Nurse Educators Influence on Student Success

Callie Whittington
University of New Mexico - Main Campus, cwhitt25@salud.unm.edu

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“Nurse Educators Influence on Student Success”

Callie Whittington, MSN

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Tamara Hall, DNP, RN, CPNP-PC (Chair)

__________________________
Jacqueline Wuellner, DNP, MPH, RN, CNE (Member)
NURSE EDUCATORS INFLUENCE ON STUDENT SUCCESS

BY: CALLIE WHITTINGTON

A scholarly project submitted to the College of Nursing in partial fulfillment of the requirements for the degree Doctor of Nursing Practice

University of New Mexico
College of Nursing

Scholarly project chair: Tamara Hall, DNP, RN, CPNP-PC
Scholarly project committee member: Jacqueline Wuellner, DNP, MPH, RN, CNE
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ABSTRACT

Passing nursing licensure exams is important to promising nurses. The number of times a graduating nursing student must take The National Council Licensure Examination-Registered Nurse (NCLEX-RN), reflects upon the institution of higher education as a gauge of the quality of their training programs and preparation. Student outcomes are very important to overall standing of the nursing programs, as the first attempt NCLEX-RN pass rates affect status of the nursing program. The nurse educator’s role in student success is vital and the level of education for the nurse educator can play a valuable part in this as well.

The researcher of the study used a retrospective correlational analysis design to assess 17 public nursing programs in New Mexico. These included associate degree in nursing programs (ADN), and Bachelor of Science in nursing (BSN) programs. This analysis compared the percentage of faculty with an advanced preferred degree at each institution to NCLEX-RN pass rates on the first attempt among graduating registered nurse (RN) students from these same 17 public nursing programs. The researcher examined the results over the past 5 years, from 2014-2019. Based on the findings from this study, the data suggest that public nursing programs in New Mexico which employ full time nursing faculty with advanced preferred degrees may see positive effects on NCLEX-RN pass rates.

Keywords: nurse educator, faculty, educator, nursing faculty, barriers to role, barrier to nurse educator role, student, nursing student, NCLEX-RN, National Council Licensure Examination for Registered Nurses success, success on board certification, nurse, registered nurse, shortage in United States, nurse educator, faculty educator, nursing faculty, faculty attributes, educational status, examination outcomes, exit examinations board certification, pass rates.
DEDICATION

I would like to dedicate this project to my husband and children. Matt, you have heard more projects and edited more papers than I can count, and you deserve a gold medal for your patience. You rooted me on when I needed a cheerleader and I know that my success would not have been possible without you. Thank you for putting up with my endless years in school and the advancement in my career. Receiving my terminal degree has always been my goal and your support in my endeavors means more to me than you will ever know.

Avery and Cameron, I know that you have put up with me being in front of the computer for many years now working on endless projects and being in class. I hope that you know I put in this effort to show you that no dream is impossible when you put your mind to it. You have made me want to be the best version of myself and I cannot thank you enough for that. Thank you for your patience with me during this process. Now let’s go celebrate!!!

To the rest of my family. My parents, siblings, and in-laws. Your support in this process has been so encouraging and detrimental to my success. The phone calls, brainstorm and paper edits made this degree go more smoothly and I know that your help was key. Thank you from the bottom of my heart.

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CHAPTER 1
Introduction and Background
In New Mexico, nursing students passing The National Council Licensure Examination-RN, NCLEX-RN, on the first attempt is a priority. Nursing schools, both two-year and four-year, are rated in accordance with students' success on licensure examination (also referred to as boards). In addition, only the student’s first attempt at taking the NCLEX-RN is reported to determine the school’s overall pass rates. Not surprisingly, schools have responded to the imperative nature of passing the test by implementing a change in processes (Clarke, 2017). These changes include increasing the frequency of student testing throughout the program, adapting admission standards, and requiring exit exams before exiting the program (Clarke, 2017).

Moreover, the NCLEX-RN scores reflect on the school either positively or negatively, depending on the student outcome. If the reported scores continue to be above the necessary standard (80%), the nursing school can proceed with their current plan of action (New Mexico Board of Nursing, 2017). However, poor pass rates (<80%) for two consecutive years make it necessary for the school to develop a plan of corrective action to be submitted within 6 months, and an evaluation visit to the campus may be required (New Mexico Board of Nursing, 2017). Current nursing shortages across the nation, especially in the state of New Mexico, make it imperative that students successfully graduate from programs and pass boards to help bridge this deficit. Successful graduates can enter the workforce and care for impoverished and underserved populations within the state.

Despite its significant role in shaping nursing school’s curriculum, Clark (2017) argued that the NCLEX-RN was not considered a traditional test in many ways. Specifically, the author pointed that because the test did not simply take the exact same questions and present them to
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every student in the same order, and that it was considered an adaptive test (Clarke, 2017). Moreover, the questions, whose difficulty had already been calculated, were carefully chosen from a pool based on how well the test taker had done on previous questions (Clarke, 2017). Each test taker answered different questions, and some completed their test in 75 questions, whereas others took over 200 for the program to determine a pass or fail decision (Clarke, 2017). In its history, the exam is focused on four main areas of practice, which include (1) safe effective care environment, (2) health promotion and maintenance, (3) psychosocial integrity, and (4) physiological integrity (Staff Writers, 2020). Ultimately, the sole purpose of the NCLEX-RN was to determine if the graduate nursing student possesses the required entry level of safety in patient care (Kaplan Nursing, n.d.). Currently, it costs the graduate nursing student $200 for each attempt of taking the NCLEX-RN, whether successful or unsuccessful (Staff Writers, 2020).

In addition to the test, influence on student success can come from many different avenues, including the nurse educators level of education in relationship to student outcomes of passing boards. For nurse educators, a barrier may exist for transitioning from bedside nursing into the role of academia (Summers, 2017). Initially transitioning to the educator role made some nurses have mixed feelings about expertise in their role (Goodrich, 2014). Furthermore, feeling overwhelmed by expectations and role confusion were other reported stressors for nurse educators (Summers 2017). In fact, nurse educators were deemed as ineffective and have a negative impact on student outcomes for the first three years of their academic career directly related to role transition (Coenen, 2018). This is largely due to the nurse educator feeling unprepared and not able to meet the educational needs of their nursing students.

There are some ways that nurse educators can modify teaching modalities to allow students the opportunity to grasp the concepts more effectively. Nurse educators can accomplish
this by ensuring that all types of learners are accommodated in lecture style (Jeffreys, 2015). Success on the NCLEX-RN will be a reflective outcome of students being successful. Instructors should identify barriers to student success via peer-reviewed research and address these obstacles to create productive pathways to student success (Jeffreys, 2015). By addressing barriers that influence student success, nurse educators can help make students more successful and create more positive outcomes.

Nurse educators play a pivotal role in student success. In previous years, student success was thought to be the work of the individual student, but more recent research highlights the link between this success and the student’s educators and institutions. Student’s success or failure ultimately is reflective of the nurse educator as well and does not only impact the student (Mehaffy, 2018). It is essential for educators to identify this link and make every effort within their power to achieve student success, because overall success for a student is success for all.

Nursing students were reported to occasionally overestimate their ability to be successful in school. Such environmental factors as family and financial responsibilities, childcare gaps, living arrangements and transportation can have a negative impact on student success if security in these areas is not in place (Jeffreys, 2015). Additionally, these influential factors placed on both the nurse educator and the students themselves can affect academic achievement. Students not being successful academically means that they will not be able to graduate and help the workforce that needs them so badly.

New Mexico, designated as a low-income, rural state, faces challenges with the nursing shortage (Reagan, 2016). More specifically, New Mexico was projected to be a grade ‘F’ by 2030 with a shortage of 7496 nurses, compared to other states such as South Dakota with a projected grade of ‘A’ and a surplus of 3633 nurses by the same date (Zhang, Tai, Pforsich, &
Lin, 2018). In today’s economy, college degree attainment has become mandatory for functioning in society. By 2025, at current graduation rates, there will be an 11 million job deficit in all fields that require college degrees that will not be able to be filled (Mehaffy, 2018). Greater student achievement in all degree fields will fill vacant positions within the workforce and will overall create a more thriving economy (Mehaffy, 2018). Graduating nursing students specifically being successful in school and passing boards can help to fill this workforce void and help eliminate this statewide deficiency.

