

2018

Preparing Novice Nurses for Early Recognition Acute Deterioration

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Walden University

College of Health Sciences

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Norma Harris

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the review committee have been made.

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Walden University
2018

Abstract

Preparing Novice Nurses for Early Recognition of Acute Deterioration

by

Norma Harris

MS, Walden University, 2010

BS, Richard Stockton University, 2006

Project Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Nursing Practice

Walden University

November 2018

Abstract

Hospitalized patients increasingly present with complex health issues that place them at risk for acute patient deterioration (APD). Novice nurses are ill-equipped with the critical clinical skills to function competently in recognizing APD, placing patients at risk for negative health outcomes. This project addressed the need to educate novice nurses to recognize APD and answered the project focused questions that asked if an educational intervention with high-fidelity simulation (HFS) would improve nurse knowledge and clinical confidence in recognizing APD. Benner's novice-to-expert and the constructivism theory were used to guide the project. Based upon a review of the literature, the HFS was developed to provide scenarios in which participants would view APD evolving case studies and demonstrate knowledge and skill for caring for patients with APD. A convenience sample of 11 novice nurses participated in the pre- and posttest design project to determine if knowledge and clinical competence increased. Data from the HFS program were analyzed; results showed no statistically significant change in knowledge or confidence post intervention ($p = 0.441$). A larger sample size is recommended for future HFS interventions at the site to determine if the program of education will increase knowledge and clinical confidence with future iterations of HFS. The project has the potential to promote positive social change as novice nurses learn to recognize and respond to APD and as APD events are reduced.

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Dedication

I dedicate this degree to my dear deceased mother, Mavis Panton, who saw the great potential in me and never ceased to decree and declare that I would positively impact the world with my gifts. Also, to my superbly supportive husband, Selvin, who is the wind beneath my wings and my inspiration for soaring outside my comfort zones. Observing his quiet dignity and optimism in his health challenges over the past 10 years gave me the tenacity to persevere against all the odds during this journey. To my children, Allison and Shari Ann, sons-in-love, Shayne and Kofi, and my adorably gifted grandchildren, Amare, Rowan, Leonor, Noah, and Anna, may they be inspired that dreams do come through for those who dare to follow and work God's divinely orchestrated plans. Finally, to my cousin, Elon Patterson, who challenged me to become a doctor when I graduated nursing school over 40 years ago, I took your challenge and here's to you for seeing this predestined moment!

Acknowledgments

I would like to extend my heartfelt gratitude to the faculty of Walden University and my doctoral committee: Dr. Janice Long (chair), Dr. Mary Tan, Dr. Barbara Gross, and Dr. Mary Rogers for their unwavering support and expertise throughout this journey. To God be the glory for all His wondrous works and mighty acts as also evidenced by this awesome accomplishment. To my darling husband and soul-mate, Selvin, who still believes that I am the smartest girl in the world, thank you for always expecting excellence and giving no less in return. My most special commendation to my loving father, Algernon Anderson, for always reminding me that I am his firstborn and believing in my abilities to positively impact the world. Also, my overflowing gratitude to my preceptors, Emily Turnure and Dr. Kamala Chambers, and the prayers of Pastor Emily Myrick, Elder Dr. Paul Harden, and Evangelist Brenda Alexander. I acknowledge my daughters, Allison and Shari-Ann, sons in love, Shayne and Kofi, my sister, Helena, and the host of loved ones, friends, and colleagues, who provided continuous encouragement and support for which I am eternally grateful. Also, to the leadership of the practicum site, my preceptors, my director, the simulation staff, and the dedicated nurses who participated in this project and made my dream a reality, thank you.

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Section 1: Nature of the Project

Introduction

The U.S. healthcare system is vibrant and dynamic but continues to be considerably more complex; hence, it is a fertile environment for unpredictability and adverse events (Hart et al., 2014). This complexity is heightened by high acuity levels of patients, rapid turnaround times in admission and discharge cycles, and short lengths of hospitalization (Dyess & Sherman, 2009). Increasingly, hospitalized patients are dealing with complex health issues and are at increased risks for acute patient deterioration (APD; Hart et al., 2014). Compounding these challenges is the on-going nursing shortage, the ever-evolving technology, and financial constraints, resulting in shortened orientation periods for novice acute care nurses entering the profession (Dyess & Sherman, 2009).

Novice acute care nurses enter the practice environment as fully licensed registered nurses and are expected to take on all the responsibilities of caring for patients with these complex health issues, by using the nursing process (Benner, 1984; Dyess & Sherman, 2009). However, studies have shown that due to their limited experience, this expectation may possibly be outside their critical thinking abilities and competence in providing safe and competent care during this transition period from novice to expert (Benner, 1984; Dyess & Sherman, 2009). Hence, novice nurses might fail to recognize the early changes in the condition of patients until major complications, inclusive of death, have ensued (Thomas, Force, Rasmussen, Dodd, & Whilden, 2007). Despite their

best intentions, this conundrum can adversely impact the goal of providing the best quality care in acute care units (Thomas et al., 2007).

Patient safety and quality outcomes are associated with the skill levels of nurses; therefore, educational interventions are vital to bridging these gaps in practice (Saintsing, Gibson, & Pennington, 2011). Using high fidelity simulation (HFS) as an educational strategy to augment a safe and nonthreatening learning environment benefited these novice nurses in improving their clinical skills, without fear of harming patients (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead, Scaffidi, Kerley, & Farside, 2016). On a broader level, the project contributes to social change by addressing the objective that nurses should continue their education to meet the ever-changing needs of a complex health care system (Institute of Medicine [IOM], 2010). This social change will also improve our health-care delivery systems in facilitating safer care and quality clinical outcomes. Overall, social change will be impacted by decreasing morbidity and mortality rates, enhancing quality of life, and hopefully decreasing health care costs (Institute of Healthcare Improvement [IHI], 2004).

Problem Statement

Novice acute care nurses who are transitioning to the professional role have less than 2 years of professional experience and limited skills in critical thinking, clinical reasoning, and judgment (Benner, 2001; Saintsing et al., 2011). However, the novice nurse is quickly placed into positions where they may need to recognize and respond to acutely deteriorating patients. Patient safety and optimal clinical outcomes can be directly related to the critical thinking abilities of the nurse in caring for the wellbeing of

patients, and there might be heightened risks for errors, especially among these novice nurses (Saintsing et al., 2011). At the practicum site, a theory-practice gap was identified by our leadership team through feedback provided by preceptors and communication from new employees about some noticeable deficiencies in these novice nurses (director of education, personal communication, December 16, 2016). One of these gaps in practice was difficulty in recognizing the early warning signs of APD and the appropriate rapid response to avert further decline, such as cardio-pulmonary events and death (director of education, personal communication, December 16, 2017). Duncan, McMullan, and Mills (2012) described these impending signs of deterioration as

- Change in mental status such as restlessness or agitation,
- Decreased level of consciousness,
- Increased respiratory rate,
- Increased heart rate,
- Reductions in systolic blood pressure,
- Temperature changes (high or low), and
- Altered hourly urinary output.

The appropriate standards of care entailed the nurse's critical thinking skills that acutely deteriorating patients must be recognized early to avert adverse clinical outcomes (IHI, 2004). In 2004, the 100,000 lives campaign was introduced to support hospitals in instituting interventions to improve medical care and reduce morbidity and mortality rates (IHI, 2004). One of the proposed interventions was the deployment of rapid response teams (RRTs) at the first sign of deterioration in the patients' condition (IHI,

2004). These RRTs have shown improvements in mitigating cardio-pulmonary events outside of the intensive care units and decreasing transfers to the intensive care unit. However, the RRTs have also led to novice acute care nurses having fewer incidences of cardio-pulmonary codes in the acute care units. This initiative might have lessened the novice nurses' experiences with the management of the acutely deteriorating patient prior to the arrival of code team (Matthew et al., 2016). Despite the fewer incidents of cardio-pulmonary arrests in the acute care units with the implementation of RRTs, the morbidity, mortality, and survival rates have remained poor (Matthew et al., 2016).

Purpose

There are documented studies that have identified early warning signs that usually precede an APD. However, Hart et al. (2014) argued that these premonitory signs might be missed by these novice nurses, leading to delays in timely treatments. Research in nursing education has revealed inadequate clinical reasoning skills among new graduates as a contributory factor in failure to recognize APD (Hart et al., 2014). Theory-practice gaps continue to occur as students are generally ill-prepared for the rigors of transitioning to the nursing profession as fully competent practitioners (Hart et al., 2014). The purpose of this project was to develop an evidence-based staff development program using HFS to bridge this theory-practice gap. This educational intervention was developed to instruct the novice nurses on the early recognition of the acutely deteriorating patients and the appropriate management of these patients, while awaiting the arrival of the rapid response team (Bussard, 2016).

Nursing education is, therefore, faced with the necessity to develop teaching strategies to promote the development of clinical judgment for these novice nurses (Lavoie, Pepin, & Boyer, 2013). HFS had been characterized as a novel and evidence-based intervention to practice real life clinical scenarios in a safe and nonthreatening learning environment (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). Bussard (2016) posited that there was a body of research that acknowledged how the use of HFS was associated with increases in critical thinking, reasoning abilities, clinical judgment, psychomotor skills, self-confidence, communication, accountability, and interprofessionalism. Also, HFS has been described as more interactive than classroom learning as simulation provides opportunities for repetitive practice in a safe environment and had the capability of transforming novice nurses into competent and confident practitioners (Sexton, Stobbe, & Lessick, 2012). Simulation, as an instructional tool, encourages higher levels of participant engagement, deeper levels of learning, and increased retention of principles when compared with classroom and theoretical learning (Carlton College, 2017). Therefore, with simulation, one can provide realistic clinical scenarios that are capable of challenging students at each stage of deterioration and provide “real-time” opportunities to capture the responses as appropriate or inappropriate (Aebersold & Tschannen, 2013).

The practice-focused questions were as follows:

1. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to recognize the early warning signs of APD?

2. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to manage APD prior to the arrival of the code team?

This doctoral project had the potential to address the gap in practice as simulated scenarios were ideal for providing real life clinical experiences in a safe and nonthreatening environment, while eliminating the potential for patient harm (Aebersold & Tschannen, 2013). The IOM (1999) report, *“To Err is Human: Building a Safer Health Care System,”* recommended simulation as an effective strategy to integrate into the clinical setting to train novice practitioners in efforts to prevent errors (p. 179). These novice nurses were observed in the simulation environment, where they were allowed to make mistakes, without the stress and pressure of the patient environment, and had the ability to correct them by reflective learning, and debriefing (Lavoie et al., 2013). Consequently, they had repeated opportunities to hone their clinical reasoning abilities, developed psychomotor skills, improved their communication and team building skills, and developed self-confidence (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016).

Nature of the Doctoral Project

Primary and secondary sources of evidence were obtained by gathering institutional data on RRT calls and conducting a review of the literature in the nursing and allied health databases, such as the Cumulative Index to Nursing and Allied Health Literature and Medline. Additional search strategies included Joanna Briggs, PubMed, and Cochrane databases to ensure that there was a broad search of the available and pertinent evidence. Other sources of evidence were available from institutions that had

successfully integrated HFS in their teaching strategies and shared their expertise and outcomes. Summary and synthesis of the literature were accomplished with the Melnyk hierarchy of evidence decision-making matrix to evaluate the effectiveness, usability, and feasibility of the identified best practices. The literature review provided guidance in the development of an educational strategy, using HFS, to educate novice nurses how to adequately recognize APD and how to manage these patients prior to the arrival of the code team (Melnyk & Fineout-Overholt, 2011).

The possible strategies were to conduct a comprehensive literature review of the primary and secondary sources, prepare a decision matrix to gather best practices in teaching with HFS, synthesize the best practices, and select an appropriate model for the clinical setting. My plan was to develop an evidence-based staff development training program that would provide instructions on the early recognition of APD and the management of these patients in preparation for the arrival of the RRT. This program was done in collaboration with the information technology staff in the HFS laboratory at the clinical site. Training was designed to enhance the learning experiences of the novice acute care nurses by providing clinical scenarios for one lesson that would assess their performance of the identified skills. They would be evaluated immediately following the lesson with a debriefing session and postassessment, using simulation instruments, such as the Lasater Clinical Judgment Evaluation Tool (Ashcraft et al., 2013). The outcome for this project was (a) the documented results of a pre- and post-test assessment on the content of the acute deterioration content and (b) HFS scenario response times to the various stages that were built into the simulation scenario.

Significance

The IHI (2004) highlighted the severity of adverse clinical outcomes with some astounding figures, such as approximately 35 to 40% of in hospital deaths tend to be on mediate-surgical units. Similarly, the National Patient Safety Agency (NPSA; 2007) reported that many patients who suffer cardio-pulmonary arrests had displayed signs of deterioration during the previous 24 hours. Compounding the issue, an estimated 23,000 in hospital cardiac arrests occurred in the United Kingdom, which were deemed as potentially avoidable with better care (NPSA, 2007). Competent nurses, who engaged in close monitoring of patients for acute changes in physiological observations, were more likely to identify deteriorating patients before a serious adverse event occurred (NPSA, 2007). Early identification is essential to reduce mortality, avoidable morbidity, length of stay, and associated healthcare costs (NPSA, 2007).

