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Improving the Competency of Nurse Educators in the Use of Simulation

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This doctoral project, directed and approved by the candidate's committee, has been accepted by the College of Graduate and Professional Studies of Abilene Christian University in partial fulfillment of the requirements for the degree

Doctor of Nursing Practice

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by

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Dedication

This DNP project is dedicated to my family who empowers me to better myself by being a nurse and educating future nurses. A special thanks goes to my husband, my two boys, and my father-in-law. Their support keeps me fueled and allows me to believe in my ability to reach my goals.

Acknowledgments

I would like to express my gratitude to my committee chair, Dr. Molly Kuhle. I greatly appreciate her expertise and guidance throughout my scholarly project and thank her for empowering me to reach my goals. I also would like to thank my committee members, Dr. Catherine Garner and Dr. Cheryl Green, for their mentorship and guidance.

The completion of this project would not have been accomplished without the support and participation of my colleagues. I want to thank the faculty I work with daily who have cheered me on and encouraged my efforts to improve our department and simulation program.

I would not have been able to reach my goals without the love and support of my family and gratefully acknowledge their grace for the endless hours I spent writing and researching to complete this project. I love you with all of my heart, Will, Carter, and Fin.

Abstract

Simulation in nursing education programs is widely used as an active clinical learning strategy. This teaching methodology is a standard supplement to clinical experiences for nursing students to meet the requirements of clinical components within their degree program; however, the faculty of a small liberal arts-based Bachelor of Science in Nursing program was not using simulation to its fullest potential. Therefore, the purpose of this DNP project was to introduce the use of evidence-based practice simulation guidelines recommended by the National Council of State Boards of Nursing. The study sample of 16 included 10 full-time faculty, five part-time adjunct faculty, and one simulation lab coordinator. Implementing the educational training using the guidelines took place over 3 months in the spring of 2021. Participants completed the Faculty Attitudes and Adoption of Simulation assessment before and after implementing the education program. Additionally, participants completed an Educator's Self-Efficacy questionnaire after the educational training was completed. The study revealed that formal educational training positively affects faculty attitudes and adoption of simulation. Thus, results of this project suggest that continuing education works and is necessary to develop new knowledge based on evidence-based practice.

Keywords: BSN pre-licensure programs, NCLEX-RN pass rates, simulation guidelines, nursing clinical judgment, accredited simulation programs, nursing simulation education

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Chapter 1: Introduction

Newly licensed nurses who enter practice encounter significant challenges adapting to nursing practice, including high acuity patients, fast patient turnover, and legal accountability through documentation. New graduates and nurse executives recognize ongoing challenges and have implemented nurse residency programs for transition to practice (Hatzenbuhler & Klein, 2019). In addition, the number of clinical hours for nursing students is limited as traditional hospitals and other clinical facilities have become inundated with healthcare students from many disciplines. As a result, many hospitals, faced with their own financial and staffing challenges, have limited the number of clinical rotation hours offered to nursing schools. Thus, the limited number of clinical spots decreases the student's chance to get the kinesthetic opportunity to apply theory and practice. This barrier causes a significant problem for nurse educators who need to produce quality and innovative clinical experiences for students to enter the profession at the expected level.

This problem has been exacerbated by the COVID-19 pandemic, with clinical assignments being canceled and nursing students having limited access to the facilities. As a result, some clinical hours have become virtual clinicals using simulation, which places the students even farther away from hands-on instruction. Educators prepare these virtual simulation clinicals with the hope of only temporary arrangements. However, the unknown of the situation separates new graduates from rich learning experiences.

These factors have forced educators to utilize simulation as a supplement or replacement for clinical activities. The critical issue for educators is how to maximize simulation instruction as an alternative to clinical experiences. Some clinical faculty are hesitant to use simulation as a replacement teaching opportunity (White, 2017). Understanding the faculty's perceptions and

attitudes toward simulation can improve and advocate for simulation as an innovative teaching tool. Identifying the faculty's needs and providing evidence-based practice (EBP) education is a positive step toward building a consistent and effective simulation program (White, 2017).

Statement of the Problem

With the increased utilization of the simulation pedagogy, nursing educators have largely accepted its integration into the nursing curriculum (Aebersold, 2018). Often without formal training, educators are left with figuring out the best deployment of this mode of active learning. Barriers such as lack of experience, fear of technology, and limited training lead to educators' hesitancy and negative perceptions and attitudes toward adopting this pedagogy (Aebersold, 2018). There is recognition among the faculty in this small liberal arts Bachelor of Science in Nursing (BSN) program of a need for additional education and support for the simulation program. There is no formal training process on the National Council of State Boards of Nursing (NCSBN) simulation guidelines for prelicensure nursing programs (Alexander et al., 2015) to guide the development of nurse educators.

Without consistent guidelines within the simulation program, each faculty member is assigned a didactic course to teach and is left to manage their own simulation lab experience and clinical. From personal experience and teaching in this particular program, the simulation program's overarching attitude is rudimentary and inconsistent among all the courses taught using this pedagogy. This problem has led to the faculty goal of devising a strategic educational plan implementing the changes necessary to meet standardized guidelines for a consistent, high-quality simulation experience for faculty and students. EBP simulation guidelines would help improve faculty perceptions, attitudes, and self-efficacy on the use of simulation.

Background

Traditional models of nursing education have changed as simulation-based learning grows. Experiential learning naturally relates to the elements of simulation through a concrete experience of a clinical scenario with immediate debriefing (Chmil et al., 2015). This teaching method is an opportunity for educators to customize clinical opportunities for nursing students who otherwise may or may not experience them with a live patient. Also, simulation has proven efficacious in clinical learning (Gore & Thomson, 2016). For example, a national study conducted by the NCSBN (2014) publicized best practices in simulation use. The NCSBN established that simulation can replace up to 50% of clinical hours in all prelicensure nursing clinical courses (Brydges, 2016).

As nursing faculty take on the obligation of filling the profession with adequately prepared nurses, this leaves them speculating on maximizing the simulation experience. The education and support of simulation experiences should evaluate the faculty members' perception of simulation to address gaps in acceptance and change the cultural attitude towards this effective pedagogy.

Educators must believe in what they are teaching to provide effective use of this type of active learning. Literature has supported that effective simulation education is achieved by attending symposiums on advances in simulation technology, scenario writing resources, established simulation "champions," advancing education in simulation, and reaching certification or accreditation (Al-Ghareeb & Cooper, 2016). The literature has advocated for acclimating faculty to simulation by establishing a resource person who can provide guidance and support through consistent simulation use under a framework or structure such as the guidelines established by the NCSBN (Al-Ghareeb & Cooper, 2016).

In the early days of adopting simulation, faculty questioned "the efficacy of replacing learning in traditional clinical environments with simulation" (White, 2017, p. 43). Some of this hesitancy evolved from barriers reported, such as time, resources, lack of professional development, and training. Faculty even speculated a contribution to high anxiety levels from students, leading to adverse learning outcomes (White, 2017).

As simulation evolved, researchers looked back and realized that faculty members were skeptical because high-fidelity simulation was unconvincing and did not deliver consistent and positive learning outcomes (Brydges, 2016). For 10 years, simulation has evolved into a standard integration of curricula among thousands of nursing programs across the nation. The setting for this project was an educational institution where simulation accounts for up to 50% of the student's clinical hours.

In light of this pandemic and clinical displacements, simulation is crucial to providing real-life simulated experiences for all healthcare trainees to learn how to practice safely while remaining in a harmless environment themselves (Deng et al., 2020). This unprecedented time of alternative learning is pivotal for the rebirth of simulation. If simulation equates to up to 50% of clinical hours, educators must ensure that quality clinical experiences correlate to real patient care.

To create a formal process of regulatory standards, the NCSBN, in collaboration with the International Nursing Association for Clinical Simulation and Learning (INACSL) Standards of Best Practice in Simulation, developed the National Simulation Guidelines for Prelicensure Nursing Programs (Alexander et al., 2015). The purpose of the standards and guidelines is to promote high-quality simulation experiences that can enhance the clinical platform for nursing education.

Purpose of the Study

The purpose of this educational intervention was to provide formal education using the INACSL Standards of Best Practice in Simulation ("INACSL Standards Committee," 2016). This process is the first step in the formal process of becoming an Accredited Simulation Facility, which is a longer-term goal of the faculty and administration.

Mackey and Bassendowski (2017) suggested tangible ways to improve nursing as an educated discipline. These improvements include using best practice procedures, applying valid research evidence, and utilizing technological advances (Mackey & Bassendowski, 2017). The purpose of transforming simulation labs using best practice is to bridge the gap between learning the content and implementing the application in the clinical setting.

With the Next Generation National Council Licensure Examination (NCLEX NGN) design emerging and simulation acknowledged as an established teaching modality, educators must learn to combine them to improve students' clinical reasoning and judgment (Caputi, 2019). Proper faculty training and continued faculty development based on national guidelines such as the Standards of Best Practice: Simulation (INACSL) results in the effectiveness and quality outcomes of nursing simulation (Sittner et al., 2015).

Significance

Engaging faculty and supporting their teaching efforts create a healthy learning environment and workplace. Working together as a team to educate students improves the effectiveness and quality outcomes of nursing education. Setting goals, collaborating, and educating faculty leads to a successful program (Jeffries et al., 2015). The significance of creating a stable and effective simulation program is that it benefits the nursing program and the university. Achieving accreditation as a certified simulation center will also set the institution

apart from other schools when marketing to potential applicants. This level of approval contributes to the esteem of the institution when evaluated by accrediting boards such as the Commission on Collegiate Nursing Education (CCNE). Not only will the program and university benefit from this project, but so will the students.

The goal of all faculty members is to provide an excellent foundational education for nursing practice. Faculty educators have access to many tools to deliver necessary information to the learner. Active learning is an integral part of nursing education through interactive case studies, group work, and various benefits of technology.

According to a metanarrative review, simulation is also active learning simulation replacing clinical hours in nursing (Roberts et al., 2019). Roberts et al. (2019) reviewed the importance of simulation in clinical education and found that it produced positive student outcomes and learning. This form of active learning provides a rich learning experience for students by submerging them into a nonintimidating, controlled, and perhaps repetitive situation that teaches them transferrable skills and knowledge for actual clinical practice. The students benefit from simulation when the instructor has a sense of realism and investment. The learner can relate to the purpose of simulation when deployed with confidence and knowledge from the facilitator. Investing in faculty development through simulation training and EBP ultimately affects positive student outcomes.

Nature of the Project

This project used a program evaluative design (Min & O'Rourke, 2017) for an educational intervention to improve the faculty's knowledge, perception, attitudes, and self-efficacy using EBP guidelines recommended by the NCSBN and the INACSL Standards of Best Practice: Simulation (Alexander et al., 2015). The goal was to improve simulation program

outcomes as well as faculty perceptions and attitudes. According to the Doctor of Nursing Practice (DNP) Essential II, the DNP nurse's role encompasses organizational and systems leadership to promote quality improvement and advancement of nursing practice. Therefore, educating and properly training confident faculty to utilize teaching strategies structured by practice guidelines can also enhance program outcomes.

The setting of the current simulation program consisted of a simulation coordinator, three high-fidelity simulators, 16 midlevel simulators, and various partial task trainers. Coffman et al. (2015) concluded that it is not the type or level of the equipment that makes simulation successful; it is the teamwork and delivery of objectives that create an optimal learning environment. The development of tools, program evaluations, and good team training improve program outcomes (Coffman et al., 2015). Using the established standards of the NCSBN Simulation Guidelines for Prelicensure Nursing Education Programs as a framework tool, the plan was to provide the faculty participants EBP education, using the INACSL Standards of Best Practice in Simulation ("INACSL Standards Committee," 2016) and to evaluate the results of the training using Kirkpatrick's model for evaluation of continuing education: attitude, knowledge gain, and self-efficacy (MindTools.com, n.d.). The final step of evaluating the implementation in simulation practice was beyond the scope of this study. The goal was to improve the simulation program, lay the foundation for future education and practice support, and provide superior education to improve student outcomes.