Problem Statement

Nurse educators can teach for one year with their bachelor’s degree (New Mexico Board of Nursing [NM BON], 2016). After one year of teaching, nurse educators are required to obtain a master’s degree within 5 years in all New Mexico nursing institutions (Accreditation Commission for Education in Nursing (New Mexico Board of Nursing [NM BON], 2016). However, nurse educators can teach with a bachelor’s degree until completion of the advanced preferred degree. Limited research is available to support the benefits of terminal degrees for nurse educators and the impact on student success with more credentialing by the nurse educator. Ultimately, this study provided an analysis to see if there was a correlation between educators with advanced preferred degrees and the relationship to student outcomes of passing the NCLEX-RN on the first attempt.

Student success directly depends on the efforts of the students as well as their preparedness by nurse educators. This study answered the question, among public nursing programs in New Mexico, “Does having a higher percentage of faculty with institutional preferred advanced degree compared to a lower percentage faculty with a preferred advanced degree result in higher first-time program pass rates on the NCLEX-RN among graduating RN students over the past 5 years?”
Study Purpose/PICOT Question
The purpose of my research was to investigate the effects of nursing educators’ level of education on nursing students’ board outcomes over the past 5 years in 17 identified public nursing programs New Mexico. After the research was conducted, I was able to make a recommendation based on the data from 8 public nursing programs in New Mexico regarding the basal educational obtainment requirements for nursing educators when considering positive impacts on nursing students passing the NCLEX-RN.

The PICOT (Population/ Patient/Problem, Intervention, Comparison, Outcome, Time) question for this scholarly project was: “Among public nursing programs in New Mexico does having a higher percentage of faculty with institutional preferred advanced degree compared to a lower percentage faculty with a preferred advanced degree result in higher first-time program pass rates on the NCLEX-RN among graduating RN students over the past 5 years?”

Study Objectives and Aims
The study involves a retrospective, correlational study design to examine quantitative data from 17 identified public nursing programs in New Mexico over the last 5 years. The overarching aim of this study is to provide an analysis to see if there is a correlation between educators with advanced preferred degrees and the relationship to student outcomes of passing the NCLEX-RN on the first attempt. The objectives for this study include (1) to identify current relationship of student outcomes in relationship with nurse educator educational background, (2) to identify current pass rates in all public New Mexico nursing programs over the past 5 years, (3) and to identify the percentage of highest nurse educator advanced preferred degree related to student success.
Scope of the study

The scope of the study focused on investigating the relationship of nurse educators' advanced preferred degree percentage at the institutional level and student outcomes on the first attempt taking the NCLEX-RN in New Mexico. Programs included in this study are 17 identified public nursing programs in New Mexico. The researchers looked at data over the past 5 years for NCLEX-RN pass rates. Programs excluded from this study included any private or for-profit nursing programs to keep data consistent in the public realm. Also excluded were RN-BSN programs, RN to Master of Science in nursing (MSN) programs, BSN-MSN programs, non-prelicensure programs, or any PhD/DNP (doctoral) programs as no NCLEX-RN pass rates were associated.

Assumptions

There were several assumptions for this study. These include:

1. The first assumption was that the retrospective data was accurate.
2. The second assumption was that all nurse educators at the same level of education have the same effect on student outcomes.
3. The third assumption was that nurse educators in their first three years of teaching will have a negative impact on student outcomes due to inexperience (Coenen, 2018).
4. The fourth assumption was that some faculty will have a difficult time transitioning from their role of bedside nursing to academia.
5. The fifth assumption was that some students will have a difficult time passing the NCLEX-RN despite adequate preparation from institution and nurse educators related to personal factors with test taking such as testing anxiety, learning deficits or language barriers.
6. The sixth assumption was that student environmental factors will affect some student’s ability to be successful. These environmental factors include financial status, family crisis, employment, family support, living arrangements, and transportation (Jeffreys’s, 2015).

7. The seventh assumption was that the students graduating and taking boards will enter the workforce and help fill the void in the nursing shortages in New Mexico.

Significance of the Study
This study was important, because there was not a significant amount of research previously conducted to prove that a nurse educators educational background or advanced preferred degree had an impact on student outcomes. I hope that the findings are meaningful and valuable to the current knowledge base and will allow a standardized expectation for nurse educators educational background to be established for the specific types of institutions, whether that is a two-year academic setting or a four-year academic setting. Furthermore, I hope that this study showed the importance of nurse educators reaching their advanced preferred degree to aid in student success and overall help in the student’s ability to pass the NCLEX-RN on the first attempt.

CHAPTER 2
Review of the Literature
As previously stated, this scholarly project focused on investigating the relationship between the percentage of nurse educators’ institutional advanced preferred degrees and student outcomes on the first attempt taking the NCLEX-RN. Originally looking at only the educational level of the instructor was too narrow, and the search was broadened to include other factors that affect the research overall. A literature review of four main areas which contribute to the main research topic revealed a significant amount of information for this topic. These four areas
include barriers to the nurse educator, barriers or influences to student success (specifically on the NCLEX-RN), nursing shortage nationwide and local impact, and educational background of instructor. The goal was to look outside the field of nursing at other healthcare domains, including physician’s assistant (PA) and physical therapy (PT) students, to determine whether the educators educational preparedness had an impact on student outcomes.

Boolean search terminology was specific to the four topic areas relating back to the project which included nurse educator level of education, barriers to the nurse educator role, NCLEX-RN pass rates and RN nursing shortage nationwide. There were numerous searches over several months to collect articles. Some criteria and key words for nurse educator barriers search terminology included nurse educator OR faculty OR educator OR nursing faculty AND barriers to role OR barrier to nurse educator role. Some search terminology to student success included student OR nursing student AND NCLEX-RN OR National Council Licensure Examination for Registered Nurses success OR success on board certification. Some search terminology for nursing shortage included nurse, OR registered nurse AND shortage in United States. Lastly, for educational background some terminology included nurse educator OR faculty OR educator OR nursing faculty AND faculty attributes OR educational status AND NCLEX-RN OR National Council Licensure Examination for Registered Nurses examination outcomes, OR exit examinations OR board certification OR pass rates. Plurals and spelling variants were also taken into consideration.

The limiters for this study included that the journal be published in English and peer-reviewed. Articles published within the last 5 years were preferred, however some articles published outside this timeframe were used in this literary search, because of their application.
Sentinel articles proved to be necessary to build a foundation of knowledge for this topic, as there are not substantial works published about the exact topic.

Kuss (2014) utilized a cross-sectional retrospective design for 40 public and private Associate Degree Nursing (ADN) programs in Florida to research if faculty educational preparation has a direct relationship to student outcomes for the NCLEX-RN. The author used the input-output model as the theoretical framework and found that there is no statistically significant difference between doctoral prepared nurse educators versus masters prepared in relationship to student outcomes. The author used IBM Statistical Package for Social Sciences (SPSS) data software platform to analyze the data. Limitations of this study included that no survey instrument was used, only nursing programs in one southern state were evaluated (Florida), small sample size, and many programs did not choose to participate or respond to survey.

Similarly, Bushardt (2012) studied the impact of the educators influence on pass rates in physician assistant certifying exam using regression analysis of several online programs throughout the United States. Data were input into IBM SPSS for analysis. In this study, the data indicated that although a doctoral degree should be a goal for PA programs, the additional educational preparation does not have enough research to be proven as a worthwhile endeavor. Institutional financial efforts in PA programs should not focus on faculty educational advancement toward doctorate degrees but should be reserved for improving student-to-faculty ratios by providing more instructors. Limitations of this study included that data for all variables were not available with approximately 22 programs having missing pass rates.

Novak (2011) used the input-output theoretical design to study faculty attributes and its impact on physical therapy student’s ability to pass national certifying exams. The author used a retrospective study design of 233 programs in the United States and applied backward deletion to
predict first-time pass rates. Specific data attributes collected from online reports were used in this study which included employment status, clinical specialization, years of teaching, educational degree designation, and licensure designation and were input into IBM SPSS for analysis. The data indicated that full-time years in teaching and full-time faculty with a terminal degree had statistical significance on student outcomes associated with first-time board pass rates. Limitations of this study included lack of recent publications, retrospective study design, pass rate time frame, and no variance control.