Stakeholders were vital to the success of the project as a collaborative approach with all the key players at the table allowed for contributions and perspectives of all the participants. The chief financial officer, chief nursing officer, education director, and the clinical outcomes manager for the unit were key stakeholders as all training and education had to be approved through these departments. Other stakeholders were the simulation laboratory staff as the project was conducted in the simulation laboratory. Scheduling and providing expert advice about the equipment were the major considerations for the simulation laboratory staff. The nurse manager, care center director, and representatives from the novice nurses were vital stakeholders, and their voices needed to be a part of the needs assessment, program planning, and development

(see Hodges & Videto, 2011; Kettner, Moroney, & Martin, 2017). The potential impact would have been mainly economic, but the education director had earmarked the project to be incorporated into the orientation program to defray some costs (director of education, personal communication, December 15, 2017).

Health care safety and quality continue to be a part of the public discourse in the areas of public policies, licensure, and through accreditation and regulatory agencies that aim to stipulate which measures constitute healthcare quality (Laureate Education, Inc., 2011). According to Nash (as cited in Laureate Education, Inc., 2011), this issue has highlighted the need for public reporting in the scope of accountability and transparency of healthcare organizations in how they measure up to the standards of quality as mandated by both government agencies, accreditation agencies, and the creators of quality measures such as National Committee on Quality Assurance. This project will contribute to nursing practice in various ways, such as providing educational interventions for novice nurses to facilitate development and improvement in clinical decision skills, increase team building skills, improve communication, and enhance self-efficacy and confidence (see Bussard, 2016). Other significant contributions might be noted in improved clinical outcomes, decreased incidents of patient harm, and assistance in containment of rising health costs (see Centers for Medicare and Medicaid Services, 2017). Reduction of stress, increased job satisfaction, and increased nurse retention rates might also be impacted by nurses feeling supported and empowered to practice effectively along the continuum from novice to expert (see Benner, 2001; Hezaveh, Rafii, & Seyedfatemi, 2013).

This project has the potential of significantly contributing to improvements in nursing practice in the areas of nurses taking accountability for their continuing education and being life-long learners (see IOM, 2010). Also, the project met the IOM (2010) recommendation of preparing and enabling nurses to lead change in the advancement of health. Furthermore, this project provides potential transferability to similar practice areas in the education of novice nurses in their transition to the professional role.

Social change can be impacted in novice nurses being empowered with the clinical decision tools to recognize early warning signs of APD. Improvement in novice nurses' clinical decision skills should result in decreased morbidity and mortality, improved clinical outcomes, lower healthcare costs, reduction in patient harm, increased job satisfaction, and lower turnover and retention rates (see Hezaveh et al., 2013).

Summary

Healthcare environments are complex structures with heightened potential for errors, even with highly skilled and competent care providers (Dyess & Sherman, 2009; Hart et al., 2014). Novice nurses often lack the critical thinking abilities to readily recognize APD during their transition to the professional role (Hart et al., 2014). Patient safety and optimal clinical outcomes have been associated with the critical thinking and clinical reasoning abilities of nurses (Saintsing et al., 2011). Therefore, hospital leadership and nurse educators were tasked with providing interventional strategies to eliminate the theory-practice gap. HFS had been characterized as an effective educational strategy to meet the clinical educational needs of novice nurses by providing a safe and nonthreatening environment that realistically mimicked the real practice areas

and negated patient harm (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016).

Section 2: Background and Context

Introduction

Novice nurses who were transitioning to the professional role might have less than 2 years of professional experience and limited skills in critical thinking, clinical reasoning, and judgment (Benner, 2001; Saintsing et al., 2011). However, the novice nurse is quickly placed into positions where they are expected to accurately recognize and respond appropriately to acutely deteriorating patients. Patient safety and successful clinical outcomes can be directly related to the critical thinking abilities of the nurse in assuring the wellbeing of patients (Saintsing et al., 2011). Saintsing et al. (2011) expressed that there might be increased risks for errors among novice nurses. Failure to adequately recognize and respond to acute deterioration in patient condition by some novice nurses was identified and reported by experienced nurses to the leadership team and the education department (director of education, personal communication, December 16, 2016). The literature supported that this theory-practice gap can have deleterious effects on patient safety and optimal clinical outcomes, so addressing this gap was the purpose of this project (see Benner, 2001; Dyess & Sherman, 2009; Hart et al., 2014).

Nursing education is faced with the necessity to develop teaching strategies to promote the development of clinical judgment, clinical reasoning, and critical thinking in novice nurses to avert further cascading decline of APD, such as cardio-pulmonary events and death (Lavoie et al., 2013). HFS has been determined to be an innovative and evidence-based intervention to practice real life clinical scenarios in a safe and conducive learning environment (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead

et al., 2016). Bussard (2016) also posited that there is a body of research that acknowledged a positive relationship between the integration of HFS and increases in critical thinking, reasoning abilities, clinical judgment, psychomotor skills, self-confidence, communication, accountability, and interprofessionalism. The practice-focused questions for this project were as follows:

1. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to recognize the early warning signs of APD?
2. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to manage APD prior to the arrival of the code team?

Section 2 addresses the following headings: concepts, models, and theories; relevance to nursing practice; local background and context; and the role of the DNP student.

Concepts, Models, and Theories

A conceptual model or framework is important in structuring the design, planning the approach, and presenting the findings for this project. Concepts are terms used to describe or identify the phenomena of interest being presented and may be abstract or concrete (Wills & McEwen, 2014a). Concepts need to be specifically defined so that they are clearly understood and communicated as to their meanings in the real world (Wills & McEwen, 2014a). The concepts that informed this doctoral project were *novice nurses*, *high fidelity simulation*, *acute patient deterioration*, and *best practices*. Benner's (1984) novice to expert theory informed this project. This was considered a learning theory, which described learning as a permanent change in behavior or the potential to change behavior, relative to the exposures and experiences that were not attributable to

any temporary alteration of body states, such as drugs, illness, or fatigue (Olson & Hergenbahn, 2012, as cited in Wills & McEwen, 2014b). The theory of constructivism that emanated from Piaget and Dewey (as cited in Roger, 2007) also informed this project.

Benner's Novice to Expert Model

Benner (1984) conceptualized that nursing skills are developed over time as nurses are personally engaged in different patient experiences combined with sound educational principles. Furthermore, Benner expressed that nurses can acquire knowledge and skills without learning the theoretical foundations or simply understanding “how to do the skill” without comprehending the “knowing that” in performing the skill. According to Benner, nursing knowledge can be developed as an extension of research and understanding gained through clinical practical experiences. Benner's 1984 novice to expert model is based on the Dreyfus's model of skill acquisition, which studied pilots and chess players and determined that proficiency and mastery in any area of study progressed through five distinct stages (Benner, 1984). These stages were identified as novice, advanced beginner, competent, proficient, and expert (Benner, 1984).

The novice nurse is described as a beginner with little or no experience and simply obeys the rules as they were taught (Benner, 1984). As such, the novice nurse has a limited ability to be flexible and is guided strictly by following rules and doing as they are directed (Benner, 1984). Also, the novice is limited in the ability to predict how signs and symptoms might manifest in particular situations until after these situations are

experienced; hence, impending changes or deteriorations in clinical conditions are likely to be missed (Benner, 1984).

The advanced beginner is described as a nurse who has gained some previous experience in performing in actual nursing situations and shows some degree of acceptable performance (Benner, 1984). At this level, the nurse lacks the “know how” but is in a position to use these past experiences to recognize the repetitive meaningful parts of the activities and principles and is able to link them together to guide present and future actions (Benner, 1984).

The competent nurse is one who has been doing the same job and has been in the same field for 2 to 3 years or who is exposed to similar experiences over this period of time (Benner, 1984). Benner (1984) explained that these nurses are capable of identifying long-term goals, are autonomous in planning their own actions, and have increased efficiency in their organizational skills

The proficient nurse is at the level of being able to perceive and understand the “big picture” or situations as a whole and has the decision-making capacity to provide care in a holistic manner (Benner, 1984). These nurses have gained experiential knowledge that has equipped them to anticipate situations, and they are able to modify plans accordingly (Benner, 1984).

The expert nurse is at the highest level on this continuum and has more in-depth foundational experiences that increase the ability to intuitively sense and understand relevant clinical situations (Benner, 1984). These nurses can fully comprehend and

connect various situations, without the need to rely on principles, rules, or guidelines to determine the appropriate actions (Benner, 1984).

Benner's (1984) theory or model was appropriate for this doctoral project as it related to skill acquisition as a developing process and proposed that nursing expertise depended on nurses being exposed to various situations in their skill development. The different skill levels showed the progressive changes in the three aspects of skilled performance: movement from the reliance on abstract principles to more concrete principles that incorporated past experiences to guide actions, growth in the learner's perception from viewing the situations as small separate pieces but towards formulation of the whole situation, and progression from a limited and detached onlooker to a fully engaged healthcare provider (Benner, 1984). Also, each step progressively built on the prior step, and Benner's theory has been used successfully in nursing education, practice, and research.

Constructivism Theory

Constructivism is a learning theory based on Piaget's (1952) work, which proposes that knowledge does not exist on its own but is perceived and interpreted by individuals based on prior knowledge (Wills & McEwen, 2014b). Wills and McEwen (2014b) and Rogers (2007) explained that learning operates on three processes of assimilation (individuals bring their previous knowledge into interactions with the current object or event), accommodation (involves making adjustments to previous knowledge to fit the new situation), and constructivism (the learning that occurs by the incorporation of

past knowledge being modified to the new situation by constructing new knowledge).

Constructivism has three tenets of relevance to simulation and adult learning:

- Each individual has unique past experiences and knowledge that are brought to new situations (Rodgers, 2007). Simulation technology fosters a conducive learning environment for learners to use these past experiences as building blocks to understand and uniquely apply them to the new situations (Rodgers, 2007).
- Learning is dynamic and results from active exploration when the individual's previous knowledge base does not fit in with the presenting experience (Rodgers, 2007). As such, simulation motivates the learner to be open to gaining new knowledge (Rodgers, 2007).
- Learning is facilitated by social interaction, and simulation provides the social milieu for team learning and dynamics (Rodgers, 2007).

High Fidelity Simulation

Simulation can be described as both an art and a science in the recreation of real-life clinical scenarios in a controlled, safe, and nonthreatening environment to provide structured learning experiences, without causing harm to patients (National Council of State Boards of Nursing [NCSBN], 2009). Simulation with the use of animal models has been recorded as far back as over 2,000 years, and manikins were used in obstetrical care in the 16th century (Rogers, 2007). Simulation has also been used in aviation since 1929 when Link patented the first aviation simulator; however, it has gained increasing support in healthcare and nursing education (Rodgers, 2007). Rogers (2007) described several forms of simulation: animal models, human cadavers, standardized patients, written

simulations, computer-based clinical simulations, audio simulations, video-based simulations, three-dimensional static models, task-specific simulators, and virtual reality simulation. The term *fidelity* is based on the simulator or manikin's abilities to portray similarities to real-life scenarios in achieving the expected learning and teaching objectives (Rogers, 2007). Hence, there are varying degrees of simulator fidelity, ranging from low fidelity (designed for single skills and geared towards learners practicing in isolation), medium fidelity (provides a more realistic portrayal of simulation but limited in providing adequate cues to facilitate the learners' complete involvement in the situation), and high fidelity (highly representative of reality with associated cues to encourage complete involvement and appropriate responses to treatment interventions; Rogers, 2007).

HFS has the capability to fully engage learners in interactive learning as the learners use sensory methods of touching, listening, and observing (Bland, Topping, & Wood, 2011). Furthermore, Bland et al. (2011) expressed that this level of fidelity enhances the learners' ability to synthesize the information by linking it to the underlying theoretical concepts. Nurse educators are aware that simulation can be a significant learning strategy in an era of advancing technology and students also embrace the technology (Bland et al., 2011). However, there was sparse evidence to support the increasing use and more research is needed to advocate for the benefits of simulation technology (Bland et al., 2011).

APD can be described as the process of an evolving and worsening decline in the physiology or functioning of the body towards critical illness that is predictable and symptomatic (Lavoie et al., 2016).

Clinical judgment as a concept is a complex, multifaceted, multi-dimensional, and interactive skill that is influenced by the concepts of clinical decision making, critical thinking, and clinical reasoning (Mariani, Cantrell, Meakim, Prieto, & Dreifuerst, 2013). . Although these concepts are difficult to define in concrete ways, the development of clinical judgment that is acquired through the integration of decision making, critical thinking, and clinical reasoning is critical for novice nurses in providing safe patient care (Mariani et al., 2013).

Best practices can be considered as current evidence that supports optimal clinical outcomes that are based on patient preferences and also provides cost-effective solutions.

Relevance to Nursing Practice

Nurses are responsible for making critical clinical judgments in caring for patients who have complicated health issues and are expected to respond accurately and timely to prevent deteriorations in patient conditions (Miraglia & Asselin, 2015). Within this context nurses are also expected to address competing needs of patients and families, perform orders from physicians, and ensure that each patient gets the right care at the right time. Patient safety is of primary importance and this responsibility demands precise clinical judgment skills and the ability to accurately recognize the critical elements that constitute providing safe patient care and the associated optimal outcomes (Miraglia & Asselin, 2015). These critical clinical skills take time to develop and novice

nurses are at a disadvantage in that they tend to have deficiencies in these critical skills and must progressively develop them in the clinical setting (Benner, 1984). However, with limited clinical sites, inadequate numbers of clinical faculty and reductions in orientation budgets, Miraglia and Asselin (2015) expressed how these novice nurses are expected to be ready to transition into the fast-paced practice environment and deliver safe patient care. The lack of adequate mentoring and clinical expertise is a recipe for increased incidents of patient harm, suboptimal care, and failure to recognize APD and demands that nurse educators and clinical specialists develop educational strategies to assist these novice nurses in developing these critical skills (Miraglia & Asselin, 2015).