Research Questions

The NCLEX NGN research is evolving to measure new graduate nurses on a higher level of clinical judgment or to *think like a nurse* as soon as they enter practice. The questions that served as the basis for this study include:

RQ1: Does the provision of best practice simulation education through faculty development improve faculty's attitudes, knowledge, and self-efficacy?

RQ2: Do faculty attitudes reflect knowledge and confidence in this teaching modality?

- P – Due to limited clinical experiences and simulation as a substitute for 50% of clinical requirements, simulation programs and faculty need to be supported and educated to standards that establish a higher level of clinical judgment in new graduate nurses to meet the demands of nursing practice.
- I – An educational training for faculty in simulation using the INACSL Standards of Best Practice in Simulation criterion for simulation design, accompanied by video examples of full-scale simulation scenarios and virtual simulations and a taped demonstration of a well-run and expertly debriefed simulation grounded in critical theory.
- C – Pre- and posttest scores on the Faculty Attitudes and Adoption of Simulation (FAAS) and a survey of educator's self-efficacy in using simulation (Miller, 2021).
- O – Improved faculty competence with education on the consistent use of guidelines within the simulation program (NCSBN, n.d.).
- T – Over a 6-month semester.

Question Guiding the Inquiry

The practice question was: Does the provision of best practice simulation education improve faculty's attitudes, knowledge, and self-efficacy?

Research revealed challenges that new graduate nurse's face as they transition into practice. Educational programs face pressure from the governing boards and hospital nurse executives to produce practice-ready, critically thinking new nurses (Hofler & Thomas, 2016).

This research applies to evolving nursing schools with a simulation program open to assessing the need for improving educational practices to execute quality simulated experiences to enhance clinical judgment in new graduate nurses.

The National League for Nursing (NLN)/Jeffries simulation framework states that simulation used in nursing education programs produces outcomes superior to those of traditional teaching strategies (Adamson, 2015). Therefore, with permission from the creator, the validated FAAS tool was used and assisted in evaluating attitudes on simulation (Min & O'Rourke, 2017; see Appendix A). After the educational training sessions, an Educator Self-Efficacy Scale was given to each participant to measure the training's adequacy (see Appendix B). Bandura stated that the purpose of self-efficacy is "to organize and execute the courses of action required to manage prospective situations" (Miller, 2021, p. 1). Implementing an education practice plan for regulatory standards of simulation in a developing nursing program can improve critical thinking in new graduate nurses while improving faculty attitudes toward this educational pedagogy (Adamson, 2015).

Conceptual Framework

This project utilized a conceptual framework based on the ACE star model of knowledge transformation created by Dr. Kathleen Stevens of the University of Texas Health Science Center School of Nursing in San Antonio, Texas (Stevens, 2012). This model helps organize EBP processes and approaches by connecting the transformation of new knowledge from research into practice and informing the faculty development of simulation guidelines. Healthcare teams use this tool nationwide to guide organizational policy change (Correa-de-Araujo, 2015). The ACE star model of knowledge transformation, in this study, allowed for the faculty to assess and apply research about simulation through the implementation of the EBP guidelines, which could lead to

curricular policy improvements (see Figure 1). As a model for implementation, analysis about the NCSBN simulation guidelines can be applied through inquiry and training while impacting outcomes through EBP (Correa-de-Araujo, 2015). This process is vital because faculty educators are more motivated by evidence-based research and a structure that guides them to best practice.

Figure 1

ACE Star Model of Knowledge Transformation

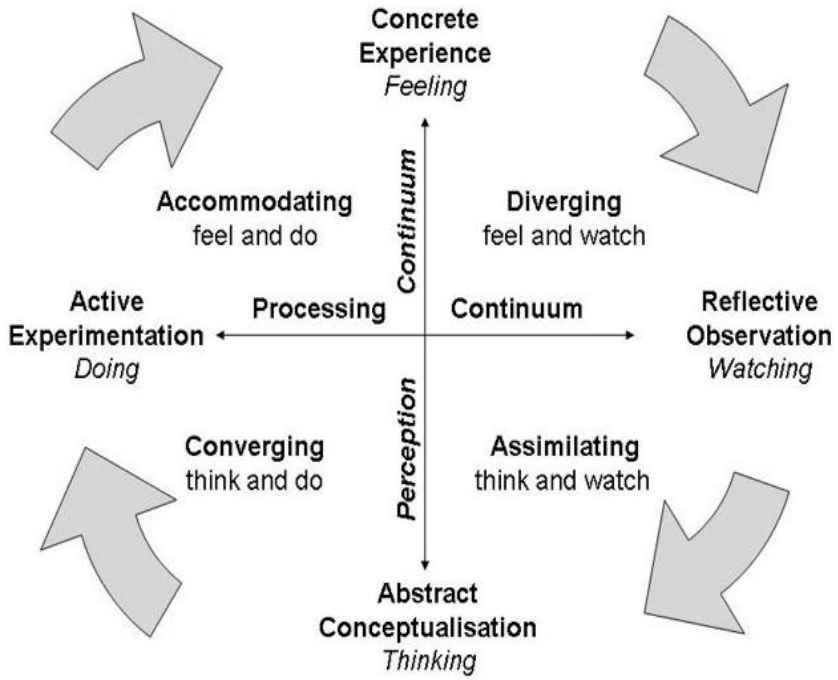
Note. Stevens, K. (2012). Star Model of EBP: Knowledge Transformation. https://nursing.uthscsa.edu/onrs/starmodel/star-model.asp. Used with permission.

The NLN education programs use adult learning theory that applies to simulation, known as experiential learning. Professor and theorist Dr. David A. Kolb formulated the experiential learning theory (ELT), which relates to simulation concepts in nursing (Morris, 2019). Interpersonal interaction, paired with theory practices within the kinesthetic learning environment, such as simulation, is the basis of this framework (Morris, 2019; see Figure 2). It is applicable in all healthcare educational disciplines. Experiential learning allows the learner to

build knowledge while experiencing a situation to process for future use (Chmil et al., 2015). Students can comfortably experiment with life-like scenarios in a situated setting and practice how they would administer care in an actual situation. As cognitive adult learners, they control the hands-on experience, reinforcing comprehension through reflective thinking (Chmil et al.).

Figure 2

The Experiential Learning Cycle



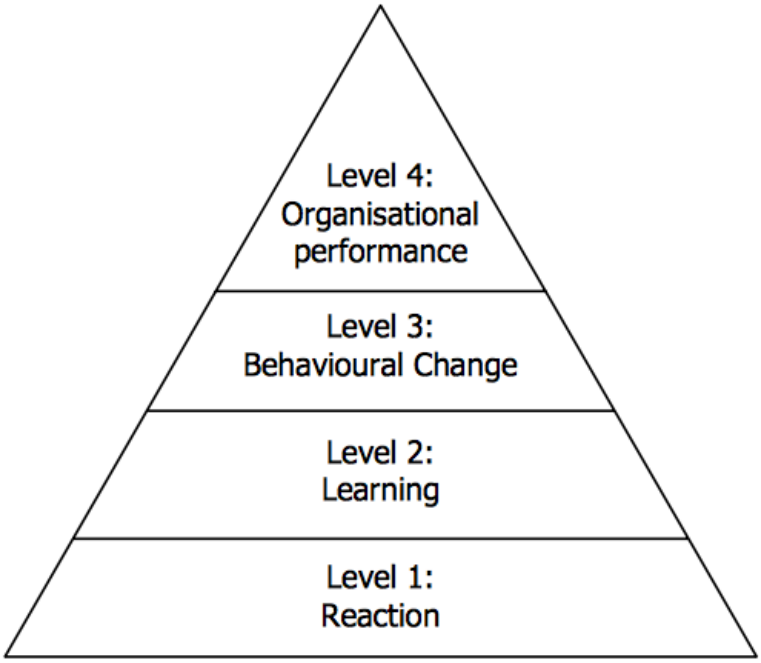
Note. Morris, T. (2019). Experiential Learning – A Systematic Review and Revision of Kolb's Model. *Interactive Learning Environments*, *28*(8), 1–14. https://doi.org/10.1080/10494820.2019.1570279. Used with permission.

The evaluation design for this project used the Kirkpatrick model for the evaluation of continuing education. The Kirkpatrick model analyzes training effectiveness and provides valuable feedback to improve the success of a training program (MindTools.com, n.d.). In the literature review, a relevant article about using this model in an organization reinforced the

purpose of training and its efficacy (La Duke, 2017). The four levels include reaction, learning, behavior, and results (see Figure 3).

Figure 3

The Kirkpatrick Model



Note. The Kirkpatrick Model. (2017). Kirkpatrick Partners. https://www.kirkpatrickpartners.com/Our-Philosophy/The-Kirkpatrick-Model. Used with permission.

Level 1 (Reaction) is used to evaluate how participants respond to the training. Level 2 (Learning) is used to measure if they learned the material, Level 3 is used to measure whether the learning is transferred into practice in the workplace, and Level 4 is used to determine the tangible results of the training (La Duke, 2017). This framework was appropriate for this study as the faculty perceptions before and after implementing the guidelines guided the success of the practice plan. Researched and educated training in simulation was instrumental in the application of this study.

Definition of Key Terms

Simulation-based nursing education. In this project, "a useful pedagogical approach that provides nursing students with opportunities to practice their clinical and decision-making skills through varied real-life situational experiences, without compromising the patient's well-being" (Kim et al., 2016, p. 1).

Scope and Limitations

The few parameters of this project included the inclusion criteria of faculty members that have used simulation in their teaching experience. There was not a set amount of experience determined. A limitation of the project was the convenience sampling of only the faculty directly related to simulation at one liberal arts-based BSN program. Other limitations to the project included COVID-19 restrictions, which necessitated the delivery of education via Zoom using videos of simulations rather than face-to-face instruction.

Chapter Summary

Faculty involvement and investment are essential for quality simulation-based education to be effective. Therefore, adequate preparation and support for the faculty must be in place to foster positive perceptions and attitudes about this type of teaching modality. The purpose of this educational intervention was to provide formal education using the INACSL Standards of Best Practice in Simulation ("INACSL Standards Committee," 2016). This is the first step in the formal process of becoming a Certified Simulation Facility, which is a longer-term goal of the faculty. This intervention was significant because research has suggested that educators can learn about best standards of practice and the structure of a program, and help students learn in a well-organized and evidence-based environment (White, 2017). Raising the standard of simulation

pedagogy can help students transfer clinical skills and hopefully decrease the transitional gaps for new graduate nurses.

Chapter 2: Literature Review

This chapter provides the literature review that guided this DNP project investigating current faculty perceptions and attitudes about simulation before and after a formal educational training on evidence-based simulation standards in baccalaureate nursing programs. There are two areas of growing concern in nursing education: an increase in simulation and clinical experiences and the elevating standards of clinical judgment as measured by the National Council Licensure Examination for Registered Nurses (NCLEX-RN). A systematic review and quality appraisal of multiple studies by Bogossian et al. (2019) revealed there was no difference in evaluation outcomes between healthcare simulation education and those of real-life clinical experiences. Therefore, the suggestion to increase the use of simulation education in nursing education has been implemented.

Another concern for nursing educators is elevating standards evolving on the NCLEX-RN to measure a higher clinical reasoning or judgment level. Evidence has shown that the current rigor of the standardized exam does not adequately measure clinical judgment or clinical readiness of the new graduate nurse (Sherrill, 2020). Starting in 2018, the NCSBN examination committee began a formal analytical process to examine the amount of clinical judgment in novice nurses. This study yielded the conclusion that the "current NCLEX does measure clinical judgment, but the test could be improved to measure it more effectively" (Poorman & Mastorovich, 2019, p. 86). These concerns lead to the practice problem of the increased use of simulation and its effectiveness in achieving a higher level of clinical judgment expectations necessary to meet the standards of the new changes of the NCLEX. Therefore, there is a need to pause and evaluate faculty perceptions about simulation and fix the gaps now. With the promising future established in simulation and advancing technology, educators must be updated

and progress effectively in the pedagogy of simulation education. Researchers have suggested that mandatory training courses, continuing education, and specific mentorship with a simulation champion are necessary to ensure an adequate level of simulation education for nurse educators (Gore & Thomson, 2016).

