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Exploring Teacher Self-Efficacy in Nurse Educators: A Mixed Method Study

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EXPLORING TEACHER SELF-EFFICACY IN NURSE
EDUCATORS: A MIXED METHOD STUDY

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ABSTRACT

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In the face of a rapidly changing healthcare environment and a nursing shortage, schools of nursing are pressed to produce higher numbers of fully prepared nurse graduates. In other disciplines, teacher self-efficacy has been linked to better student outcomes, faculty instructional methods, and student engagement. This construct has not been well studied in nursing education. This mixed methods study investigated how current faculty perceive their teacher self-efficacy as measured by the Self-Efficacy Towards Teaching Inventory-Nursing Education (SETTI-NE) survey and identified contributing factors, followed by interviews gathering qualitative data from nine faculty members of varying SETTI-NE scores as well as varying years of nursing experience, the variable of interest.

Guided by Bandura's self-efficacy theory, this study analyzed 352 predominantly female faculty members a majority of whom were over 60 years of age and found factors that positively correlated with SETTI-NE scores were increased age, years of teaching experience, and doctoral preparation (DNP and Ph.D.). There was no correlation with years of nursing experience. This survey tool is composed of for subscales course preparation, teacher behaviors, examination and evaluation, and clinical practice. The low teacher self-efficacy group scored highest in teacher behaviors, while both the moderate and high teacher self-efficacy groups scored highest in course preparation. All groups scored lowest in clinical practice. This is not a measure of their

clinical expertise, but rather their ability to teach and evaluate students in clinical practice. This qualitative data further explained that the personal efficacy component of the teacher self-efficacy score may not be associated with years of clinical experience as suggested previously, but rather how that expertise more closely relates to education theory supporting literature suggesting the concept of teaching as a separate expertise.

Integrating these findings with the qualitative data, demonstrated that making connections between clinical experiences and didactic material was more impactful than any other factors. This survey indicated that only 12% of participants included simulation in the academic teaching practice which may have impacted the scores in this subscale. Regardless, faculty must be able to connect these learning activities to the classroom and clinical settings for them to contribute to knowledge gains in students. The qualitative finding that faculty with doctoral preparation, either DNP or Ph.D., were making connections between clinical and classroom, through teaching methods that helped students understand the material and bridge the theory to practice gap in the classroom, not just in clinical may provide the missing piece to bridge theory and clinical.

Academic nurse education is a complex field that requires clinical expertise as well as knowledge in educational theories to guide faculty in ensuring students acquire the requisite knowledge to perform the skills and clinical decision making of a nurse.

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INTRODUCTION

The modern healthcare system in the United States has seen an increase in the complexity

of patients, in its use of technology, and increased level of care provided by nurses, worsened

during the COVID-19 pandemic. Nursing education has not seen a substantial update in the

education of undergraduate nurses to meet the needs of industry in relation to increased

complexity in patient care. Additionally, education suffered during the pandemic with many

faculty leaving nursing education. These circumstances likely contribute to reports of new

graduate nurses entering the profession ill-prepared to practice that is often referred to as the

theory-practice gap (Huston et al., 2018).

Though the phrase 'theory-practice gap' is used often in nursing literature, there is no

consensus on its definition (Greenway et al., 2019), but in broad terms, it can be thought of as the

gap between theoretical knowledge gained in the classroom and the practical application of that

nursing knowledge in the clinical setting with adverse outcomes (Greenway et al., 2019). Prior to

the pandemic, this persistent gap prompted the National League for Nursing (NLN, 2005) to

launch a reform initiative designed to transform nursing education thus better preparing new

nursing graduates to safely enter and then remain in the workforce. Yet, some nursing faculty

continue to struggle with implementing recommendations of new innovative pedagogical

methods designed to prepare new graduate nurses to critically think and develop clinical

decision-making skills, key skills for successfully navigating this new landscape. Nursing

education's long-standing use of lecture, a traditional teacher-centered practice, has served the

profession well for many decades (Bristol et al., 2019), but in the modern healthcare landscape, these passive methods are proving insufficient and ineffective.

Currently, the nursing profession faces not only a continued shortage of nurses at the bedside but also a shortage of nursing faculty to prepare the next generation of nurses for this new healthcare landscape (American Association of Colleges of Nursing [AACN], 2020a; Fang & Kesten, 2017). Nurse educators are traditionally hired as clinical experts and may have little to no education in adult learning and education theory (Gardner, 2014). Even with formal education at the master's, Doctor of Philosophy (Ph.D.), or Doctor in Nursing Practice (DNP) degree level, studies have shown little to no coursework in education theory in many of these programs (Booth et al., 2016; Dreifuerst et al., 2016; Fitzgerald et al., 2020). Without preparation in learning theory, pedagogy, or nursing education research, many junior faculty members report high levels of dissatisfaction with the teaching role (Dreifuerst et al., 2016). Role dissatisfaction has the potential to influence their desire to remain in education and grow in their abilities as educators, further perpetuating the faculty shortage and stunting the growth gained with mastery experiences which, according to Bandura's self-efficacy theory, has the largest influence on an individual's self-efficacy beliefs.

Teacher self-efficacy is the teacher's belief that they can bring about the desired outcome of student engagement and learning (Bandura, 1997; Tschannen-Moran & Hoy, 2001; Zee & Koomen, 2016) and research in K-12 education suggests many positive correlations with student achievement (Shahzad & Naureen, 2017; Tschannen-Moran & Hoy, 2001), student engagement (Martin et al., 2012; Tschannen-Moran & Hoy, 2001), instructional strategies (Allinder, 1995; Ashton et al., 1983; Berman et al., 1977; Khanshan & Yousefi, 2020)), classroom management (Allinder, 1995; Ashton et al., 1983; Poulou et al., 2019), and career commitment (Ashton et al.,

1983; McKim & Velez, 2015; Mokhtar et al., 2021). Teacher self-efficacy is comprised of two elements, personal efficacy, and teaching efficacy (Ashton et al., 1983; Dembo & Gibson, 1985; Nugent et al., 1999). Early studies of this construct in the context of nursing suggested that the personal efficacy component may be high and attributed to the fact that nurse educators are often experts in their clinical field. However, since many nurse faculty members are expert clinicians, they may have little to no training in education theory or methods, and K-12 teachers are specifically trained in education, these research findings may not translate across disciplines.

An increased interest in scholarship of teaching (Hutchings et al., 2011) suggests that this construct be studied in context of nursing education. Recent nursing education research in teacher self-efficacy has centered on clinical instruction (Bourne et al., 2021; Nguyen et al., 2017; Shin et al., 2021; Weston, 2018), simulation and technology use (Crocetti, 2014; Garner et al., 2018; Roney et al., 2017), and distance education (Richter & Idleman, 2017; Robinia & Anderson, 2010). Not integrating these concepts to the classroom may be a factor in the reluctance of some nursing faculty to move from the passive lecture to more active teaching strategies as well as continuing to perpetuate the theory to practice gap (Benner et al., 2010).

With the focus of research in clinical setting, there remains a dearth of research on teacher self-efficacy in classroom teaching in nursing and its relationship with faculty behaviors and choices in the classroom setting. Understanding teacher self-efficacy of nurse faculty adds to existing knowledge to further develop educators, leading to the advancement of the education of nursing students and to better prepare for the complex nursing clinical roles. As doctoral nurses make up only 2.2% of the nursing workforce (Smiley et al., 2021), schools of nursing may recruit experienced nurses to supplement the faculty shortage. While these nurses may be experts in their clinical field, they may lack training in educational theory and the role of the

nurse educator (Booth et al., 2016; Gardner, 2014; Nugent et al., 1999). The results of this study can guide nursing education leadership to provide ways to develop teacher self-efficacy in faculty to develop skills in the domains of course preparation, clinical teaching, teacher behaviors, and exam and evaluation.

Background

The Call for Change

Beginning in the late 1980s, the NLN first called for curriculum reform to better prepare the next generation of nurses to meet practice challenges. The ensuing decade demonstrated curriculum shifts, but not significantly. In 2000 the Institute of Medicine (IOM) released their report entitled, *To Err is Human*,which included an in-depth look at healthcare systems and practices in the United States, including a critical look at nursing education as the largest workforce in healthcare. This report provided support for the earlier changes suggested by the NLN.

In 2003, the NLN issued another call for curriculum reform and innovative instructional pedagogies to address data indicating that new graduate nurses were ill-prepared for practice (NLN, 2005; Patterson et al., 2021). A subsequent NLN statement in 2005 included recommendations as to how the nursing profession could transform nursing education and included the need for continued research to support instructional practices to move the classroom focus away from content delivery to a more student-centered focus (NLN, 2005).

In 2010, the Carnegie Foundation echoed the call for change by the NLN with recommendations for emphasizing connections between classroom theory and practical application in the clinical setting (Benner et al., 2010). In that same year, a second report was issued by a partnership of the IOM and the Robert Woods Johnson Foundation titled *The Future*

of Nursing, which noted that schools of nursing were failing to prepare nursing students adequately for the realities of the modern healthcare system (IOM, 2010). The *Future of Nursing* report led to an explosion of DNP programs to meet the IOM's call to double the number of doctoral prepared nurses by 2020 and while falling short of the projected goal, did lead to increasing the number of practicing nurses with higher levels of education (Yancey, 2020). At the same time, it allowed schools of nursing to hire more doctoral prepared faculty.

Academic Preparation of Nursing Faculty

In the early 2000s, partly in response to the call of the IOM, graduate education for nurses focused primarily on preparing nurse practitioners (NPs) thus creating nurse experts in their clinical nursing specialty, but not in teaching and learning (Booth et al., 2016; Gardner, 2014; Nugent et al., 1999). While there is no national standard for qualifications of nurse faculty, one study of directors of nursing schools indicated that while they would hire master's prepared faculty, doctoral prepared faculty would be preferred (Bednash et al., 2014; Oermann, Lynn et al., 2016). The same study also indicated no difference in role expectations for teaching between Ph.D. prepared faculty and DNP prepared faculty (Bednash et al., 2014; Yancey, 2020). Additional studies found little to no preparation in teaching and learning in either program outside of patient education (Bednash et al., 2014; McNelis et al., 2019; Yancey, 2020). The American Association of Colleges of Nursing (AACN) offered a white paper *Preferred Vision of the Professoriate in Baccalaureate and Graduate Nursing Programs* that explicitly stated that "the terminal degree in nursing is the doctorate (research or practice-focused)" (para 1). There was no discussion of educational preparation related to pedagogy or adult learning theories and the AACN does not consider nursing education to be a specialty area of practice (Yancey, 2020).

In response to these many influences, nursing education focused on hiring more doctoral-prepared faculty to address the faculty shortage. The growth of DNP programs that produced a higher and more specialized level of clinical expertise in the nursing workforce also created a larger pool of potential faculty. The two major doctoral degrees specific to nursing include the Ph.D., which is research-focused, and the DNP, which is practice-focused. These programs comprise the largest potential faculty pool, yet, unless they are one of the programs that prepare nurses specifically in nursing education, most do not prepare nurses specifically to meet the challenges of teaching students in academia (AACN, 2008; Bullin, 2018; Dreifuerst et al., 2016; McNelis et al., 2019; Yancey, 2020).

To meet the call for new learning strategies to better prepare new nurse graduates for practice, nursing education must recognize, and act on, the need for a shift in the pedagogical approaches in the classroom, blended learning, and clinical environments (Benner et al., 2010; Yancey, 2020). Blended learning will refer to any time technology is merged with physical lab, classroom, or clinical learning experience (Leidl et al., 2020). With only 2.2% of the nursing workforce holding a doctoral degree (Smiley et al., 2021), many masters prepared nurses may move to teaching as they leave the clinical environment (Brown & Sorrell, 2017).