Historically, schools of nursing had relied on didactic or theoretical learning and progressive clinical experiences that provided real-life hands on experiences. However, the traditional ways of preparing novice nurses to become full partners in the complex and ever-evolving healthcare environment showed areas of theory-practice gaps and the need for improvements within the academic setting (Robinson & Dearmon, 2013). Also, Robinson and Dearmon (2013) expressed that traditional teaching styles had deficiencies in meeting the various learning styles of the learners. Doctoral-prepared nurse leaders are equipped with the required skills and education to observe and identify gaps in practice and take the lead in searching the literature for the best evidence to translate into nursing practice (American Association of the Colleges of Nursing [AACN], 2006). Simulation learning, such as HFS has been credited in increasing the level of interactive learning that addresses the cognitive, psychomotor, and affective domains (Bland et al., 2011). Bland et al. (2011) explained that HFS has the ability to provide realistic learning strategies that

engage all the learners' senses as they touch, listen, observe, and then synthesize their findings by applying the underlying theoretical concepts.

Current State of Nursing Practice in Preparing Novice Nurses

Schools of nursing are constantly being challenged with adequately preparing their students in being ready to be full partners in the ever-evolving and challenging healthcare environment. These challenges include an aging faculty, diminishing clinical sites, inadequate levels of educators, and the increasing demands and complexity of healthcare and health care delivery (Robinson & Dearmon, 2013). Consequently, nurse educators are constantly looking for innovative strategies to meet these challenges and the integration of simulation learning has been identified as a novel and effective strategy (Lavoie et al., 2013). Also, healthcare organizations are faced with hiring these novice nurses and provide orientation programs, mentorships, and residency programs to meet the theory-practice gap as these novice nurses transition in the real fast-paced practice environment (Cheeks & Dunn, 2010). Cheeks and Dunn (2010) described how novice nurses were overwhelmed with the transitioning process in the clinical practice environment and the demands of the job in keeping patients safe. Furthermore, Cheeks and Dunn stated that the literature showed that it may take a period of 1-2 years for novice nurses to adjust to their new role; hence, innovative strategies are needed to facilitate successful transition.

Review of the Literature

Simulation technology has being used in other industries and nursing education has increasingly adopted the learning strategy to enhance learning outcomes (Bland et al.,

2011). There are different forms of simulation such as human patient simulation, which uses manikins and/or standardized patients, virtual and computer based simulations, and simulation that is used to teach psychomotor skills, or role play (Society for Simulation in Healthcare, 2015). Many studies have highlighted the benefits of simulation in creating learning opportunities that require the development of critical thinking skills without causing patient harm. One of the benefits of simulation is that it is effective in providing rich learning opportunities for students to integrate theory with practice, thereby being able to make real-time clinical decisions in a conducive learning environment, without posing any potential risks to patients (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016; Society for Simulation in Healthcare, 2015). Also, simulation provides opportunities for repeated exposure for the novice nurses to practice the specific skills and the ability to use reflective feedback to identify and correct areas of deficiencies (Cato & Murray, 2010; Lavoie et al., 2013). Consequently, they will have repeated opportunities to hone their clinical reasoning abilities, develop psychomotor skills, improve their communication and team building skills, help in the transition from theory to practice, and develop self-confidence (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016).

The National League for Nursing (NLN) has being an avid proponent in promoting simulation technology as a viable learning strategy in the preparation of nurses for the complexities of the healthcare environment (National League for Nursing [NLN], 2015). Also, Hayden, Smiley, Alexander, Kardong-Edgren, and Jeffries (2014b) reported how the NLN agreed that 50 percent of the traditional clinical experience could be

substituted with simulation, based on the findings from the National Council of State Boards of Nursing's (NCSBN) landmark, multi-site, longitudinal, study that explored the role and outcomes of simulation in pre-licensure clinical nursing education in the United States. Cato and Murray (2010) explained how the NLN has being instrumental in endorsing that nurse educators should be competent in content knowledge and professional expertise and possess personalized teaching styles that also accommodate various teaching methods to meet the diverse learning styles of the learners. Integration of simulation learning, such as HFS, in nursing education can prepare novice nurses to develop critical thinking and clinical reasoning as the novice nurses are consistently exposed to these learning opportunities (Cato & Murray, 2010).

Advancement of Nursing Practice

The integration of simulation technology in nursing education and practice has being pivotal in preparing novice nurses for the complexities of the healthcare environment (NLN, 2015). The historical passive learning approaches have advanced to highly interactive learning experiences with the initiation of low fidelity simulation such as "Mrs. Chase" in 1911 to the increasing HFS that use computer technology to mimic real life clinical scenarios (NLN, 2015). Consequently, HFS has been shown to fill the theory-practice gap for novice nurses transitioning to the registered nurse practice role as real-life clinical scenarios can be designed to give them meaningful experiences to develop their clinical thinking skills, clinical reasoning abilities, teamwork, and confidence in the early recognition of APD (Hart et al., 2014). Likewise, the doctoral project would have advanced nursing practice by providing the educational intervention

with the integration of HFS to promote the development of the critical thinking skills in the novice nurses at the practicum site in the early recognition of APD and the appropriate responses. Also, the theory-practice gap would have been addressed, which should result in enhanced patient safety and satisfaction, reductions in potential patient harm, improved clinical outcomes, such as reductions in morbidity and mortality rates, decreased length of hospital stays, and reductions in healthcare costs (see IHI, 2004). Additionally, the findings would have added to the body of nursing knowledge and should generate new ideas for further nursing research and scholarship (see AACN, 2006).

Local Background and Context

A theory- practice gap was identified at the practicum site in which novice nurses had difficulties in the early recognition of the acute deterioration in patient condition and the appropriate response to this clinical situation (Personal communication, director of education, December 16, 2017). Novice nurses, despite their limited experiences, are expected to care for patients with complex health issues, function effectively with high acuity assignments, the rapid turnaround times in admission and discharge cycles, and short lengths of hospitalization (Dyess & Sherman, 2009). Similarly, the literature shows evidence of this theory-practice gap of their limited clinical reasoning abilities and how these expectations may possibly be outside their critical thinking abilities and competence in providing safe and competent care during this transition period from novice to expert (Benner, 2001; Dyess & Sherman, 2009, Hart et al., 2014). Consequently, the novice nurses might fail to recognize the early changes in the condition

of patients until major complications, inclusive of death, have ensued (Thomas et al., 2007). Early recognition of APD is a patient safety issue as serious adverse events can be mitigated, and optimal clinical outcomes can be realized from early interventions (Hart et al., 2014; NPSA, 2007)

Institutional Context

The project was conducted at my workplace as the practicum site, which is a charitable nonprofit health care organization, consisting of a 325- bed in-patient acute care teaching facility in the Northeast United States, with Magnet status and accredited by Det Norske Veritas (DNV; American Nursing Credentialing Center [ANCC], 2016; Det Norske Veritas [DNV], 2016). The facility offers specialized services in emergency care, hematology/oncology, rehabilitation, outpatient, robotic-surgical, radiation oncology, maternal and child health, chest pain center, and stroke care which are accredited by the American Heart Association (AHA; 2016). I am employed at the practicum facility as a performance improvement manager for quality and patient safety and the proposed project was not a part of my employment activities. The project occurred in collaboration with the education department and the newly acquired high-fidelity simulation center and it was feasible to accomplish this project in the identified setting.

As a teaching organization, the practicum site is affiliated with different educational institutions and hence, routinely admits medical residents and employs various amounts of novice nurses. A residency program for newly hired and novice nurses was available at the site; however, that residency program was discontinued due to

budgetary constraints. Therefore, there was a relevant need for educational interventions to support novice nurses in their transition through to the expert level. The organization had a newly designed and fully equipped simulation center and the education department was excited to use the resources in providing meaningful learning experiences for the novice nurses that might prevent patient harm and improve quality outcomes.

Magnet accredited organizations are focused on transformational leadership, structural empowerment, exemplary professional practice, new knowledge, innovation, and improvements, and empirical quality results (ANCC, 2008). The vision of the organization is to provide high quality health services that improve the lives of all their healthcare customers; while the mission is focused on being the region's leading network of health care providers by delivering the full continuum of primary, acute and advanced care services. Therefore, this project supported the vision and mission of the practicum site.

Role of the DNP Student

Professional Context and Relationship to the Doctoral Project

I obtained a diploma of Nursing in 1977 in Jamaica, West Indies and went on to graduate as a registered midwife in 1983 at the same university. Education was always important to me and I have had many opportunities to mentor and precept novice nurses throughout my over 40 year career. I migrated to the United States in 1988 after being recruited by an American hospital during a period of nursing shortage. Again, I found myself being a mentor and preceptor for novice nurses in various specialties of nursing. My dream of advancing my education again surfaced after raising my family, so I

enrolled in a local community college and redid all the required subjects to obtain a baccalaureate degree that culminated in 2006.

I pursued the masters in nursing (MSN) and graduated from Walden University in 2010 and although I always dreamed of reaching the doctoral level in nursing, I was hesitant due to my age and looming retirement status. Consequently, the desire for professional self-actualization won and I enrolled in the doctoral program at Walden in 2015 and it was onward and upward. My passion for teaching and mentoring novice nurses and patient safety led me to this project. Despite many challenges, I have arrived at this stage in the doctoral journey and excited to see the positive impact and social change that this project will contribute locally and on a broader level.

Role in the Doctoral Project

As a doctoral student and a nurse leader, my role in the doctoral project was a facilitator in empowering novice nurses to seek out educational resources that would equip them to be competent practitioners, as they advanced towards the expert role. Nurses, who are educated to the doctoral level, possess the education and skills to be effective leaders in advancing the nursing profession and healthcare delivery (AACN, 2006). Hence, I was the leader as I collaborated with the director of the simulation laboratory and other panel of experts. As such, I controlled each step of the timeline for the project by collecting the pertinent information, taught the class, collected the pre- and post-tests, conducted the debriefing, and analyzed and interpreted the data.

My motivation for doing this doctoral project stemmed from my passion for teaching and coaching novice nurses in their transition to the role of becoming competent

registered nurses. Throughout my career, I have witnessed many occasions where novice nurses were ridiculed or ostracized by some experienced nurses instead of being nurtured by them. Also, I viewed how novice nurses felt overwhelmed and intimidated by experienced nurses to the point where some of the novice nurses have left the profession. In my role of preceptor and mentoring nurses, I have been informed that my passion for nursing, teaching style, and patience have encouraged nurses to develop their skills, gain confidence, and advance in their educational pursuits, and love for the profession.

Potential Biases

As a passionate nurse educator I had to assess and acknowledge potential biases that might have adversely affected my role and objectivity in conducting the doctoral project. One potential bias might have been that this project was part of the requirement for my doctoral degree and as such, I might have been overly concerned with the personal achievement over the educational impact of the project. Another potential bias might have been related to my expectations about the foundational preparation that novice nurses should have acquired from the educational institutions to competently perform in a highly complex health care environment. Steps that were taken to address these biases were identifying them and exploring objective strategies, such as having the expert panel observing, reviewing, critiquing, and providing feedback on the processes and phases of the project.

Summary

HFS has been identified as an effective teaching strategy in the education and staff development of novice nurses (Aebersold & Tschannen, 2013; Bussard, 2016;

Padden-Denmead et al., 2016). Also, integration of HFS in the education of novice nurses to recognize APD has been shown to improve nursing knowledge and skills and empower nurses to provide quality patient care in a variety of clinical settings (Bliss & Aiken, 2017; Hart et al., 2014; Lee & Oh, 2015). Therefore, the DNP project was to develop an evidence-based staff development program using HFS that would support novice nurses' abilities to recognize and respond to patients with acute deteriorating conditions in a timely manner. Successful simulation programs require careful designs that are geared towards specific learning objectives and outcomes in the development, implementation, and evaluation of simulation programs (Jeffries & Rogers, 2012). The incorporation of Benner's theory, constructivism, and the NLN Jeffries simulation framework in the development of the simulation program would have provided the necessary elements to facilitate a successful program. Section 3 will address the development of the HFS education program.

Section 3: Collection and Analysis of Evidence

Introduction

The U.S. healthcare system is a complex and fertile environment for unpredictability and adverse events (Hart et al., 2014). This complexity is further heightened by high acuity levels of patients, rapid turnaround times in admission and discharge cycles, and short lengths of hospitalization (Dyess & Sherman, 2009). Increasingly, hospitalized patients are dealing with complex health issues and are at increased risks for APD (Hart et al., 2014). Compounding these challenges is the on-going nursing shortage, the ever-evolving technology, and financial constraints, resulting in shortened orientation periods for novice acute care nurses entering the profession (Dyess & Sherman, 2009).

Novice acute care nurses are expected to take on all the responsibilities of caring for patients with these complex health issues, despite their limited experiences (Benner, 1984; Dyess & Sherman, 2009). However, studies have shown that due to their limited experience, this expectation may possibly be outside their critical thinking abilities and competence in providing safe and competent care during the transition period from novice to expert (Benner, 1984; Dyess & Sherman, 2009). Hence, novice nurses might fail to recognize the early changes in the condition of patients until major complications, inclusive of death, have ensued (Thomas et al., 2007). Despite their best intentions, the skill deficiencies can negatively impact the goal of providing the best quality care in acute care units.