Literature Search Methods

Several database searches were used, including CINAHL, EBSCOhost, Google Scholar, Medline, and PubMed. Various sources included peer-reviewed articles, research projects, editorial reviews, peer commentaries, and websites of professional bodies such as the NCSBN and the NLN. A systematic search strategy within these databases consisted of *BSN pre-licensure programs, simulation education, NCLEX-RN pass rates, simulation guidelines, nursing clinical judgment,* and *accredited simulation programs*. A refined advanced search using "and" revealed more specific results using *nursing simulation education and clinical judgment*, yielding 145 results narrowed down to English peer-reviewed sources dated between 2010 and 2020. Professional guidelines included the NCSBN Simulation Guidelines for Prelicensure Nursing Education Programs, the INACSL Standards of Best Practice: Simulation, and the NLN/Jeffries simulation theory (NCSBN, n.d.).

Theoretical Framework

David Kolb's ELT provided the theoretical framework of this project in conjunction with the ACE star model of knowledge transformation created by Dr. Stevens (Stevens, 2012). In the literature review, a relevant article emerged about the effects of Kolb's theory in simulation design and how it can affect clinical nursing judgment development. Experiential learning encompasses all types of learning elements, and the student's mindfulness of these elements is mainly applied to simulation (Chmil et al., 2015). Metacognition is known as the learner's

awareness of conscious learning (Chmil et al., 2015). This theory applies to the teaching of clinical judgment in nursing students.

Kolb's ELT emphasizes the learner's transformation through experience and knowledge acquisition by utilizing all of the senses. This theory has four essential components: abstract conceptualization, active experimentation, concrete experience, and reflective observation (Morris, 2019). Research is ongoing, and discoveries in ELT have revealed that learning styles contribute to integrate learning that goes back to the basics of the theory. Simulation is a perfect platform to use all of the senses to connect the content with applicable situations to reinforce specific objectives. The ACE star model of knowledge transformation, paired with simulation, can achieve the standards required by the next generation of licensing examinations. Stevens (2012) recognized the purpose of the NCLEX-RN as a standard to measure and ensure safe nursing practice. However, with the increasing complexities of patient acuity and the imperative need for graduates to achieve appropriate clinical decisions, the standards of the measurements have been elevated. Educators must meet this challenge head-on with adaptations to their teaching. Adjusting the educational strategies to accommodate the increasing complexity of standardized exams correlates with adapting to healthcare system changes.

Thus, Stevens from the University of Texas at San Antonio Health Science Center created the ACE star model to assist the learner in discovering and transforming this newfound knowledge into practice (Stevens, 2012). This model consists of five phases: discovery, summary, translation, integration, and evaluation (Correa-de-Araujo, 2015). Much like the nursing process, this tool has been effective in facilitating scenarios and simulation-based education. Kolb's ELT and the ACE star model frameworks help guide the idea of elevating standards and improvements to simulation programs across the nation to achieve improved

clinical judgment and clinical readiness for graduate nurses. The Kirkpatrick model guided this project's educational design evaluating the formal training process of simulation utilizing the INACSL Standards of Best Practice in Simulation ("INACSL Standards Committee," 2016).

Related Literature

Transition to Practice

Nursing programs are growing exponentially across the United States to answer what used to be a nursing shortage. With the large volume of nurses entering practice, the profession is saturated with new graduates who carry the expectation of having a higher level of clinical judgment. Some challenges of recent graduates entering practice, also known as "transition shock" (Blevins, 2018, p. 199), include increased patient load, complex conditions with multiple comorbidities, lack of experienced trainers, pressures to perform at higher levels, generational differences, and the inability to reason past the advanced beginner stage (Hofler & Thomas, 2016). Graduating from college at a young age and having the new responsibility of the adult world is a daunting realization.

The reality of this transition can be intimidating and hinder the shift from student to professional nurse. A new graduate nurse can take the licensure exam within weeks of graduation and begin practicing rather quickly. The ramification of this convenient possibility means rapid employment in clinical settings where they "are expected to navigate the complexities of the healthcare environment" (Hatzenbuhler & Klein, 2019, p. 93). The literature spoke to the new graduate nurses' first year of practice. It referenced the dichotomy of achieving legal requirements to practice. At the same time, studies showed that many new nurses are weak in clinical skills and judgment necessary to provide safe and effective care to patients (Hatzenbuhler & Klein, 2019). Consistent discussion within nursing education includes the need

for new graduate nurses to be prepared to enter practice with clinical readiness or a higher level of clinical judgment. However, research has not determined how this transpires. Limitations included the correlation between student's educational training and the concrete transition into practice (Hatzenbuhler & Klein, 2019).

Simulation Pedagogy

In the literature review, searches revealed practice gaps between the perceptions of clinical preparedness of graduate nurses and increasing healthcare demands. A qualitative study on new graduates and their observation of their educational preparation for clinical readiness suggested that nursing faculty improve practice-oriented, active-learning educational experiences to better prepare graduates (Hatzenbuhler & Klein, 2019). This study's findings suggested that additional educational experiences, such as increased clinical hours, help prepare entry-level graduates for various healthcare settings (Hatzenbuhler & Klein, 2019). The authors revealed that this solution is not feasible due to limited clinical placement sites and qualified nurses or faculty (Hatzenbuhler & Klein, 2019). In the United States, the NCSBN's study officially validated the approval for nursing simulation for up to 50% of clinical hours required by the state's governing boards of nursing (Brydges, 2016). Through the NCSBN report, researchers found that 7% of nursing programs across the United States used simulation in their curriculum (Sofer, 2018, p. 17). Therefore, nursing schools need to understand faculty's attitudes about the use of simulation in nursing programs.

The simulation modality is a perfect platform to deliver this hands-on experiential learning that can bridge the gap between content and practice. Researchers have reinforced the importance of educators implementing practice-oriented educational experiences into not just the classroom but simulation. A simulated learning experience "assists and challenges students to

develop higher-level clinical reasoning skills that are fundamental to successfully transition to professional clinical practice" (Hatzenbuhler & Klein, 2019, p. 96). The increased utilization of this type of active learning improves how faculty perceive the simulation pedagogy.

To effectively use this teaching tool, inquiring, equipping, and promoting faculty investment is imperative. Simulation can fall into the category of active learning. Active learning is frequently used in nursing education as a tool to reinforce the application of the content. Simulation offers students a safe place to apply vital clinical concepts in a secure environment without threatening the patient or clinical facility. Literature has supported "simulation as a key tool to clinical education regarding positive outcomes for students and learning" (Roberts et al., 2019, p. 6). With evidence that simulation is being implemented into the curriculums of over half of the nursing programs nationwide, an intervention to raise the standards of quality simulation is critical. Accreditation of nursing programs is one way to assess if criteria are being met.

Benefit of Accreditation

When simulation began over 2 decades ago, a suggestion was borrowed from successful military training (Aebersold, 2018). Healthcare institutions tried this educational modality to help nurses continue acquiring knowledge and skills used in practice (Aebersold, 2018). Today, it is used in many nursing programs as a substitution for clinical hours mandated by the governing state boards of nursing. Therefore, simulation has recognition as an effective pedagogy just as much as actual bedside training.

As published by the NCSBN, the NCLEX plans to implement changes to the examination to measure better clinical judgment (Poorman & Mastorovich, 2019). Tools such as the clinical judgment model (CJM) can help educators increase the rigor needed to meet these anticipated standards of the new NCLEX plan. The CJM "offers a new approach to bedside decision-

making" (Sherrill, 2020, p. 82). Clinical judgment encompasses comprehending and processing patient cues, anticipating outcomes, prioritizing interventions, taking action, and evaluating the process outcome. Critical thinking should be implemented in the classroom and in the simulation lab, where there is ample opportunity to create precise objectives to help facilitate clinical judgment thinking.

A comprehensive analysis conducted by the NCSBN in October 2015 produced supporting evidence that simulation was suitable for substituting up to 50% of traditional clinical practice across the prelicensure nursing curriculum (Alexander et al., 2015, para. 1; see Appendix C). The study done by NCSBN confidently advocated for the substitution of clinical experiences contingent upon adequately trained and committed faculty who have sufficient access to a dedicated lab with necessary resources (Alexander et al., 2015). The expert researchers developed guidelines based on data from previous simulation studies. These guidelines help (a) boards of nursing in evaluating the readiness of prelicensure nursing programs in using simulation as a substitute for traditional clinical experience, and (b) nursing education programs in the establishment of evidence-based simulation programs for the undergraduate nursing curriculum (Alexander et al., 2015). The expert panel of researchers included the INACSL and the NLN. Together, the researchers added their contribution to the Standards of Best Practice: Simulation in adjunct to high-quality simulations, best debriefing models, educational theory integration, and dedicated simulation educators (Gore & Thomson, 2016).

To achieve the next level of best practice, the Society for Simulation in Healthcare (SSH) offers a possibility for simulation programs to become accredited and reach simulation certification. Accreditation can provide a basis for simulation centers to implement best practices

and promote uniformity within the educational institution (Gore & Thomson, 2016). This ambitious goal of accreditation empowers average nursing programs with basic simulation programs to reach higher standards and provide better educational experiences for their students. Pairing higher standards for simulation programs with the implementation of the CJM into the curriculum will promote success towards the higher expectations of the NCLEX NGN. Ultimately, this will result in better clinically prepared graduate nurses and an increase in positive patient outcomes.

NCLEX Pass Rates

A limitation noted in the literature review was the lack of correlation between NCLEX pass rates and the use of simulation. Only a few peer-reviewed articles reinforced the study of the NCSBN. Curiosity prompts the thought about accredited simulation programs and the correlation to their NCLEX pass rates. The literature search did not yield a large number of sources to investigate this question. An article about strategies to improve NCLEX-RN success suggested that more research is needed about teaching clinical judgment and student success (Quinn et al., 2018). The literature about standardized testing recommended a change in practice to accommodate nurses' improvement on the national licensure exam (NCLEX; Sherrill, 2020). Sherrill (2020) predicted that many educators would encounter challenges in teaching the next generation of nursing students.

With the documented changes in the NCLEX NGN, educators have to transform teaching strategies from learning the content to pass the exam to facilitating clinical judgment to make patient-centered decisions. Caputi (2019), a renowned author and nurse educator, explained that the revised NCLEX-RN aims to present more practical situations through testing to portray actual patient scenarios instead of traditional testing items. This reasoning revisits the CJM that

connects simulation experiences and real-life patient scenarios to improve learning through situational application.

Perception of Simulation

Because simulation is a growing teaching methodology, reflecting on past and present insight is beneficial to nursing education. A related literature search revealed one study that identified faculty perceptions of simulation in an undergraduate program (Quilici et al., 2015). The aim of this study was to identify perceptions of simulation and the advantages and challenges of introducing this active learning method into the curriculum (Quilici et al., 2015). Some benefits included simulation as a useful teaching tool, freedom for students to make safe mistakes, and opportunities for the learners to work in teams (Quilici et al., 2015). The disadvantages were insightful and offered perceptive ideas. More than half of the faculty reported time and resources as problematic in delivering effective teaching (Quilici et al., 2015). Preparation and planning, as well as learning the technological equipment, were mentioned as obstacles (Quilici et al., 2015). This valuable perspective supports the current study's purpose to obtain further information within the past 5 years on how simulation can become a more successful and effective teaching method in nursing education.

Summary

The literature review contributed to this capstone project by laying the historical background about simulation and its evolution in nursing education. As the literature supports a more substantial integration of simulation into the nursing curriculum and the complexity of the licensure examinations, nursing education must evolve accordingly. Current and historical research findings support the idea that increased levels of simulation expectations are needed to achieve the projected goal of teaching graduate nurses a higher level of clinical judgment and

clinical readiness. The lack of literature that highlights this gap between simulation education and clinical judgment of graduate nurses is necessary to implement changes in simulation programs to prepare graduate nurses for advancing practice expectations. With faculty educators being such an integral part of nursing education, their insight and educational training must be considered in the evolution of simulation. The next chapter discusses the methods and planned evaluation of the project goals.

