
108. Validates life long learning and a professional commitment to provide optimal quality care to patients.
109. By becoming involved, you enhance the profession of nursing and expand your knowledge in the field, this becoming a better nurse. As members of professional organizations, we help influence the future of healthcare.
110.
111. Certification shows a higher level of knowledge or specialization. Professionalism by definition required specific knowledge and skills along with a higher level of learning. This is especially import in nursing.
112. Successful certification provides an external validation of expert knowledge in the area of certification. For many organizations the collective weight of having certified nurses in practice is viewed as a means to expert nursing practice delivery to their patients. In our area nurses are paid additional salary as a result of professional certification as well
113. life long learner

114.	Dedication to the nursing profession
115.	
116.	
117.	Demonstrates a connection between all aspects of professionalism
118.	
119.	
120.	
121.	None
122.	None
123.	Im not understanding what you mean by certification status. I have a FNP, I'm three courses from an MBA. Are these certification specialties? The FNP is a certification but the business is educational.
124.	If knowledge of the specialty is used for health care consumers, it is a win-win relationship.
125.	Demonstrates life-long learning, current in best practice, actively involved in quality improvement, and more likely a peer mentor
126.	certification is expensive and requires continuing education I find difficult to afford
127.	Holding a certification allows you to be an expert in your area of practice. I believe having a certification reflects one's advanced knowledge and dedication in a specialty area.
128.	
129.	Keeps the nurse wor
130.	
131.	
132.	Ongoing professional
133.	Love of learning, passion for being the best nurse possible
134.	Those who have advanced certificates, seem to hold education in high regard and want to share their evidence-based knowledge.
135.	Shows that you are invested in your job and willing to take your career to the next level. Demonstrates a personal drive to become more knowledge and accountable for one's work
136.	The certification enabled me to outwardly demonstrate my professionalism (continuing education, best-practice, uptodate on knowledge/treatments).
137.	It is a loose association between the two elements. Just becaouse a nurse is certified, does not necessarily mean s/he consistently demonstrates professionalism behaviors toward others.
138.	I think it demonstrates a committment and is more respected in the profession
139.	I used to value the specialty certification as a testimony to the public that we are seeking continued knowledge in our roles and are practicing to standard and higher. I now see many peers obtaining "numerous badges" to place after their name. I am not certain this always translates to quality.
140.	I believe that the more a nurse is engaged in her specialty, the more quality her skills have in the care of her patient. I am currently only certified in my specialty

at the bedside. I am looking into CNE certification once I have been nursing faculty for more than 2 years.
141. Attaining certifications is an extension of my own personal professionalism. Certifications and "additional letters" behind my name add a certain "clout" when needed. Otherwise it does not make me " more" of a professional.
142. Apart of being a professional is to continue learning not only in nursing but also with nursing specialties. I see a great need for me to get my Nurse educator certification, yet I have not accomplished this yet. I have attended meetings to help prepare me for the certification exam. I just need to commit to it.
143.
144. Speciaity certification signifies the desire to obtain a creditial that exemplies expertise in a speciality area. A desire for life-long learning and serve as a role model of our profession.
145. The achievement of specialty certification is importnat to encourage the nurse to continue learning and positivily affecting outcomes.
146.
147. Certification demonstrates a commitment to standards of excellence
148. Viewed as someone that has taken the initiative to improve their knowledge, which improves patient care

APPENDIX J

PEER REVIEWER FORM: DEMOGRAPHIC QUESTIONNAIRE—QUESTION 11

Peer Reviewer Form

Demographic Questionnaire - Question 11

Directions: Please review each statement as an individual entry. This is a quantitative content appraisal and the focus is on word count. Please count the specific words or phrases as you review the participant responses to the question, in your view, what is the relationship between a nurse's specialty certification status and other characteristics of professionalism, please explain –

Categories	Descriptors & Counts	Total
Specialty Certification	• **Descriptors of certified practice:** 1. EBP, informs practice	
	2. Specific type or area of clinical practice	
	3. Standards of care or excellence in practice	
	4. Best practice or current clinical practice	
	5. Autonomy or scope of practice	
	6. Other:	
	• **Descriptors of competence or proficiency in certified practice:** 1. Expert, expertise	
	2. Competence	
	3. Specialization, specialty knowledge	
	4. Quality care	
	5. Increased knowledge base	
	6. Other:	
'Other' Characteristics of Professionalism	• **Descriptors of professionalism:** 1. Professionalism, professional behavior	
	2. Professional development	
	3. Career performance, above and beyond	
	4. Leadership, professional attitude	
	5. Other:	
	• **Descriptors of professional development:** 1. Life-long learning	
	2. Continuous improvement	
	3. Advanced learning, additional or continued education	
	4. Scholarship	
	5. Other:	