The IHI (2004) highlighted the severity of adverse clinical outcomes with some astounding figures, such as approximately 35 to 40% of in hospital deaths tend to be on mediate-surgical units. Similarly, the NPSA (2007) reported that many patients who suffer cardio-pulmonary arrests had displayed signs of deterioration during the previous 24 hours. Compounding the issue, an estimated 23,000 in hospital cardiac arrests occurred in the United Kingdom, which were deemed as potentially avoidable with better care (NPSA, 2007). Competent nurses, who engage in close monitoring of patients for acute changes in physiological observations, are more likely to identify deteriorating patients before a serious adverse event occurs (NPSA, 2007). Early identification is essential to reduce mortality, avoidable morbidity, length of stay, and associated healthcare costs (NPSA, 2007).

Summary of Background and Context

Novice nurses, who are transitioning to the professional role, might have less than 1 year of professional experience and limited skills in critical thinking, clinical reasoning, and judgment (Benner, 2001; Saintsing et al., 2011). However, the novice nurse is rapidly assigned positions where they are expected to accurately recognize and respond appropriately to acutely deteriorating patients. Patient safety and successful clinical outcomes can be directly related to the critical thinking abilities of the nurse in assuring the wellbeing of patients (Saintsing et al., 2011). Saintsing et al. expressed that there might be increased risks for errors among novice nurses. Failure to adequately recognize and respond to acute deterioration in patient condition by some novice nurses was identified and reported by experienced nurses to the leadership team and the education

department (director of education, personal communication, December 16, 2016). The literature supported that this theory-practice gap can have deleterious effects on patient safety and optimal clinical outcomes, so addressing this gap was the purpose of this project (see Benner, 2001; Dyess & Sherman, 2009; Hart et al., 2014).

Nursing education is consistently faced with the necessity to develop teaching strategies to promote the development of clinical judgment, clinical reasoning, and critical thinking in novice nurses to avert further cascading decline of APD, such as cardio-pulmonary events and death (Lavoie et al., 2013). HFS has been determined to be an innovative and evidence-based intervention to practice real life clinical scenarios in a safe and conducive learning environment (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). Bussard (2016) also reported that there was a body of research acknowledging a positive relationship between the integration of HFS and significant increases in critical thinking, reasoning abilities, clinical judgment, psychomotor skills, self-confidence, communication, accountability, and inter-professionalism.

Section 3 addresses the following headings: practice-focused questions, sources of evidence, and analysis and synthesis.

Practice-Focused Questions

Patient safety and quality outcomes can be associated with the clinical thinking and clinical reasoning abilities of the healthcare team. Nurses spend predominantly more time with patients than other members of the healthcare team and are more likely to be the first to recognize and respond to patients who are experiencing deteriorating

conditions (Reynolds, 2010). Novice nurses are inexperienced in the critical thinking skills to adequately recognize or identify the imminent signs of APD during the transition period from student nurses to the registered nursing role (Benner, 2001; Dyess & Sherman, 2009; Hart et al., 2014). At the practicum site, a gap in practice in the early recognition of the acutely deteriorating patient by novice nurses was identified by experienced nurses, physicians, and nursing educators. Novice nurses were sometimes unsure of the imminent signs of impending APD and the necessity in alerting the rapid response teams, thereby causing delays in early interventions (director of education, personal communication, December 16, 2016). The practice gap was also identified in reviewing the data from the rapid response teams.

The practice focused questions for this project were as follows:

1. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to recognize the early warning signs of APD?
2. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to manage APD prior to the arrival of the code team?

The purpose of the DNP project was to develop an evidence-based staff development program using HFS to bridge this theory-practice gap. This intervention instructed the novice nurses on the early recognition of the acutely deteriorating patients and the appropriate management of these patients, while awaiting the arrival of the rapid response team (see Bussard, 2016). HFS has been used in nursing education to augment the clinical competencies of prelicensure nurses with some documented positive

outcomes. HFS provides opportunities for nurses to practice real-life high-risk clinical scenarios in a low risk, safe, and nonthreatening learning environment to meet specific learning needs (Aebersold & Tschannen, 2013; Bussard, 2016; Hart et al., 2014; Padden-Denmead et al., 2016). Also, the risk in causing harm to patients is potentially minimized or eliminated as novice nurses have valuable learning opportunities in the simulated environments before actually performing in the real world setting (Aebersold & Tschannen, 2013; Bussard, 2016; Dyess & Sherman, 2009; Hart et al., 2014; Padden-Denmead et al., 2016).

Sources of Evidence

Bliss and Aiken (2016) conducted an exploratory qualitative study with semistructured interviews of eight registered nurses and determined that the participants' perceived simulation had contributed to their ability to assess the deteriorating patient in clinical practice. Furthermore, the participants believed that simulation contributed to improvements in their knowledge by presenting them with a framework that provided a systematic approach to assess patients in the areas of airway, breathing, circulation, disability, and exposure (ABCDE) in efforts to accurately assess patients, interpret findings, and take appropriate action. Hence, the participants gained confidence and increased ability in the discernment about their decisions, which aided their ability to speed up the management of the patient. Likewise, Lee and Oh (2015) conducted a meta-analysis of 26 studies, consisting of 2,031 participants, with sample sizes ranging from 20 to 192 participants. Although the meta-analysis included different interventional characteristics, which could affect the direction and magnitude of effect and poor validity

due to the small number of studies, HFPS might have beneficial effects on cognitive outcomes (problem-solving competency, critical thinking, and clinical judgment), and clinical skill acquisition (Lee & Oh, 2015). However, the effectiveness of using HFPS to determine affective outcomes (self-efficacy and learning satisfaction) produced inconclusive results (Lee & Oh, 2015). Therefore, Lee and Oh recommended conducting further randomized clinical trials with larger samples to ascertain whether HFPS has an effect on self-efficacy and learning satisfaction.

Similarly, Buckley and Gordon (2011) performed a study to evaluate nurses' responses in the early recognition of APD, conducting patient assessments, prioritization of interventions, and ability to seek help in a timely manner. They also assessed the leadership and team communication skills and followed up with a 6-month survey to evaluate the skills of the 38 medical-surgical registered nurses after the full immersion with HFS (Buckley & Gordon, 2011). The main findings revealed that there were improvements in the nurses' ability to respond in a systematic way in performing airway management and handover to the team. Also, post simulation debriefing and assertiveness produced beneficial results (Buckley & Gordon, 2011). However, Buckley and Gordon (2011) recommended further studies to assess the technical and nontechnical skills, along with teamwork, in areas such as time to first defibrillation and seeking help after recognition of deterioration. Furthermore, Buckley and Gordon (2011) recommended that immersive HFS should be used to augment other learning activities to achieve optimal results, instead of being used as the single learning strategy.

Martin, Keller, Long, and Ryan-Wenger (2016) conducted a retrospective quality improvement project with 83 registered nurses over a 12-month period and discovered that novice nurses who were assigned to afternoon and night shifts may be more likely to show deficiencies in the early identification of APD when compared with novice nurses on day-shifts. They recommended that future prospective studies were needed to evaluate reflective responses and timely interventions (Martin et al., 2016). In a descriptive cross-sectional study by Luctkar-Flude et al. (2015), the researchers used a convenience sample of 239 nursing students to evaluate their experiences, knowledge, confidence, and performance of assessments and interventions for the unresponsive patient across 3 years of an undergraduate nursing program. Findings suggested a need for more repetition of basic unresponsive patient scenarios to provide mastery. It was anticipated that the addition of unresponsive patient scenarios into the second year curriculum would enhance performance by the final year of the program (Luctkar-Flude et al., 2015).

Synthesis of the Literature

Synthesis of the literature demonstrated common support for HFS as an effective educational tool to augment other modalities of learning in the facilitation of the cognitive, affective, and psychomotor skills of novice nurses. Also, simulation provided safe and controlled learning environments for novice nurses to repetitively practice real-life clinical scenarios without causing harm to patients. Staff education that incorporated simulation in the learning environment was associated with participants' reports of improvement in self-confidence, clinical judgment, and problem-solving abilities.

Furthermore, it was gleaned that HFS scenarios could be designed according to the identified learning outcomes and the specific required skill levels for various health problems and complications. Engagement in these life real-life scenarios also showed a conducive environment in fostering team collaboration and communication

There were a vast array of studies to support the effectiveness and benefits of HFS in teaching novice nurses how to recognize and respond to APD, but 11 studies were selected for this project. Seven of the studies were conducted with registered nurses, with experiences ranging from 6-months to 24-months and four studies used second, third, and fourth-year nursing students. Of 11 studies only Lindsay & Jenkins (2013) and Merriman, Stayt, and Ricketts (2014) used randomization in their study designs and one of the study was a meta-analysis. Bliss and Aiken (2017); Lindsey and Jenkins (2013); Lee and Oh (2017); Liaw, Chan, Scherpbier, Rethans, and Pua, (2012), and Merriman et al. (2014) found that the integration of simulation as a learning intervention assisted nurses in increasing their knowledge, self-confidence, clinical judgment, and problem-solving abilities in caring for patients with deteriorating clinical conditions.

Four teams of investigators (Bliss & Aiken, 2017; Liaw et al, 2012; Luctkar-Flude et al., 2015, & Merriman et al., 2014) identified the use of a framework as providing improvements in the ability to respond in systematic ways in the identification of cues and performance of skills, such as airway management, and handing over to the team. Scenario debriefing and assertiveness were also beneficial. Also, three studies' investigators (Lee & Oh, 2015; Merriman et al., 2014; & Straka, Burkett, Capan, & Eswein, 2014) found that the use of HFS showed a positive impact on novice nurses'

critical thinking skills, and the participants also believed that the intervention provided a satisfactory or high degree of confidence during crisis situations. Although the majority of the studies supported HFS as an effective teaching strategy in improving clinical skills, clinical reasoning, and decreasing incidents of failure to rescue, the investigators recommended that further studies with larger samples be conducted to evaluate the long-term effects of the learned skills on improvements in clinical practice and patient outcomes.

Best Practice in Simulation: Debriefing

Predominantly throughout the literature the best practice of debriefing was highlighted. Debriefing consists of a vital and targeted conversation between the facilitator and the simulation participants in efforts to reframe and analyze the context of the specific situation to promote the objective and subjective clarification of the perspectives and assumptions (NLN, 2015). This reflective reframing should be included in the goals of every faculty-student interaction and not only be practiced within the simulation environment (NLN, 2015). The use of reflective debriefing provided opportunities for the participants to express their thought processes during the simulation experience, the decisions that were made, and correct errors in judgment and clinical reasoning (NLN, 2015). Also, the facilitator was able to gain new insights into the participants' perspectives and assumptions and assisted them in integrating the theoretical knowledge into clinical practice during the process of understanding why a particular action was chosen (NLN, 2015). Overall, the use of reflective debriefing facilitated the non-judgmental and safe space for the participants to honestly review and reflect on the

knowledge, assumptions, values, beliefs, and feelings behind their actions and attach meaning to information (NLN, 2015).

Clarification of the Relationship of the Evidence and the Purpose

The purpose of the DNP project was to develop an evidence-based staff development program using HFS to bridge the theory-practice gap in the early recognition and treatment of APD by novice nurses. I used this intervention to instruct the novice nurses on the cues to observe in the early recognition of the acutely deteriorating patients and the appropriate management of these patients, before the arrival of the rapid response team (see Bussard, 2016). The evidence, based on the review of the literature, suggested that HFS was an effective learner-centered strategy in preparing novice nurses with the critical skills to recognize the acutely deteriorating patients in a timely manner and effectively intervened to prevent further deterioration (see Bliss & Aiken, 2016; Buckley & Gordon, 2011; Lee & Oh, 2015). Furthermore, HFS can be used to provide real-life clinical scenarios in a safe and non-threatening learning environment that eliminates the threats of harming patients (Aebersold & Tschannen, 2013; Bussard, 2016; Hart et al., 2014; Padden-Denmead et al., 2016). Additionally, the evidence demonstrated that novice nurses have reported improvements in their knowledge to accurately assess patients, interpret findings, and take appropriate actions (see Bliss & Aiken, 2016).

I collected and analyzed the evidence from the pre-and post-test assessments that I conducted in the evidence-based staff development education program and used the evidence to address the practice-focused questions. The simulation scenarios were based

on the advanced cardiac life support (ACLS) sequencing of APD (see AHA, 2018). The simulation staff provided some of the archived clinical scenarios that had occurred at the practicum site to be used for the pre- and post-tests and the simulation exercises.

Evidence Generation for the Doctoral Project

I designed the staff education project to provide information and practical skills that should improve the knowledge and clinical skills of novice nurses as they engaged cognitive, affective, and psychomotor skills in the prepared scenarios (see Walden University, 2017).

Participants

The nurse managers recruited the participants from the novice nursing staff, who had 2-years or less of nursing experience and were considered as a part of the continuing education period. They comprised the female gender (as no male participant volunteered), ages 20 years and above, educational levels (associate or baccalaureate degrees), from all the acute care units, and from both day and night shifts. There were 12 participants who were selected from a convenience sample, based on the recommendations of the clinical outcomes managers and the novice nurses' availability and willingness to participate. However, one participant had to withdraw due to work assignment and inability to secure alternative coverage. The relevance of the participants to the practice-focused questions was based on premise of their limited clinical experience in the early recognition of the acutely deteriorating patient and the appropriate rapid interventions to prevent further life-threatening cardio-pulmonary complications. Also, the organizational data of the rapid response calls showed that the majority of the

calls were placed by novice nurses and mostly from the night shifts (nurse manager/chair of RRT team, personal communication, May 12, 2018). Being novices, they were ideal candidates for participating in the educational intervention to evaluate if best practices with HFS can be used to teach novice nurses the skills in improving their clinical reasoning, decision-making, communication, and team dynamics in caring for APD.