Coenen (2018) used a comprehensive systematic review of forty-four articles over the last ten years to analyze the intricate relationship between teachers and student performance. The author found that an educator's quality of secondary education has an impact on student success. Additionally, Coenen emphasizes that nurse educators actually have a negative impact on student outcomes in their first 1-3 years of their educational careers. Limitations identified by the author include future research being more focused on specific mechanisms of teacher effectiveness.

Bagley (2018) used the input-output framework to identify barriers regarding the transition to becoming nurse faculty. Identified barriers included aging academic faculty members, financial limitations, environment of academia and transitioning difficulties into this role. The author used a qualitative design approach to perform both one-on-one and group interviews on ten nurse educator participants. Additionally, the study revealed two major themes of identified barriers of perceptions of the academic educator role and barriers to becoming a nurse educator. The author identified that by addressing barriers, a smoother role transition can be created for the nurse educator. Limitations of this study include data saturation, consistency of interviewers, no male participants, and biases of recruitment of participants.
Summers (2017) used an integrative review of 3,505 papers to identify factors that can either facilitate or impede a nurse educators transition into an educational role. The author identified 27 studies that indicated lack of formal training and inadequate preparation into role as barriers. Providing support to this transition can provide better outcomes for educators and students alike. Overall, the author identified that more needs to be done to prepare and support novice nurse educators in their transition to academia. Limitations of this study include publication bias, and some studies having limited participants and generalizability.

Goodrich (2014) utilized a convenience sample for electronic mail and online survey to describe the role transition to nurse educator. The Career Transitions Inventory instrument was used to measure the nurse educators level of readiness, confidence, personal control, support, and independence. The author used descriptive, qualitative design to answer the research questions from the four self-reported electronic surveys and input the data into IBM SPSS for analysis. Multivariate analysis of variance was then used by Goodrich (2014) to determine whether the educator had an intention of staying in the role. The author found that an overwhelming majority (n=478) of the 541 academic nurse educators surveyed intended to stay in the role despite the perceived barriers of challenges of balancing work-life responsibilities. Limitations of this study include the sample population did not have equal distribution of gender or age and results only being generalizable to participating population, contributors must have internet access to participate, and some questions needed to be examined in alternate formats.

Brigley (2018) performed a literature review of qualitative studies to review consistent barriers to nurse educators. A primary barrier identified by the author is conversations with students about performance, especially when the performance is poor. The author developed a Performance Conversation Concept Map to allow nurse educators to overcome this barrier and
have successful conversations with students about performance. The author created the concept map based on three crucial perspectives in discussion that are student perspective, patient perspective, and profession/university perspective. The author found that educators were growing in confidence of their evaluation in student performance with use of the concept map tool. There are no identified limitations of this study.

Wenner (2019) performed a qualitative phenomenological study where 14 RNs were interviewed using online conferencing. The aim of this study was to explore what nurses experienced in their role transition from a clinical expert to a faculty member. The author revealed seven key themes the participants shared from lived experiences. These were (1) different background, different experiences; (2) guidance and support; (3) challenges along the way; (4) maintaining two work roles; (5) influences of prior work experience; (6) influence of personal attributes; and (7) recommendations for successful transition. The author found the work role transition is highly individualized and multifactorial. Limitations of this study included barriers of not all participants being comfortable with technology and choosing to use the telephone for interview versus a video camera, participants not reading/receiving participation email, the author having a potential bias as a clinical expert, and only one male adjunct faculty participated in the study.

Opsahl (2018) performed a study at a four-year university in the Midwestern United States to assess the effectiveness of implementation of an online coaching program to improve student learning outcomes. Senior BSN students were provided access to an online MSN-prepared coach who worked with the students’ weekly on focus areas related to the NCLEX-RN examination (Opsahl, 2018). The author used electronic surveys to analyze student satisfaction of the online coaching program through a mean average scoring of the seven-point Likert scale. The author then
assessed NCLEX-RN pass rates via $t$-test comparison with an analytical survey software program before and after implementation. Opsahl (2018) found the pass rates improved significantly (from 66% in 2013 to 95% in 2016) with supplemental academic support. There were no identified limitations of this study.

Reyes (2015) utilized a qualitative study design to explore nursing students’ understanding and representation of resilience. The author used the ‘pushing through’ theory to represent nursing students’ understanding of resilience and its application to nursing school. The author found that more than a characteristic trait, students’ can be taught resilience. The theory of ‘pushing through’ is applicable for students during the stress of nursing school to learn opportunities to enhance resilience and achieve positive academic outcomes. Furthermore, nurse educators can use this design to apply appropriate strategies to support students in their challenges throughout nursing school and not allow the student to be problem focused in their mindset. Limitations of this study include only participants from one university were interviewed and most participants were Canadian-Caucasian females (83%) in their second and third year of the BSN program. Transferability of findings to larger populations might be difficult given the original sample.

Mehaffy (2018) developed a rationale for student success by analyzing two articles on the topic. The two articles analyzed are generated from reports on 44 campuses focused on the Re-Imagining the First-Year project which draws attention to student success. The author found several key factors necessary to student success and that the failure of the student is also linked to the educators and institutions as well. There were no identified limitations of this analysis by the author.

Conklin (2019) identifies a process, known as Kaplan Learning Integrated Course (KLIC) as a strategy for student success. The course was implemented to guide students in becoming more
active in NCLEX-RN preparation and have effective test-taking strategies prior to sitting for boards. Different classes were inducted into the curriculum at different points of the semester to aid in student success. After implementing the KLIC, the cohort had a 91.38% pass rate in 2013 on the NCLEX (previously 74.75% in 2010). There were no identified limitations of this analysis by the author.

Mager (2017) analyzes a successful 10-step action plan implemented after one nursing school experienced a ten percent dip in NCLEX pass rates. These proactive strategies helped this school increase pass rates by ten percent in one year. The 10 identified steps are (1) implemented organizational structures to promote success, (2) reviewed curriculum in conjunction with student performance outcomes, (3) measured critical thinking using commercially available tools, (4) conducted a curricular gap analysis, (5) examined test construction, test item analysis, and relation to the NCLEX, (6) instituted use of computer-based testing, (7) examined grading and exam practices, (8) incorporated study and test-taking skills into introductory nursing courses, (9) examined course-grade data from unsuccessful NCLEX completers, and (10) conducted focus groups with faculty and students. There were no identified limitations of this analysis by the author.

Buerhaus (2017) analyzes major trends in healthcare and their implications to nursing. The study looks at four major challenges including the aging baby boomer population, physician shortages, accelerated rate of RNs retiring over the next 15 years, and the effects of the Affordable Care Act. The author addresses that the most important step moving forward is that all RNs see themselves as leaders in healthcare and influence the care delivery continuum. Nurses should anticipate challenges and spearhead the issues that lay ahead in the nursing workforce in years ahead. The author does not identify any limitations.
Zhang (2018) uses a forecast future demand model and grading methodology to examine the extent of the projected nursing shortage in the United States from 2016 to 2030 from previous studies. The author breaks down registered nurse (RN) shortages to three levels: national, regional and state. The author identifies that by 2030, the South and West regions will have the highest shortage ratios of RNs, and the impact of the three levels will continue to grow across the United States. The author further identifies the nursing shortage having a significant effect and that by 2030 half a million RN jobs in the United States will be vacant. Limitations of this study include in the demand model the start year of 2015 is a significant assumption, assumption that there is no shortage prior to 2015, the personal health expenditures (PHE) used the national slope to convert change and shows a larger demand in some states, the average age of an RN in certain states was assumed to be the same, the study did not project to include increasing nursing school enrollment, not including foreign born nurses in the RN supply, some studies researched projected the shortage to be much smaller, unemployment rates were not included in statistics, and technology efficiency was not considered in nursing responsibilities.