Chapter 3: Research Method

The mixed perceptions among faculty members of the active learning strategy for simulation have prompted an interest in investigating improvements for simulation programs. This study's overall approach was an educational intervention aimed at improving the competency of undergraduate educators in the use of clinical simulation. The plan was to educate the faculty on implementing EBP guidelines that will provide structure and consistency to an existing simulation curriculum and then evaluate the same faculty for feedback. Data collection and analysis showed how education on EBP guidelines impacts faculty attitudes toward simulation, knowledge gain, and self-efficacy using simulation as a teaching/learning strategy.

Purpose

The purpose of this educational intervention was to provide formal education using the INACSL Standards of Best Practice in Simulation as EBP guidelines ("INACSL Standards Committee," 2016). This is the first step in the formal process of becoming a Certified Simulation Facility, which is a longer-term goal of the faculty.

Project Design

The faculty participants were recruited via email from one nursing school. They were informed of the educational intervention's purpose and gave individual permission to complete the assessment tools. Each participant was de-identified for the pre- and postcomparison data. All participants were informed of their right to withdraw at any time. Permission to use this team within the study facility and administrative support for this project were obtained.

The educational administrator prepared for the development of the teaching program using the Faculty Development Resource offered by the National League for Nursing Simulation Innovation Resource Center. Description:

> Faculty and staff development are essential for successful simulation experiences. Education on developing support for using simulation and ways to incorporate simulation as a teaching strategy is critical to achieving curricular goals. In Developing Faculty, you will learn about models for faculty development and strategies for gaining faculty support. You will be shown examples and create your plan for attaining your aims. The Educator's Toolkit offers 17 job descriptions, as well as templates and checklists to stimulate ideas. 2 Contact Hours/2 Continuing Education (CE) credits are offered at the completion of this course. (National League for Nursing, n.d., p. 1)

The educational intervention is an approved continuing online education module developed and offered by the National League for Nursing Simulation Innovation Resource Center – Integrating Simulation as a Teaching and Learning Strategy. This course was provided online and supplemented by videos of exemplary simulation activities due to COVID guidelines.

> In this course, you will be focusing on teaching/learning strategies. Guidelines and considerations for incorporating simulations as a teaching/learning strategy will be discussed. Integrating simulation into class, clinical and laboratory experiences will be explored. Field-tested strategies will be offered. Resources offered in this course will include a directory of organizations, and their listservs and web-based moulage resources. The Educator's Toolkit for this course includes a recipe book for homemade moulage, an example of a commercial basic and advanced scenario, a sample rotation schedule for rotating student groups through simulations, and a sample confidentiality statement. 2 Contact Hours/2 Continuing Education (CE) credits are offered at the completion of this course. (National League for Nursing, n.d., p. 2)

Adhering to Kirkpatrick's (2017) evaluation model for continuing education, the faculty participants were asked to complete pre- and postassessments. The first assessment, the FAAS tool, was created to identify faculty attitudes and levels of perceived knowledge and adoption of simulation (Min & O'Rourke, 2017). In conjunction with the Kirkpatrick model, the FAAS tool reveals the foundational position of the learner where proper training should begin. Level 1 of the training model helps the trainer identify what is necessary to include and what gaps exist in the foundational knowledge of the subject (Kirkpatrick, 2017). The reaction within Level 1 is the degree to which the participants find the training pertinent to their job (Kirkpatrick, 2017). Level 2 involves the learning process and the degree to which the participants acquire the intended knowledge, skills, attitude, confidence, and commitment based on their participation in the training (Kirkpatrick, 2017). The FAAS tool relates to the Kirkpatrick model Levels 1 and 2 by providing essential information in the initial baseline of faculty involvement and simulation investment.

Self-efficacy is a concept that guides one's ability to succeed, set goals, and accomplish those goals (Miller, 2021). Bandura explained that the purpose of self-efficacy is "to organize and execute the courses of action required to manage the prospective situation" (Miller, 2021, p. 1). Using such a concept in the deployment of an educational intervention will ensure the intent of the new knowledge and its effect on practice changes.

Comparative data analysis on the pre- and postassessments began with a *t* test. Further statistical analysis was not necessarily due to the sample size of 13 participants. The results will be compiled and presented to all the faculty members and the dean and recommendations on the next steps of the path towards excellence. Simulation accreditation is the desired goal for

accredited nursing programs nationwide “to ensure that the program adheres to a high standard by providing quality healthcare education” (Khan & Sasso, 2020, para. 1).

Methodology Appropriateness

The established problem is that there is recognition among the faculty in this small liberal arts BSN program that additional education and support are required for the simulation program. Currently, there is no formal training process on the use of simulation following NCSBN guidelines. This educational intervention was based upon the ACE star cycle of quality improvement (Stevens, 2012). A core value of the nursing profession is continuous learning to improve practice. Thus, educational intervention is an appropriate methodology for improving faculty competency in simulation in order to provide an exceptional education for nursing students. The continuing education pedagogy calls for enhancing knowledge and the use of expertise in changing educational practice.

Feasibility and Appropriateness

Being an employee in the study facility increased the feasibility of this project. There was ample access to the project setting and study participants. The feasibility and appropriateness of the IRB process addressed the consideration of essential elements sensitive to the project, such as my colleagues’ use. Permission was requested and granted by the dean and the program director of the school of nursing. An affiliation agreement was deemed unnecessary by the dissertation and project managers. Considering any conflict of interest with using colleagues is appropriate and was reviewed and approved by the IRB (see Appendix D).

IRB Approval Process

IRB approval was obtained from Abilene Christian University before the implementation of the project. The investigator submitted an Exempt Research Determination Request. De-

identified data collected during this project were stored in a secure university drive under my name. The university owns the data in case access is needed at a future date. This storage system was provided by the online graduate school for doctoral student research data and supported by the university's IT department for security purposes. The data will be kept for the minimum required time according to IRB guidelines. The IRB completed a review of using colleagues as participants in the study. The response reassured the board that there is no hierarchy of position between the participants and me as the researcher.

Interprofessional Collaboration

This DNP project involved the faculty who teach at an accredited BSN nursing program. This project was completed in collaboration with the faculty who teach in the simulation program. Interprofessional collaboration included the involvement of the simulation coordinator with IT experience. Established evidence-based guidelines were utilized from the NCSBN in coordination with the INACSL. Students were not participants in the study due to their classification of a vulnerable population.

Practice Setting for EBP

The setting took place via Zoom meeting due to the enforcement of the Centers for Disease Control and Prevention (CDC) COVID-19 guidelines. Because this venue is a familiar place of employment, approval was requested from the BSN director and the dean. There were not any barriers to physical resources or the need for any additional expenses. A potential barrier was time for faculty education due to the participants' different schedules. There was no conflict with leadership as permission was granted within the School of Nursing.

Target Population

The population of interest for this study was the faculty of a BSN program at a local university. There were nine full-time faculty members and three adjunct faculty who were assigned to simulation. The simulation lab coordinator (SLC) was included in the sample as this person works alongside the faculty in the lab. The total population was projected at 13 participants to include faculty, faculty adjunct educators, and one SLC who teaches simulation at least twice per semester each semester. There was a large amount of simulation experience from this institution or other places they have worked among this population. During the spring 2021 semester, the EBP simulation guidelines were taught via Zoom through three educational sessions. These guidelines will be piloted with permission from the BSN director and dean of the program in the near future; however, this is beyond the scope of the study.

Risks

The threat of COVID-19 forcing virtual learning posed a challenge. The risks included faculty not providing honest perceptions that could skew the results. Faculty could potentially have schedule conflicts with the educational sessions, which would make the post assessment of the training incomplete. Because distance learning was enforced, Zoom meetings were scheduled with the faculty participants to complete the training, and recorded sessions were available for later viewing.

Benefits

Professionals and administrators acknowledge and encourage nurse educators to become competent in their role of teaching future nurses. Standards of competence are measured by meeting program outcomes through accreditation processes such as the American Association for Colleges of Nursing (AACN). Improved student outcomes are also evaluated to measure a

program's success. Budgetary money is spent annually in promoting nurse educators and their continuing professional development to achieve these goals. However, a recognized gap in simulation training and competency among nurse educators needs to be addressed (King, 2018). Simulation is a beneficial active learning tool but is only as effective as the facilitator and their comfort level (Jeffries et al., 2015). An evaluation of facilitator knowledge and investment in a tool such as simulation is expected to support and enhance the simulation program and positive student outcomes.

The predicted outcome of my intervention correlated improved faculty perceptions and attitudes with a structured simulation program after formal educational simulation training and the application of the NCSBN simulation guidelines. Research and evidence-based teaching strategies such as these provide educators with a framework to stay on task and know they are meeting expected outcomes. As an educator, empowerment comes from understanding expectations, having guidance through a structure, and achieving expected outcomes. In a study about teaching and learning strategies, researchers demonstrated that "if faculty feel empowered within the organization, it can positively affect the faculty's behavior, attitude and, therefore, their teaching" (Culyer et al., 2018, p. 175).

The NCSBN Simulation Guidelines for Prelicensure Nursing Programs were chosen because of the rigor displayed from a comprehensive national study concerning the use of simulation as a substitution for up to 50% of clinical hours (Alexander et al., 2015). For example, results published in 2015 showed that high-quality simulation experiences could be used in exchange for half of the required traditional clinical hours across the prelicensure nursing curriculum (Alexander et al., 2015). With multiple nursing programs nationwide implementing

these guidelines and evidence to support successful simulation, these results provided this study's framework. This project was completed over 6 months (spring 2021; see Appendix E).

Instruments and Measurement Tools

In a pre- and posttest format, the faculty participants completed a quantitative five-item list of questions based on a Likert scale rating about individual attitudes related to the adoption of simulation. This tool is O'Rourke's FAAS and was used with permission from the author (see Appendix A). The content validity of this tool was found to be .91 (Min & O'Rourke, 2017). The participants answered based on a scale of 1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree* (Min & O'Rourke, 2017). After the education on implementing the simulation guidelines, the participants were asked the same questions through the same format for consistency to compare for any difference in attitude, knowledge gain, and self-efficacy toward simulation. Based on the Kirkpatrick model, a postevaluation questionnaire on the educator's self-efficacy was given to participants to complete (see Appendix B). This quantitative questionnaire measured the outcome of the educational training.

Data Collection Management

Consent was given to all of the participants after IRB approval. This information was scanned into a file stored in a secured university drive with a protected passcode for participant privacy. The quantitative tool, the FAAS, was used with permission from the author, Dr. Jenny O'Rourke, Ph.D., APN-BC, CHSE (see Appendix A). In addition, the Educator Self-Efficacy Scale collected data and feedback about the educational training (see Appendix B).

Timeline

The timeline for this DNP project took place over 6 months. Starting in December 2020, the initial recruitment of faculty participants began. I completed the NLN education in December

2020. In January, spring 2021, the pretest FAAS was collected. The educational training sessions of the INACSL simulation guidelines were completed once a month from February through April 2021. Then posttest data from the FAAS and the Educator's Self-Efficacy Scale were collected in May 2021. Summer 2021 was used to finalize the results and prepare for the final project's defense (see Appendix E for a complete timeline).

Analysis Plan

Once the pre- and poststudy interviews were completed, organizing the data was the first step. The responses were placed in an organized format based on 11 responses and entered into an Excel spreadsheet. After the data were collected, the prestudy results were compared to the poststudy results using an Excel spreadsheet to sort information. A pre- and post-FAAS survey *t* test paired two sample for means was performed.

The data determined how effective the educational training was for the faculty and how it improved their simulation attitudes. The de-identified data collected were confidentially stored in a secure university drive under my name. The university owns the data in case access is needed at a future date. This storage system was suggested by the online graduate school for doctoral student research data and supported by the university's IT department for security purposes and kept for the minimum required time according to IRB guidelines. The participants were not able to see each other's responses. Permission to use the classrooms, the simulation lab facility, and the faculty as participants was requested and granted by the dean and the program director. An affiliation agreement was deemed unnecessary by the dissertation and project managers.