The DNP scholarly project was aligned with the DNP Essentials and was conducted according to the guidelines of the Walden University Staff Education Manual in the steps: planning, implementation, and evaluation (see AACN, 2006; Walden University, 2017).

Planning

- I conducted an analysis of the educational needs to determine the criteria for the staff education program by reviewing the existing available data from the practicum site, literature, and supportive theoretical framework.
- I held meetings with the organizational leadership (director of education) to discuss the needs and staff education goals of the organization.
- I assisted in conducting surveys of the nursing staff about the educational needs and goals that garnered their engagement and gained their support.
- I obtained a firm commitment from the organizational leadership of the feasibility and support for the project.
- I collaborated with the director of education and clinical education staff on formulation of specific learning objectives.

- I conducted a literature search for the relevant and appropriate teaching materials or content that was aligned with the goals of the program.
- We planned and developed the staff education program, including the content and the delivery strategy, using appropriate instructional methods and theoretical framework (teaching/learning, adult education, and nursing theories).
- We followed a systematic process for development of the education that included appropriate pre-testing of any newly developed material with the identified stakeholders and end-users.
- I verified the staff education program plan with the organizational leadership and expert panel via formative or iterative review (via anonymous questionnaires).
- I also verified the staff education program plan based on the formative and iterative reviews.
- I presented the revised staff education program to the organizational leadership and end-users/key stakeholders and discussed steps to validate the content and ensure usability.
- I secured the resources of the simulation laboratory (computers and software accessories, crash cart, case study scenarios) to implement the staff education program.
- I finalized the development of the staff education program, including a second anonymous questionnaire review, with organizational leadership and end-users.
- I obtained the appropriate ethics approvals at the site and through Walden IRB (see Walden University, 2017).

Project Design

I used a pre- and post-test study design in the project. As the project leader and facilitator, I solicited permission for the project from the Walden University's institutional review board (IRB), the practicum site's IRB and the director of education as part of the ethical requirements prior to implementation of the project. Following the IRB approvals and the assigned number 07-31-18-0131709 was obtained; I finalized the project planning activities with the practicum site's leadership. Next, I conducted the briefing and pre-testing, which was followed by the project implementation phase, post-testing, debriefing, and evaluation. I completed the data collection by anonymous means with pre-determined coding for both the pre- and post-tests and stored them securely in locked folders with password access.

Procedures

I conducted the staff development program with HFS in the simulation laboratory at the practicum site. Based on best practices, the simulation session comprised six sections: briefing, pre-test, simulation, post-test, debriefing, feedback/evaluation (see Sittner et al., 2015). The expert panel and I designed the pre-simulation or briefing section to prepare the participants by giving an orientation to the simulation laboratory, the available equipment, the purpose of the simulation, and the learning objectives (see Sittner et al., 2015). As the facilitator, I created a trusting relationship with the participants by informing them that this learning activity would be conducted in a safe and non-threatening learning environment (see Sittner et al., 2015). Also, I instructed the participants that the project would be conducted as part of their on-going continuing

education schedule and their participation were obtained with the information provided by Walden University (Walden University, 2017). As the facilitator

- I collaborated with and supported the organization in the recruitment of staff for the education program as part of the novice continuing education program.
- I reviewed the learning objectives and simulation scenarios with the director of education, clinical outcomes managers, and the simulation laboratory personnel (panel of expert).
- I conducted a simulation test lab to assess feasibility and ease of plan prior to implementation.
- I supported the organization in the implementation of the planned staff education program.
- I requested anonymous evaluations from the staff education program participants (see Walden University, 2017).

The education department staff and the nurse managers recruited and assigned the novice nurses for the project. A Statement of Mutual Agreement was obtained from the practicum site leadership. The simulation staff, clinical outcomes managers, and I greeted the participants in the simulation laboratory on the scheduled day and time. I apprised them of the educational intervention, oriented them to the simulation laboratory, addressed their questions and concerns, and presented each participant with a pre-coded number packet with the following items:

- Cover letter (Appendix A)
- Demographic survey (Appendix B)

- Pre and posttests (Color-coded)
- Creighton Competency Evaluation Instrument (C-CEI)
- Lasater Clinical Judgment Rubric (LCJR)
- National League for Nursing (NLN) Student Satisfaction and Self Confidence in Learning of the simulation activity (National League of Nursing [NLN], 2005).

Tools and Instruments

The Creighton Competency Evaluation Instrument (C-CEI) is a modification of the Creighton Simulation Evaluation Instrument (Parsons et al., 2012) and consists of 23 skills that are grouped under four main categories: assessment, communication, clinical judgment, and patient safety (Hayden, Keegan, Kardong-Edgren, & Smiley, 2014a). The National Council of State Boards of National Simulation Study has used the tool in simulation and traditional clinical settings to evaluate student competencies (Oermann, Kardong-Edgren, & Rizzolo, 2016). Hayden et al. (2014a) have assigned high reliability and validity to the tool in instances when raters are highly trained and performed appropriately. Content validity ranged from 3.78 to 3.89 on a 4-point Likert scale and Cronbach's alpha $>.90$ in the assessment of three different levels of simulation performance (Hayden et al., 2014a).

The Lasater Clinical Judgment Rubric (LCJR) was used as one of the measurement tools. The LCJR instrument was designed based on the conceptual framework of Tanner's (2006) Clinical Judgment Model, which provides a valuable substitute for the nursing process model (Miraglia & Asselin, 2015). The LCJR instrument provided a systematic approach to describe the process of nursing judgment

that has been used by both novice nurses, as well as for experienced nurses (Miraglia & Asselin, 2015). Miraglia and Asselin explained that a synthesis of literature, focused on the clinical judgment of experienced nurses practicing in the clinical setting, was used to design the model.

According to Miraglia and Asselin (2015), the model offered a definition of clinical judgment and an illustration of the complexities involved in the thought processes of expert nursing care. Consequently, the model broke down the clinical judgment process into four aspects (noticing, interpreting, responding, and reflecting) and revealed the relationships among them (Miraglia & Asselin, 2015). The LCJR provided a framework for assessing students' clinical judgment abilities in each of these dimensions by incorporating subscales to evaluate the students' behaviors and actions as either beginning, developing, accomplished, or exemplary in the dimensions in the aforementioned aspects of noticing, interpreting, responding, and reflecting (Lasater, 2007). Noticing is described based on the nurses' expectations of the situation, while interpreting addresses the perceived meaning of the available data of a clinical situation, and responding is an assessment of the development of an appropriate course of action. Finally, the dimension of reflecting included the process of reflecting on one's practice, behaviors, and clinical judgment (Mariani et al., 2013; Tanner, 2006). Although, results on validity and reliability of the tool are yet to be reported, it has been used in over 50 studies and in educational programs to assess nursing judgment in caring for patients with critical needs (Miraglia. & Asselin, 2015).

Mariani et al (2013) used the tool in a mixed study quasi-experimental design of 83 junior level baccalaureate nursing students to examine the effects of structured debriefing on clinical judgment after two simulation experiences. The inter-rater reliability was assessed at 0.87 by Gubrud-Howe's (2008) study (as cited in Mariani et al., 2013) and internal consistency rated at 0.97 by Adamson's (2011) study (as cited in Mariani et al. 2013). Hence, the tool was used to assess the effectiveness of reflective debriefing on clinical judgment after the simulation experience.

Protection

The director of education and the clinical outcomes managers recruited the nursing participants. They were selected from novice nurses who had 2-years or less nursing experience and volunteered to participate in the project as part of their continuing education and preparation for the ACLS certification. The clinical outcomes managers at the site kept the time-sheets and attendance records of the nurses and I did not receive any identifying information from the participants. I ensured confidentiality and privacy by using pre-determined coded information, and their performance records will only be shared as aggregate data with the appropriate nursing leadership. I informed the participants that although the educational intervention was recommended, they were free to opt out of participating. Furthermore, I obtained IRB approvals from Walden University and the partner site before implementation of the project.

Analysis and Synthesis

I presented each participant with the anonymous individualized color-coded packets and the information, after which, I collected them. I collected and stored the data

securely in locked cabinets with personal password protected access. Collection and analysis of data were placed in a Microsoft Office Excel file and the data will be retained for seven years. There were equal numbers of questions on the pre- and post- tests on the knowledge and skills' assessments of each participant. Also, I gave each participant special codes and the comparisons were made between the pre- and post-tests of each participant to determine the existence of any significant differences between the scores. I utilized frequency distribution graphs to display the results of the pre- and post tests and denoted whether the scores went up or down on the post tests.

I collected the demographic information which included the participants: age, gender, educational level (Associate, baccalaureate, masters, or doctoral degrees), experience (years in practice), gender, and certifications (Appendix B).

Evaluation

- I conducted the evaluation from the analysis of the completed summative and impact evaluations of each participant about their learning based on an anonymous paper-based questionnaire that was directly related to the identified learning objectives. A validated questionnaire, the NLN "*Student satisfaction and self-confidence in learning*" was used to evaluate the simulation experience (NLN, 2005).
- I determined the effectiveness of the staff education program through the analyses of the summative and impact evaluations.
- I analyzed, interpreted, and determined the applicability of the results for both the organization and for social change.

- I ensured the integrity of the evidence by maintaining the anonymity of participants with the use of specific individual color-coded labels for each participant's pre- and post-tests. I also distinctly marked each participant's pre- and post-tests and coded them to differentiate between the pre and post-tests. I collected the pre-tests before the simulation activity and stored them in locked password protected cabinets for added security. I addressed the issue of outliers by data cleaning and inspecting the highest and lowest values in a frequency distribution to determine data entry errors, or the legitimacy of the outliers, and removed, if appropriate (see Polit, 2010). In regards to missing data, I maintained consistent communication with the education department to monitor and follow-up with the participants to ensure their availability as was scheduled (see Polit, 2010). Also, I reviewed the data to assess the extent and pattern of the missing data and addressed accordingly, such as deletion.
- I conducted the statistical analyses with the use of a Microsoft Office Excel program and calculated the pre- and post-tests results to determine the effect of the educational intervention and how the results addressed and were aligned with the practice-focused questions.
- I will communicate the results and recommendations to the organizational leadership and program stakeholders. A systematic presentation and synthesis of the findings of the educational intervention will be provided. Additionally, the final DNP project with the appropriate methodology was successfully presented to the DNP committee for final review and approval.

Summary

Patient safety is a key factor in the quality of healthcare and must be integrated into the education curricula of nursing programs and healthcare organizations. Novice nurses are transitioning to the clinical environment and the theory to practice gap is evident in their ability to recognize early warning cues of patient deterioration that can result in possible delays in interventions to prevent deleterious outcomes. As such, staff education development programs that integrate HFS have been identified as valuable and effective strategies in meeting the clinical assessment deficiencies. A well-designed project is vital to the success of the learning outcomes and the essential skills to safely care for patients. After the planning and implementation of the educational intervention with simulation, I was able to collect, analyze, and collate the data. I reported the findings, recommendations, and implications for nursing education and practice after I had analyzed the data.

Section 4: Findings and Recommendations

Introduction

Novice nurses have been identified as being unprepared for the complexities of the ever-changing and evolving healthcare system (Dyess & Sherman, 2009; Hart et al., 2014). However, they are quickly placed in situations of caring for patients with complicated health issues and are expected to perform competently despite their limited clinical expertise (Benner, 2001; Hart et al., 2014; Saintsing et al., 2011). Hart et al. (2014) argued that the identifiable theory-practice gap can result in dangerous clinical outcomes in cases where early recognition of APD might be missed and not readily addressed with the appropriate early interventions. At the practicum site, it was identified that novice nurses demonstrated inadequate responses to instances of APD and the appropriate timely interventions to prevent further clinical decline in patient conditions. Benner (2001) explained the concepts of gaining experiential knowledge and clinical skills along the route from novice to expert clinician. Similarly, the constructivism learning theory based on Piaget's 1952 work proposed that knowledge does not exist on its own but is perceived and interpreted by individuals based on prior knowledge (as cited in Wills & McEwen, 2014). Piaget's work (as cited in Wills and McEwen, 2014 and Rogers, 2007) explained that learning operates on three processes of assimilation (individuals bring their previous knowledge into interactions with the current object or event), accommodation (making adjustments to previous knowledge to fit the new situation), and constructivism (the learning that occurs by the incorporation of past knowledge being modified to the new situation by constructing new knowledge).

Ultimately, effective strategies to address this deficiency in clinical competence were reviewed, and a staff education program with the integration of HFS was identified as a suitable intervention (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). HFS had been characterized as a novel and evidence-based intervention to practice real life clinical scenarios in a safe and nonthreatening learning environment (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). Bussard (2016) disclosed that there is a body of research that acknowledges how the use of HFS is associated with increases in critical thinking, reasoning abilities, clinical judgment, psychomotor skills, self-confidence, communication, accountability, and interprofessionalism. Consequently, the practice-focused questions were as follows:

1. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to recognize the early warning signs of APD?
2. Can the integration of best practices with HFS be used to teach novice acute care nurses the skills to manage APD prior to the arrival of the code team?

The purpose of the doctoral project was to develop an evidence-based staff development program using HFS to bridge this theory-practice gap. This intervention was based on Benner's novice to expert and the constructivism learning theories to instruct the novice nurses on the early recognition of the acutely deteriorating patients and the appropriate management of these patients, while awaiting the arrival of the rapid response team (see Benner, 2001; Bussard, 2016; Wills & McEwen, 2014).