The article by Auerback (2015) attempts to forecast both the size and age distribution of the nursing workforce by 2030. The author uses a retrospective analysis to compare nursing workforce by 2030 to the recently projected analysis by the Health Resources and Services Agency. The author found that the nursing workforce will reach an average age of 44.4 in 2015, and from there the workforce population will continue to age, but the forecasts will not match what was projected a decade ago. With the retirement of more than one million nurses, the nursing supply is projected to fall short of the demand by 128,000 (4%) of nurses by 2025. This estimate is much closer to meeting requirements than previously thought. Uncertainty in predictions arise based on several complications. These include that although the retirement of baby boomers is
predictable, the number of RNs that will enter the workforce over the next two decades is not. Assumptions made on recent trends are based on previous patterns and observations in first-time NCLEX-RN test takers. No specific limitations were identified in this study.

Lastly, the article by Beauvais (2013), identifies the significant relationship between psychological empowerment, resilience, spiritual well-being, and academic success in 124 undergraduate and graduate students at a private Catholic university. The author uses a descriptive correlational design to assess data from a survey response. The author found that emotional intelligence is related to academic success in graduate students but had a small effect size on undergraduate students. Attrition in universities is essential to promote student success. Instructors having a better understanding of the role of emotional intelligence, empowerment, resilience, and spiritual wellbeing is key to student success and retention. This retention overall allows students to graduate and become a member of the workforce which overall helps fill the void of the forecasted nursing shortage. Limitations to this study include a small study sample that is not reflective of all nursing students. Also, the setting was one specific Catholic university and may provide different spiritual support as opposed to a non-religiously affiliated university. Another limitation includes a potential bias of self-reporting spiritual well-being, resilience, psychological empowerment, and GPA scores. A procedural limitation of two mandated websites for use on responses is also identified by the author.

**Literature Summary**
Nurse educators play a big role in student success. Ultimately, more and more pressure is being placed on public New Mexico nursing schools for accomplishment. This pressure can drive some students or can serve as a barrier for other students. Nursing schools need to have resources available to students to help them succeed, and nursing instructors need to be willing to aid students in this success. Looking at faculty education preparedness as one of the keys to
student success is another approach to student readiness for the NCLEX-RN. Students successfully accomplishing boards will be an aid to nursing school outcomes and will bridge the gap in the overall nursing shortage in New Mexico.

Faculty educational level does prove to have a statistical significance on student outcomes (Kuss, 2014). Research demonstrates that although there is statistical significance of an educators level of education and student outcomes, more education may not always be in the best interest of the students. In fact, Novak (2011) discusses that educational level, especially in associate degree programs, should be focused on bachelor’s or master’s prepared educators (Novak, Dawn-Cross, & Echternach, 2011). Higher attainment of credentialing should be reserved for those in research (Novak, Dawn-Cross, & Echternach, 2011). Additionally, Bushardt (2012) encourages that efforts should be focused on increasing faculty to student ratios, rather than faculty attaining higher educational certificates (Bushardt, Booze, Hewett, Hildebrandt & Thomas, 2012). Furthermore, Coenen (2018) identifies that secondary education quality for the educator is essential in successful student outcomes.

Faculty must get more comfortable with providing necessary feedback to the students in both the theory and clinical environments (Wenner & Hakim, 2019). Students passing the NCLEX-RN boards is vital to both the student themselves as well as the college from which they graduated. Pass rates on the first attempt reflect directly back to the college where the student received training and is the basis for much funding from different entities, as well as recruitment for incoming students (Quinn, Smolinski, & Peters, 2018). More students passing boards and attaining expansion in the field will help to solve the nursing shortage crisis and reduce the likelihood of this approaching devastation. Students staying in programs and graduating is part of the success pathway as a whole. Reyes (2015) identified the concept of resilience as a key to students staying
in nursing programs. ‘Pushing through’ is essential to completion of programs and resilience was identified as a concept that can be taught by the nurse educator and is not simply an inherent trait (Reyes, Andreusyszyn, Iwasiw, Forchuk, & Babenko-Mould, 2015).

Collectively the research provides that there is a lot of work to be done in the impending gap for the nursing shortage. Although luckily the shortage is not projected to be as vast as once expected, it is an area that needs continued new graduates being poured back into the equation to make up for shortcomings (Auerbach, Buerhaus, & Staiger, 2015). Many areas across the United States are still predicted to be negatively impacted by the nursing shortage, especially across the South and West regions (Zhang, Tai, Pforsich, & Lin, 2018). New Mexico, in particular, will be very affected by this shortage, with an expected deficit of almost 7500 nurses by 2030 (Zhang, Tai, Pforsich, & Lin, 2018). Nursing programs having more faculty to accept more students will allow more output to reduce the present gap that will continue to grow over the next 2 decades of the nursing shortage. Students having the keys to be successful on the NCLEX-RN will allow them to get into a position and begin to thrive in the job that they have individually worked so hard to attain (Buerhaus, Skinner, Auerbach, & Staiger, 2017). Beauvais (2013) identifies that intentionality of student academic success can allow for students to graduate and lessen the forecasted nursing shortage. Psychological empowerment, resilience, spiritual well-being and academic success are key factors found in students who are successful in academia (Beauvais, Stewart, DeNisco, & Beauvais, 2014).

Overall, there is a multifaceted thought process that needs all wheels well-oiled and functioning to help students be successful in nursing school and pass the NCLEX-RN on the first attempt. Nursing student persistence, retention and success are all desired outcomes universally, however the key to success remains elusive and challenging (Jeffreys, 2015). It is the responsibility
of the nurse educator to become proficient in their field by receiving advanced preferred degrees and with time become competent and comfortable in their role. Students must utilize resources available to them to help them through the challenging time known as nursing school. Lastly, it is the responsibility of both the educator and the student to put together all these tools to achieve the success of passing the NCLEX-RN boards on the first attempt. This will allow the graduating student to go out into the workforce and help fill the gap of the nursing shortage.

CHAPTER 3

Theoretical Model and Methodology

This researcher used Jeffreys’s Nursing Universal Retention and Success (NURS) model (2012) as the theoretical framework. Jeffreys’s NURS model is a specific model used to present a globally applicable framework for examining the multidimensional factors that affect nursing student retention and success (Jeffreys, 2012). The basic premise of this model focuses on student retention and explores the question “why do students stay” as its emphasis (Jeffreys, 2012). The model indicates retention choices, perseverance, and optimal results with a multitude of student influencing factors (see Figure 1).
Specifically, the NURS model presented in Figure 1 highlights retention decisions that are based on the student and their ability to be successful in academia (Jeffreys, 2012). These include student profile characteristics, academic factors, student affective factors, environmental factors, psychological outcomes, professional integration factors, academic outcomes, and outside surrounding factors (Jeffreys, 2012). All of these retention decisions create innovative strategies that will make a positive difference in the life of the student (Jeffreys, 2015).

Jeffreys’s NURS model explores the many factors which affect students and their ability to be successful and provides an ‘A-Z’ list of action ideas for optimizing student outcomes (Jeffreys, 2015). These action steps challenge the nurse educator to become creative in their approach to education and delivery of educational content for student success. Strategies support the idea that nurse educators should use a variety of ways to present materials, such as “K-know the students by name, give kudos frequently but judiciously, and provide feedback kindly,” “L-livening up the lectures,” “M-motivate and mentor students,” “T-transform teaching to thought-provoking” sessions and “V-validate and value students via various venues that showcase their success” (Jeffreys, 2015). This list is intended to be a springboard for further development and challenge the nurse educator to adapt teaching strategies (Jeffreys, 2015).

Furthermore, the NURS model allows nurse educators to address the changing student population (Jeffreys, 2012). Today’s student population is trending toward nontraditional students (Jeffreys, 2012). Specifically, in a two-year, associate degree of nursing (ADN) program, many students come to this career field after a multitude of life events that change their circumstances and require a different approach to learning. Nursing student retention is a priority.
focus for nursing programs and nurse educators alike (Jeffreys, 2015). Keeping students in the program is a dynamic and multidimensional phenomenon, influenced by multiple factors which may influence the student’s ability to be successful in school (Jeffreys, 2015). These factors can include anything from problems with transportation to school, to childcare issues, to not being able to afford tuition or textbooks (Jeffreys, 2015). Optimizing student outcomes can best be accomplished by adopting a holistic approach that focuses on all the factors that can affect student success, rather than the narrow view of only the student themselves (Jeffreys, 2015).