Academia's response to the unprecedented coronavirus disease of 2019 (COVID-19) pandemic most clearly highlighted the significance of these alternative delivery methods as many brick-and-mortar institutions closed campuses to protect students, staff, and faculty in early 2020 (Gaffney et al., 2021). In nursing, this was particularly challenging as much of the discipline of nursing education involves hands-on learning in lab and clinical environments (Dewart et al., 2020). Adapting to the online environment caused varying levels of stress for both students and faculty and has been attributed to many factors including generational differences, previous

exposure to online learning, technology efficacy, time-management, and self-directedness to name a few (Gaffney et al., 2021). While the effects of this rapid shift may not be fully ascertained for years, it is apparent that nursing education needs to remain flexible as it studies lesson learned resulting from its efforts.

Teacher Self-Efficacy

Based on Bandura's theory of self-efficacy, teacher self-efficacy can be defined as the teacher's judgment on their capabilities to bring about the desired outcome of student engagement and learning (Tschannen-Moran & Hoy, 2001; Zee & Koomen, 2016). According to this theory, a teacher may know a certain achievement result is the desired outcome, but this knowledge is useless if they lack the belief that they can provide such actions (Zee & Koomen, 2016).

Teacher self-efficacy has not been widely studied in nursing education outside of teaching patients; however, since teacher self-efficacy may impact instructional behaviors that encourage students' cognitive development (e.g., Tschannen-Moran & Hoy, 2001) this warrants exploration of the concept in relation to nursing education. Teacher self-efficacy has long been studied in higher education in other disciplines and in K-12 education and has been shown to be positively related to student outcomes such as achievement, motivation, and promoting students' own sense of efficacy (Armor et al., 1976; Tschannen-Moran & Hoy, 2001). Additionally,

> Evidence indicates that teachers' beliefs in their instructional efficacy partly determine
> how they structure academic activities in their classrooms and shape students'
> evaluations of their intellectual capabilities...Teachers who have a high sense of
> instructional efficacy devote more classroom time to academic activities, provide

students who encounter difficulties with the guidance they need to succeed, and praise

their academic accomplishments. (Bandura, 1997, pp. 240-241)

In their review of 40 years of research on teacher self-efficacy, Zee and Koomen (2016)

suggested that the "instructional behaviors, practices, and strategies teachers employ to

encourage students' cognitive development may, in part, be determined by their self-efficacy

(e.g., Tschannen-Moran & Hoy, 2001)" (p. 990).

Measurement of Teacher Self-Efficacy

To measure teacher self-efficacy, the Teacher Sense of Efficacy Scale (TSES) was

developed by Tschannen-Moran and Hoy (2001) and measures three aspects of teacher efficacy:

efficacy for instructional strategies, efficacy for classroom management, and efficacy in student

engagement. Instructional strategies efficacy refers to how confident teachers are in their

abilities to implement various strategies and was shown to be influenced by their level of teacher

efficacy (Zee & Koomen, 2016). Higher self-efficacy is achieved by understanding and

experiences which influence teaching behaviors, and professional development (Britton, 2017).

Nugent et al. (1999) posited that in nursing education, teacher self-efficacy could be

viewed as the "extent to which the nurse educator bridges the theory-to-practice gap." In their

study, they adopted a scale developed by Tollerud (1990). Tollerud's scale was named Self-

Efficacy Toward Teaching Inventory (SETTI) and was originally a 48 item self-report scale

measuring the degree to which participants felt confident in their ability to execute specific

teaching behaviors in four domains: course preparation, instructor behavior, evaluation and

examination, and clinical skills. Nugent et al. (1999) further refined this scale by removing three

items that did not pertain to nursing and adding nineteen items dealing with selecting teaching

strategies, promoting critical thinking and more specific behaviors associated with clinical

teaching and evaluation of student performance in the clinical area. The Nugent et al. adaptation was further refined by Garner et al. (2018) to incorporate the use of newer pedagogies such as simulation and to apply to a more global audience was named Self-Efficacy Towards Teaching Inventory-Nursing Education (SETTI-NE).

Statement of the Problem

Some reports indicate that new graduate nurses are entering the profession lacking the skills to safely transition to the professional nursing role in this new century of complex patients and the new technologies to care for them (Huston et al., 2018; Institutes of Medicine [IOM], 2010). National nursing education organizations have challenged nurse educators to evaluate educational practices in schools of nursing to address the issue of ill-prepared new nurse graduates by incorporating new and innovative teaching strategies that better develop new nursing graduates to transition safely to practice (Ironside & Valiga, 2007). Devising innovative student-centered approaches to teaching continues to be a persistent challenge for nurse educators, especially for those without formal preparation for the faculty role (Bednash et al., 2014; Patterson et al., 2021; Yancey, 2020).

In trying to address the faculty shortage, some schools of nursing seek to hire experienced nurses, hoping they can translate their expertise to nursing students, however, without formal preparation for the role of educator and an understanding of adult learning theory, nursing faculty may tend to rely on conventional pedagogies that sustain a persistent focus about *what* content should be taught, rather than *how* content should be taught (Ironside, 2004). As Bandura suggested, the affective state of stress, such as presented with the rapid shift to online education in early 2020 or entering academia unprepared for the role (Brown & Sorrell, 2017;

Dreifuerst et al., 2016), can negatively affect teachers' self-efficacy and impact their willingness to try new instructional methods (Bandura, 1977; Cataudella et al., 2021).

Lack of teacher self-efficacy in nurse educators may affect their choice of pedagogical strategies in both the clinical and classroom settings. While we are beginning to understand some aspects of clinical teacher self-efficacy, there is a gap in our understanding regarding the extent to which teacher self-efficacy impacts instructor behaviors of nurse educators in the classroom. The aim of this research is to investigate teacher self-efficacy in nursing faculty and explore traits of varying levels of teacher self-efficacy in nurse educators. By increasing our understanding of this relationship, we can better prepare faculty to educate students providing them with the tools necessary to best care for patients in this new and challenging healthcare environment. Further exploration into the relationship between personal efficacy of nurses and its impact on their teacher self-efficacy could support their development.

Purpose of the Study

To better understand nurse educator sense of teacher self-efficacy and its impact on faculty behaviors in a nursing program, the purpose of this study was to identify variables influencing nurse educator self-efficacy and describe nursing faculty characteristics related to varying teacher self-efficacy scores. The results of this study will add to existing nursing specific teacher self-efficacy knowledge, including the understudied issue of whether nursing clinical expertise with a lack of education in pedagogy impacts teacher self-efficacy and faculty behaviors. These results will assist nurse educators to update classroom pedagogical methods and meet the needs of students when they transition into a more complex and demanding profession.

Research Questions and Hypotheses

This study proposed to use an explanatory sequential mixed methods design to explore

the self-efficacy of nurse educators. Specifically, this study proposed to explore the following

questions and hypotheses:

Q1   What is the perceived self-efficacy of academic nurse educators and specifically
      in the domains of course preparation, instructor behavior, evaluation and
      examination, and clinical teaching as measured by the SETTI-NE survey?

Q2   Is there a correlation between teacher self-efficacy scores and total years of
      working in direct patient care as a registered nurse?

H_{02} There will be no significant correlation between teacher self-efficacy scores as
      measures by the SETTI_NE survey and total years of working in direct patient
      care as a registered nurse.

H_{A2} There will be a significant correlation between teacher self-efficacy scores as
      measures by the SETTI_NE survey and total years of working in direct patient
      care as a registered nurse.

Q3   How do nurse faculty of varying teacher self-efficacy scores characterize their
      teaching behaviors and development of self-efficacy?

Significance of the Study

This study aims to better understand how teacher self-efficacy impacts nurse faculty

behaviors. Understanding the role teacher self-efficacy plays in nurse faculty behaviors may help

advance professional development activities for faculty that increase their self-efficacy toward

teaching and encourage the use of pedagogical choices that close the theory-practice gap by

developing clinical reasoning skills in students thus better arming them to address the new

healthcare landscape through safe and effective care. Reducing the amount of new nurses that

leave the profession because they were ill-prepared for practice will reduce a substantial cost to

organizations (Lockhart, 2020), allow aging nurses to retire (Fang & Kesten, 2017), relieve the

stress of nursing workforce (Lockhart, 2020), reduce mortality (Needleman et al., 2011), and allow leadership to ensure faculty has the experiences and skills necessary to do their work well.

Summary

Teacher self-efficacy has been shown in other fields to have a positive association with faculty instructional methods, student engagement, and student achievement yet remains understudied in nursing education. Nurse educators are charged with preparing new graduate nurses to address the complexity of nursing responsibilities in today's healthcare landscape and enter the profession prepared to practice. A significant challenge to nurse educators is engaging students and cultivating students' clinical decision-making skills. Developing their own sense of teacher self-efficacy may assist nurse educators in advancing their instructional behaviors and pedagogical choices. How nurse educators develop their own sense of teacher self-efficacy is currently not found in the literature.

CHAPTER II

REVIEW OF THE LITERATURE

Relevant literature was identified by searching Cumulative Index to Nursing and Allied Health (CINAHL), Ovid Technologies, Inc. (OVID), ProQuest Direct (Dissertations and Theses), and Elton B. Stephens Co. (EBSCO). Electronic databases were searched for unpublished dissertations and published articles between 2016 and 2021. Search terms included nurse, nursing, educator, instructor, faculty, self-efficacy, teacher, teacher efficacy, academic, didactic, and pre-licensure. Classic works frequently cited in the literature were also included. Decision-making for inclusion in this review was based on the appraisal of the abstract for significant content related to the topic and a lack of serious methodological flaws.

Restricting the search to these years produced limited literature specific to nursing education producing only three studies. Eliminating the years restriction in the nursing education-specific search generated only 13 studies included in this review. Excluded were studies involving graduate-level faculty, self-efficacy of students, post-licensure nurse educators, studies involving teaching patients, and teacher effectiveness. Of the 13 articles selected, only one study and one dissertation were directly related to teacher efficacy and academic nurse educators. Examining the remaining 11 articles resulted in five studies examining the newly recognized construct of academic clinical teacher-efficacy. Four articles covered the topic broadly defined as teacher self-efficacy and technology use including distance education and simulation. The remaining two articles addressed self-efficacy with related topics such as career commitment and hospital-based educators. Additionally, eight studies were included in this

review as they addressed the academic preparation of nurse faculty relating to developing teacher self-efficacy.

Due to the significance of the global COVID-19 pandemic on all education that occurred between the time of the initial literature search and end of this study, the literature review was conducted again looking at the years 2021-2022. This did not result in any additional studies pertinent to this study.

Theoretical Framework

Bandura's Social Learning Theory

Social learning theories are often described as the 'bridge' between traditional learning theory (behaviorism) and cognitive theory, which advocates that the processes of learning can be explained by analyzing mental processes (Rumjaun & Narod, 2020). Social learning theory posits that social behavior is learned through observation and modelling and is influenced by reactions of other (Bandura, 1977; Lippke, 2020; Rumjaun & Narod, 2020). Bandura asserted that most human behavior is learned through observation, imitation, and modeling. He emphasized that for learning to occur, as opposed to direct imitation, the observable behavior requires four steps, attention (attention must be given to the displayed behavior), retention (the behavior observed must be remembered), reproduction (learner must be able to enact the learned behavior), and motivation (the learner must be motivated to reproduce the observed behavior) (Rumjaun & Narod, 2020).

Bandura later extended these theoretical assumptions to include human agency and mastery approach (Bandura, 1977; Lippke, 2020). With this he published two new theories, social cognitive theory and self-efficacy. The social cognitive theory includes that learning occurs in a social context with dynamic and reciprocal interactions between person, environment,

and behavior (Bandura, 1977). Social cognitive theory integrates self-efficacy theory in the sense that self-efficacy is a core concept in his social cognitive theory which considers how both the environment and cognitive factors interact to influence human learning and behavior (Rumjaun & Narod, 2020). Social cognitive theory describes human behavior in terms of a three-way, dynamic, reciprocal model in which personal factors, environmental influences, and behavior are continuously interacting (Bandura, 1977; Bandura & National Institute of Mental Health, 1986).