Summary of Sources of Evidence

Some documented studies have identified early warning signs that usually precede an APD. However, Hart et al. (2014) argued that these premonitory signs might be missed by these novice nurses, leading to delays in timely treatments. Research in nursing education has revealed inadequate clinical reasoning skills among new graduates as a contributory factor in failure to recognize APD (Hart et al., 2014). Theory-practice gaps continue to occur as students are generally ill-prepared for the rigors of transitioning to the nursing profession as fully competent practitioners (Hart et al., 2014). Primary and secondary sources of evidence were obtained by gathering institutional data on RRT calls and conducting a review of the literature in the nursing and allied health databases, such as the Cumulative Index to Nursing and Allied Health Literature and Medline.

Additional search strategies included Joanna Briggs, PubMed, and Cochrane databases to ensure that there was a broad search of the available and pertinent evidence.

Other sources of evidence were available from institutions that had successfully integrated HFS in their teaching strategies and shared their expertise and outcomes. Summary and synthesis of the literature were accomplished with the Melnyk hierarchy of evidence decision-making matrix to evaluate the effectiveness, usability, and feasibility of the identified best practices (see Melnyk & Fineout-Overholt, 2011). The literature review provided guidance in the development of an educational strategy, using HFS, to educate novice nurses on how to adequately recognize APD and how to manage these patients prior to the arrival of the code team (see Melnyk & Fineout-Overholt, 2011).

Analytical Strategies

I used a pre- and post-test knowledge assessment design. Each participant received the anonymous individualized color-coded packets, and I collected the information. The data were collected and are stored securely in locked cabinets with personal password protected access. I placed the data in a Microsoft Office Excel file and used the Statistical Package for Social Sciences Version 24. The data will be retained for 7 years. There were equal numbers of questions in the pre- and post-tests on the knowledge and skill assessments of each participant. Also, I gave each participant special codes, and I compared the pre- and post-tests of each participant to determine significant differences between the scores. Frequency distribution graphs were used to display the results of the pre- and post-tests and denoted whether the scores went up or down on the posttests.

The demographic information obtained included the participants' age, gender, educational level (associate, baccalaureate, masters, or doctoral degrees), experience (years in practice), gender, and certifications (Appendix B). I greeted the participants, apprised them of the simulation activity, introduced them to the expert panel, and oriented them to the simulation laboratory and the equipment. The participants completed the demographic data and pretest and I collected the data sheets, after which I provided the participants with a report on the simulated patient. The simulation staff ran the sequencing of the pre-planned scenarios according to my instructions. We provided various sequencing of deterioration in the simulated patient's condition as I monitored and evaluated the participants' assessment, clinical judgment, communication, and

patient safety skills. After the simulation activity, participants completed the posttest, a debriefing session, the LCJR evaluation, and the NLN evaluation of the simulation experience.

Evaluation

- I conducted the evaluation from the analysis of the completed summative and impact evaluations of each participant about their learning based on an anonymous paper-based questionnaire that was directly related to the identified learning objectives. A validated questionnaire, the NLN's student satisfaction and self-confidence in learning was used to evaluate the simulation experience (see NLN, 2005).
- The expert panel and I determined the effectiveness of the staff education program through the analysis of the summative and impact evaluations.
- I analyzed and interpreted the results, and determined the applicability of the results for both the organization and for social change.
- Integrity of the evidence was assured by maintaining the anonymity of participants with the use of specific individual color-coded labels for each participant's pre- and post-tests. Each participant's pre- and post-tests were also distinctly marked and coded to differentiate between the pre- and post-tests. I collected the pretests before the simulation activity and kept them safely stored and protected. Outliers were addressed by data cleaning and inspecting the highest and lowest values in a frequency distribution to determine data entry errors or the legitimacy of the outliers and removed, if appropriate (see Polit, 2010). In regards to missing data, I

made every effort to monitor and follow-up with the education department to assist with participants being available as scheduled (see Polit, 2010). Also, I reviewed the data to assess the extent and pattern of the missing data and addressed them accordingly, such as deletion.

- I conducted the statistical analysis with the use of a Microsoft Office Excel program by calculation of the pre- and post-tests results to determine the effect of the educational intervention and how the results addressed and were aligned with the practice-focused questions.

Findings and Implications

The data were placed in a Microsoft Office Excel file, and the analysis was done with the use of the Statistical Package for Social Sciences Version 24. There were 11 female novice nurses ($N = 11$) who participated in the project as no males volunteered their participation. The ages ranged from a minimum of 23 years to a maximum of 55 years old, with a mean of 34 years, and registered nursing experience ranged from 0.25 years to 2 years with mean of 0.99 or 1.0 year. Eight nurses ($n = 8$) or 72.7% of the nurses held associate diplomas and four ($n = 4$) or 27.3% of them held baccalaureate degrees. All the participants ($N = 11$) had basic cardiac life support certifications, but only five ($n = 5$; 45%) had ACLS certifications.

Tools and Instruments

Knowledge Test

I administered a pre- and post-test assessment consisting of 10 multiple choice and true and false questions based on basic and ACLS protocols to assess the before and

after intervention (simulation) knowledge (see AHA, 2018). One point was assigned to each question, and participants could score a maximum of 10 points on a scale of 0 to 10 for each correct answer (see Figures 1, 2, and 3).

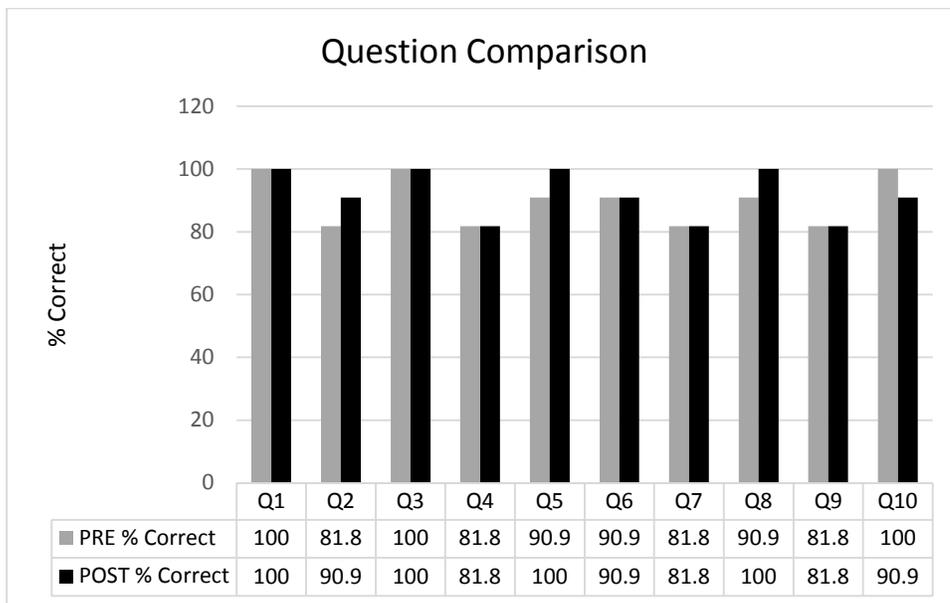


Figure 1. Knowledge test: Comparison of correct answers in percentages between pre- and post-test assessment

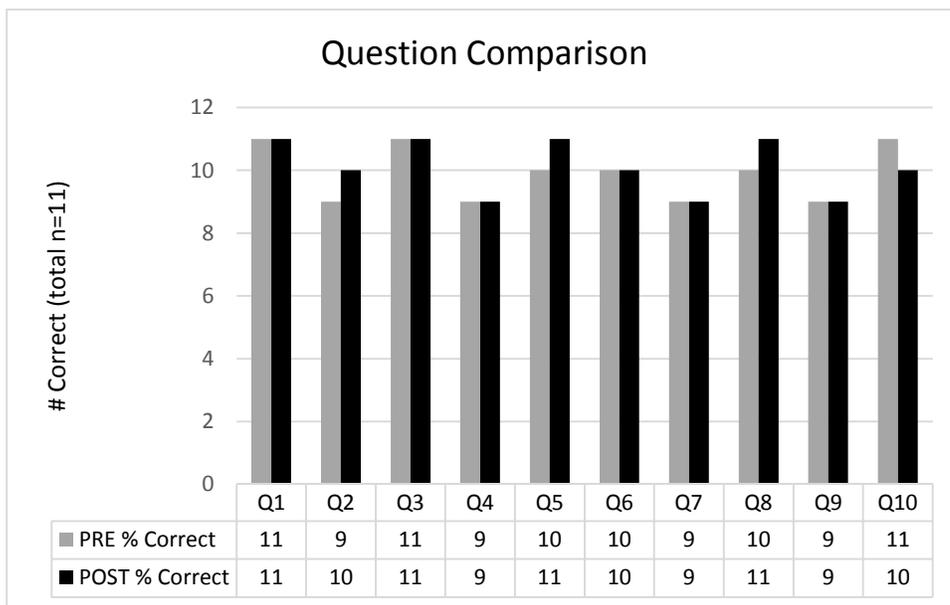


Figure 2. Knowledge test: Results of number of correct answers between pre- and post-assessment.

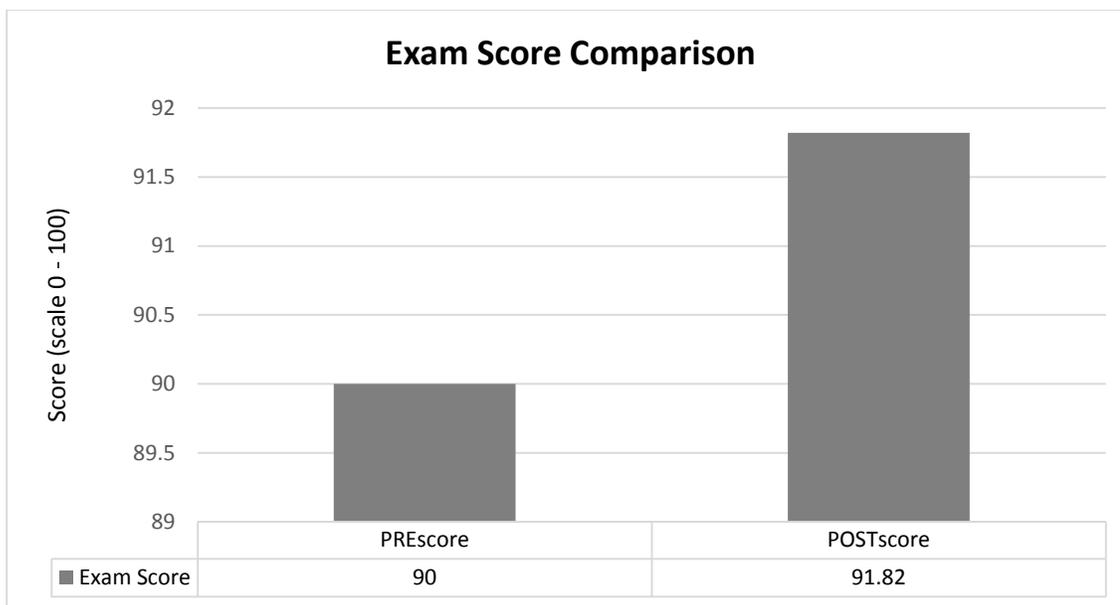


Figure 3. Knowledge test: Comparison of pre- and post-assessment scores

The test questions were chosen in collaboration with the clinical outcomes managers and were aligned with the learning objectives and outcomes. A paired-samples *t* test (see Table 1) was performed to evaluate the effectiveness of the educational intervention with the integration of HFS on the knowledge levels of the nurses. The preintervention scores ranged from a low of 5 to a high of 10 (50% to 100%), and the post scores ranged from a low of 7 to 10 (70% to 100%).

Table 1

Knowledge Test

		Prescores			
		Frequency	Percent	Valid percent	Cumulative percent
Valid	50	1	9.1	9.1	9.1
	80	1	9.1	9.1	18.2
	90	4	36.4	36.4	54.5
	100	5	45.5	45.5	100.0
Total		11	100.0	100.0	

		Postscores			
		Frequency	Percent	Valid percent	Cumulative percent
Valid	70	1	9.1	9.1	9.1
	80	2	18.2	18.2	27.3
	90	2	18.2	18.2	45.5
	100	6	54.5	54.5	100.0
Total		11	100.0	100.0	

The paired samples of the pre-scores showed a mean of 90.0, standard deviation of 14.832, and the standard error of the mean 4.472; while the paired samples of the post

test scores showed a mean of 91.82, standard deviation of 10.787, and standard error of the mean = 3.252. Similarly, the paired samples correlation of the pre- and post-tests showed 0.875 and a significance of 0.000; while the paired samples *t* test showed mean = -1.818; standard deviation = 7.508; standard error of the mean = 2.264; lower limit = -6.862 and upper = 3.225 (95% confidence interval); *t* = -.803; *df* = 10; and significance = 0.441 (see Table 2). Therefore, the increase in knowledge from the pre-intervention to the post intervention was not statistically significant. However, the small sample size (*n*=11) of the group could have been a contributory factor in this result and should be considered when contemplating the unintended or unanticipated outcomes.