Nurse Characteristics	• **Descriptors of certification as individual nurse development:** 1. Serve as role model or mentor	
	2. Increased work satisfaction, advancement, pay incentives	
	3. Prestige, external validation, peer recognition	
	4. Ambition, personal challenge or self-confidence	
	5. Dedication, engaged, commitment to profession	
	6. Networking	
	7. Respected, stand-out	
	8. Internal (personal) satisfaction, growth or care about practice abilities	
	9. Personal drive, performance 'next level'	
	10. Other	
The Contrary Case	• **Descriptors of barriers to certification:** 1. Disagree with certification as a practice	
	2. Is expensive to attain and maintain	
	3. Requires continuing education	
	4. Does not 'make' professionalism	
	5. Other	
Other Miscellaneous Items	1. Don't know	
	2.	
	3.	
	4.	
	5.	

APPENDIX K

FORMAL EXAMPLES

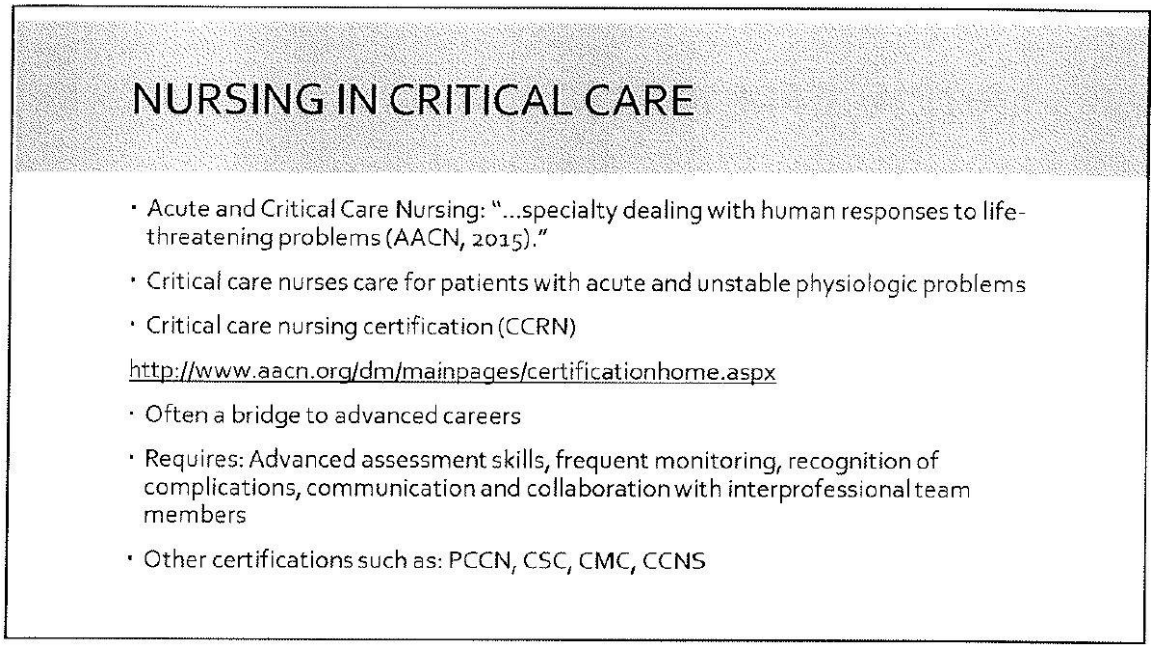
Formal Examples

Item 1. Class one objectives: Role of the Nurse

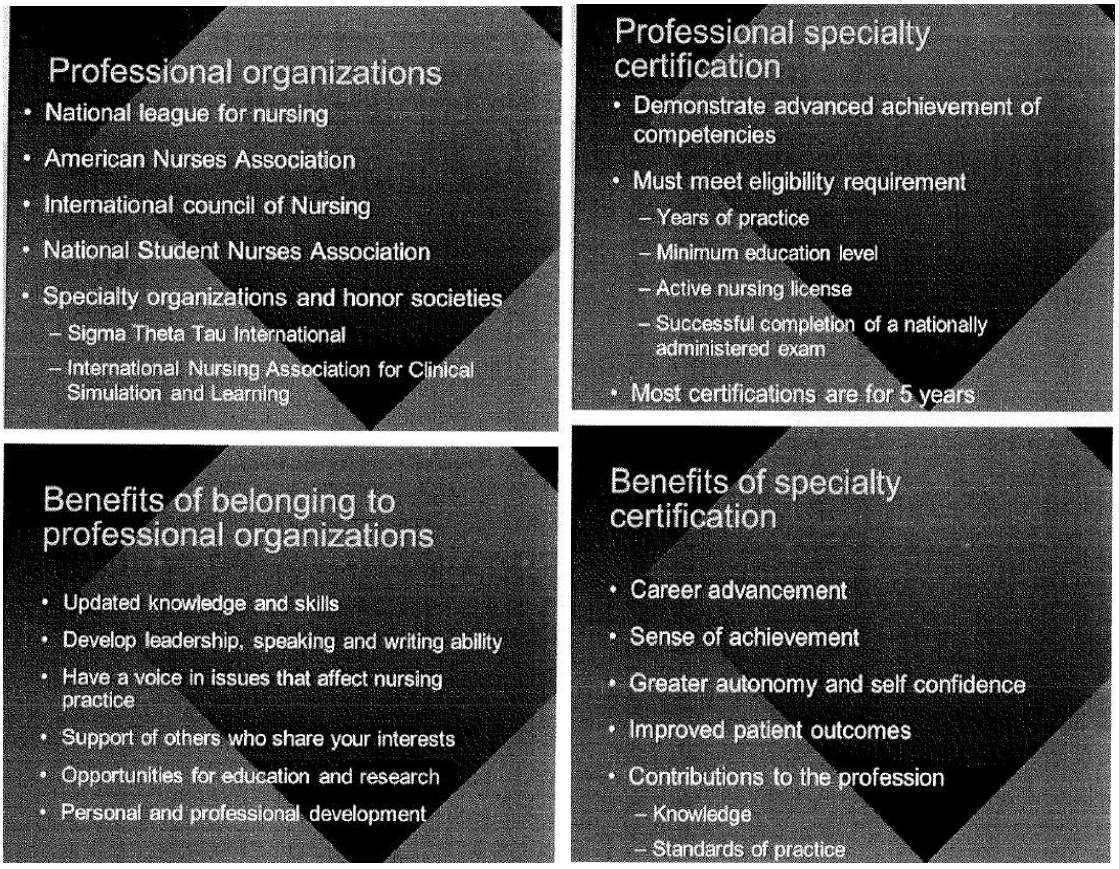
Class One Objectives: Role of the Nurse

1. Describe the educational programs that are available for professional, registered nurse education. (Course Objective 1,7)
2. Explain the role of the American Nurses Association and define the purpose of standards of practice. (Course Objective 1,2,7)
3. Identify the role and career opportunities for nurses today. (Course Objective 1,7)
4. Define the purpose of professional organizations and their impact on nurses. (Course Objective 1,2,7)
5. Explain the licensure process for registered nurses and maintenance of that license. (Course Objective 1,8)

Item 2. Nursing care of the client II presentation; slide 9



Item 3. Four presentation slides



Item 5. Gerontological nursing course syllabus; page 5

Philosophy of the College of Nursing

Nursing is an art and science reflective of and responsive to an ever-changing healthcare environment. Nursing professionals utilize clinical judgment, quality improvement, informatics, teamwork and collaboration to provide safe, culturally-competent, patient-centered care. The goal of the professional nurse is to protect, promote, and restore comfort and health throughout the lifespan.

Education as a life-long, interactive process provides the opportunity for the adult learner to develop personally, socially, and intellectually. The adult learner's previous life experiences and knowledge provide a foundation for acquiring new knowledge, skills, and attitudes.

Associate Degree Nursing (ADN) prepares the graduate for entry into professional nursing practice. As a registered nurse generalist the ADN graduate leads, manages, and provides direct care to individuals, families, and groups across various healthcare environments.