Additionally, an MSN degree with an emphasis in nursing education creates opportunities for nurse educators to learn different ways to teach content and ensure that all types of learning styles are met. Just as no two persons are alike, no two students are identical or the same in their learning modalities. Jeffreys’ (2015) NURS model directly supports utilizing teaching strategies that promote learning in visual, auditory, reading/writing, and kinesthetic styles. Addressing the variety of learning styles will help students grasp content for successful application to their nursing studies.

Moreover, application of student success endeavors are vital to apply back to success on the NCLEX-RN. Nursing instructors can apply different strategy approaches to enable students to be as well prepared as possible before sitting for boards. Identifying students in the nursing program who are struggling and offering assistance through remediation and nursing course specific tutoring have shown to be very helpful strategies (Conklin & Cutright, 2019). Integration of NCLEX-RN test preparation, such as Kaplan, while the student is still in nursing school is another strategy that can be helpful to student success (Conklin & Cutright, 2019). Structured action plans for students can also be productive in preparing a student to pass the NCLEX-RN on the first attempt (Mager, Beauvais, & Kazer, 2017). Mager (2017) describes the
effort of one nursing program that created a 10-step plan to facilitate an innovative yet evidence-based plan. The 10-step action plan identifies such steps as faculty members being appointed to spearhead remediation efforts, faculty taking initiative to ensure that curriculum content is updated and regularly reviewed, faculty to examine content of nursing exams for updated material, utilizing computer-based testing for students to learn a format more closely aligned with NCLEX online format and for faculty to look at weightage of exams in content to increase weight of final grades to count more overall (up to 30%) (Mager, Beauvais, & Kazer, 2017). A multifaceted approach is necessary to help students be prepared for the NCLEX-RN and is crucial for nursing faculty to play a very foundational role in this readiness.

Methodology
Descriptive, non-experimental research was utilized for this study through retrospective, correlational design. A survey was emailed to the program directors at each of the 17 identified public nursing programs in New Mexico. The data were then collected via REDCap. The New Mexico Board of Nursing website was used as the primary resource for the NCLEX-RN pass rates from 2014-2019 for the same identified public nursing programs in New Mexico.

Ethical Issues
This study did not present any specific ethical concerns. The information gathered was kept confidential and anonymous. The information was kept at the institutional level and did not directly reflect individual participants. There were great efforts taken to ensure the safety and confidentiality of the data acquired during this research project.

Study Setting
The study setting for this project was public nursing programs in New Mexico that offered either ADN programs or BSN programs where the NCLEX-RN would be taken at
completion of the degree requirements. There were 17 identified public nursing programs in New Mexico included in this study. These include:

1. Central NM college/ADN
2. Clovis Community College/ADN
3. Eastern New Mexico University-Roswell/ADN
4. Luna Community College/ADN
5. New Mexico Junior College/ADN
6. New Mexico State University-Carlsbad/ADN
7. New Mexico State University- Dona Ana Community College/ADN
8. New Mexico State University-Las Cruces/BSN
9. Northern New Mexico College/ADN
10. San Juan College/ADN
11. Santa Fe Community College/ADN
12. University of New Mexico/BSN
13. University of New Mexico-Gallup/ADN
14. University of New Mexico-Taos/ADN
15. University of New Mexico-Valencia/ADN
16. Western New Mexico University/ADN
17. Western New Mexico University/BSN

The data from these institutions were reflected as aggregated data for advanced preferred degrees and were compiled in reports with the pass rates from the BON website. These two measures were assessed using IBM Statistical Package for Social Sciences (SPSS) for correlation and statistical significance.
Study Population
The study population included the NCLEX-RN pass rates from students who took boards from 2014-2019 in New Mexico. These rates were taken from the public BON website. The institutional analysis of advanced preferred degrees for the nurse educator was also assessed from 2014-2019 for the 17 identified public nursing programs in New Mexico. This was taken from surveys submitted to REDCap by the program directors of the previously identified public nursing programs.

Research Design
Retrospective correlational design was used for the analysis of this study. This design method was chosen, because it allowed the researcher to look backwards and examine factors in relationship to the outcomes. This method also allowed a preliminary measure of association to be established. The predictor for this analysis was the percentage of highest degree attainment by the nurse educator. The outcome was the first attempt NCLEX-RN pass rates. This design approach was used as an observational way to assess objective data. The research design provided an in-depth analysis between educators with advanced preferred degrees and its relationship with student outcomes of passing the NCLEX-RN on the first attempt.

Data Collection Process
The data collection process analyzed data obtained from compiled reports from 17 identified public nursing programs and the NCLEX-RN pass rates. A REDCap survey link was included in the email sent to the program directors of the public ADN and BSN nursing programs in New Mexico (see appendix A). The NCLEX-RN pass rates were collected from the BON website. Some data reported by the directors had to be adjusted so that all was consistent. One school reported approximates for percentage of nurse educators with advanced preferred degrees. For this school, the midpoint of the range was used for analysis. Another school
reported all degrees earned by the nurse educator rather than the highest degree. This was clarified and adjusted to be consistent with the rest of the data. The data were put into SPSS data software platform and a retrospective correlational statistical analysis (Pearson’s) was performed to look for significance between the two variables.

**Data Collection Methods**

Obtained percentage of faculty with advanced preferred degrees from REDCap surveys and NCLEX-RN student outcomes from the BON website were used as data collection methods. The numerical data values were input into the SPSS data software platform for analysis of correlation between the two measures. Trends of these variables were assessed for statistical significance.

**Data Protection Plan**

The data were collected from the individual public nursing programs and kept on the REDCap site securely. The Board of Nursing data were accessed from the Board of Nursing public site and stored securely. All data were saved and processed on a password-protected computer. The data will be destroyed May 2023. The data were only used for the purpose of this study. All statistical data used reflect aggregate data and did not contain any individual identifying information.

**Statistical Analysis**

Pearson’s correlation was used as the statistical analysis test to evaluate the relationship between two continuous variables. All data were obtained from nursing programs and BON reports for the 17 identified public nursing programs in New Mexico. This was analyzed using SPSS data software platform. Pearson’s correlation looked at the measure of strength between the two variables to see if there was statistical significance between the percentage of faculty with an advanced preferred degree and NCLEX-RN student outcomes.
Budget
The costs of this study were minimal and included only the renewal of SPSS data software platform that was used for analysis. The cost of this renewal was around $40 and was paid for by the student-researcher. The NCLEX-RN pass rates report from the BON was free and accessed directly from their website. The program directors donated their time to fill out the information for the survey.

CHAPTER 4
Results and Discussion
Results/Outcomes
A total of 8 public nursing programs in New Mexico responded to the survey. Pearson’s correlation was used to assess the association between NCLEX-RN pass rates from 2014-2019 and percentage of advanced preferred degrees in full-time nursing faculty at reported institutions. As is shown below, large effect size associations were observed between these variables in four of the six years included in this study. Although there was no statistical significance in any of these associations, there is still a suggested relationship between the two measured variables. The limited sample size of the population prevents having sufficient statistical power to detect this relationship. The analysis of the data suggests that the public nursing programs in New Mexico that employ full-time faculty with advanced preferred degrees may see positive effects on NCLEX-RN pass rates.

NCLEX-RN Descriptive Findings
Table 1 presents the descriptive statistics for the NCLEX-RN pass rates for the 8 participating programs. The NCLEX-RN data were pulled from the New Mexico Board of Nursing website and is public information. Of the surveyed years, 2015 had the smallest range at 8.75 (79.25% to 88%, SD = 4.17), while 2016 had the largest at 32.14 (67.86% to 100%, SD =
10.98). 2017 had the lowest minimum pass rate average at 62.5%, while 2019 was the highest minimum pass rate average at 82.46%. Several years (2014, 2016, and 2018) had a maximum pass rate at 100%.