Table 2

Paired Samples Test

Paired differences: Prescores/Postscores

Mean	Standard Deviation	Standard Error of the Mean	95% Confidence Interval of the Difference		<i>t</i>	<i>df</i>	Sig. (2-tailed)
			Upper	Lower			
-1.818	7.508	2.264	-6.862	3.225	-.803	10	.441

Creighton Competency Evaluation Instrument (C-CEI)

The Creighton Competency Evaluation Instrument (C-CEI) was selected to assess the levels of competency of the participants during the simulation session. I obtained permission to use the tool from the owners after a prerequisite online training (see

Appendix C). The C-CEI has a reported content validity that ranged from 3.78 to 3.89 on a 4-point Likert scale and Cronbach's alpha $>.90$ in the assessment of three different levels of simulation performance (Hayden et al., 2014a). The instrument is designed to evaluate 23 skills and competencies in four categories: assessment, communication, clinical judgment, and patient safety, with one (1) point assigned to "demonstrates competency", zero (0) point for "does not demonstrate competency", and N/A for "not applicable" if the skill was not assessed during the simulation scenario. The participants were assessed in the four areas as either demonstrating competence with a score of 1 point, not demonstrating competency with a score of zero, and not applicable (N/A) for the competencies that were not included in the simulation scenario. Two competencies were not included: "Documents clearly, concisely, and accurately" and "Delegates appropriately" as they were not assessed in the scenario due to time constraints.

Competency results. The minimum limit was 19 points and the maximum limit was 53 points with a mean = 43.55 and standard deviation = 9.114. The findings implied that most of the nurses ($n=10$) were comfortable in areas of assessment and communication but had some deficiencies in clinical judgment and patient safety. One nurse ($n=1$) was noticeably having more difficulties in all the areas, which could account for the wide range in the results (see Table 3). This finding again aligned with the identified gap in practice where novice nurses had difficulty recognizing the early warning signs of APD. Similarly, they demonstrated delays in responding appropriately in a timely manner and needed repeated cues to provide the essential interventions to mitigate patient decline.

Table 3

Lasater and Creighton Scores

	<i>N</i>	Minimum	Maximum	Mean	Std. dev.
1stAssess_Score	11	41	63	56.64	6.546
Lass_Score	11	12	33	26.18	6.585
Creighton Score	11	19	53	43.55	9.114
Valid <i>N</i>	11				

Lasater Clinical Judgment Rubric (LCJR)

The LCJR instrument was designed based on the conceptual framework of Tanner's (2006) Clinical Judgment Model, which provided a valuable substitute for the nursing process model (Miraglia & Asselin, 2015). The LCJR instrument provided a systematic approach to describe the process of nursing judgment that has been used by both novice nurses, as well as for experienced nurses (Miraglia & Asselin, 2015). Miraglia and Asselin (2015) explained that a synthesis of literature, focused on the clinical judgment of experienced nurses practicing in the clinical setting, was used to design the model. This tool was assigned to each novice nurse as a self-assessment of clinical judgment as beginning (1), developing (2), accomplished (3), and exemplary (4). The areas of assessment were: noticing (focused observation, recognition of deviations from expected patterns, and information seeking); interpreting (prioritizing data and making sense of data); responding (calm, confident manner, clear communication, well planned

intervention/flexibility, being skillful), and reflecting (evaluation/self-analysis and commitment to improvement (Lasater, 2007; Miraglia & Asselin, 2015).

Results on validity and reliability of the tool are yet to be reported, but it had been used in over 50 studies and in educational programs to assess nursing judgment in caring for patients with critical needs (Miraglia. & Asselin, 2015). Mariani et al (2013) used the tool in a mixed study quasi-experimental design of 83 junior level baccalaureate nursing students to examine the effects of structured debriefing on clinical judgment after two simulation experiences. The inter-rater reliability was assessed at 0.87 by Gubrud-Howe's (2008) study (as cited in Mariani et al., 2013) and internal consistency rated at 0.97 by Adamson's (2011) study (as cited in Mariani et al. 2013). Hence, the tool was used to assess the effectiveness of reflective debriefing on clinical judgment after the simulation experience (see Table 3). The results ranged from a minimum of 12 and a maximum of 33, with mean of 26.18 and standard deviation of 6.585 (mean=26.18; SD=6.585). Overall, the participants rated their clinical judgment as either at the beginning or developing stages and with an exemplary commitment to further improvement (see Table 3).

Student Satisfaction and Self-Confidence in Learning Questionnaire

The summative and impact evaluations were conducted by having the participants complete an anonymous questionnaire about the simulation experience. The NLN's student satisfaction and self-confidence in learning questionnaire was selected as it contains a series of five (5) questions about satisfaction with current learning and eight (8) questions on self-confidence in learning (see NLN, 2005). Also, it is based on the Likert

scale of: 1=Strongly Disagree; 2=Disagree; 3=Undecided; 4=Agree, and 5=Strongly Agree (see NLN, 2005). The results were: $N = 11$; minimum = 41 and maximum = 63; mean = 56.4, with standard deviation of 6.546. The implications were that the participants had a high level of satisfaction with the simulation activity and the learning outcomes. Also, they were confident that engaging in simulation activities provided safe and effective opportunities to develop and hone their clinical skills without causing potential harm to patients (see Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016).

Unanticipated Limitations and Potential Impact

One unanticipated limitation was the absence of any male gender participation as this would have provided some additional insights into the possible gender similarities or differences in recognizing and responding to APD. Also, the statistically insignificant result from the knowledge test was an unanticipated outcome as the participants expressed increased knowledge after the simulation intervention. The potential impact might be that the organizational leadership could deduce that HFS was not an effective strategy in preparing novice nurses in the early recognition and timely response in APD. Consequently, the organizational leadership might conclude that the financial implications of integrating HFS into the educational developmental plans might not be a prudent or viable option. However, the small sample size of eleven ($N=11$) persons in the group should be taken into account as a pertinent factor in the analysis of the unanticipated findings. Alternately, it must be considered that one session was not adequate to provide a meaningful and comprehensive perspective; therefore, the potential impact might be to

conduct additional sessions with other samples of novice nurses to evaluate the outcomes over a period of time and monitor the trends.

Implications of the Findings

Although, the results of the knowledge test were statistically insignificant between the pre-test and the post-test scores, it might be possible that the participants had mastered the theoretical knowledge and could answer the majority of the questions correctly. However, from an individual perspective, the clinical skills were not commensurate with the theoretical knowledge as was evident on the results from the C-CEI instrument that evaluated their competency in the areas of assessment, communication, clinical judgment, and patient safety (Hayden et al., 2014a). This finding was aligned with the Benner's novice to expert model that explained how nursing skills are developed over time from nurses being personally engaged in different patient experiences, which are then combined with sound educational principles (see Benner, 1984). Also, according to Benner (1984), nurses can develop experiential knowledge as an extension of research and the understanding that is acquired through clinical practical experiences. Furthermore, the findings were also aligned with the *Constructivism* theory in that the participants brought their prior experiences to the simulation intervention and performed according to those experiences as they tried to bring meaning in understanding how to effectively respond to the new situation (see Rodgers, 2007).

The implications for communities, institutions, and systems are in the areas of having competent nurses who can function effectively and efficiently within the complex healthcare system (IHI, 2007). HFS is an effective learning strategy that enables nurses

to gain critical clinical skills in a safe and non-threatening environment, without causing undue or potential harm to patients (Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). Social change can also be impacted by organizational support that provides learning opportunities for nurses. Communities should gain confidence in the quality and safety of care that is being provided by the nurses and the organizations which should increase patient satisfaction scores and the desire to use the local institutions. Institutions and systems might gain increased recognition in the quality of care and possible increased revenues from having highly trained and competent staff. Insurance payers might be more likely to collaborate and do business with institutions that provide quality care with optimal clinical outcomes at affordable costs.

The potential implications to social change might be noted in the advancement of nurses who are accountable for their continuing education that advances clinical scholarship and analytic methods for evidence-based practice (see DNP Essential III; AACN, 2006). In meeting the DNP Essential I, nurses will be empowered to avail themselves of the opportunities of integrating scientific underpinnings in their practice as they keep abreast of emerging best practices and translating this evidence into practice (see AACN, 2006). Having highly trained and competent nurses who can recognize impending patient deterioration and responding appropriately in a timely manner should improve clinical outcomes in the areas of decreased incidents of avoidable morbidity and mortality, improvement in quality of life, decreased length of hospitalization, and the reduction of the associated healthcare costs (see NPSA, 2007). Another potential implication for social change can also be realized as nurse leaders engage in finding new

models of care to improve health outcomes of target populations or communities that are aligned with the integration of nursing science and the organizational, economical, political, and cultural trends (see DNP Essential II; AACN, 2006).

Recommendations

Although the project findings of using HFS as an effective intervention in the preparation of novice nurses to recognize the early warning signs of APD showed minimal improvements that were statistically insignificant, the nurses expressed increased confidence in caring for these acutely-ill patients from their participation in the simulation intervention. Furthermore, they perceived that they could transfer the knowledge gained in the simulation to the clinical area in caring for these critically-patients. Studies by Bliss and Aiken (2017); Lindsey and Jenkins (2013); Lee and Oh (2017); Liaw et al. (2012), and Merriman et al. (2014) also found the integration of simulation to be an effective learning intervention in assisting nurses in increasing their knowledge, self-confidence, clinical judgment, and problem-solving abilities in caring for patients with deteriorating clinical conditions. Bliss and Aiken (2017) used an exploratory qualitative design that included semi-structured face-to-face interviews, which elicited similar positive responses of improvement in knowledge and assessment skills in caring for the acutely deteriorating patient. Also, the respondents expressed experiencing an enhanced learning environment that facilitated their decision making skills and acknowledged the perceived benefits of simulation as a valuable intervention (see Bliss & Aiken, 2017). Therefore, one of my proposed recommendations that will potentially address the gap in practice based on the findings of my project is for

additional sessions to be conducted to provide more opportunities for novice nurses to practice in the safe learning environment of simulation activities.

During the simulation session some of the nurses needed repeated cues to assist in their decision-making and also how to properly use some of the equipment such as the Life Pack monitor for cardiac pacing and defibrillation, so another recommendation would be to incorporate additional skills modules that address decision-making, delegation, cardio-pulmonary equipment, and correct documentation, within the simulation experience to provide a systematic approach to decision-making and to accentuate the learning experience.

Contribution of the Expert Panel

The expert panel of the education staff, clinical outcomes managers, director of research and Magnet, and the simulation staff were instrumental in planning, implementation, and evaluation of the doctoral project. The process of working with the team was professional and collegial as each member was focused on the organizational vision and mission of promoting quality and safety as part of attaining a high reliability organization (HRO) status. The education staff identified some of the educational needs of the organization and collaborated with me on the need assessment that was conducted prior to making a decision on the staff development educational intervention. The clinical outcomes managers recruited the target population and were present during the implementation as a source of familiar support for the participants. Also, they provided valuable feedback on the assessment questions and the learning objectives and outcomes. The simulation laboratory staff provided the simulation resources, such as computers,

HFS manikins, verifiable sequenced scenarios, medical and diagnostic equipment, and simulation expertise. Inter-professional collaboration is vital for successful project planning and implementation as effective communication and teamwork should be facilitated among the stakeholders (see White, Dudley-Brown, & Terhaar, 2016). As such, communication between the stakeholders and I were frequent and ongoing to ensure that each member of the team was aware of the individual's role and timelines to accomplish the project.

Future Plans

The organization had invested in the HFS laboratory to provide cutting edge technology as a teaching institution for medical residents, pharmacy and nursing students. The organizational leadership welcomed my DNP project as a valuable part of preparing highly competent and qualified healthcare practitioners to meet the increasing complex demands of healthcare delivery. Ultimately, there are potential plans to extend the project beyond the DNP designation to bridge the theory-practice gap of novice nurses as part of the orientation and continuing education program for staff development.

Strengths and Limitations of the Project

As with any project, there were strengths and limitations that were assessed. A significant strength of the project was in the theoretical frameworks of the Benner's novice to expert and the constructivism learning theory. These models provided the theoretical underpinnings for the development, planning, implementation, and evaluation of the educational intervention (see Benner, 1984; Rogers, 2007). Another strength was achieved by the confidential and anonymous selection of the participants, which should

have eliminated any perceived bias in the sampling. The purpose of the study and its significance to nursing education and practice, social change, organizational and systems leadership for quality improvement and systems thinking (DNP Essential I), and the advancement of clinical scholarship and analytical methods for evidence-based practice should also be considered a strength of the project (see AACN, 2006; Fineout-Overholt, Melnyk, Stillwell, & Williamson, 2010).

Alternately, the limitations were noted in the small sample size of the convenient accessible population, which made it difficult to control if the participants were truly a representative sample of the novice nurses (see Grove, Burns, & Gray, 2013). A further limitation was that only one simulation session was conducted and this might have added some constraints in trying to meet too many objectives in a limited time period. The results cannot be generalized to other settings as there were other extraneous variables, such as some of the nurses had worked the night shift prior to participating in the session and this might have affected their concentration and cognitive functions, affective, and psychomotor abilities.

Recommendations for Future Similar Projects

Some recommendations for future projects that addressed similar topics and used similar methods should include having multiple sessions with specific targeted skills to be assessed that build on previous skills. Also, ensuring that the participants are not tired from working long hours prior to the educational activity so that their cognitive, affective, and psychomotor abilities are not compromised. Possibly, another recommendation would be to provide learning modules that could prepare the

participants with a frame of reference for the learning activity. This best practice in effective simulation should enhance the learning outcomes (see Jefferies & Rogers, 2012).