Chapter Summary

This project intended to reveal how education on EBP guidelines impacts faculty attitudes toward simulation, knowledge gain, and self-efficacy using simulation as a

teaching/learning strategy. The need for a formal simulation educational process in this small liberal arts-based nursing program was identified as the problem that served as the basis for this study. Investing in evidence-based education about faculty development and simulation and then implementing this formal educational training is crucial in this project's practice change. I took an NLN course in faculty development in simulation and then formally educated the existing faculty participants in this nursing program on the EBP simulation guidelines established by the NCSBN and INACSL ("INACSL Standards Committee," 2016). The tools used to measure this intervention's effectiveness were the FAAS (Min & O'Rourke, 2017) and the Educator's Self-Efficacy Scale.

Chapter 4: Results

Identifying the gaps in nursing education, specifically within simulation, was the goal of this study. Improving the competency of nurse educators in the use of simulation was the motivation. It is vital to evaluate the current perspective of simulation among nurse educators to identify where improvement is needed. With the use of EBP, the purpose of this educational intervention was to provide formal education using the INACSL Standards of Best Practice in Simulation ("INACSL Standards Committee," 2016) to nurse educators at a small, private, liberal arts university.

Purpose of the Project

The purpose of the project was to evaluate a small liberal arts BSN program and its faculty concerning simulation pedagogy. Educational training provided evidence-based guidelines with the intent to improve the perceptions of the faculty. Proper training and continued faculty development based on national guidelines such as the Standards of Best Practice: Simulation (INACSL) results in nursing simulation's effectiveness and quality outcomes (Sittner et al., 2015).

Discussion of Demographics

The population targeted for this study was the faculty of a BSN program at a small liberal arts university. There were nine full-time faculty members and three adjunct faculty assigned to simulation at the university. The SLC was included in the sample as this person works alongside the faculty in the lab. The total population for the study was 13 participants, including faculty, faculty adjunct educators, and one SLC who teaches simulation at least two times per week each semester. Among the participant population, there were a variety of simulation experiences.

Data Analysis

This quantitative study was performed virtually due to COVID-19 restrictions and was successfully completed without any earlier addressed risks. The faculty participants were recruited via email from one nursing school. There were 13 participants who agreed and gave consent to participate in the study. Each participant was de-identified for the pre- and postcomparison data and was informed of their right to withdraw at any time. The participants were all sent a Google Form consent that anonymously assigned them a participation number. Once the consent was secured, the FAAS presurvey (Min & O'Rourke, 2017) was sent to each de-identified participant to complete. Of the 13 de-identified participants, 11 responded to the presurvey FAAS tool.

Pearson correlation shows this study is statistically significant and that there is a strong correlation between education and increased attitudes and adoption of simulation because the *r* of .559–.659 exceeds the *a*-level of 0.05. The population standard deviation is unknown, and the sample size is small ($N < 30$). A sample size of 11 completed a pre- and post-FAAS survey for the data results. The participants also completed an Educator Self-Efficacy Scale, based on the Kirkpatrick model, about the educational training to test the effectiveness of the intervention (Miller, 2021).

The first tool used was a quantitative five-item list of questions based on a Likert scale rating about individual attitudes related to the adoption of simulation. This tool is O'Rourke's FAAS, used with permission from the author (see Appendix A). The participants answered based on a scale of:

- 1 = *Strongly Disagree*,
- 2 = *Disagree*,

- 3 = *Neutral*,
- 4 = *Agree*, and
- 5 = *Strongly Agree* (Min & O'Rourke, 2017).

The first question of the FAAS tool asked the participants if they believe that using simulation in teaching could positively affect student learning. Of the participants, 90.9% strongly agreed with this statement, and 9.1% strongly disagreed. The next question asked the participants if they believe that using simulation in teaching could positively affect students' understanding of course content. Again, 90.9% (n = 10) of the participants strongly agreed with this statement, and 9.1% strongly disagreed.

The third question asked the participants if they believe that using simulation in teaching could positively affect students' problem-solving strategies. Of those in agreement, 81.8% strongly agreed and 9.1% (n = 1) agreed. Conversely, 9.1% strongly disagreed. The fourth question asked the participants if they believe that using simulation in teaching could positively affect students' ability to analyze data. The results revealed that 63.6% of the participants strongly agreed, 27.3% agreed, and 9.1% strongly disagreed.

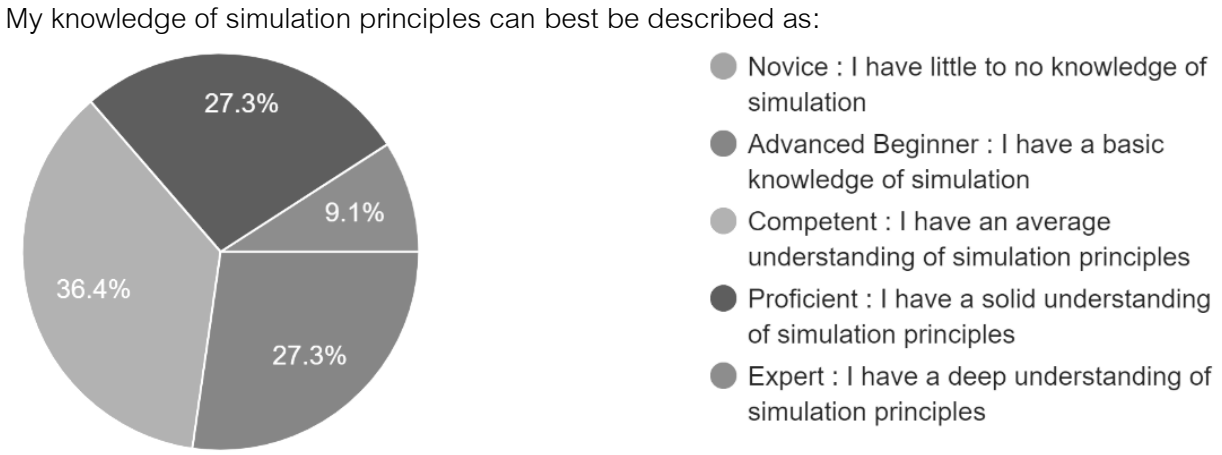
The last question that surveyed the participants' perception of simulation and student involvement asked the participants if using simulation in teaching could positively affect student participation and feedback. Among the 11 responses, 72.7% strongly agreed with this statement, 9.1% were neutral, 9.1% agreed, and 9.1% strongly disagreed.

The next set of questions using the FAAS tool measured the participant's current knowledge of simulation (see Figure 4) and their adoption of the pedagogy before the educational sessions (see Figure 5). The current knowledge results showed that 36.4% of the participants felt competent and have an average understanding of simulation pedagogy. Another

27.3% of participants felt they were proficient and possessed a solid understanding of simulation pedagogy. Similarly, 27.3% felt they were advanced beginners with a basic knowledge of simulation pedagogy. Finally, 9.1% of participants described themselves as an expert with a deep understanding of simulation pedagogy (see Figure 4).

Figure 4

FAAS Presurvey Level of Knowledge



Note. n = 11; 27.3% Advanced Beginner; 36.4% Competent; 27.3% Proficient; 9.1% Expert

The adoption results revealed that 63.6% of the participants felt they understand all levels of simulation pedagogy and its applications. This outcome suggests the faculty comprehend what simulation is used for and how to put it into practice using various types of simulation equipment. On the other hand, 36.4% of participants stated they had an awareness of simulation pedagogy but rarely used simulation to teach students (see Figure 5).

Figure 5

FAAS Presurvey Level of Adoption

Note. n = 11; 63.6% Understanding and Applying the Process; 36.4% Facilitating the Process

In February 2021, I completed an online course from the National League for Nursing (NLN), and the Simulation Innovation Research Center (SIRC) titled Developing Faculty in Simulation (NLN, n.d.). I earned two contact hours for continuing education and established the educational administrator role, which facilitated the development of the teaching program. After the completion of the FAAS presurvey, three educational sessions were scheduled virtually with the participants. Each session was approximately 1.5–2 hours long and was recorded and sent to all participants. The few participants who had a conflict were able to view the presentation at their convenience.

The sessions consisted of a PowerPoint presentation of the material learned from the NLN's online course. The most important information was the NCSBN study and EBP guidelines in simulation. After the guidelines were introduced, each section was broken down and discussed among the participants. Some participants voiced recognition of gaps in knowledge and even new information learned.

The first session occurred in February 2021. A Zoom invite was sent via email to each participant initially selected due to the actual participants being de-identified. Eleven of the 13 participants responded to the invite for the first educational session. Eleven participants attended the session virtually, and it was recorded for those who could not attend.

Two more educational sessions occurred in March and April 2021. Ten of 13 participants attended the recorded session on March 25, 2021, and five of 13 participants attended the recorded session on April 27, 2021. All three recorded sessions were sent via email to all 16 original participants due to the anonymity of the study. This concluded the educational intervention of the study.

The postsurvey FAAS tool was sent to the initial participants who consented to the study due to the de-identification process. The same participants were also sent an Educator Self-Efficacy Scale. Of the 13 de-identified participants, 11 responded to the presurvey FAAS tool.

The first question of the FAAS tool asked the participants if they believe that using simulation in teaching could positively affect student learning. After the educational intervention, 72.7% of the participants strongly agreed with this statement and 9.1% agreed. Conversely, the remaining 18.2% of participants strongly disagreed.

The second question asked the participants if they believe that using simulation in teaching could positively affect students' understanding of course content. Again, 72.7% of the participants strongly agreed with this statement while 9.1% agreed. The remaining 18.2% of participants strongly disagreed.

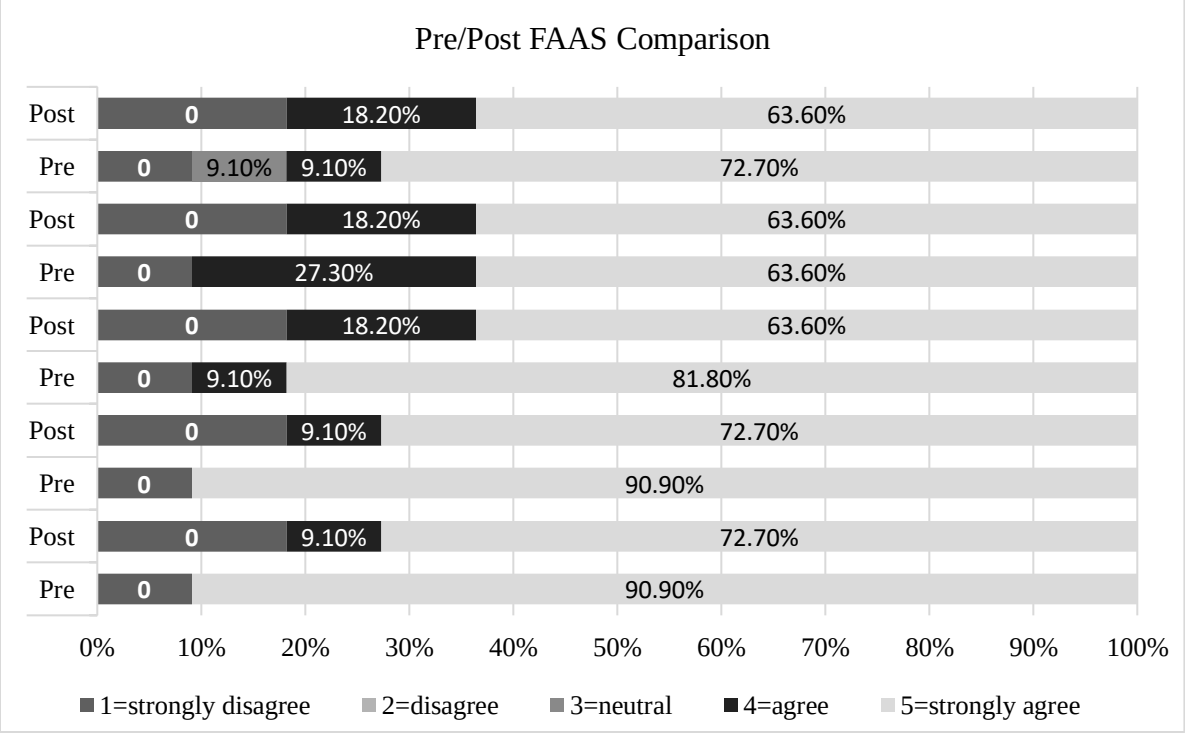
The third question asked the participants if they believe that using simulation in teaching could positively affect students' problem-solving strategies. Amongst participants, 63.6% strongly agreed while 18.2% agreed. The remaining 18.2% of participants strongly disagreed.