Table 1

**Descriptive Statistics: NCLEX-RN Pass Rates**

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>NCLEX-RN 2014</td>
<td>8</td>
<td>28</td>
<td>72</td>
<td>100</td>
<td>83.37</td>
<td>10.69</td>
</tr>
<tr>
<td>NCLEX-RN 2015</td>
<td>7</td>
<td>8.75</td>
<td>79.25</td>
<td>88</td>
<td>83.11</td>
<td>4.17</td>
</tr>
<tr>
<td>NCLEX-RN 2016</td>
<td>8</td>
<td>32.14</td>
<td>67.86</td>
<td>100</td>
<td>83.65</td>
<td>10.98</td>
</tr>
<tr>
<td>NCLEX-RN 2017</td>
<td>7</td>
<td>31.89</td>
<td>62.5</td>
<td>94.39</td>
<td>84.32</td>
<td>10.77</td>
</tr>
<tr>
<td>NCLEX-RN 2018</td>
<td>8</td>
<td>23.81</td>
<td>76.19</td>
<td>100</td>
<td>89.3</td>
<td>7.55</td>
</tr>
<tr>
<td>NCLEX-RN 2019</td>
<td>7</td>
<td>11.66</td>
<td>82.46</td>
<td>94.12</td>
<td>87.42</td>
<td>5.02</td>
</tr>
</tbody>
</table>

**Faculty Descriptive Statistics**

Faculty with advanced preferred degrees were reported by the program director via the REDCap survey link. The number of full-time faculty per program varied greatly in the surveyed respondents of public nursing programs in New Mexico, reflecting variations in program size and location of the university. Table 2 presents the descriptive statistics for the 8 responding public nursing programs in New Mexico and the percentile average for full-time faculty with advanced preferred degrees. Of the 6 years analyzed in responding institutions, the percentages for all years were very similar. The range in 2017 showed to be the lowest (51.43%), with 2019 being the highest (60.00%). Consistent with these reported years, the standard deviation was lowest in 2017 (20.79%) and highest in 2019 (25.30%). Percentage of faculty with APD was reported lowest in 2019 (40.00%) and all documented years reported the same maximum value (100%).
Table 2

*Descriptive Statistics: Percentage faculty with APD*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>Range</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage faculty with APD 2014</td>
<td>8</td>
<td>55.56%</td>
<td>44.44%</td>
<td>100.00%</td>
<td>83.24%</td>
<td>23.67%</td>
</tr>
<tr>
<td>Percentage faculty with APD 2015</td>
<td>8</td>
<td>55.56%</td>
<td>44.44%</td>
<td>100.00%</td>
<td>81.46%</td>
<td>22.74%</td>
</tr>
<tr>
<td>Percentage faculty with APD 2016</td>
<td>8</td>
<td>55.56%</td>
<td>44.44%</td>
<td>100.00%</td>
<td>80.01%</td>
<td>24.49%</td>
</tr>
<tr>
<td>Percentage faculty with APD 2017</td>
<td>8</td>
<td>51.43%</td>
<td>48.57%</td>
<td>100.00%</td>
<td>82.22%</td>
<td>20.79%</td>
</tr>
<tr>
<td>Percentage faculty with APD 2018</td>
<td>8</td>
<td>52.94%</td>
<td>47.06%</td>
<td>100.00%</td>
<td>82.72%</td>
<td>20.84%</td>
</tr>
<tr>
<td>Percentage faculty with APD 2019</td>
<td>8</td>
<td>60.00%</td>
<td>40.00%</td>
<td>100.00%</td>
<td>80.22%</td>
<td>25.30%</td>
</tr>
</tbody>
</table>

The descriptive statistics for faculty percentages of advanced preferred degrees over the surveyed years in relationship to NCLEX-RN pass rates are represented in Figure 1. The two variables seem to generally trend together with, of course, the noted exception of 2016.

*Figure 1. Descriptive statistics of faculty advanced preferred degrees and NCLEX-RN pass rates*
Findings
The research question for this study was, “Among public nursing programs in New Mexico does having a higher percentage of faculty with institutional preferred advanced degree compared to a lower percentage faculty with a preferred advanced degree result in higher first-time program pass rates on the NCLEX-RN among graduating RN students over the past 5 years?” Correlations for faculty variables (percentage of advanced preferred degrees) and the average percentile scores of the NCLEX-RN for the five years included in this study were analyzed using SPSS.

The correlation for the proportion of full-time faculty with advanced preferred degrees and the corresponding programs NCLEX-RN average pass rates was analyzed for each assessed year. Table 3 presents the correlation and statistical significance between faculty with advanced preferred degrees and the NCLEX-RN pass rates. Of the years surveyed, 2015 had the smallest correlation \( (r = .01) \) between percentage of faculty with advanced preferred degrees had a not even small effect size, and there was no statistical significance \( (p = .98) \). The largest correlation \( (r = .75) \) between percentage of faculty with advanced preferred degrees had a large effect size and occurred in 2017, however there was no statistical significance \( (p = .05) \). Overall, there were four large effect size associations in the six years analyzed and all years showed no statistical significance.
Table 3

Correlation and Statistical Significance 2014-2019

<table>
<thead>
<tr>
<th>Year</th>
<th>r</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>.55</td>
<td>.15</td>
</tr>
<tr>
<td>2015</td>
<td>.01</td>
<td>.98</td>
</tr>
<tr>
<td>2016</td>
<td>.51</td>
<td>.19</td>
</tr>
<tr>
<td>2017</td>
<td>.75</td>
<td>.05</td>
</tr>
<tr>
<td>2018</td>
<td>.61</td>
<td>.10</td>
</tr>
<tr>
<td>2019</td>
<td>.01</td>
<td>.97</td>
</tr>
</tbody>
</table>

r = Pearson’s correlation; p = statistical significance

Interpretation of Findings
The data received from the survey provided a wealth of information regarding the percentage of advanced preferred degrees among nurse educators in New Mexico. The two variables measured in the analysis were the proportion of full-time faculty with advanced preferred degrees and the corresponding programs NCLEX-RN average pass rates. After combining the data in SPSS with NCLEX-RN pass rates, the data suggest that nursing programs in New Mexico that have more faculty with advanced preferred degrees might see improved NCLEX-RN pass rates. The majority of the years included had a large effect size (2014, 2016, 2017 and 2018) and this suggests a relationship likely exists. However, the limited sample prevents this study from having sufficient statistical power to detect this relationship.

Discussion
This investigation is one of the few studies to consider nurse educators level of education related to NCLEX-RN pass rates on the first attempt. Although the sample in this study was very
small and generalized to the specific population of public nursing programs in New Mexico, the information provided is still valuable as a point of reference. The topic is not well researched nationwide and is especially not specific to the population of New Mexico. It contributes to the currently very limited body of knowledge and helps suggest the benefit of advanced preferred degrees in public nursing programs in New Mexico. The study results are consistent with prior studies performed in other states.

The PICOT question for this study was, “Among public nursing programs in New Mexico does having a higher percentage of faculty with institutional preferred advanced degree compared to a lower percentage faculty with a preferred advanced degree result in higher first-time program pass rates on the NCLEX-RN among graduating RN students over the past 5 years?” Based on the research, the data does suggest that public nursing programs in New Mexico that employ full time nursing faculty with advanced preferred degrees may see positive effects on NCLEX-RN pass rates.

Implications for Practice

Nursing programs are mandated to produce graduates who are prepared to take their NCLEX-RN boards and pass on the first attempt. It is also an expectation that these nurses will provide safe and competent care once they are licensed registered nurses. There are a variety of ways for students to obtain the necessary education to be eligible to take the NCLEX-RN. Of the 17 identified public nursing programs in New Mexico, there are associate degree and bachelor’s degree nursing programs available. Depending on the level of program or the specific institution, there is a wide range of acceptable education levels by the nurse educator. Per the New Mexico Board of Nursing, all nurse educators must obtain their MSN within five years of hire, however, nurse educators can teach for the first year as a BSN prepared nurse (New Mexico Board of
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Nursing [NM BON], 2016). Furthermore, terminal degrees are a mandatory faculty requirement at some of the nursing programs in New Mexico.

The implications of this study were to assess whether faculty should go on for higher education. This study is the first step to determine if there is a level of educational preparedness that maximizes student outcomes. The results of the study suggest that it is beneficial for public nursing programs to have full-time faculty members with advanced preferred degrees. This advanced preferred degree can help the faculty member transition into the role of educator by having a basic foundation of education principles and understanding methods that help facilitate student learning (Kuss, 2014).