Section 5: Dissemination Plan

Dissemination Plan

Dissemination is the ultimate step of the research process as it provides valuable opportunities to share the findings and results of these studies in the advancement of nursing knowledge. Therefore, one can never overstate the significance of dissemination of the outcomes of research and evidence-based (EB) studies, especially in the healthcare environment that depends on these findings to improve care quality and enhance patient safety (Forsyth, Wright, Scherb, & Gaspar, 2010). Consumers depend on and are influenced by the dissemination of research to varying degrees, whether within their daily lives of being informed of product safety and efficacy or as scholar-practitioners who are reliant on credible, valid, and reliable evidence to support their practice (see Walden University, n.d.). Successful dissemination is dependent on effective presentations that are geared towards the target audiences and are designed with appropriate content to meet the requirements of the diverse dissemination outlets: journals, conferences, books, and other media (see Walden University, n.d.).

Plans for Dissemination of the Study to the Organization

Dissemination of the project's findings will be presented to the target stakeholders so that they will have the opportunity to realize the results and outcomes and the implications for the organization. Also, this presentation will provide opportunities for questions, clarification of findings, and how to integrate the findings into practice based on the alignment with the organizational vision and mission (see White et al., 2016). My plan is to prepare a PowerPoint presentation with the pertinent information that is geared

towards the peers and scholar-practitioners within the organization. The target audience will be the organizational leaders, such as the director of education, education staff, the manager of the simulation laboratory, the clinical outcomes managers, nurse managers, quality and patient safety director, physician representative, and novice nurses.

PowerPoint presentations are appropriate for this target audience as the information can be provided in a clear, concise, and interactive manner. I will make the presentation visually appealing by using graphics that can be easily understood.

Dissemination to a Broader Audience

I should also consider dissemination to a wider audience to ensure availability and visibility of the findings. Based on the nature of the project as an educational intervention to address clinical competence of novice nurses in the early recognition and treatment of APD, some other avenues for dissemination might be poster presentations at conferences that target nursing educational perspectives. With this in mind, I might have to adapt the methods of dissemination to meet the needs and objectives of the specific audiences. For example, I should consider the purpose and goal of dissemination, such as whether the ideas will be shared and/or applied. Overall, according to Walden University (n.d.), researchers usually target scholars, practitioners, or the public in dissemination of their research.

Ultimately, researchers should ensure that their research is presented in alignment with the needs and interests of their target audiences (see Walden University, n.d.). I will use this insight to promote the delivery of an effective presentation in that scholars are peers whose interests lie in the area of inquiry and are also reviewers of my work in the

peer-review process (see Walden University, n.d.). I understand that scholars are interested in the methodology that was used to arrive at the results, and, as such, dissemination of my study that is targeted to scholars will be directed to peer-reviewed journal articles, professional conferences, and books (see Walden University, n.d.). Some publications under consideration are the Journal of Nursing Education, Journal of Nursing Education and Practice, and Journal of Nursing Care Quality. Here, I could prepare and present abstracts about my project with the long-term intention of publishing the entire project. Overall, dissemination of my project should meet the goal of sharing my work so that the findings and outcomes can be available to advance nursing practice and scholarship, while generating additional topics for nursing research and new knowledge (see AACN, 2006).

Analysis of Self

I decided to pursue the Doctor of Nursing practice degree as a result of my intense desire for self-actualization to attain the highest levels of nursing education in the fulfillment of my personal and professional accomplishments. My family and I made many sacrifices in time, family commitments, and financial obligations. At the start of the journey, I did possess some of the knowledge, skills, attributes, and behaviors that were requirements of the DNP essentials for doctoral-prepared nurses (see AACN, 2006). However, as I became more engaged in the new levels of scientific approaches to being a nurse expert, I saw the incremental increases in my knowledge and skills developed over the duration of each semester. Progressively, I acquired the various knowledge and skills that were essential to my growth and development as I sought out diverse learning

opportunities to meet my learning objectives, the DNP essential objectives, and the program objectives (see AACN, 2006).

Development as a Scholar Practitioner

As a scholar-practitioner, I have developed the advanced education, skills, and abilities to use a multifaceted and integrative approach that is based on scientific principles from different disciplines to address health-care delivery (see AACN, 2006). Some of these scientific principles rely on ethics and biophysical, psychosocial, analytical, and organizational sciences that incorporate the theories and concepts in the pursuit of determining the nature and significance of health and health care delivery phenomena (see AACN, 2006). Consequently, I have learned the concepts and principles of planning and the development of interventions to ameliorate and revolutionize the health and health care delivery phenomena at the individual and population levels, with the application of effective frameworks to evaluate outcomes. Furthermore, I have gained confidence in my ability to identify, assess, and define gaps in evidence-based practice and apply effective evidence-based (EB) strategies to develop and evaluate new practice approaches that incorporate theories from nursing and other disciplines (see AACN, 2006).

Additionally, I have developed competencies in being an influential scholar-practitioner by using EB analytical methods to advance clinical scholarship: the ability to integrate information technology in the enhancement of health care delivery outcomes, the development of EB projects, and dissemination of the findings in the advancement of nursing practice, education, research, and writing for publication (see AACN, 2006;

Oermann & Hays, 2016; White et al., 2016). I am confident in my ability to engage in meaningful interprofessional collaboration with organizational leadership and other stakeholders to provide effective solutions to the challenges of a complex healthcare environment (see White et al., 2016).

Development as a Project Manager

A dynamic and highly complex health care system requires nurses who are prepared with the education, skills, and abilities to be leaders in systems and organizational structures, possessing the proficiencies in integration of technology to positively influence health outcomes and promote interprofessional collaboration (see AACN, 2006; White et al., 2016). My development as a more influential nurse leader has also prepared me to be an effective project manager. The educational principles and practicum experiences have strategically prepared me to critically identify problems, facilitate innovative change, and inspire and promote meaningful engagement of the stakeholders to understand and support EB solutions to practice issues (see Sherrod & Goda, 2016). During this journey, I have had many opportunities to observe various leadership styles during my practicum experiences and also practice some of these leadership styles in my roles as teacher, mentor, project manager, and facilitator. From these experiences, I have learned that effective leaders are great communicators and function in diverse roles to facilitate the advancement of effective, efficient, safe, timely, patient-focused care to positively impact health outcomes (see Hoyle & Johnson, 2015; Joshi & Berwick, 2014). These experiences will foster my long-term plans as a scholar-

practitioner and nurse leader in the areas of teaching, mentoring, writing, and engaging in health policy.

Completion of the Project: Challenges, Solutions, and Insights Gained

No journey is ever without challenges and the quest to complete this project had its fair share of challenges. One major challenge was the coordination of the schedules of the participants, the availability of the simulation laboratory, and my work schedule. The solution was to keep open lines of communication with the team and being flexible with different dates, times, and an alternative plan for other participants. The project experience has taught me many lessons that will be beneficial in my long-term professional goals.

One significant lesson or insight gained was to plan a time-line for the different aspects of the project; however, flexibility is vital as we can never control every aspect of how smoothly the process will evolve. Another lesson was by being passionate about the project I inspired others to see and support my vision. Also, the stakeholders had to envision how the project would benefit the organization; therefore, one has to ensure that the project is needed and aligned with the vision and mission of the organization to elicit their support (see Hodges & Videto, 2011; White et al., 2016).

Summary

Healthcare is a vital commodity that each person will access at some point in life's journey. The nature of healthcare delivery involves complex structures and systems that are constantly changing and adapting to new technologies, innovative interventions, and complex health issues. Patient safety and quality outcomes are dependent on highly

trained and competent health care providers who possess the critical thinking and clinical reasoning abilities to recognize APD and respond appropriately to prevent deleterious outcomes. Nurses are the largest group of the healthcare team and also spend predominantly more time with patients; therefore, they might be the first responders to APD. Novice nurses might lack the critical clinical skills to effectively address the complex issues but are sometimes placed in situations where they might miss the impending cues of APD. Nurse leaders are responsible for ensuring that nurses are adequately prepared for the rigors of practicing in this high-risk environment and preventing incidences of patient harm.

Effective strategies are required to address the theory-practice gap of novice nurses and HFS has been identified as an effective strategy to address the clinical competence of nurses in safe and non-threatening learning environments that eliminate potential patient harm (see Aebersold & Tschannen, 2013; Bussard, 2016; Padden-Denmead et al., 2016). The DNP project of integrating HFS into the educational intervention to instruct novice nurses in the early recognition and appropriate responses of APD demonstrated that, although the increase in knowledge was not statistically significant, the cognitive, affective, and psychomotor skills were positively impacted. Additional studies that use a larger sample and serial simulation instructional scenarios are recommended to obtain increased data that can give more valid and credible evidence in support of the effectiveness of HFS in increasing critical thinking, reasoning abilities, clinical judgment, psychomotor skills, self-confidence, communication, accountability, and inter-professionalism (see Bussard, 2016).

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Appendix A: Cover Letter

Dear Nurse Participant

I am a doctoral student in Walden University's Doctorate of Nursing Practice (DNP) program and I am conducting my DNP project at this clinical site. You might know me in an outcomes manager's role but this project is not a part of my job role. My project is designed to prepare novice nurses in the early recognition of acute patient deterioration (APD) with the use of high-fidelity simulation (HFS) in the facility's simulation laboratory. I am requesting your permission to participate in this project. It will be based on real-life simulation scenarios to assess your clinical skills in the early recognition of APD and your interventions to address the specific changes in the patient's status during the simulation. The purpose of this study is to improve your skills in critical thinking, clinical reasoning and decision, communication, and team dynamics in promoting patient safety and clinical outcomes. The goal of this study is to incorporate HFS as a learning strategy to improve your clinical competency.

Data will be collected for this project through conducting an initial pre-assessment, conducting the simulation scenarios, and obtaining a post-assessment. Also, a post simulation debriefing to review performance and an evaluation will be required to obtain your feedback about the study. This study will be conducted in one session and the data will be analyzed. The findings of this study will be shared via a formal presentation with the nursing education staff, the clinical outcomes managers, and the nurse managers. All information obtained from this study will be anonymous and confidential as only aggregate (group) data will be used in all sharing of the results. Furthermore, no participant will ever be identified individually by name or the assigned unit. If you choose to participate in this study, please inform your specific assigned clinical outcomes managers. You may reach out to me anonymously or through your clinical outcomes managers with any additional questions.

Thank you for your time and willingness to participate in this study to develop a learning strategy that will help in increasing the clinical competency of our novice nurses.

Sincerely,
Norma Harris, MSN, RN
Doctoral Student
Walden University

Appendix B: Demographic Form

High-Fidelity Simulation: Preparing Novice Nurses for Early Recognition of Acute Deterioration

Demographic Survey

Age: What is your age in years?

○ _____

Education: Circle the nursing education level you have completed?

- Associate degree in nursing
- Bachelor's degree in nursing
- Master's degree in nursing
- Doctorate degree in nursing

Experience: How many years have you worked as a Registered Nurse?

○ _____

Advanced Certification:

Circle the certifications you have completed?

- BLS
- ACLS
- PALS
- OTHER: _____

Gender: Check Gender

Male: _____

Female: _____

Appendix C: Permission for Lasater Clinical Judgment Rubric

Hi Dr. Lasater,

I am a DNP student at Walden University and I am requesting permission to use your tool for my DNP project. I will be using high-fidelity simulation (HFS) to teach novice nurses to recognize acute patient deterioration and the appropriate early interventions. Your tool is appropriate in my evaluation, so I hereby seek your permission to use it.

Thank you for your kind and expeditious consideration in this matter.

Regards,
Norma Harris
DNP Student # A00131709
Walden University.
Friday 8/10/18 @ 4:15 AM

Hi Norma,

Thank you for your interest in the Lasater Clinical Judgment Rubric (LCJR). You have my permission to use the tool for your project. I ask that you (1) cite it correctly, and (2) send me a paragraph or two to let me know a bit about your project when you've completed it, including how you used the LCJR. In this way, I can help guide others who may wish to use it. Please let me know if it would be helpful to have an electronic copy. You should also be aware that the LCJR describes four aspects of the Tanner Model of Clinical Judgment—Noticing, Interpreting, Responding, and Reflecting—and as such, does not measure clinical judgment because clinical judgment involves much of what the individual student/nurse brings to the unique patient situation (see Tanner, 2006 article). We know there are many other factors that impact clinical judgment in the moment, many of which are impacted by the context of care and the needs of the particular patient. The LCJR was designed as an instrument to describe the trajectory of students' clinical judgment development over the length of their program. The purposes were to offer a common language between students, faculty, and preceptors in order to talk about students' thinking and to serve as a help for offering formative guidance and feedback (See Lasater, 2007; Lasater, 2011). For measurement purposes, the rubric appears to be most useful with multiple opportunities for clinical judgment vs. one point/patient in time.

Please let me know if I can be of help,

Kathie
Kathie Lasater, EdD, RN, ANEF, FAAN
Professor, OHSU School of Nursing

Appendix D: Approval for Use of Creighton Scale

Re: Use of Creighton Clinical Evaluation Instrument for DNP Project

NH

Norma Harris

Reply all

Wed 8/8, 3:08 PM

Todd, Martha <XXX@creighton.edu>;

Norma Harris

Inbox

Ms. Todd,

Thank you for your prompt and kind response. I had already done the training modules. I will certainly contact you if I have any questions.

Regards,

Norma Harris

From: Todd, Martha <XXX@creighton.edu>**Sent:** Wednesday, August 8, 2018 11:23 AM**To:** Norma Harris**Subject:** Re: Use of Creighton Clinical Evaluation Instrument for DNP Project

Norma,

Thank you for your interest in the CCEI.

You are most welcome to use the instrument for your DNP project.

Here is the link to the training for the instrument. Please let me know if you have any questions.

Martha

<https://nursing.creighton.edu/academics/competency-evaluation-instrument>