Bandura's Self-Efficacy Theory

Self-efficacy theory attempts to explain how people's beliefs about their capabilities to produce designated levels of performance influence their lives and is built on his social cognitive theory (Bandura, 1994). Bandura's self-efficacy theory describes four main sources of influence (mastery/own experiences, vicarious experiences, verbal/social persuasion, affective/emotional states) in developing people's beliefs about their efficacy and four major psychological processes (cognitive processes, motivational processes, affective processes, selection processes) through which self-beliefs of efficacy affect human functioning (Bandura, 1977; Bandura & National Institute of Mental Health, 1986). The relationships between the sources of self-efficacy and the human functioning affected by them are posited as reciprocal in nature harkening to their origins in social cognitive theory.

Sources of Self-Efficacy

Bandura posited that self-efficacy beliefs can be developed through four main sources of influence: mastery experiences, vicarious experiences, social persuasion, and physiologic states.

Mastery Experience

"Enactive mastery experiences are the most influential source of self-efficacy information because they provide the most authentic evidence of whether one can muster whatever it takes to succeed (Bandura, 1997, p. 80)." Successes build a robust belief in one's personal efficacy (Bandura, 1994) and failures may also decrease one's self-efficacy (Bandura, 1997). After strong efficacy expectations are developed through repeated successes, the negative impact of occasional failures is likely reduced (Bandura, 1977). Once people become convinced that they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks (Bandura, 1997, p. 80).

Bandura explains that the weight of a mastery experience on one's perception of self-efficacy can be impacted various factors, including the difficulty of a task, contextual factors, effort expenditure, self-monitoring, reconstruction, and attainment trajectories (Bandura, 1997). For example, if one succeeds at an easy task, it is likely deemed as redundant with one that is already knows and therefore does not cause that person to reevaluate the efficacy value. Success achieved with external support likely carries little efficacy value as the success is attributed to the assistance (Bandura, 1997).

Vicarious Experiences

Seeing people like oneself succeed by sustained effort rallies observers' belief that they too possess the capabilities to master comparable activities (Bandura, 1994). Because vicarious experiences rely on inferences from social comparison, it is a less dependable source of information about one's own abilities (Bandura, 1977). There are many processes that govern the impact of modelling on self-efficacy. Modeling influence can be accomplished in various forms and can be structured in ways that strengthen and instill a self of self-efficacy (Bandura,

1997). For example, seeing people similar to oneself perform successfully, typically raises efficacy beliefs. The greater the assumed similarity the more persuasive are the models' successes and failures (Bandura, 1997). "Self-modeling, in which people observe their own successful attainments achieved under specially arranged circumstances that bring out their best, is directly diagnostic of what they are capable of doing (Bandura, 1997, p.87)." People actively seek out models who display competencies to which their aspire.

Social Persuasion

People who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort (Bandura, 1994). This is most often achieved through evaluative feedback and should highlight personal capabilities to raise personal efficacy (Bandura, 1997). Efficacy expectations raised in this manner are likely to be weaker because they do not provide an authentic experiential base (Bandura, 1977). This information can be relayed in a manner that can boost a sense of efficacy or undermine it (Bandura, 1997).

Physiological and Affective States

People rely in part on their somatic and emotional states to judge their capabilities (Bandura, 1994). People vary in their proneness to dwell on somatic states and are influenced by attention, construal bias, and mood (Bandura, 1997). Because high arousal usually inhibits performance, individuals are more likely to expect success when they are not plagued by aversive arousal than if they are tense and agitated (Bandura, 1977, p.198).

Efficacy-Activated Processes

According to Bandura, there are four major physiological processes through which self-efficacy beliefs affect human functioning: cognitive processes, motivational processes, affective processes, and selection processes.

Cognitive Processes

Effects of self-efficacy beliefs on cognitive processes may affect goal setting and persistence (Bandura, 1994, 1997). People with higher perceived self-efficacy set higher goals for themselves and are more persistent (Bandura, 1977, 1997).

Motivational Processes

Most human motivation is cognitively generated. People motivate themselves and guide their actions anticipatorily by forethought. They form beliefs about what they can do, anticipate likely outcomes, and set goals for themselves planning courses or actions designed to realize valued futures (Bandura, 1994).

Affective Processes

People's beliefs in their coping capabilities affect how much stress and depression they experience in threatening or difficult situations, as well as their level of motivation (Bandura, 1994). He posited that despairing mood lowers perceived efficacy and positive mood enhances it. Stating that people then act according to with their mood-altered efficacy beliefs. People then choose more challenging activities when they are in a self-efficacious frame of mind than if they are in a despondent mood (Bandura, 1997, p. 160).

Selection Processes

Beliefs of self-efficacy can shape the course lives take by influencing the types of activities and environments people choose. Avoiding activities and situations they believe exceed their coping ability and will readily undertake challenging activities and situations they judge themselves as capable of handling (Bandura, 1994).

Related Terms

Confidence; The terms confidence and self-efficacy are regularly used, at times interchangeably,

but they have key distinctions. Bandura (1997) describes confidence as a *general* feeling

of certainty about an individual's ability but does not specify which behaviors the feeling

is associated with, nor the strength of those feelings. He then notes that self-efficacy is

specific. It is a strong belief or certainty in one's ability to perform a *specific* behavior

successfully (Bandura, 1997).

***Teacher-Efficacy*:** Teacher's belief in their ability to produce behaviors that will allow them to

be a successful teacher (Armor et al., 1976; Dembo & Gibson, 1985; Tschannen-Moran

& Hoy, 2001). The next section of this chapter explores this concept in more depth as the

foundation for this literature review.

***Instructional Efficacy*:** Teacher's belief in their ability to motivate and educate students through

counteracting any adverse influences in the students' personal lives on their academic

development (Bandura, 1997).

***Collective Efficacy*.** Collective efficacy was described by Bandura (1977) when he "observed

that a group's confidence in its abilities seemed to be associated with greater success. In

other words, the assurance a person places in his or her team affects the team's overall

performance. In schools, when educators believe in their combined ability to influence

student outcomes, there are higher levels of academic achievement (Bandura, 1997).

Teacher Self-Efficacy

Teacher self-efficacy is comprised of two factors - personal efficacy and teacher efficacy

(Allinder, 1995; Dembo & Gibson, 1985). Personal efficacy is belief in one's skills and abilities

(Dembo & Gibson, 1985). Teacher efficacy is the belief that students will benefit from the

educational experience in the way the teacher develops and presents it (Allinder, 1995; Dembo & Gibson, 1985). In other words, a person may believe that a process is the right one and that they can perform it but may still lack the belief that they can impact a student's benefit from it (Dembo & Gibson, 1985). In 1997, Bandura described teacher-self-efficacy: "The task of creating learning environments conducive to development of cognitive competencies rests heavily on the talents and self-efficacy of teachers." (p. 240).

History and Development

Often used interchangeably with the term teacher efficacy, teacher self-efficacy has been defined as the belief a teacher holds in their ability to influence a student in a way that brings about learning (Armor et al., 1976; Dembo & Gibson, 1985; Nugent et al., 1999; Zee & Koomen, 2016). This term was born from two studies sponsored by the RAND corporation in 1976 (Armor et al.) and 1977 (Berman et al.) that used Rotter's locus of control theory as their conceptual base (Tschannen-Moran et al., 1998). The two studies analyzed reading programs in minority elementary schools in Los Angeles to determine programs preference (Armor et al., 1976; Berman et al., 1977). In analyzing the varying products used, implementation of the programs, and sustainability of the programs, they discovered that teacher characteristics had major effects on project outcomes rather than the products themselves (Berman et al., 1977). Specifically, they found that teachers' sense of efficacy emerged as a powerful variable (Berman et al., 1977).

Later that year, Bandura introduced the theory of self-efficacy which was derived from his social cognitive theory leading to new research that examined the concept of teacher self-efficacy with a new lens and in more depth. Studies that examine teacher self-efficacy using Bandura's theory as the conceptual guide showed positive influences on student learning (Ashton

et al., 1983). A study by Ashton et al. (1983) indicated that teacher self-efficacy beliefs were reflected in teacher behaviors and student performance. Each of these early studies was conducted using middle school level students and teachers and this was reflected in early teacher self-efficacy measurement development.

Bandura's (1977, 1997; Bandura & National Institute of Mental Health, 1986) addition to Rotter's (1966) theory impacted teacher self-efficacy research immensely. Initially, researchers sought to differentiate between self-efficacy and outcome expectancies (Zee & Koomen, 2016). Researchers Dembo and Gibson (1985) contributed much to this area and identified two factors that resembled these two constructs and labeled them respectively personal teaching efficacy and general teaching efficacy. These new constructs were later confirmed and used by additional researchers in the 1990s (Zee & Koomen, 2016). Refining these constructs led to the now generally accepted definitions of personal efficacy and teaching efficacy. Personal efficacy is the belief that an individual teacher has the skills necessary to effect change in students (Ashton et al., 1983; Dembo & Gibson, 1985; Nugent et al., 1999). Teaching efficacy is the belief that students benefit from educational experiences (Dembo & Gibson, 1985; Nugent et al., 1999).

Teacher-efficacy examines both an educator's personal self-efficacy and his/her teaching efficacy. Teachers with high teacher-efficacy studied in research demonstrated positive links to student's academic achievement, student engagement, motivation, and students' own sense of self-efficacy (Tschannen-Moran & Hoy, 2001). It also relates to the teacher's behavior in the classroom and includes efforts invested in teaching (Allinder, 1995), willingness to experiment with new methods (Berman et al., 1977), persistence (Ashton et al., 1983), and goal setting (Allinder, 1995; Zee & Koomen, 2016).

Measurement

As identified by Tschannen-Moran and Hoy (2001) measuring this concept continues to be elusive. One early scale for measuring this was Tschannen-Moran and Hoy's Teacher Sense of Self-Efficacy Scale (TSES) which measures three categories: instructional strategies, student engagement, and classroom management. This can be done with the long form (24 items) or a short form (12 items). Measurement in higher education adjusted the scales to eliminate categories such as parent-teacher relations as irrelevant in these contexts (Tschannen-Moran et al., 1998). These tools went on to be further modified to be more specific to different fields correlating with findings that showed self-efficacy is task-specific (Bandura, 1977; Tschannen-Moran et al., 1998; Zee & Koomen, 2016).

Tollerud (1990) developed a 35-item tool, named Self-Efficacy Toward Teaching Inventory (SETTI), that was used to measure perceived self-efficacy of teaching skills in advanced doctoral students and graduates from counselor education programs. This tool was later revised by Prieto and Altmaier (1994) to measure perceived self-efficacy among graduate assistants. This version had 32 items that were identical to the original tool except three items deleted that were specific to counselor education (Nugent et al., 1999).

Later, Nugent et al. (1999) adapted Tollerud's 35-item tool and developed a 48-item scale, The Self-Efficacy Toward Teaching Inventory (SETTI) by adding 19 items dealing with selecting teaching strategies, promoting critical thinking, and other specific behaviors associated with clinical teaching and evaluating student performance in the clinical area (Nugent et al., 1999). Garner et al. (2018) further adjusted this scale developing the SETTI-NE to assess a global audience and include the new technologies being used in nursing education, such as simulation and other newer technologies. This revised scale reports information on four

subscales: course preparation, instructor behaviors, evaluation and examination, and clinical skills.

The 35-item tool designed by Tollerud (1990) was used in a dissertation to measure the perceived self-efficacy of teaching skills of advanced doctoral students and graduates from counselor education programs. Construct and content validity were established via literature reviews, feedback from faculty considered experts, and factor analysis (Prieto & Altmaier, 1994; Tollerud, 1990). Internal consistency was reported at .94 and factor analysis showed the items of the SETTI converging into one factor, with loadings from .39 to .78 which accounted for 35% of variance. Prieto and Altmaier (1994) adapted version consisted of 32 items identical to the original version, deleting three items that were specific to counselor education and reported an internal consistency of α = 0.94.

Nugent's adaptation further adapted Prieto & Altmaier version removing three items not pertaining to nursing and adding nineteen items dealing with teaching strategies, promoting critical thinking and more specific behaviors associated with clinical teaching and evaluating student performance in the clinical area. This resulted in a 48-item survey. They reported internal consistency of .95 alpha coefficient on total scale. Reliability on the four subscales were reported at .89 for course preparation, 0.89 for instructor behavior, .88 for evaluation and examination, and .91 for clinical skills.