Limitations for Health Policy

There are several identified limitations for health policy with this study. First, the application of this study is not generalizable to states other than New Mexico. Considering that the New Mexico Board of Nursing places specific mandates on obtaining advanced degrees within a 5-year timeframe and the individual institution mandates the preferred level of degree, this would not be easily applicable to any other programs (New Mexico Board of Nursing [NM BON], 2016). Next, the results of this study could result in changes in the hiring process for the nurse going into nursing education for the first time. The nurse not having the advanced preferred degree of the hiring institution could be viewed a negative quality. Long term, the institution could use this as a reason to only hire nurses with preferred degrees to keep pass rates consistent, rather than allowing BSN prepared nurses to teach for a period of time while obtaining their MSN degree.

Limitations of Study

There are several identified limitations of this study. First, the sample size was very small. The survey was emailed to 16 nursing directors which represent 17 invited public nursing
programs in New Mexico. Of those, only 8 (50%) responded to the survey. Very small samples can affect the validity of a study, both internally and externally (Faber & Fonseca, 2014). Each school represented did provide 5 retrospective years of data, making 40 data points total for this study.

Second, there were several responses that needed to be clarified. This created some data that was not consistently reported for analysis. Because of this, some results were not completed following clarification by the program director, and the completed data needed a specific formula to make consistent for analysis.

Third, with the study design, it was not possible to look specifically at a single nurse educators influence on student outcomes, because the degrees were reported as percentages of faculty with advanced preferred degrees. This helped to keep the anonymity of the individual instructor, as the results were reported at the institutional level.

**Strengths of Study**

There are several identified strengths of this study. First, the content of this study is limited, and covers a topic of research that is extremely needed. Second, the study was cost effective, as it did not cost the participants anything other than their time. Third, the data were reported in a way to give educators anonymity. Fourth, the survey was highly reliable as it presented the same questions in the same format/choices for all respondents. Lastly, the remote administration of the survey allowed for flexibility among respondents so they could answer any time of day that was convenient for their schedule.

**Suggestions for Further Research**

There are several suggestions for future research. First, future researchers should assess a larger sample size to look for statistical significance. In order to make the research more generalizable, further studies may need to include all types of pre-licensure programs in multiple
states. Second, the researchers may include how long nurse faculty have been teaching as a nurse educator. Nurse educators can have a negative impact on student outcomes for the first three years of their academic career, and this would have been a helpful data point to include (Coenen, 2018). Third, it would be helpful to include faculty that are obtaining hours towards their master’s degree in education, or terminal degree, into the equation. This is because an MSN in nursing education programs include curriculum development, student-centered learning, and evaluation methods (University of New Mexico, n.d.). This advancing education would allow the nurse educator to have more understanding of their role and help overall student outcomes. It would also be helpful in the future to include student responses for a portion of the analysis. The Jeffrey’s Nursing Universal Retention and Success (NURS) model would allow for the ability to include student profile characteristics, academic factors, student affective factors, environmental factors, psychological outcomes, professional integration factors, academic outcomes and outside surrounding factors (Jeffreys, 2012). These questions to the students would examine the multidimensional factors that affect nursing student retention and success and include this as another variable for overall pass rates. Lastly, utilizing accrediting bodies for educators advanced preferred degree in future studies would allow for more information to be gained in a consistent manner.

**Concluding Remarks**

The purpose of this retrospective, correlational study was to examine the relationship between educational preparation of nursing faculty and student outcomes and performance on the NCLEX-RN in 17 public nursing programs in New Mexico. Based on the findings from this study, the data suggest that public nursing programs in New Mexico that employ full-time nursing faculty with advanced preferred degrees may see positive effects on NCLEX-RN pass rates.
Nelson Mandela said, “Education is the most powerful weapon which you can use to change the world.” As a nurse educator, it is important to take acquired information and apply to the domain of the role by committing to lifelong learning and improvement of knowledge and skills (Alexander, 2014). Obtaining a higher degree can be beneficial to not only the students, but also the educator themselves. This mindset of furthering education will help the nurse educator feel more confident in their role and understand the bigger picture to their very vital part in student success.
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APPENDIX A

DATA COLLECTION TOOL
Dear ____________,

I am contacting you because I need help to complete my scholarly project with information from your institution. I am currently a DNP student at the University of New Mexico. I am gathering data to analyze the correlation between nurse educators’ level of education and its impact on the student outcome of passing the NCLEX-RN on the first attempt. I am requesting information from all public nursing programs in New Mexico that have the option for students to take the NCLEX-RN exam.

The survey will require you to input the name of your college, as well as the number of total nurse educators, number of nurse educators with BSN, and lastly the number of nurse educators with MSN or higher from 2014-2019. The link below is to REDCap. This is a secure source through the University of New Mexico to input the needed data.

Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may stop participating at any time while you are taking the survey and you may decide not to answer any specific question. Once the survey is submitted you will not be able to withdraw consent.

The researcher will maintain the confidentiality of the research records or data, and all data will be destroyed in May 2023.

By clicking the link to access this survey, you are indicating that you have read the description of the study, are over the age of 18, and that you agree to the terms as described.

If you have any questions, or would like a copy of this consent letter, please contact me at (c) 575-714-9448 or cwhitt25@salud.unm.edu.

The primary investigator for this project is Tamara J. Hall, DNP, RN, CPNP-PC. Her contact information is cell. (505) 818-7958 and email: tamarahall@salud.unm.edu.

Thank you in advance for your participation!

REDCap Link: https://cts trials.health.unm.edu/redcap/surveys/?s=PCPWPKTC74

Sincerely

Callie Whittington, MSN, RN
cwhitt25@salud.unm.edu
UNM DNP-NEOL Nursing Student

Study ID 20-243
Version 1.3
05.19.20
APPENDIX B

IRB APPROVAL LETTER
Human Research Protections Program

May 14, 2020
Tamara Hall
tamaraHall@salud.unm.edu

Dear Tamara Hall:

On 5/14/2020, the HRRC reviewed the following submission:

Type of Review: Initial Study
Title of Study: Nurse Educators Influence on Student Success on NCLEX-RN First Attempt
Investigator: Tamara Hall
Study ID: 20-243
Submission ID: 20-243
IND, IDE, or HDE: None

Submission Summary: Initial Study
Documents Approved: • Appendix_A_data_collection_worksheet.pdf
• Appendix_C_Survey_Example
• Appendix_B_Data_Requests
• HRP-503 Cat 2

Review Category: Exempt Category (2)(i) Tests, surveys, interviews, or observation (non-identifiable)

Determinations/Waivers: Provisions for Consent are adequate.
HIPAA Authorization Addendum Not Applicable.

Submission Approval Date: 5/14/2020
Approval End Date: None
Effective Date: 5/14/2020

The HRRC approved the study from 5/14/2020 to 5/14/2020 inclusive. If modifications were required to secure approval, the effective date will be later than the approval date. The “Effective Date” 5/14/2020 is the date the HRRC approved your modifications and, in all cases, represents the date study activities may begin.

Because it has been granted exemption, this research is not subject to continuing review.

Please use the consent documents that were approved by the HRRC. The approved consents are available for your retrieval in the "Documents" tab of the parent study.
Human Research Protections Program

If the study meets the definition of an NIH Clinical Trial, the study must be registered in the ClinicalTrials.gov database. Additionally, the approved consent document(s) must be uploaded to the ClinicalTrials.gov database.

This determination applies only to the activities described in this submission and does not apply should you make any changes to these documents. If changes are being considered these must be submitted for review in a study modification to the HRRC for a determination prior to implementation. If there are questions about whether HRRC review is needed, contact the HRPO before implementing changes without approval. A change in the research may disqualify this research from the current review category. You may submit a modification by navigating to the active study and clicking the “Create Modification/CR” button.

If your submission indicates you will translate materials post-approval of English materials, you may not recruit or enroll participants in another language, until all translated materials are reviewed and approved.

In conducting this study, you are required to follow the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library.

Sincerely,

[Signature]

Thomas F. Byrd, MD
HRRC Executive Chair

Abbreviated Investigator Responsibilities

NOTE: For a full unabridged version of the Investigator Manual, please visit the HRPO website at [https://hsc.unm.edu/research/hrpo/](https://hsc.unm.edu/research/hrpo/).