The fourth question asked the participants if they believe that using simulation in teaching could positively affect students' ability to analyze data. The results revealed that 63.6% of the participants strongly agreed and 18.2% agreed. The remaining 18.2% strongly disagreed that simulation could positively affect students' ability to analyze data.

The last question surveyed the participants' perception of simulation and student involvement by asking participants if using simulation in teaching could positively affect student participation and feedback. Among the 11 responses, 63.6% of participants strongly agreed with this statement, 18.2% agreed, and 18.2% strongly disagreed. Figure 6 summarizes the responses.

Figure 6

Pre/Post-FAAS Distribution Chart

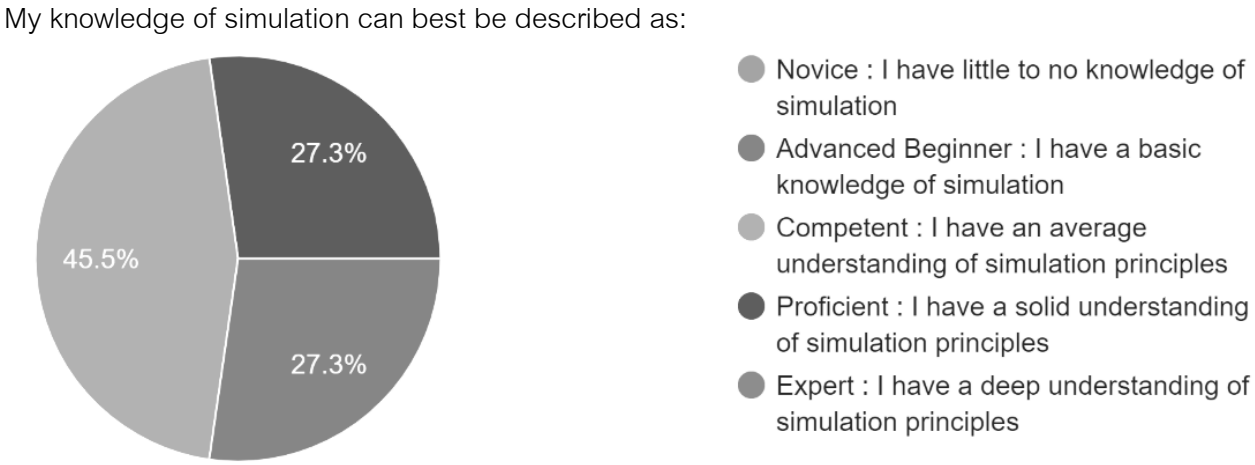


The next set of questions measured the participants' knowledge of simulation (see Figure 7) and their adoption of this pedagogy after the educational sessions (see Figure 8). The survey results for level of knowledge revealed that 45.5% of the participants felt competent with an

average understanding of simulation pedagogy. Of the remaining participants, 27.3% felt they were proficient with a solid understanding of simulation pedagogy, and 27.3% felt they were advanced beginners with basic knowledge of simulation pedagogy (see Figure 7).

Figure 7

FAAS Postsurvey Level of Knowledge

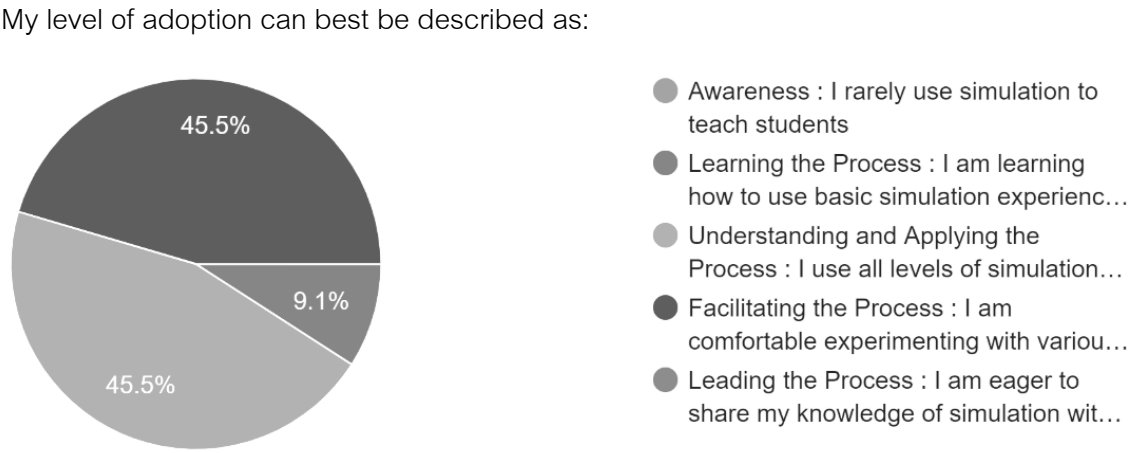


Note. n = 11; 27.3% Advanced Beginner; 45.5% Competent; 27.3% Proficient

The adoption results revealed that 45.5% of the participants understand simulation and apply the process using all levels of simulation pedagogy. Likewise, 45.5% stated that they facilitate the process and are comfortable with experimenting with the simulation pedagogy. The remaining 9.1% of participants reported that they are learning the process of how to use basic simulation (see Figure 8).

Figure 8

FAAS Postsurvey Level of Adoption



Note. n = 11; 9.1% Learning the Process; 45.5% Understanding and Applying the Process; 45.5% Facilitating the Process

The Educator Self-Efficacy Scale is a quantitative questionnaire that measures the outcome of the educational training. Nine of the 13 participants completed this 12-item questionnaire. The first question revealed that 55.6% of participants strongly agreed that they understand what INACSL is and does in nursing education. Another 33.3% of participants agreed with this statement, while 11.1% neither agreed nor disagreed.

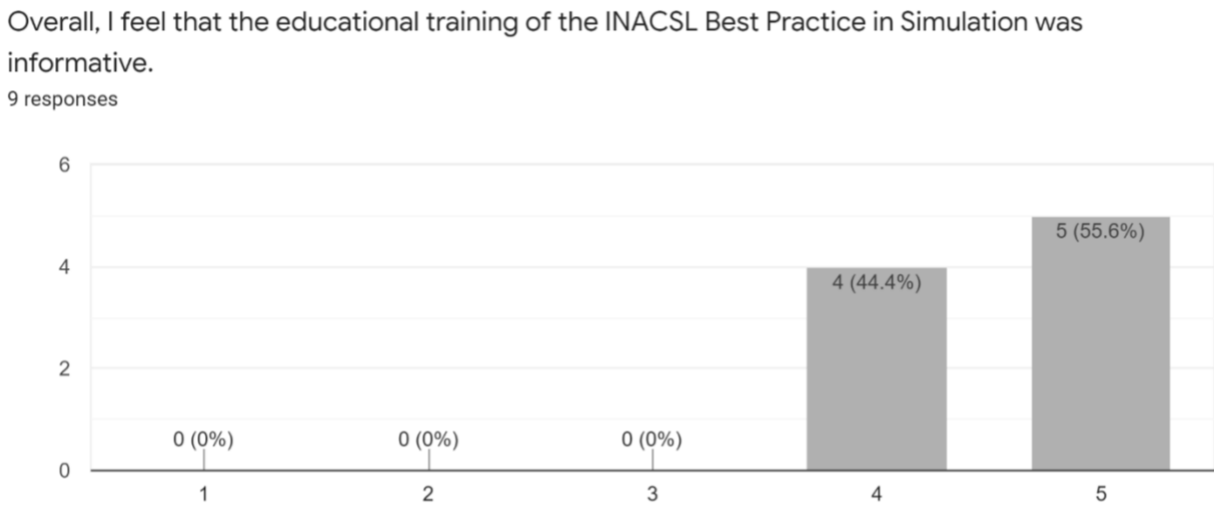
When asked the second question about their understanding of Best Practice Standards in Simulation, 55.6% of participants strongly agreed while 33.3% agreed. Next, the participants were asked how clearly the 11 criteria of Simulation Design were explained. All participants either strongly agreed (55.6%) or agreed (44.4%) that the criteria were clearly explained.

The following questions asked the participants specifically if they were introduced to all the components of Best Practice in Simulation, including outcomes and objectives, simulation facilitation, simulation debriefing, simulation participant evaluation, simulation professional

integrity, simulation-enhanced interprofessional education, and simulation operations. The results were evenly reported with 55.6% of participants who strongly agreed, and 44.4% who agreed that these components were introduced. The last two questions of this questionnaire evaluated the participants' confidence and overall feelings about simulation in nursing education. Of the participants, 33.3% reported that they strongly agreed that they feel more confident in their knowledge about simulation in nursing education. Interestingly, 66.7% of participants only agreed with improvement in their confidence level. Overall, 55.6% of participants strongly agreed that the educational training of the INACSL Best Practice in Simulation was informative and 44.4% agreed with this statement (see Figure 9).

Figure 9

Educator Self-Efficacy Scale



Question Guiding the Inquiry

Does the provision of best practice simulation education improve faculty's attitudes, knowledge, and self-efficacy? According to the study results, 45.5% (n = 5) of the faculty attitudes toward the adoption of simulation changed from 36.4% (n = 4) due to the educational information about EBP simulation guidelines that was presented. These faculty attitudes

indicated that they were comfortable with simulation and even experimenting with various simulation uses for teaching. Faculty knowledge increased from 36.4 % (n = 4) to 45.5% (n = 5) after the EBP simulation guidelines were presented. The participants felt competent and had an average understanding of simulation principles. When the EBP guidelines were explained, some faculty perceptions were validated and corrected by the research behind the guidelines. It could be surmised that once the EBP guidelines were explained, attitudes toward simulation were challenged as to how this program is currently operating and could improve. This perhaps could be why some of the attitudes changed.

Conclusion

The findings of this study were fascinating and revealed that educational training based on EBP could improve faculty attitudes and the adoption of simulation. The results also showed that continuing education is needed for faculty to consistently integrate the proper simulation deployment in nursing education. The Educator Self-Efficacy Scale showed that the training was effective, thus validating the results of the surveys.

Chapter 5: Discussion of Findings

The importance of assessing nurse educators' attitudes and readiness to adopt simulation into their curriculum was proven through this study. The results from this particular BSN program showed that informal training as a foundation for this faculty was correlational to the study's results. The data revealed variable perceptions before and after the evidence-based guidelines were presented to the faculty participants. The findings reveal that being educated in the EBP of simulation can improve faculty knowledge and readiness to adopt this pedagogy into their curriculum.

Literature has supported the acclimation of faculty to simulation based on best practices to ensure quality simulation pedagogy. Researchers have advocated for consistent simulation use by nurse educators within a structure such as the guidelines established by the NCSBN (Al-Ghareeb & Cooper, 2016). Nurse leaders need to identify barriers such as time, resources, lack of professional development, and training.

The literature has also contributed to high levels of anxiety from students, leading to adverse learning outcomes (White, 2017). Proper faculty training and continued faculty development based on national guidelines such as the Standards of Best Practice: Simulation (INACSL) results in the effectiveness and quality outcomes of nursing simulation (Sittner et al., 2015). This study shows nurse leaders that faculty may be missing the best-practice structure and necessary tools to reach a higher level of optimal outcomes. Nurse leaders must advocate for evidence-based training for faculty working in simulation to improve nursing education for the future.

Interpretation and Inference of the Findings

The findings can be interpreted in various ways. The Educator Self-Efficacy Scale, adapted from Bandura's theory of self-efficacy (Miller, 2021), demonstrated that the administrative educator was effective in delivering the material. The specific results showed that for all five questions asked, five of the nine participants strongly agreed that the content was provided effectively and clearly explained. The other four agreed with these statements. Six participants agreed that they were more confident in their knowledge about simulation after the EBP guidelines were presented. The other three strongly agreed. Overall, five strongly agreed and four agreed that the educational training of the INACSL Best Practice in Simulation was informative. Therefore, it can be deduced that the educational training sessions were solid and effective in providing knowledge and sufficient information, thus validating the FAAS tool results.