The final adjusted version, SETTI-NE, wording was changed to reflect a more global audience and items were added specific to simulation. Content was validated using nine international expert nurse educators. Scale showed overall Cronbach's alpha of .98 internal consistency was reported for this version.

Teacher Self-Efficacy in Nursing

Nursing Education

In nursing education, the personal efficacy component of teacher self-efficacy may be influenced by the fact that many faculty members were clinical experts (Bourne et al., 2021; Nugent et al., 1999) before transitioning to education, while the teacher efficacy component may be related to formal education preparation or professional development activities (Dozier et al., 2019; Shin et al., 2021; Weston, 2018). A nursing instructor may have high personal efficacy in the specialty in which they worked clinically but have low teacher self-efficacy in the classroom or clinical teaching environment.

In one of the earliest and most influential studies of teacher self-efficacy in nursing education, Nugent et al. (1999) reinforced the importance of mastery experience for new nurse educators citing that new nurse educators became more confident after receiving direct experience in classroom teaching. Several studies showed that nurse faculty members felt unprepared for the teaching role which impacted their intention to stay in the role thus limiting the opportunities for them to develop teacher self-efficacy through mastery experience (Candela et al., 2015; Dreifuerst et al., 2016; Garner & Bedford, 2021; McNelis et al., 2019; Summers, 2017). Much research in teacher self-efficacy has been in K-12 education where teachers are taught to be teachers and usually involve formal student teaching experiences which begins their mastery experience development.

This is pertinent to this study as Bandura explains that self-efficacy is task and context specific (Bandura, 1989). This also relates to the notion that many nurse educators are experts in their clinical field and report high self-efficacy, but once transitioning to academia once again

are novice and may exhibit lower self-efficacy in this new context (Nugent et al., 1999; Weston, 2018).

Four studies supported the maxim that nursing expertise does not equal teaching expertise (Crocetti, 2014; Dozier et al., 2019; Shin et al., 2021; Weston, 2018) and may influence the influx of nursing faculty who are prepared as advanced practice nurses and experts in their field of practice but may lack training in educational theory. Consistent with Bandura's self-efficacy theory, mastery experiences were found most closely linked with self-efficacy development as evidenced by correlations to years of teaching experience as found in three studies (Dozier et al., 2019; Nugent et al., 1999; Shin et al., 2021) and a lack of correlation with clinical experience in one study (Weston, 2018).

Academic Nurse Educator

Roach (2020) examined the development of self-efficacy in novice nurse faculty teaching in the classroom setting and supported Bandura's mastery experiences as the most influential in developing self-efficacy. One of the themes discovered in this qualitative study was that of developing efficacy through time and experience in teaching (Roach, 2020). This was also supported by the only other study found reviewed regarding academic nurse educators and self-efficacy.

Dozier et al. (2019), found in a small study *(n=118)* examining nursing faculty teacher self-efficacy levels in schools of nursing in Georgia that teaching experience was a good predictor of perceived teacher self-efficacy in the domains of instructional strategies and classroom management. The lack of additional studies in this area further demonstrates the knowledge gap.

Clinical Nurse Educator

In early 2015, the NLN identified the need to delineate the role of the academic clinical nurse educator and after much research officially launched the Certified Academic Clinical Nurse Educator (CNE®cl) in October 2018 (Christensen & Simmons, 2019). This delineation initially excluded articles from the literature review applicable to this study, however, with very few studies existing on teacher self-efficacy specific to nursing education they were then included.

To clarify concepts and terms, Bourne et al. (2021) conducted a concept analysis on "clinical teacher self-efficacy." As more and more schools of nursing are relying on adjunct clinical educators to help alleviate the nursing faculty shortage (Crocetti, 2014; Weston, 2018) this concept analysis becomes more significant in both practice and for driving continued research. They also found that not being prepared through education or training in how to teach, it is likely they lack confidence in their abilities thereby affecting their performance and outcomes. Bourne et al. (2021) concluded that the overarching goal of clinical teachers is linking didactic content to the clinical reality. This further supports Nugent et al. (1999) statement, "In nursing, self-efficacy could be viewed as the extent to which the nurse educator bridges the theory-to-practice gap" (p. 230).

Two studies combined technology and clinical nurse educator concepts by using simulation to orient adjunct clinical faculty. Both studies showed a positive correlation with clinical teacher self-efficacy and use of simulation (Crocetti, 2014; Weston, 2018).

Teacher Self-Efficacy and
Technology

While technology use in nursing education is outside the scope of this study, it is only prudent to mention a few studies specific to this topic and its relation to teacher self-efficacy as

the last few decades have seen a rise in the use of technology in healthcare as well as in education. Roney et al. (2017) noted that faculty who taught didactic only reported moderate technology use while faculty who taught didactic and clinical reported high technology use. Clinical instructors high use of technology may relate to the use of technology being used in healthcare settings. Teaching with technology may include such things as activities in the classroom (Roney et al., 2017), activities in a lab setting (Aldridge, 2017; Oermann, Muckler et al., 2016), activities in clinical experiences (Weston, 2018), simulation (Garner et al., 2018), blended learning (Leidl et al., 2020), and distance education (Richter & Idleman, 2017; Robinia & Anderson, 2010).

Clinical education is essential to nursing education and is generally considered to be concepts taught in the clinical environment (Bourne et al., 2021). This can be expanded to include lab and simulation as recent developments around simulation have shown it to be a useful and necessary tool in nursing education. However, not all nurse faculty are trained in this technology, and not all nurse faculty have access to the technology (Garner et al., 2018).

This specialized area of nursing education prompted Garner et al. (2018) to further adapt the SETTI to include simulation in the scale and renamed her scale Self-Efficacy Towards Teaching Inventory for Nurse Educators (SETTI-NE). With the current faculty shortage, many faculty members are being asked to teach both in the classroom and clinical or lab settings (Garner et al., 2018; Oermann, Muckler et al., 2016). Simulation can be used in any setting, including the classroom and online (Robinia & Anderson, 2010; Roney et al., 2017). For these reasons, this scale was chosen for this study.

Distance Education

To appeal to the modern learner pre-pandemic, most schools provided at least some offerings online, including in nursing programs (Robinia & Anderson, 2010; Roney et al., 2017; Valiga, 2012). Teaching in this environment differs from face-to-face instruction and requires a different expertise (Robinia & Anderson, 2010). As enrollment in these programs grew, so did the interest in educational research in this area. This prompted Robinia and Anderson (2010) to modify TSES to incorporate the skills necessary to teach online effectively and measure this appropriately. They developed the Created Michigan Nurse Educators Sense of Efficacy for Online Teaching (MNESEOT).

Since the pandemic necessitated that most schools of nursing shifted to an online format, this generated post pandemic studies adding more studies using MNESEOT. Culp-Roche et al. (2021) agreed with Robina & Anderson and suggested that pre-emptive opportunities to teach online can build self-efficacy for faculty in this environment. As this is a highly specific scale, studies using this scale are not appropriate to this study, however, are a few are included in this review due to the limited number of studies specific to nursing education in the classroom and teacher self-efficacy. This did not address the growing number of blended learning opportunities being offered by many schools nursing in which "technology is merged with a physical lab, classroom, or clinical learning experience (Leidl et al., 2020, p. 2)" or any combination of face-to-face instruction with technology-mediated instruction.

Miscellaneous Studies

A study by Jones (2017) examined relationships between career commitment, career satisfaction, and teacher self-efficacy. They found that when measured in credit hours, there was no significant relationship with career satisfaction or career commitment. They did find teaching

experience measured by years held a strong correlation with career commitment. They also found a direct positive relationship with teacher self-efficacy and education by credit hours. They posited that this was an important finding stating that it "clearly indicates the completed graduate-level credit hours focused in education and/or nursing education have a direct impact on teacher self-efficacy." (375) They also suggested opportunities to teach during one's graduate level nursing education to provide increased opportunities to develop teacher self-efficacy. This is consistent with Bandura's self-efficacy theory and the influence of mastery experiences.

Shin et al. (2021) conducted a study in Korea that sought to examine differences in personal characteristics, core practice competency, and role stress to levels of teaching efficacy among clinical nurse educators working in general hospitals. They found no significant correlations. Previous experience teaching and time in the nursing role were found to contribute to higher levels of teacher self-efficacy in many clinical studies (Shin et al., 2021). This study was performed on 364 nurses, but not knowing the structure of the nursing education in Korea it is unclear if these findings can be generalized to the United States.

Academic Preparation of Nursing Faculty

In the 1990s, graduate education for nurses focused on preparing nurse practitioners creating experts in their specialty, but not in teaching (Booth et al., 2016). Effective teaching requires a specialized skill set involving curriculum, teaching strategies, and evaluation methods, while still engaging in research and other scholarly activities (Fitzgerald et al., 2020). Teaching expertise is supported by both the American Association of Colleges of Nursing (AACN) and the NLN (Benner et al., 2010; Booth et al., 2016; Cangelosi et al., 2009; Halstead, 2018). There is evidence that role confusion and feeling unprepared for the role of nursing faculty is damaging new nursing faculty longevity in teaching positions (Brown & Sorrell, 2017). This not only

perpetuates the faculty shortage, but it also limits the opportunities for new faculty to gain practice and develop self-efficacy through mastery experiences.

Incorporating Teacher Self-Efficacy
Theory

New requirements for doctoral preparation of nurse practitioners have created a rapid increase in the number of Doctor of Nursing Practice (DNP) programs. The AACN reports that there are currently 348 DNP programs with enrolled students and another 98 in the planning stages. Between 2017 and 2018, this generated growth in the number of enrolled students from 29,093 to 32,678 and the number of graduates from 6,090 to 7,039. Nursing Ph.D. programs have experienced a leveling off in growth of both programs and students (AACN, 2020b). However, neither of the degrees offer much coursework in pedagogy, with DNP focusing on nursing practice, and the Ph.D. focusing on research (Oermann, Lynn et al., 2016).

There is a plethora of research describing the difficulties in transitioning to the role of novice educator from expert clinician (Brown & Sorrell, 2017; Cooley & Gagne, 2015; Cotter & Clukey, 2019; Poindexter, 2013; Summers, 2017). Novice educators are entering a new field unprepared for the realities of the responsibilities associated with the new role. Studies on the experiences of novice faculty show that gaining confidence in teaching takes time (Gardner, 2014). Self-directed learners in the transition phase look for their own answers, but it is not easy to find answers as to *what* and *how* to teach the new material (Schoening, 2013). This leads them to rely on teaching content the way they were taught or experimenting with "buzz words" and "trending strategies" versus evidence-based teaching practices. The added stress from role confusion aligns with Bandura's final source of self-efficacy, in which he posits that affective or emotional states can negatively affect self-efficacy.

Synthesis of Literature Around Teacher
Self-Efficacy in Nursing Education

From Bandura's social cognitive theory emerged his self-efficacy theory and ensuing Teacher Self-efficacy construct. The literature reviewed revealed that while this has been widely studied in K-12 education showing positive influences on student learning, teacher behaviors, student engagement, and student performance, research in nursing education is extremely limited. Bandura's theory posits that self-efficacy is task and context specific, suggesting that these findings may not transfer to field of nursing education. The earliest study of this construct in the context of nursing education suggested that the personal efficacy component may be attributed to the fact that nurse educators are often experts in their clinical fields before transitioning to education, however, no studies were found examining this component nor how it relates to overall teaching self-efficacy in nursing. The second component of teacher self-efficacy is teacher efficacy which may not be as well developed in the formal education of the nurse as it was in the K-12 educators studied. The identified literature did show that experience in teaching positively influenced teacher self-efficacy, which is consistent with Bandura's theory that mastery experiences are the most influential sources of self-efficacy. Literature did not show any correlation between level of nursing education and teacher self-efficacy in nurse educators (Nugent et al., 1999). With existing literature supporting the development of the teaching efficacy component, the personal efficacy component remains unstudied. Further exploration into the relationship between personal efficacy of nurses and its impact on their teacher self-efficacy could support their development.