What will happen after HRRC review?
The HRPO will provide you with a written decision indicating that the HRRC has approved the Human Research, requires modifications to secure approval, or has disapproved the Human Research.

- If the HRRC has approved the Human Research: The Human Research may commence once all other organizational approvals have been met. HRRC approval is usually good for a limited period of time which is noted in the approval letter.
- If the HRRC requires modifications to secure approval and you accept the modifications: Make the requested modifications and submit them to the HRRC.
Human Research Protections Program

If all requested modifications are made, the HRRC will issue a final approval. Research cannot commence until this final approval is received. If you do not accept the modifications, write up your response and submit it to the HRRC.

- If the HRRC defers the Human Research: The HRRC will provide a statement of the reasons for deferral and suggestions to make the study approvable, and give you an opportunity to respond in writing. In most cases if the HRRC's reasons for the deferral are addressed in a modification, the Human Research can be approved.
- If the HRRC disapproves the Human Research: The HRRC will provide a statement of the reasons for disapproval and give you an opportunity to respond in writing.

In all cases, you have the right to address your concerns to the HRRC directly at an HRRC meeting.

What are my obligations after HRRC approval?

1. Do not start Human Research activities until you have the final HRRC approval letter.
2. Do not start Human Research activities until you have obtained all other required institutional approvals, including approvals of departments or divisions that require approval prior to commencing research that involves their resources.
3. Ensure that there are adequate resources to carry out the research safely. This includes, but is not limited to, sufficient investigator time, appropriately qualified research team members, equipment, and space.
   a. Delegate responsibility to the research staff in accordance with the staff's training and qualifications.
   b. Assure that all procedures associated with the research are performed, with the appropriate level of supervision, only by individuals who are licensed or otherwise qualified to perform them under the laws of New Mexico and policies of The University of New Mexico Health Sciences Center.
   c. Monitor the research study and perform quality management activities to ensure the protection of participants and the quality of the research data.
4. Obtain the legally effective informed consent from human participants or their representatives, using only the currently approved informed consent documents, and provide a copy to the participant, if applicable. a) Ensure that only HRRC-approved investigators obtain informed consent from potential participants.
5. If unavailable to conduct the research personally, as when on sabbatical leave or vacation, arrange for another HRRC-approved investigator on the study to assume direct responsibility or notify the HRRC of alternate arrangements.
6. Maintain accurate and complete research records, including but not limited to, original signed informed consent and authorization documents, and retain these records according to HRRC policy and the applicable regulatory retention terms.
Human Research Protections Program

7. Fully inform the HRRC of all locations in which human participants will be recruited for this project and obtain and maintain current HRRC approvals/letters of cooperation when applicable.

8. Ensure that Research Staff are qualified (e.g., including but not limited to appropriate training, education, expertise, credentials, protocol requirements and, when relevant, privileges) to perform procedures and duties assigned to them during the study.

9. Update the HRRC office with any changes to the list of study personnel.

10. Personally conduct or supervise the Human Research.
    a. Conduct the Human Research in accordance with the relevant current protocol as approved by the HRRC.
    b. When required by the HRRC, ensure that consent or permission is obtained in accordance with the relevant current protocol as approved by the HRRC.
    c. Do not modify the Human Research without prior HRRC review and approval unless necessary to eliminate apparent immediate hazards to participants.
    d. Protect the rights, safety, and welfare of participants involved in the research.

11. Submit to the HRRC:
    a. Proposed modifications as described in this manual. (See “How do I submit a modification?”)
    b. A continuing review application as requested in the approval letter. (See “How do I submit continuing review?”)
    c. A continuing review application when the Human Research is closed. (See “How Do I Close Out a Study?”)

12. Report any of the information items listed in Appendix A-1 to the HRRC within five business days.

13. Submit an updated disclosure of financial interests within thirty days of discovering or acquiring (e.g., through purchase, marriage, or inheritance) a new financial interest.

14. Do not accept or provide payments to professionals in exchange for referrals of potential participants (“finder’s fees.”)

15. Do not accept payments designed to accelerate recruitment that were tied to the rate or timing of enrollment (“bonus payments.”)

16. See additional requirements of various federal agencies in Appendix A-2 through A-9 of the Investigator Manual. These represent additional requirements and do not override the baseline requirements of this section.

If the HRRC directs or your study is selected for an onsite post-approval review, cooperate with HRPO Quality Improvement program staff to complete it.

Research Data and Study Records

Researchers and staff should have systems or practices for maintaining the essential Research Records that they create in order to be able reasonably to support research findings, justify the uses of research funds and resources, and protect any resulting intellectual property.
Human Research Protections Program

During the life of a study and beyond its closure, many information security and storage policies pertain to the maintenance and archival of study documents and research data. These policies and procedures include those of the researcher's department, UNM HSC, the State of New Mexico, Federal privacy laws (such as HIPAA, FERPA, FOIA, New Mexico IPRA), Federal regulations (FDA, OHRP, DHHS, etc) as well as the data confidentiality requirements associated with research funding (e.g. National Institutes of Health, Department of Defense (DOD), etc.).

PI responsibilities for document and data security are particularly critical during times of study transition, as when a PI is leaving UNM HSC, is transferring PI responsibilities or is closing a study. Be prepared ahead of time and discuss transition and/or long-term storage plans with your department Chair/Research Chair. Assure that information regarding these plans are documented in a standard manner and are using an established process, so that an incoming PI and department personnel can find, understand and follow it.

Appendix A.1 Reportable New Information

Report information items that fall into one or more of the following categories to the HRRC within 5 business days. Reference SOP: New Information (HRP-024).

1. Information that indicates a new or increased risk, or a new safety issue, for example:
   a. New information (e.g., an interim analysis, safety monitoring report, publication in the literature, sponsor report, or investigator finding) indicates an increase in the frequency or magnitude of a previously known risk, or uncovers a new risk.
   b. Protocol violation that harmed participants or others, or that indicates participants or others might be at increased risk of harm.
   c. Complaint of a participant that indicates participants or others might be at increased risk of harm or at risk of a new harm.
   d. An investigator brochure, package insert, or device labeling is revised to indicate an increase in the frequency or magnitude of a previously known risk, or describe a new risk.
   e. Withdrawal, restriction, or modification of a marketed approval of a drug, device, or biologic used in a research protocol.
   f. Changes significantly affecting the conduct of the clinical trial or increasing the risk to participants.

2. Harm experienced by a participant or other individual, which is in the opinion of the investigator are unexpected and related or possibly related to the research procedures.
   a. A harm is "unexpected" when its specificity or severity are inconsistent with risk information previously reviewed and approved by the HRRC in terms of nature, severity, frequency, and characteristics of the study population.
Human Research Protections Program

b. A harm is "related or possibly related" to the research procedures if, in the opinion of the investigator, the research procedures more likely than not caused the harm.

3. Non-compliance with the federal regulations governing human research or with the requirements or determinations of the HRRC, or an allegation of such non-compliance.

4. Failure to follow the protocol due to the action or inaction of the investigator or research staff.

5. Change to the protocol taken without prior HRRC review to eliminate an apparent immediate hazard to a participant.


7. Complaint of a participant that cannot be resolved by the research team.

8. Premature suspension or termination by the sponsor, investigator, or institution.

9. Incarceration of a participant in a study not approved by the HRRC to involve prisoners.

10. Audit, inspection, or inquiry by a federal agency and any resulting reports (e.g., FDA Form 483).

11. Written reports of study monitors.

12. Unanticipated adverse device effect (any serious adverse effect on health or safety or any life-threatening problem or death caused by, or associated with, a device, if that effect, problem, or death was not previously identified in nature, severity, or degree of incidence in the investigational plan or application (including a supplementary plan or application), or any other unanticipated serious problem associated with a device that relates to the rights, safety, or welfare of participants).

13. Unanticipated Problems Involving Risks to Subjects or Others, including any event or problem that is serious, unexpected, and related to the research, where "related" means the event or problem might reasonably be regarded as caused by, or probably caused by, the research.

14. Disciplinary action against the investigator or research staff by federal, state, and local regulatory agencies.