The FAAS surveys indicated that the faculty had some misperceptions about simulation before the training. Regardless of their foundational education about simulation, the survey results showed an improved or contemplative change in their attitude. Perhaps some faculty thought they knew what the best practices were and learned differently. When explicitly asked about their knowledge in simulation after the educational training sessions, one participant reported that they felt competent, and one participant changed their response from being an expert. When explicitly asked about their adoption of simulation after the educational sessions, one participant responded that they were in the "learning process." The rest of the participants were split evenly between "understanding and applying the process" and "facilitating the process."

These results reveal that the faculty participants learned new information that influenced their knowledge and readiness to adopt simulation. Does the provision of best practice simulation education improve the attitudes, knowledge, and self-efficacy of faculty? I say yes. Regarding knowledge and self-efficacy, the results suggested that whether participants had an improvement or contemplative position, they enhanced their overall simulation assessment. Thus, educating professionals within any nursing field allows for change and benefits the practice (Institute of Medicine, 2011).

The limitations of the study involved COVID-19 restrictions, with the educational sessions being delivered virtually. This barrier could have caused some disconnect between the participants and their surrounding environment. Also, the participant availability varied, as evidenced by a reduced attendance in the second and third sessions. Lastly, the small sample size could have hindered the actual results of the subject matter.

The new knowledge derived from this study is very applicable in the field of nursing. Educating the experts in a particular subject is vital to contribute to the growing body of knowledge so the profession can thrive. Nurse educators may be considered experts in their field; however, they need continuing education to keep such competency, especially in a world where technology changes daily and enhances the way in which nursing is taught. According to the ACE star model of knowledge transformation, faculty can assess and apply research about simulation by implementing the EBP guidelines, which will lead to policy changes within this nursing program.

As a model for implementation, research about the NCSBN simulation guidelines can be applied through inquiry and training while impacting outcomes through EBP (Correa-de-Araujo, 2015). As a result, faculty educators are more motivated by evidence-based research and a

structure that guides them to best practice. As evidenced by the results of this study, the faculty had some changes in their attitudes and adoption of simulation after being adequately educated about the EBP guidelines of this pedagogy.

Implications of Analysis for Leaders

One of the mission statements and goals for the nursing program involved in this study states, Ensure that the nursing program meets or exceeds the standards set by the Texas Board of Nursing, the American Association of Colleges of Nursing (AACN), and Commission on Collegiate Nursing Education (CCNE). As this is the institution's mission, the nursing leadership or administration of the program should understand the importance of this study. Implementing EBP guidelines into the policy of the simulation program is contributory to meeting the standards set by the Texas Board of Nursing and the other governing boards mentioned. Having a faculty immersed in continuing education about their field of practice, whether in simulation or teaching in the classroom, is of priority to the nursing leadership. Proper faculty training and continued faculty development based on national guidelines such as the Standards of Best Practice: Simulation (INACSL) results in the effectiveness and quality outcomes of nursing simulation (Sittner et al., 2015).

This research study on educating the faculty in a BSN program on faculty attitudes and confidence in using simulation emphasizes how necessary enhanced simulation training is to nursing education. As EBP evolves, so must nurse educators' abilities to teach the best practices to their students. If continuing education and training in simulation can be incorporated into nursing programs, this can ensure that EBP is being utilized and passed on to the students who are the future nurses who go into the field, community, and the world. In addition, this enhanced effort of EBP in simulation can translate to optimal student and patient outcomes.

It is recommended that nurse leaders invest in advancing their simulation programs as technology enhances this type of active learning. The purpose of transforming simulation labs using best practice is to bridge the gap between learning the content and implementing the application in the clinical setting. In addition, with the NCLEX NGN design emerging and simulation acknowledged as an established teaching modality, educators must learn how to combine them to improve students' clinical reasoning and judgment (Caputi, 2019).

According to the DNP Essential II, the DNP nurse's role encompasses organizational and systems leadership to quality improvement and advancing nursing practice (American Association of Colleges of Nursing [AACN], 2006). Educating and properly training confident faculty to utilize teaching strategies structured by practice guidelines can also enhance program outcomes. The outcomes from this study indicate that continuing education is needed for nurse faculty to deploy and utilize best practices in simulation adequately. As a nurse leader, I would implement this system change as a quality improvement initiative for this BSN program.

Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking

The foundation for any system or organizational change should be based on research and science. As previously mentioned, nurses and educators respond positively to the validity of research and EBP. This benchmark, which sets a standard for how nurses operate, correlates to Essential II and systems thinking.

Making a change in a nursing program should follow sound evidence to ensure a trustworthy quality improvement process. According to Essential II and the AACN, nurse leaders such as a DNP possess the expertise in assessing organizations, identifying systems' issues, and facilitating organization-wide changes in practice delivery (AACN, 2006). As demonstrated by

this study, an organization's assessment took place after identifying a system issue. The results of this study will assist me with (a) implementing a policy change within this nursing program and their simulation program, (b) establishing EBP guidelines in the curriculum, and (c) requiring continuing education for all simulation faculty.

Essential III: Clinical Scholarship and Analytical Methods for EBP

Clinical scholarship lends itself to the discovery of new knowledge through the application of research. Research leads to quality EBP that transforms nursing through real-world application. EBP has proven to be a pivotal change in how nursing continually evolves. According to Essential III and the AACN, nurse executives are identified as leaders who "require competence in knowledge application activities such as the translation of research in practice, the evaluation of practice, improvement of the reliability of health care practice and outcomes, and participation in collaborative research" (AACN, 2006, p. 12). This study has allowed for scholarly research and analytical methods for EBP to be a catalyst for an organizational quality improvement practice change.

Recommendations for Future Research

Education is a revolving door in nursing. With newer and more advanced technologies in medicine, there is a demand for further knowledge inquiry. Nurse educators are at the forefront of adopting these recent changes in medicine, which translates to their students and future nurses.

As revealed in this study of nurse educators and the use of simulation, formal educational training affects attitudes and the adoption of simulation pedagogy. The results suggest that continuing education works and is necessary for developing new knowledge based on EBP. Nurse educators must always be inquisitive and actively learn about the tools available to train new nurses. Fewer clinical spots limit a student's chance of getting hands-on experiences and

kinesthetic opportunities in healthcare facilities; thus, nurse educators must be well-informed in the EBP of simulation to provide students with quality and innovative clinical experiences. A recommendation for future research would be to investigate the efficacy of continuing education among nursing faculty on student performance and nursing theory application as they enter practice. Also, further research on whether EBP simulation makes a difference in NCLEX scores is warranted.

The literature supports the acclimation of faculty to simulation based on best practices to ensure the quality of this pedagogy. Researchers have advocated for consistent simulation use by nurse educators within a structure such as the guidelines established by the NCSBN (Al-Ghareeb & Cooper, 2016). Nurse leaders need to identify barriers such as time, resources, lack of professional development, and training.

The literature also contributes to high levels of anxiety from students, leading to adverse learning outcomes (White, 2017). Proper faculty training and continued faculty development based on national guidelines—such as the Standards of Best Practice: Simulation (INACSL)—results in the effectiveness and quality outcomes of nursing simulation (Sittner et al., 2015). This study shows nurse leaders that some faculty are missing the best practice structure and necessary tools to reach optimal outcomes. Nurse leaders must advocate for this pedagogy and improve nursing education for the future.

Conclusion

The purpose of this educational intervention was to provide formal education to current nursing educators using the INACSL Standards of Best Practice in Simulation (“INACSL Standards Committee,” 2016). This is the first step in the formal process of becoming a Certified

Simulation Facility, which is a longer-term goal of the faculty and administration of the university in this study.

Initially, an assessment was needed to gauge what the faculty of this nursing program perceived about simulation. Once the SWOT analysis was completed, the educational intervention could introduce the EBP guidelines recommended by the INACSL and NCSBN. After the educational intervention was deployed adequately, the results reflected a genuine understanding and attitude toward simulation among the faculty. The study's outcome also correlated to their readiness to adopt simulation as an active learning modality.

The ultimate goal was to improve the school's simulation program by educating those who teach in simulation frequently and providing a research-based structure to guide their teaching utilizing EBP. This step leads to the long-term goal of meeting the requirements to reach a certification level of simulation education. As revealed in this study of nurse educators and the use of simulation, the hypothesis that formal educational training positively affects attitudes and the adoption of this pedagogy failed to be rejected.

Results of this project suggest that continuing education works and is necessary to develop new knowledge based on EBP. As previously mentioned, the survey results showed an improved or contemplative change in their attitude. The faculty participants learned further information that influenced their knowledge and readiness to adopt simulation. Regarding knowledge and self-efficacy, the results proved that whether they had an improvement or contemplative position, they enhanced their overall simulation assessment.

After implementing the EBP guidelines and faculty development in the best practices of simulation, would there be more use and satisfaction in simulation pedagogy? Following nursing students' standardized exam scores after faculty use simulation based on the EBP guidelines may

offer insight into the effectiveness of simulation and its impact on nursing board pass rates. Ongoing continuing education should be implemented for all faculty requiring the use of EBP guidelines to teach simulation. Lifelong learning is essential when teaching future nurses.

References

Adamson, K. (2015). A systematic review of the literature related to the NLN/Jeffries Simulation Framework. *Nursing Education Perspectives*, *36*(5), 281–291. https://doi.org/10.5480/15-1655

Aebersold, M. (2018). Simulation-based learning: No longer a novelty in undergraduate education. *Online Journal of Issues in Nursing*, *23*(2), 1. https://doi.org/10.3912/OJIN.Vol23No02PPT39

Alexander, M., Durham, C. F., Hooper, J. I., Jeffries, P. R., Goldman, N., Kardong-Edgren, S., Kesten, K. S., Spector, N., Tagliareni, E., Radtke, B., & Tillman, C. (2015). NCSBN simulation guidelines for prelicensure nursing programs. *Journal of Nursing Regulation*, *6*(3), 39–42. https://doi.org/10.1016/S2155-8256(15)30783-3

Al-Ghareeb, A. Z., & Cooper, S. J. (2016). Barriers and enablers to the use of high-fidelity patient simulation manikins in nurse education: An integrative review. *Nurse Education Today*, *36*, 281–286. https://doi.org/10.1016/j.nedt.2015.08.005

American Association of Colleges of Nursing. (2006). *The essentials of doctoral education for advanced nursing practice*. AACN. https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf

Blevins, S. (2018, May–June). From nursing student to registered nurse: The challenge of transition. *MedSurg Nursing*, *27*, 199–200. https://search.proquest.com/openview/a4912c0df60e8110d879742c35e02650/1?pq-origsite=gscholar&cbl=

Bogossian, F. E., Cant, R. P., Ballard, E. L., Cooper, S. J., Levett-Jones, T. L., McKenna, L. G., Ng, L., & Seaton, P. C. (2019). Locating “gold standard” evidence for simulation as a

substitute for clinical practice in prelicensure health professional education: A systematic review. *Journal of Clinical Nursing, 28,* 3759–3775. https://doi.org/10.1111/jocn.14965

Brydges, R. (2016). From simulation research to education policy: How much evidence is enough? *Advances in Simulation, 1*(1). https://doi.org/10.1186/s41077-016-0023-0

Caputi, L. J. (2019, January–February). Reflections on the Next Generation NCLEX with implications for nursing programs. *Nursing Education Perspectives*, *40*(1), 2–3. https://doi.org/10.1097/01.NEP.0000000000000439

Chmil, J. V., Turk, M., Adamson, K., & Larew, C. (2015). Effects of an experiential learning simulation design on clinical nursing judgment development. *Nurse Educator*, *40*(5), 228–232. https://doi.org/10.1097/NNE.0000000000000159

Coffman, S., Doolen, J., & Llasus, L. S. (2015). Program development and evaluation of the concierge model of simulation. *Online Journal of Nursing Informatics*, *19*(2). http://www.himss.org/ojni

Correa-de-Araujo, R. (2015). Evidence-based practice in the United States: Challenges, progress, and future directions. *Health Care for Women International*, *37*(1), 2–22. https://doi.org/10.1080/07399332.2015.1102269