Summary

The purpose of this study was to identify variables influencing nurse educator self-efficacy and describe nursing faculty characteristics related to varying teacher self-efficacy

scores. This study was guided by Bandura's social cognitive theory which introduced the concepts of reciprocal determinism and self-efficacy. His self-efficacy theory posits four main sources of influence on perceived self-efficacy (mastery experience, vicarious experience, social persuasion, and emotional and affective states) that mediate cognitive, motivational, affective and selection processes. Literature in this review revealed the related concept of teacher self-efficacy is comprised of two factors, personal efficacy, and teacher efficacy. Further studies suggest that nurse faculty may have high sense of personal efficacy and low sense of teacher efficacy. Similar to other fields, high levels of teacher self-efficacy positively associate with faculty instructional methods, student engagement, and student achievement. These concepts have not been studied in depth in nursing education yet could help educators to address the persistent problems facing nursing education today and better prepare new nursing graduates for complex clinical practice.

CHAPTER III

METHODOLOGY

Research Design

This study used an explanatory, sequential, mixed methods design to collect, analyze, and integrate quantitative and qualitative data through the research process within a single study (Ivankova et al., 2006). The rationale for this method selection was that neither a strictly quantitative nor a strictly qualitative design would sufficiently evaluate the complex issue of nurse faculty self-efficacy. Mixed methods research in nursing is becoming increasingly popular as it is very useful for practice as this combination of both quantitative and qualitative methods provides a scientific base for practice as well as the richness provided by qualitative inquiry (Bressan et al., 2017).

The primary purpose of this study was to identify variables that influence nurse educator self-efficacy and describe nursing faculty characteristics related to varying teacher self-efficacy scores. The first strand, collecting quantitative data, addresses research questions one and two. To address research question one, the first quantitative strand of this study identified the perceived teacher self-efficacy of academic nurse educators and specifically in each of the four domains of course preparation, instructor behavior, evaluation and examination, and clinical teaching as measured by the SETTI-NE survey (Garner et al., 2018). Research question two sought to identify any relationship between total years of working in direct patient care as a registered nurse and teacher self-efficacy scores. The third research question will be answered by

data collected in the qualitative strand and then integrated with the quantitative analysis. This integration aimed to fill the existing gap in knowledge.

Teacher self-efficacy theory has been demonstrated in other fields, as well as in nursing, to be influenced by years of teaching experience. Nurses often enter teaching with years of clinical nursing experience and formal education that may have no content on education, but no studies were found that looked to see if years of clinical experience influences TSE in the classroom of nurse educators. As some authors proposed nurses may come to teaching with a higher level of personal self-efficacy (Nugent et al., 1999), one of the two components TSE, this is an area that warranted further exploration.

This study conducted a variant of the explanatory design called the participant selection model (Creswell, 2007). According to Creswell (2007), participant selection is used when the researcher needs quantitative data to identify and purposefully select participants for a follow-up, in-depth, qualitative study. This mixed methods design involves two strands of data collection in which the researcher collects quantitative data in the first strand, analyzes the data, and then uses the results to plan (or build on to) the second, qualitative strand (Creswell & Plano Clark, 2018). The rationale for this approach was that the quantitative data and results were posited to predict external factors that influence teacher self-efficacy (answering research questions one and two), while the qualitative data and analysis sought to refine and explain the statistical results by exploring the participants' views in more depth (answering research question three).

When selecting mixed methods design, the researcher must address the issues of priority, implementation, and integration of the quantitative and qualitative approaches.

Priority

Priority refers to which method, either quantitative or qualitative, is given more emphasis in the study (Creswell & Creswell, 2018; Ivankova et al., 2006). The decision of which data will take priority can be determined at any point in the analysis (Ivankova et al., 2006). This researcher initially posited that priority be given to qualitative data collection and analysis of the study since this is an identified gap in knowledge.

Implementation

Implementation refers to whether the quantitative and qualitative data collection and analysis comes in sequence (chronological), or in parallel (concurrently) (Creswell, 2007). The student researcher acknowledged that the quantitative data, no matter how robust, were limited to one source, a cross-sectional survey, and the data analysis employed only two statistical techniques: descriptive statistics and discriminant analysis. While the possibility of significant findings in the quantitative data may alter decisions, analysis of this quantitative data did not alter any decisions.

Integration

Integration refers to when the integration of the two data occurs (Creswell & Plano Clark, 2018). This study began the integration in the selection of the participants for the second strand. The analysis of the quantitative strand allowed the participants to be divided into three categories based on their sum scores. These categories were further divided based on years of clinical nursing experience to select qualitative participants for the second strand.

In the second strand, a multiple case study approach was used to collect text data through individual semi-structured interview transcripts to help explain how the factors tested in the first strand influenced the development and impact of teacher self-efficacy on faculty behaviors.

Integration of both data began at the start of the qualitative strand while selecting the participants for the case study analysis and developing interview questions based on results of the statistical tests and the literature review. The results of the two strands were also integrated during the discussion of the outcomes of the entire study.

Quantitative Strand

A convenience, nonprobability and purposive sampling method was performed to best select the sample that represents the population being investigated (Sutherland, 2017), was cost-effective and provided more generalizable results (Kellar & Kelvin, 2013; Sutherland, 2017). Participants were selected for specific characteristics. The target population for this study was faculty members actively teaching or had taught in baccalaureate, pre-licensure nursing programs at least one course in the classroom environment (either face-to-face or blended learning). Pre-licensure baccalaureate nursing courses comprise a large group of faculty members teaching didactic material face-to-face. Excluded were faculty members who teach in pre-licensure associate degree programs, to maintain consistency for the study. Post-licensure baccalaureate programs and master's programs were excluded as these programs both target working nurses offering many courses in distance format. Faculty members who teach in an online environment use a very specialized skillset and there is another tool to measure TSE in that population.

To determine the necessary sample size, a power analysis was completed using the G*Power software. The settings used were two tails, an alpha level of 0.05, power of 0.8, and hypothesized correlation for the naught hypothesis of 0 and suggested a sample size of 346. (Appendix A).

Instrumentation

This study employed the Self-Efficacy Towards Teaching for Nurse Educators (SETTI-NE) scale as adapted by Garner et al. (2018). In the development of the original tool, Tollerud (1990) studied advanced doctoral students in counselor education programs and reported Cronbach's alpha of .94. The later adaptation by Prieto and Altmaier (1994) with graduate students reported .94. The adaptation by Nugent et al. (1999) with new nursing faculty reported a Cronbach's alpha of .94.

The SETTI-NE when adapted by Garner et al. (2018), questions were added to the clinical practice subscale to add simulation content. Wording in questions was updated to appeal to an international audience, but content was not altered in those. The new content was validated by nine international expert nurse educators, US (4), India (2), Malaysia (1), and Sweden (1). Both the content validity inventory (CVI) each question and the total CVI were calculated. The reported overall raw Cronbach's alpha was reported as .98 (Garner et al., 2018).

This tool is a self-report scale asking participants to rate how confident they are using a 4-poing Likert scale in their ability to complete each of 54 stated tasks (Appendix B). The scores are then summed to calculate a total SETTI-NE score with a maximum of 216 points. These statements are then further classified in each of the four domains. Examples of the task statements from the scale can be seen below in Table 3.1. Permission to use the tool was granted by Sarah Garner and can be seen in Appendix C.

This study focused on faculty in the classroom environment, so the tool was further revised to maintain that focus. Since simulation has become a mainstay in nursing education (Aebersold, 2018) and some faculty are incorporating simulation in the classroom (Brauneis et al., 2021; Klenke-Borgmann, 2020; Kubin, 2020; Powers, 2020), simulation tasks were not

eliminated, however, a total of four tasks were modified tailoring them to the classroom setting

and three were deemed specific to clinical practice and removed. This revised scale resulted in

fifty-one tasks and a maximum summed score of 204. This modified scale was first piloted with

five faculty members, not participating in the study, for grammar and clarity. A summary of the

scale modifications can be seen in Table 3.2 below. The complete comparison of both scales can

be viewed in Appendix D. This study was reviewed and approved by University of Northern

Colorado's Institutional Review Board (Appendix E).

Table 3.1

Self-Efficacy Toward Teaching Inventory-Nursing Education Example Statements

Please rate how confident you are in your ability to be effective in each of the following teaching skills and behaviors on a scale from 1 to 4.

1	*2*	*3*	*4*
Not confident			*Completely confident*

Domain	Q	Statement	Rating
Course Preparation	1	State goals and objectives clearly	1 2 3 4
Course Preparation	2	Plan teaching methodologies	1 2 3 4
Instructor Delivery and Behavior	11	Select and use a variety of teaching strategies	1 2 3 4
Instructor Delivery and Behavior	12	Initiate discussions with students (in class or online)	1 2 3 4
Evaluation and Examination	24	Construct test questions that are at a cognitive domain of apply or higher (apply, analyze, evaluate, create)	1 2 3 4
Evaluation and Examination	25	Develop a test plan	1 2 3 4

Table 3.2

Summary of Tool Modifications

Original Wording with #	New Wording with #	Summary of Changes
31. Set clinical practice expectations that are appropriate for the level of the learner in patient care areas	31. Set expectations that are appropriate for the level of the learner	Removed 'clinical practice' and 'in patient care areas'
32. Modify clinical teaching strategies based on learner's level of performance	32. Modify teaching strategies based on learner's level of performance	Removed 'clinical'
33. Ask questions in a clinical practice setting that stimulate problem-solving	33. Ask questions in a clinical practice or didactic setting that stimulate critical thinking	Added 'or didactic setting'
34. Provide constructive feedback in a supportive manner regarding clinical practice performance	Deleted	Specific to clinical or simulation environment
36. Assist student in new patient care situations	35. Assist student in patient care or didactic situations that are new	Changed to 'patient care or didactic situations that are new'
38. Adjust clinical practice assignments to individual's level of performance and confidence	Deleted	Specific to clinical or simulation environment
43. Conclude a student's clinical practice performance is failing	Deleted	Specific to clinical or simulation environment

Procedure

Emails were sent to potential participants from the NLN member directory. Random faculty from this directory were emailed a recruitment letter containing an explanation of the study, an invitation to participate, informed consent, the researchers contact information for any questions, directions for completing the survey, and the link for participation (Appendix F). To

increase the potential of participation, an invitation to participate in the survey was posted on *The Circle*, Sigma's social networking site as well as in the PhD Pathway Community within AACN's *Connect*, the AACN's online platform for members to connect (Appendix G).

Faculty who teaches, or have taught, at least one face-to-face didactic course were eligible to participate. If an invitee chose to take the survey, they clicked on the link within the social media post or the email which opened the survey on a web browser page using Qualtrics software. The first page of this survey was consent for participation (Appendix H). Consent informed participants that completion of the survey was confidential, but not anonymous. Demographic information was collected and associated with survey responses. If participants continue to the demographic portion of the survey (Appendix I), consent was implied by continuation. If participants did not agree to the consent, they were to close their web browser and exit the survey. Once choosing to participate, the survey prompted them to complete all question items. At the end of the quantitative survey, participants were asked about their willingness to participate in the second qualitative phase, an individual interview. If they opted to be available for an interview, they provided a contact email. Upon completion of the survey items, participants submitted the survey and were prompted to close their web browser. The survey link remained open for three weeks. Raw survey data were entered directly into the Qualtrics software and was then exported to a table compatible with SPSS Version 28 software for data analysis explained below.

Data Analysis

Prior to running any inferential tests on the data, reliability analysis was completed to ascertain reliability of the survey for this specific sample population. The Cronbach's alpha was utilized to measure the internal consistency of the survey. Additionally, prior to inferential

analysis, the data were checked for violations of any of the assumptions of the tests detailed below.

Descriptive statistics were performed on the demographic data collected and included gender, age (by group), total years of working in direct patient care as a registered nurse, years teaching in academic nursing education (by group), formal education (degree) completed, and academic nursing teaching setting. Frequency tables, mean scores, ranges, standard deviation, and skewness measures were calculated. Analyzing this information addressed research question one.

A summed score of all 51 questions was used as the overall self-efficacy score. The four domains were analyzed using the same procedure as the original scale developers, Garner et al., with questions 1-9, & 30 coded as course preparation, questions 10-22, & 47 coded as instructor delivery and behavior, questions 23-29, 39, 40, & 48-51 coded as evaluation and examination, and questions 31-38, & 41-46 coded as clinical practice. I addition to research question one, these subscales were used in the integration of the two strands in the interpretation narrative.

For the variable of interest, total years of working in direct patient care as a registered nurse, research question two was answered using the Spearman test of correlation due to the nonnormal distribution of the data (Kellar & Kelvin, 2013).

The quantitative results were used to select potential participants for the qualitative strand. Since this study aimed to explore how nurse educators of varying teacher self-efficacy scores characterize their teacher behaviors, the respondents were stratified based on the overall summed score into one of three categories: high teacher self-efficacy, moderate teacher self-efficacy, and low teacher self-efficacy. The results of the quantitative analysis determined the ranges for these three categories.

As is best practice when using this research design, participants from this strand may also be selected for the second strand based on any extreme outliers, significant predictors, or significant results relating variables (Creswell & Creswell, 2018). There were only two outliers in the analysis of the quantitative data, one in the total score and one on the Subscale A score. One participant who elected to participate in the second strand had both outliers and was selected as an invitee for the second strand but did not respond to the invitation.

Reliability and Validity

In quantitative research, reliability and validity of the instrument are very important for decreasing errors that might arise from measurement problems in the research study. Reliability refers to the accuracy and precision of a measurement procedure. Cronbach's alpha has been documented with this scale at 0.98 and was calculated here to ensure validity with this population.

A non-response bias is a concern in any survey (Remler & Van Ryzin, 2015) suggesting the possibility that only faculty who feel strongly about the phenomenon responded to the survey. Participants may also have chosen not to respond out of fear that providing an honest rating of their self-efficacy may negatively affect their employment or promotion opportunities. To reduce non-response bias and elicit higher participation rates, participants were informed that while response was not anonymous, it will remain confidential.

One threat inherent with using self-report scales is the inability to guarantee honest responses from participants (Remler & Van Ryzin, 2015). Although care was taken to ensure validity of the study, threats to external validity are possible based on lack of random sampling and use of convenience sampling (Sutherland, 2017). Threats to internal validity in descriptive and correlational research may be affected when results are subject to seasonal or diurnal

variation (Sutherland, 2017). In this study, this may have affected response rates based on being conducted during a time when most faculty may be in the middle of a semester or continuing to manage teaching in a pandemic, but it is not felt that it affected the results.

Qualitative Strand

Sample

The analysis of the quantitative data allowed for selection of faculty with varying levels of perceived teacher self-efficacy scores and participants representative of the levels of clinical years of experience to be invited to interview for the qualitative strand. As the aim of this strand of the study was to identify characteristics of nurse educators with varying overall teacher-efficacy scores, sample size was determined based on the quantitative analysis. Highly stratified results should warrant a higher number of participants in this strand to have enough information to generate meaningful themes. Whereas a less stratified population will likely dictate a smaller sample size to reach a similar level of meaningful themes.

Choosing this method required having identifying information for participants in the quantitative sample who indicated willingness to participate in interviews for this strand. Participants were informed during the initial consent process about the potential of being contacted in the future about for secondary data collection. Consent was reviewed with participants selected for an individual interview prior to participation in the interview.

Using SPSS, the quantitative data of the participants willing to participate in this second strand were divided into three categories. Withing each of these categories, three participants were chosen: one participant with two to three years of nursing experience, one with 11-15 years of nursing experience, and one with greater than 35 years of nursing experience. This provided a total of nine initial participants.   Participants were sent an email invitation to the email they

provided during the survey until nine participants responded (Appendix J). Each of the participants responded via email with a convenient time for the interview, to which the researcher responded with a scheduled time.

Interview Guide

While there was no new instrument for this strand of the study, the researcher employed open-ended semi-structured questions for the interviews. Development of the initial semi-structured questions was guided by teacher self-efficacy theory and findings of the quantitative data analysis. A table describing the questions and prompts to guide the interview and ensure that key concepts in the theory are addressed can be seen in Appendix K in its entirety, with a few examples listed below in Table 3.3. The interview questions were piloted for grammar and clarity with five faculty member volunteers not participating the in the study.

Procedure

Potential participants were drawn from the quantitative sample to represent the spectrum of scores on the SETTI-NE and number of years of nursing experience and were sent an email inviting them to take part in the second strand of the study, the one-on-one interview. Interviews were transcribed verbatim for analysis, and this continued until data saturation was achieved. Once participants agree to take part in this strand of the study, a date and time for the single one-on-one semi-structured interview was arranged to take place via videoconference. At the start of the interview, the participant was informed that the interview was being audio recorded. Consent was reviewed with the participant and any questions addressed.

Table 3.3

Interview Questions and Prompts with Possible Domain and Theoretical Links

Question	Possible Tool Domain Link	Theoretical Link
1. Tell me a little about your history as a nurse?	D4	Mastery experience, general confidence as a nurse (affective state)
2. How confident have you been throughout your career in clinical practice?	D1, D4	Self-efficacy development Task-specific
3. When/how did you decide to take a role in education?	D2	Motivation to teach Self-efficacy development Task-specific
3a. Besides teaching patients, did you do any teaching in your clinical position, ie precepting, teaching CPR, etc.?		
3b. What part of your nursing education best prepared you for teaching nursing in an academic setting?	D1, D4	Motivation to teach
8. Tell me about your onboarding experience in your faculty role?	D1, D2	Sources of self-efficacy: Mastery experience
8a. How did it impact your confidence?		
13. Looking back now, if you could do it go back to your first day, what would you tell yourself?	D1, D2	Sources of self-efficacy: Mastery experience, vicarious experiences

Notes. D1 is domain 1, course preparation, D2 is domain 2, teacher behaviors, D3 is domain 3, examination and evaluation, D4 is domain 4, clinical teaching.

The researcher briefly reviewed the topic of the study and reviewed the information provided by the participant in strand one verifying the participant's demographic information. Using self-efficacy theory as a guide, the semi-structured interview guide was used to ensure essential topics were discussed but allowing participants to talk freely of their experiences in the

development of or barriers to teacher self-efficacy. All qualitative participants were provided with a $15 Amazon Gift Card as a token of appreciation for their time and participation in the study.

Data Analysis

The qualitative strand utilized the content analysis to analyze the interview data. This analysis of qualitative data is appropriate as the underlying theory is well-established but is incomplete in the context (Assarroudi et al., 2018) of nursing education. This analysis method consists of reading textual data and highlighting parts of the text that appear to be related to predetermined codes dictated by theory (Assarroudi et al., 2018). As this researcher is intimately involved in the analytical process and will actively use mental schema, theories, and lenses to interpret and understand the data justifies the use of latent content analysis (Hsieh & Shannon, 2005; Kleinheksel et al., 2020).

Preliminary codes were based on teacher efficacy theory and supported in the instrument design and its four domains (course preparation, instructor delivery/behavior, examination/evaluation, and clinical practice) and are outlined in Appendix L. These preliminary codes guided the development of interview questions and first coding cycle. Subsequent coding cycles led the final codes with examples shown in Appendix N. Upon completing the coding cycles and final codes, general themes were identified.

Credibility

Establishing rigor in qualitative research can be accomplished through establishing truth value, consistency and neutrality, and applicability (Noble & Smith, 2015).

Truth Value

The precision in which the findings accurately reflect the data and can be established as the researcher outlines any personal experiences and viewpoints, they have that may result in methodological bias. This student researcher offered a positionality statement (Appendix M).

The interviews were recorded allowing revisiting emerging themes, sharing rich verbatim extracts, and ensuring they stay true to the participants accounts (Noble & Smith, 2015). The interpretation of respondent's answers to questions were member checked to ensure that the interpretation was correct and true.

Consistency and Neutrality

Consistency relates to trustworthiness and is established by maintaining rigor in carrying out the study, conducting the study in an ethical manner, and providing the reader with enough detail to show the researcher's conclusions make sense (Merriam & Tisdell, 2016). This was bolstered through meticulous record keeping that demonstrates a clear decision trail and ensures interpretations are consistent and transparent (Noble & Smith, 2015).

Neutrality (or confirmability) is achieved when truth value, consistency, and applicability have been addressed (Noble & Smith, 2015). When interpreting through the social constructivist lens, the researcher understands that much of the participants subjective meanings have been developed over time and through interactions. When the researcher makes an interpretation of what they find, it was further shaped by the researchers' own experiences and background (Creswell & Poth, 2018). The impact of this effect is reduced through reflexivity and both acknowledging any bias to the reader up front and making all efforts to reduce any impact of the bias (Creswell & Poth, 2018). Trustworthiness is further bolstered by developing guiding questions using a framework supported by existing literature (Kallio et al., 2016).

Applicability

In interpreting responses, this researcher took into consideration whether findings can be applied to other contexts, settings, or groups (Noble & Smith, 2015).

Interpretation

This research design dictates that once both strands of data collection have been completed and analyzed, the researcher attempted to look across the quantitative and the qualitative findings and assess how this information addresses the mixed methods question in the study (Creswell & Plano Clark, 2018). Explanatory sequential designs begin integrating data at the design level as well as the methods level. At the methods level, data are building on the findings from the quantitative strand using semi-structured interviews with broad, open-ended questions (Fetters et al., 2013). At the interpretation level, reporting was accomplished through narrative that weaves both quantitative findings in a theme-by-theme basis (Fetters et al., 2013).

In doing so, this researcher kept in mind the three major threats to explanatory sequential designs and how to avoid them described by Creswell and Plano Clark (2018).

- To avoid failing to identify important quantitative results to explain, this researcher considered all possibilities for explanation of results.

- To avoid not explaining surprising, contradictory quantitative results with qualitative data, this researcher designed qualitative data collection questions to probe surprising quantitative data.

- This researcher sought to explain quantitative results with qualitative follow-up by purposefully selecting the qualitative sample using the quantitative results to identify participants who can provide the best explanations.

Ethical Considerations

This study conformed to all ethical guidelines set forth by University of Northern Colorado's ethical policies on human research. The student researcher ensured participants were aware of risks involved in participating in this study by requiring all participants complete the

informed consent that clearly explained the purpose of the study, details of the survey, and any associated risks with participation. The consent further explained that it includes identifying information only for the purpose of the conducting the second qualitative strand of the study. Participants were informed that even though this study is not anonymous, it will remain confidential. Participants agreed to implied consent as they participated in the survey.

While conducting individual interviews with selected respondents, they were assigned fictitious names for use in their description and reporting the results. All study data, including survey electronic files, interview recordings, and transcripts, are kept locked file cabinets or on a password protected computer in the researcher's office and destroyed after the study is published, but no longer than three years after completion. Participants were told summary data will be disseminated in aggregate to the professional community, but in no way will it possible to trace responses to individuals.

Participation in the study was voluntary. Informed consent prior agreed to by participant when taking survey was reviewed prior to the interview occurring. Participants were provided with a description of the purpose of the study prior to participating. Participants were made aware of their right to refuse participation in the study and if they choose to participate, their right to withdraw at any time during and immediately following the interview.

Summary

This chapter presented the sampling, instrumentation, procedure, and data analysis of both strands of this explanatory sequential mixed methods study. It addressed the first two research questions through the first strand (quantitative) by emailing the SETTI-NE scale to faculty of baccalaureate programs teaching at least one face-to-face didactic course then analyzing the results through descriptive statistics and appropriate correlation coefficients. That

analysis then determined which participants were invited to the second strand (qualitative), an

individual semi-structured interview to explore the third research question. Ethical

considerations and study limitations with strategies to combat them are detailed for both strands.

CHAPTER IV

RESULTS

Quantitative Data

Sample

Quantitative survey data were collected first and over three weeks in Spring 2022. The recruitment email was sent to approximately 10,000 valid email addresses of nurse faculty across the nation from the NLN directory. Three hundred and ninety-seven faculty members responded to the survey which represents approximately 3% participation rate. This low response rate may have been influenced by the perceived legitimacy of web surveys, they may have been overlooked, or rerouted to spam filters (Daikeler et al., 2020).