Culyer, L. M., Jatulis, L. L., Cannistraci, P., & Brownell, C. A. (2018). Evidenced-based teaching strategies that facilitate the transfer of knowledge between theory and practice: What are nursing faculty using? *Teaching and Learning in Nursing*, *13*, 174–179. https://doi.org/10.1016/j.teln.2018.03.003

Deng, A., Wang, J. J., & Tsui, B. H. (2020). Keeping trainees safe in a pandemic: The evolving role of medical simulation training. *Canadian Journal of Anesthesia/Journal Canadien D'anesthésie*, *67*(9), 1292–1293. https://doi.org/10.1007/s12630-020-01662-z

Gore, T., & Thomson, W. (2016). Use of simulation in undergraduate and graduate education. *AACN Advanced Critical Care*, *27*(1), 86–95. https://doi.org/10.4037/aacnacc2016329

Hatzenbuhler, N. J., & Klein, J. E. (2019). Educational preparation for clinical practice: Reflections of newly graduated RNs. *Nurse Educator*, *44*(2), 93–97. https://doi.org/10.1097/NNE.0000000000000550

Hofler, L., & Thomas, K. (2016). Transition of new graduate nurses to the workforce: Challenges and solutions in the changing health care environment. *North Carolina Medical Journal*, *77*(2), 133–136. https://doi.org/10.18043/ncm.77.2.133

INACSL Standards Committee. (2016, December). INACSL standards of best practice: SimulationSM. *Clinical Simulation in Nursing*, *12*(S), S5–S12. https://doi.org/10.1016/j.ecns.2016.09.005

Institute of Medicine. (2011). *The future of nursing: Leading change, advancing health*. National Academies Press. https://doi.org/10.17226/12956

Jeffries, P. R., Dreifuerst, K., Kardong-Edgren, S., & Hayden, J. (2015). Faculty development when initiating simulation programs: Lessons learned from the national simulation study. *Journal of Nursing Regulation*, *5*(4), 17–23. https://doi.org/10.1016/s2155-8256(15)30037-5

Khan, M., & Sasso, R. A. (2020). *Obtaining medical simulation center accreditation* [Updated 2021 Nov 21]. StatPearls Publishing

Kim, J., Park, J. H., & Shin, S. (2016). Effectiveness of simulation-based nursing education depending on fidelity: A meta-analysis. *BMC Medical Education*, *16*(1). https://doi.org/10.1186/s12909-016-0672-7

King, M. (2018). Developing a high-fidelity simulation program in a nursing educational setting. *The Health Care Manager*, *37*(3), 235–249. https://doi.org/10.1097/hcm.0000000000000217

The Kirkpatrick Model. (2017). Kirkpatrick Partners. https://www.kirkpatrickpartners.com/Our-Philosophy/The-Kirkpatrick-Model

La Duke, P. (2017). How to evaluate training: Using the Kirkpatrick Model. *Professional Safety*, *62*(8), 20–21. www.cc6798f52b45be62de591c1be70f9aa2.pdf

Mackey, A., & Bassendowski, S. (2017). The history of evidence-based practice in nursing education and practice. *Journal of Professional Nursing*, *33*(1), 51–55. https://doi.org//10.1016/j.profnurs.2016.05.009

McLeod, S. A. (2017). Kolb's learning styles and experiential learning cycle. *Simply Psychology*. www.simplypsychology.org/learning-kolb.html

Miller, K. D. (2021). *Applying self-efficacy theory: Exercises and tools*. PositivePsychology.com. https://positivepsychology.com/self-efficacy-theory/

Min, H., & O'Rourke, J. (2017). Faculty attitudes and adoption of simulation: Pilot testing of a new instrument. *Journal of Nursing Education*, *56*(6), 356–359. https://doi.org/10.3928/01484834-20170518-07

MindTools.com. (n.d.). *How good are your leadership skills?* mindtools.com/pages/article/newLDR_50.htm

Morris, T. (2019). Experiential learning – A systematic review and revision of Kolb's model. *Interactive Learning Environments*, *28*(8), 1–14. https://doi.org/10.1080/10494820.2019.1570279

National Council of State Boards of Nursing. (n.d.). *National simulation guidelines for prelicensure nursing programs*. NCSBN. https://www.ncsbn.org/9535.htm

National League for Nursing. (n.d.). *Faculty development*. https://cs3n.contentservice.net/launch_aicc?aicc_url=https://nln.digitalchalk.com/api/aicc/hacp

Poorman, S. G., & Mastorovich, M. L. (2019, August 13). Constructing next-generation National Council licensure examination (NCLEX) (NGN) style questions: Help for faculty. *Teaching and Learning in Nursing*, *15*, 86–91. https://doi.org/10.1016/j.teln.2019.08.008

Quilici, A. P., Bicudo, A. M., Gianotto-Oliveira, R., Timerman, S., Gutierrez, F., & Abrão, K. C. (2015). Faculty perceptions of simulation programs in healthcare education. *International Journal of Medical Education*, *6*, 166–171. https://doi.org/10.5116/ijme.5641.0dc7

Quinn, B. L., Smolinski, M., & Peters, A. (2018). Strategies to improve NCLEX-RN success: A review. *Teaching and Learning in Nursing*, *13*(1), 18–26. https://doi.org/10.1016/j.teln.2017.09.002

Roberts, E., Kaak, V., & Rolley, J. (2019). Simulation to replace clinical hours in nursing: A meta-narrative review. *Clinical Simulation in Nursing*, *37*, 5–13. https://doi.org/10.1016/j.ecns.2019.07.003

Sherrill, K. J. (2020). Clinical judgment and next-generation NCLEX – A positive direction for nursing education! *Teaching and Learning in Nursing*, *15*, 82–85. https://doi.org/10.1016/j.teln.2019.08.009

Sittner, B. J., Aebersold, M. L., Paige, J. B., Graham, L. M., Schram, A., Decker, S. I., & Lioce, L. (2015). INACSL standards of best practice for simulation: Past, present, and future. *Nursing Education Perspectives*, *36*(5), 294–298. https://doi.org/10.5480/15-1670

Sofer, D. (2018, April). The value of simulation in nursing education. *American Journal of Nursing*, *118*, 17–18. https://doi.org/10.1097/01.NAJ.0000532063.79102.19

Stevens, K. (2012). Star model of EBP: Knowledge transformation. https://nursing.uthscsa.edu/onrs/starmodel/star-model.asp

White, M. (2017). Keep calm and simulate on: Faculty experiences and insights into implementing best practices in simulation. *Teaching and Learning in Nursing*, *12*(1), 43–49. https://doi.org/10.1016/j.teln.2016.10.003

Appendix A: Faculty Attitudes and Adoption of Simulation (FAAS)

Please indicate your level of agreement with each of the following statements using the following scale: 1= Strongly Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5= Strongly Agree

Perceptions of Simulation	1	2	3	4	5
I believe that using simulation in teaching could have a positive effect on student learning.					
I believe that using simulation in teaching could have a positive effect on students' depth of understanding of course content.					
I believe that using simulation in teaching could have a positive effect on students' use of problem-solving strategies.					
I believe that using simulation in teaching could have a positive effect on students' ability to analyze data.					
I believe that using simulation in teaching could have a positive effect on student participation and feedback.					

Please circle the term that best describes your knowledge of simulation and your adoption of simulation:

Level of Knowledge	Novice	Advanced Beginner	Competent	Proficient	Expert
My knowledge of simulation can best be described as:	I have little to no knowledge of simulation	I have a basic knowledge of simulation	I have an average understanding of simulation principles	I have a solid understanding of simulation principles	I have a deep understanding of simulation principles
Level of Adoption	Awareness	Learning the Process	Understanding and Applying the Process	Facilitating the Process	Leading the Process
My level of adoption of simulation can best be described as:	I rarely use simulation to teach students	I am learning how to use basic simulation experiences with my students	I use all levels of simulation (low to high-fidelity) in my instructional delivery, and evaluation of students	I am comfortable experimenting with various uses of simulation for teaching and have used simulation to teach a variety of nursing concepts and to get students to analyze and synthesize information	I am eager to share my knowledge of simulation with my colleagues and I encourage student/faculty interactions in discovering and utilizing different ways to use simulation that are beneficial to learning

Note. From (2017). "Faculty Attitudes and Adoption of Simulation: Pilot Testing of a New Instrument," by H. Min, and J. O'Rourke, 2017, *Journal of Nursing Education*, *56*(6), 356-369. (https://doi.org/10.3928/01484834-20170518-07). Copyright 2017 O'Rourke. Reprinted with permission.

Appendix B: Educator Self-Efficacy Scale

After completing this training of the INACSL Standards of Best Practice in Simulation, please score your level of understanding about EBP guidelines in simulation.

Please rate your answer by recording a number from 0 to 5 using the scale below:

0	1	2	3	4
Strongly Disagree	Disagree	Neither disagree or agree	Agree	Strongly Agree

1. I understand what INACSL is and does in nursing education. _____
2. I understand the Standards of Best Practice in Simulation. _____
3. The 11 criteria of Simulation Design were clearly explained to me. _____
4. I was introduced to all the components of Best Practice in Simulation:
    a. Outcomes and Objectives _____
    b. Simulation Facilitation _____
    c. Simulation Debriefing _____
    d. Simulation Participant Evaluation _____
    e. Simulation Professional Integrity _____
    f. Simulation-Enhanced Interprofessional Education _____
    g. Simulation Operations _____
5. I am more confident in my knowledge about simulation in nursing education. _____
6. Overall, I feel that the educational training of the INACSL Best Practice in Simulation was informative. _____

Appendix C: Paired Two-Sample *t*-Test Results of Pre- and Post-FAAS Survey

	Question 1		Question 2		Question 3		Question 4		Question 5	
	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
Mean	4.636	4.182	4.636	4.182	4.545	4.091	4.364	4.091	4.273	4.091
Variance	1.455	2.564	1.455	2.564	1.473	2.491	1.455	2.491	1.618	2.491
Observations	11	11	11	11	11	11	11	11	11	11
Pearson Correlation	0.659		0.659		0.598		0.559		0.534	
Hypothesized Mean Diff	0.00		0		0		0		0	
df	10		10		10		10		10	
t Stat	1.242		1.242		1.166		0.671		0.43	
P(T< = *t*) one-tail	0.121		0.121		0.135		0.259		0.338	
t Critical one-tail	1.812		1.812		1.812		1.812		1.812	
P(T< = *t*) two-tail	0.242		0.242		0.271		0.518		0.676	
t Critical two-tail	2.228		2.228		2.228		2.228		2.228	

Appendix D: IRB Approval

ABILENE CHRISTIAN UNIVERSITY
Educating Students for Christian Service and Leadership Throughout the World

Office of Research and Sponsored Programs
320 Hardin Administration Building, ACU Box 29103, Abilene, Texas 79699-9103
325-674-2885

Dear Pricilla,

On behalf of the Institutional Review Board, I am pleased to inform you that your project titled

(IRB# 20-182)is exempt from review under Federal Policy for the Protection of Human Subjects.

If at any time the details of this project change, please resubmit to the IRB so the committee can determine whether or not the exempt status is still applicable.

I wish you well with your work.

Sincerely,

Megan Roth

Megan Roth, Ph.D.
Director of Research and Sponsored Programs

Appendix E: Project Timeline and Task List

September 2020	Recruit faculty
September - December	Start pre-implementation planning for educational training
November – December	Take NLN course myself to know how to formally educate participants about simulation guidelines
January	Gather pre-implementation data: pre-test FAAS tool
February	Implement educational training #1
March	Implement educational training #2
April	Implement educational training #3
May	Gather post-implementation data: post-test FAAS & Self-efficacy questionnaire
June	Analyze data
July	Analyze data
August	Write chapter 4 & 5
September-November?	Organize and complete DNP project

Task	Sept 2020	Oct	Nov	Dec	Jan 2021	Feb	Mar	April	May	June	July	Aug	Sept-Dec
Recruit Faculty													
Pre-imp planning													
NLN course													
Pre-test FAAS													
Implement educational training #1													
Implement educational training #2													
Implement educational training #3													
Post-test: FAAS & Self-efficacy													
Analyze data													
Write Ch. 4 & 5													
Organize and complete project													