Cleansing the data eliminated 38 participants who completed less than 80% of the survey and seven with a score less than .5 in the as measured by reCAPTCHA, the bot detection component of Qualtrics® leaving a final participant count for statistical analysis at 352. Thirty-one responses had partial responses: 19 in the subscale of course preparation, nine in the subscale of instructor behaviors, nine in the subscale of examination and evaluation, and three in the subscale of clinical practice. These missing data were replaced using averages (Irwing & Hughes., 2018).

One outlier was identified on the lower end of the total summed scale (SumSETTI2) and one on the lower end of the subscale that measures course preparation. The data were analyzed with these two outliers and without, without any difference in the outcomes of the analysis. As

these are often respondents who can provide rich data for the qualitative strand, it was therefore decided to keep both outliers for analysis.

Reliability Statistics

Reliability statistics were calculated for the total SETTI-NE as well as each of the four subscales (see Table 4.1). The total scale Cronbach's alpha was calculated to be .976. This was consistent with earlier versions of the scale by Garner et al. (2018) who reported a Cronbach's alpha of .980 and Nugent et al. (1999) who reported a Cronbach's alpha of .95.

Nugent et al. (1999) reported similar scores for the four subscales as course preparation as .89, instructor behaviors as .89, evaluation and examination as .88, and clinical skills as .91. Garner et al., did not report the Cronbach's alpha scores of each of the subscales. Each of these five Cronbach's alpha scores indicate a high level of reliability of the tool.

Table 4.1

Self-Efficacy Toward Teaching Inventory-Nursing Education Internal Consistency

Scale	Cronbach's α	*n* of items
Total Scale Score	.976	51
Subscales		
Course Preparation	.932	10
Instructor Behaviors	.932	14
Exam and Evaluation	.932	15
Clinical Practice	.940	12

Tests of Normality

The total scale and each of the four subscales were tested for normality using Kolmogorov-Shapiro and Shapiro-Wilk. Both tests deemed the data were not normally distributed (see Table 4.2).

Table 4.2

Self-Efficacy Toward Teaching Inventory-Nursing Education Survey Results: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	*Df*	Sig.	Statistic	*Df VF*	Sig.
Total Scale	.113	352	<.001	.918	352	<.001
Subscales						
Course Preparation	.184	352	<.001	.840	352	<.001
Instructor Behaviors	.135	352	<.001	.905	352	<.001
Evaluation & Exam	.113	352	<.001	.934	352	<.001
Clinical Practice	.148	352	<.001	.891	352	<.001

Notes. a. Lilliefors significance correction.

Computed Variables

Adding each of the 51-question survey items provided a summed score for the total survey measuring the degree to which respondents feel confident in their ability to execute specific behaviors regarding the teaching of nursing (Garner et al., 2018) and has a maximum possible score of 204. These data are further delineated into four subscales, or domains. The four domains in this scale are course preparation, instructor behaviors, examination and evaluation, and clinical practice. Course preparation is essential for effective teaching to occur and includes providing opportunities for students to improve clinical decision making and critical thinking skills, identifying goals and objectives, and selecting effective resources (Garner et al., 2018). Instructor behavior includes delivery and integration of teaching methodologies and strategies (Garner et al., 2018). The domain covering examination and evaluation is a complex component referring to activities that evaluate students in cognitive, affective, and psychomotor skills and (Garner et al., 2018). The final domain assesses activities in teaching clinical practice including simulation (Garner et al., 2018). A summary of the mean results of the scores for this study are demonstrated here (see Table 4.3).

Table 4.3

Self-Efficacy Toward Teaching Inventory-Nursing Education Scale Summaries

| Scale | n | Inventory score | |
		M	SD
Total Scale	352	174.24	24.62
Subscales			
Course Preparation	352	3.51	.54
Instructor Behaviors	352	3.48	.47
Evaluation & Exam	352	3.39	.58
Clinical Practice	352	3.31	.56

Demographics

Descriptive statistics were performed on the total sample of 352 respondents.

Gender

Data revealed 96.0% of participants identified as female (n = 338) and 4.0% identified as male (n = 14). A Spearman's rank-order correlation test was run to determine the relationship between gender and total SETTI-NE score. There was no statistically significant correlation detected between gender and total SETTI-NE score, (r_s (11) = .008, p = .879; see Table 4.4). This test was repeated with each of the subscales finding no significant correlations. Only comprising 4% of the study population suggests that these data be researched further with a larger sample of male participants before accepting this correlation.

Table 4.4

Correlation Between Age and Self-Efficacy Toward Teaching Inventory-Nursing Education

			Gender
Spearman's Rho	Gender	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	352
	Total Scale	Correlation Coefficient	.008
		Sig. (2-tailed)	.879
		N	352
	Course Preparation	Correlation Coefficient	-.025
		Sig. (2-tailed)	.643
		N	352
	Instructor Behaviors	Correlation Coefficient	.003
		Sig. (2-tailed)	.950
		N	352
	Evaluation & Examination	Correlation Coefficient	.044
		Sig. (2-tailed)	.414
		N	352
	Clinical Practice	Correlation Coefficient	-.007
		Sig. (2-tailed)	.900
		N	352

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

Age

The highest number of participants were aged 61 or older at 37.2% of the total sample (*n* = 131). The prevalence of ages followed a descending trend with the second highest category 56-60 (*n* = 54), 51-55 (*n* = 52), 46-50 (*n* = 43), 41-45 (*n* = 31), 36-40 (*n* = 24), 31-35 (*n* = 13), 26-30 (*n* = 3), and no participants 25 years or younger. One respondent declined to answer this question (Table 4.5 and Figure 4.1). The most recent data from the NLN showed that the group of 61 and older years of age accounts for 19.8% of all ranks of nurse educators and the largest group of all ranks is 44-60 years of age at 50.3% (NLN, 2021). The participants of this study, when using a similar age range, 41-60, demonstrate a consistent result at 51.3%. This study was

focused on educators who teach in the classroom setting. The numbers reported by from the NLN for faculty most likely to be teaching in the classroom (ranks of professor, associate professor, assistant professor, and instructors) demonstrated approximately 22% over the age of 60 and 43% between the ages of 46 and 60 (NLN, 2021). For this study, when the age groups were combined to better align with the NLN numbers the data showed no one below the age of 25, 26-30 years of age ($n = 3$, 0.9%), 31-35 ($n = 13$, 3.7%), 36-40 ($n = 24$, 6.8%), 41-60 ($n = 180$, 51.1%), 61 and over ($n = 131$, 37.2 %).

Table 4.5

Age by Category

Age	n	%
26-30	3	0.9
31-35	13	3.7
36-40	24	6.8
41-45	31	8.8
46-50	43	12.2
51-55	52	14.8
56-60	54	15.3
61 or above	131	37.2
Missing System	1	0.3

Figure 4.1

Age by Category
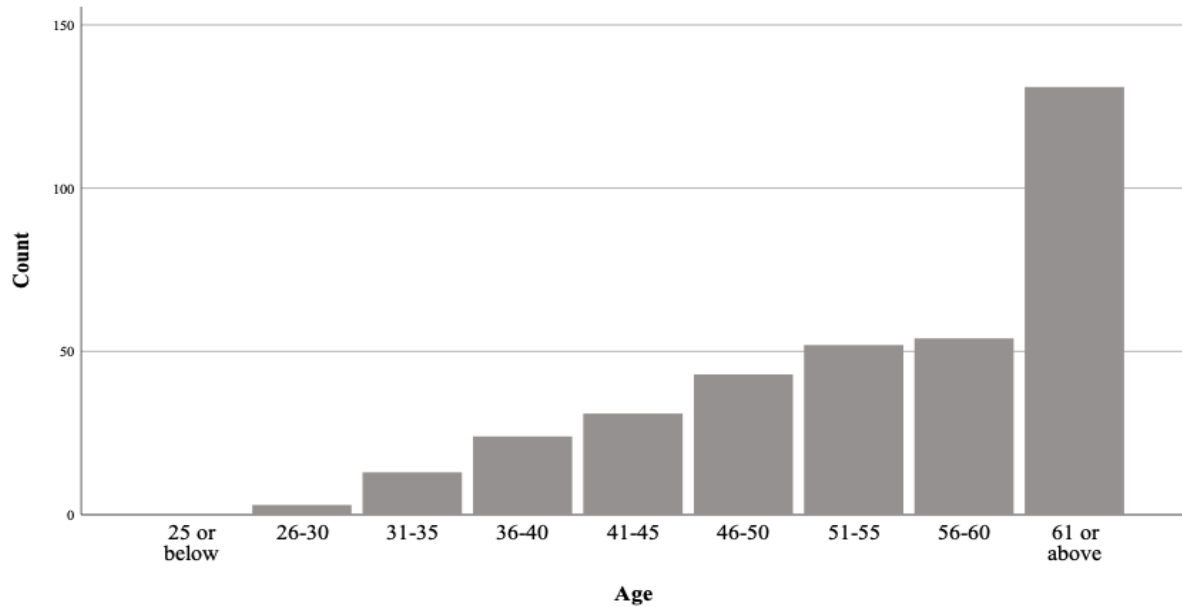
A dichotomous age group variable was computed for ages 25-45 and 46 and greater. A Spearman's rank-order correlation test was run to determine the relationship between age and total SETTI-NE score. There was a moderate statistically significant difference between age groups and total SETTI-NE score (r_s (349) = .159, p = .003). The test was also run with each of the subscales and detected a very weak significant difference between age groups and each of the subscales except, the evaluation and examination subscale (Table 4.6). Comparing the means demonstrated that the older age category scored higher on each of the statistically significant scales (Table 4.7).

Table 4.6

Correlation Between Gender and Self-Efficacy Toward Teaching Inventory-Nursing Education

			Age
Spearman's Rho	Age	Correlation Coefficient	1.000
		Sig. (2-tailed)	.
		N	351
	Total Scale	Correlation Coefficient	.159[**]
		Sig. (2-tailed)	.003
		N	351
	Course Preparation	Correlation Coefficient	.191[**]
		Sig. (2-tailed)	<.001
		N	351
	Instructor Behaviors	Correlation Coefficient	.160[**]
		Sig. (2-tailed)	.003
		N	351
	Evaluation & Examination	Correlation Coefficient	.088
		Sig. (2-tailed)	.098
		N	351
	Clinical Practice	Correlation Coefficient	.171[**]
		Sig. (2-tailed)	.001
		N	351

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

Table 4.7

Means Comparisons Age and Scores

Age		Total Scale	Course Prep	Inst Behav	Eval & Exam	Clinical Practice
25-45	*n*	71	71	71	71	71
	M	166.26	3.30	3.34	3.20	3.21
	SD	26.88	.63	.50	.61	.59
46+	*n*	280	280	280	280	280
	M	176.15	3.56	3.52	3.43	3.33
	SD	23.63	.50	.45	.56	.55
Total	*n*	351	351	351	351	351
	M	174.15	3.51	3.48	3.39	3.31
	SD	24.61	.54	.47	.58	.56

Total Years Working in the Clinical Setting as a Nurse

Total years working in the clinical setting as a nurse showed the largest group had 11-15 years in clinical practice (19.0%, *n* = 67) closely followed by 6-10 years of experience (17%, *n* = 60; Figure 4.2 and Table 4.8). Years of clinical experience was redistributed into two categories, 20 years and below and greater than 20 years. A Spearman's rank-order correlation test was run to determine the relationship between years of nursing experience and total SETTI-NE score. There was no significant difference between years of nursing experience and total SETTI-NE score (r_s (350) = .084, *p* = .114). This was run with each of the subscales and detected no correlations (Table 4.9).

Figure 4.2

Years of Nursing Experience
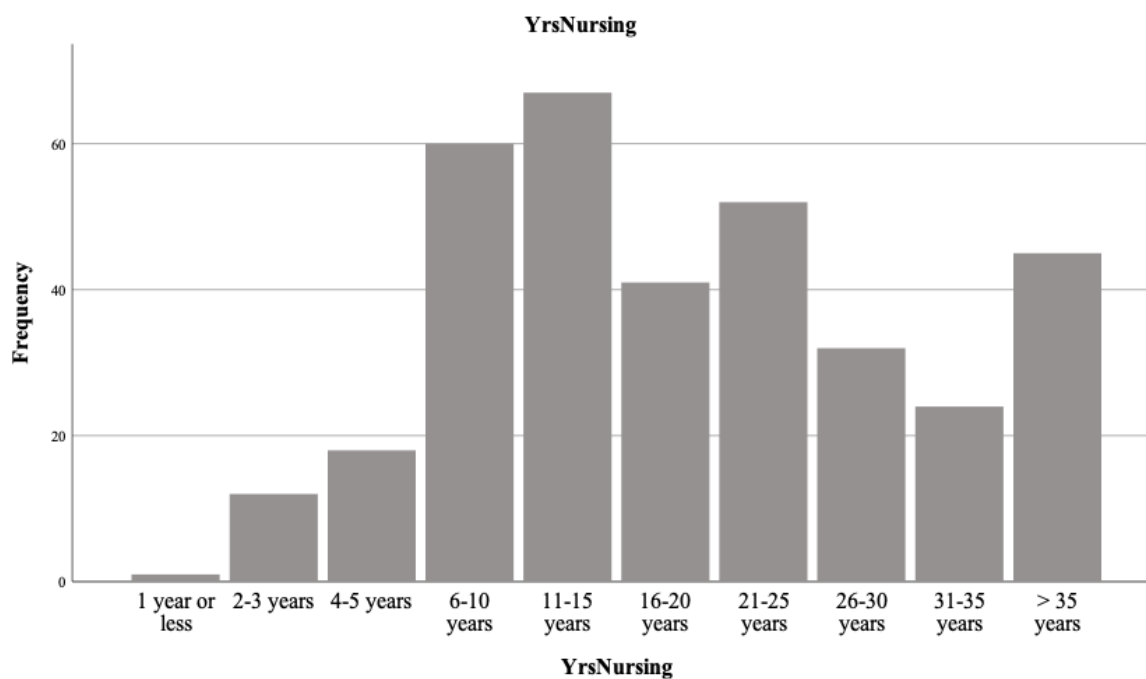
Table 4.8

Years of Nursing Experience

Years	*n*	%
1 year or less	1	0.3
2-3 years	12	3.4
4-5 years	18	5.1
6-10 years	60	17.0
11-15 years	67	19.0
16-20 years	41	11.6
21-25 years	52	14.8
26-30 years	32	9.1
31-35 years	24	6.8
> 35 years	45	12.8

Table 4.9

Years of Nursing Experience Correlations

			YrsNursing
Spearman's Rho	Total Scale	Correlation Coefficient	.084
		Sig. (2-tailed)	.114
		N	352
	Course Preparation	Correlation Coefficient	.060
		Sig. (2-tailed)	.261
		N	352
	Instructor Behaviors	Correlation Coefficient	.064
		Sig. (2-tailed)	.230
		N	352
	Evaluation & Examination	Correlation Coefficient	.085
		Sig. (2-tailed)	.110
		N	352
	Clinical Practice	Correlation Coefficient	.060
		Sig. (2-tailed)	.259
		N	352

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

Total Years Teaching in Academic Nursing Education

Total years working in academic nursing education showed the largest category in years was shared between 11-15 years ($n = 76$, 21.6%) and 6-10 years ($n = 74$, 21.0%; see Figure 4.3 and Table 4.10). This variable was recalculated to become a dichotomous variable, 10 years or less and 11 years and greater, thus allowing correlation testing. A Spearman's rank-order correlation test was run to determine the relationship between years of teaching experience and total SETTI-NE score. There was a statistically significant difference between years of teaching experience and total SETTI-NE score (r_s (350) = .882, $p <$.001). There was a positive correlation detected in each of the subscales as well (Table 4.11). Descriptive analysis explains that the group with more teaching experience (11 years and greater) scored higher in this category ($n =$

214, *M* = 182.50, *SD* = 17.46) when compared to the less experienced group (*n* = 138, *M* =

161.43, *SD* = 28.42).

Figure 4.3

Years of Experience Academic Teaching
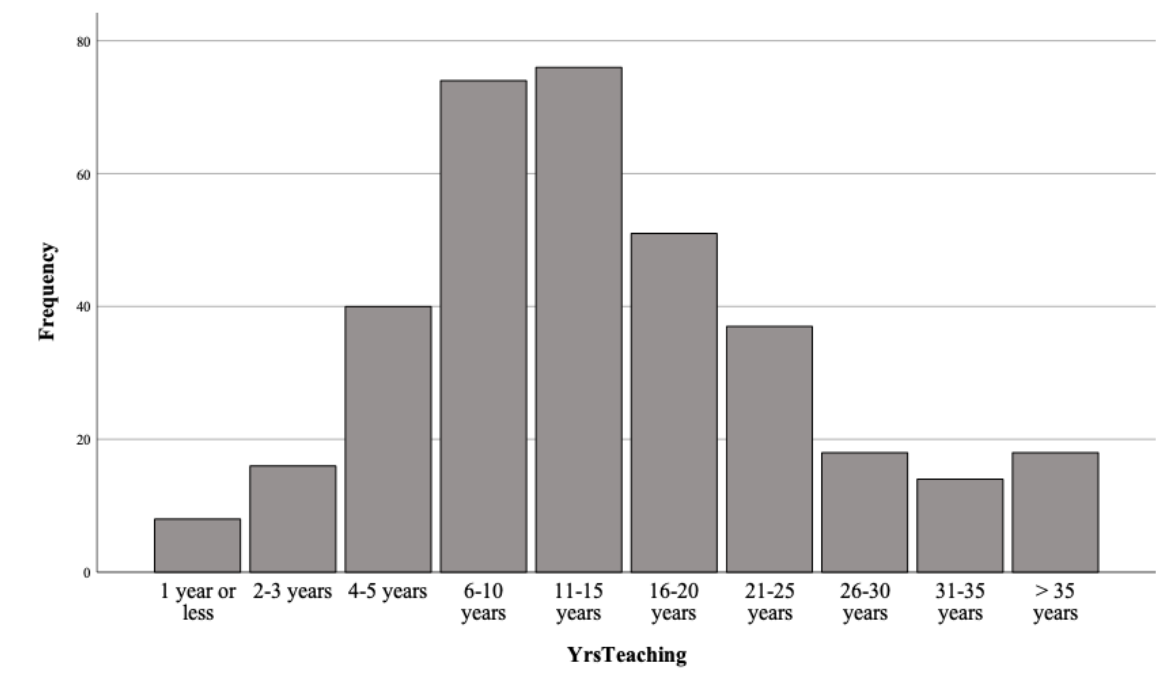
Table 4.10

Years of Teaching Summary

Years	*n*	%
1 year or less	8	2.3
2-3 years	16	4.5
4-5 years	40	11.4
6-10 years	74	21.0
11-15 years	76	21.6
16-20 years	51	14.5
21-25 years	37	10.5
26-30 years	18	5.1
31-35 years	14	4.0
> 35 years	18	5.1

Table 4.11

Doctoral Preparation Correlations

			Dichotomous teach
Spearman's Rho	Total Scale	Correl Coefficient	.379[**]
		Sig. (2-tailed)	<.001
		N	352
	Course Preparation	Correl Coefficient	.454[**]
		Sig. (2-tailed)	<.001
		N	352
	Instructor Behaviors	Correl Coefficient	.361[**]
		Sig. (2-tailed)	<.001
		N	352
	Evaluation & Examination	Correl Coefficient	.213[**]
		Sig. (2-tailed)	<.001
		N	352
	Clinical Practice	Correl Coefficient	.411[**]
		Sig. (2-tailed)	<.001
		N	352
	Dichotomous teach	Correl Coefficient	1.000
		Sig. (2-tailed)	.
		N	352

Notes. ** Correlation is significant at the 0.01 level (2-tailed).

Completed Nursing-Related Education

The highest degree of nursing education was more difficult to assess. Based on the literature review conducted, this study was predominantly concerned with the masters and doctoral preparations. Therefore, all levels of education were reconfigured into a dichotomous grouping. One group combined the two doctoral level preparations (DNP and Ph.D.) and the other contained all other levels non-doctoral levels of education (Table 4.12). This resulted in statistically significant Spearman's rho for the total scale and all subscales except evaluation and

examination (Table 4.13). There was a statistically significant difference between highest degree

and total SETTI-NE score (r_s (350) = .149, p = .005). Descriptive statistics showed that the

doctoral group scored higher (Table 4.14).

Table 4.12

Doctoral Preparation Summary

		Frequency	%	Valid Percent
Valid	Other	182	51.7	51.9
	Doctorate	169	48.0	48.1
	Total	351	99.7	100.0
Missing	System	1	.3	
Total		352	100.0	

Table 4.13

Correlation Between Dichotomous Education Level and Scales

			Dichotomous Ed
Spearman's Rho	Dichotomous Ed	Correl Coefficient	1.000
		Sig. (2-tailed)	.
		N	351
	Total Scale	Correl Coefficient	.149**
		Sig. (2-tailed)	.005
		N	351
	Course Preparation	Correl Coefficient	.219**
		Sig. (2-tailed)	<.001
		N	351
	Instructor Behaviors	Correl Coefficient	.130*
		Sig. (2-tailed)	.015
		N	351
	Evaluation & Examination	Correl Coefficient	.093
		Sig. (2-tailed)	.083
		N	351
	Clinical Practice	Correl Coefficient	.156**
		Sig. (2-tailed)	.003
		N	351

*Notes*. ** Correlation is significant at the 0.01 level (2-tailed).

Table 4.14

Means Comparison Between Doctorate-Prepared and Non-Doctoral Prepared

Dichotomous Ed		Total Scale	Course Prep	Inst Behav	Eval & Exam	Clin Pract
All Other	*N*	182	182	182	182	182
	M	170.41	3.39	3.43	3.29	3.27
	SD	26.55	.61	.48	.62	.57
Doctorate	*N*	169	169	169	169	169
	M	178.56	3.65	3.54	3.49	3.36
	SD	21.59	.42	.44	.51	.55
Total	*N*	351	351	351	351	351
	M	174.33	3.51	3.48	3.39	3.31
	SD	24.60	.54	.47	.58	.56

Academic Nursing Education Teaching Environment

Despite the wording, this question also indicated that several people selected more than one option (Table 4.15).

Table 4.15

Academic Teaching Environment

Environment	%
Clinical only	4
Lab	23.6
Classroom/didactic only	13.6
Both clinical and didactic	86.6
Total	127.8

Academic Education Practice
Incorporating Simulation

Only 12.5% of respondents indicated that their academic education practice incorporates simulation. The wording of this question did not distinguish whether they themselves do simulation or if they rely on simulation staff. As simulation has become ubiquitous with nursing education, clarity of this question would be needed for further study.

To further bolster the reliability of this study data and demonstrate consistency with extant literature, these correlation tests were also run with years of academic teaching experience. The years of academic teaching experience groups were recalculated into two groups, 20 years and less, and over 20 years. A Spearman's rank-order correlation was run to determine the relationship between the 352 respondents' years of academic teaching experience and scores on the total SETTI-NE scale. There was a weak, positive correlation between years of academic teaching experience and scores on the total SETTI-NE scale which was statistically significant ($r_s(350) = .379$, $p < .001$). Each of the subscales also demonstrated positive correlations from weak to moderate, course preparation ($r_s(350) = .454$, $p < .001$), instructor behavior ($r_s(350) = .361$, $p < .001$), evaluation and examination ($r_s(350) = .213$, $p < .001$), and clinical practice ($r_s(350) = .411$, $p < .001$; Table 4.16).

Table 4.16

Correlations with Teaching Experience

Spearman's Rho		Years teach exp	Total Scale	Course Prep	Inst Beh	Eval & Exam	Clinical Practice
Years teach exp	Correlation Coefficient	.038	.379**	.454**	.361**	.213**	.411**
	Sig. (2-tailed)	.472	<.001	<.001	<.001	<.001	<.001
	N	352	352	352	352	352	352

Statistics by Groups of Level of Efficacy

The total number of participants in the quantitative study ($n = 352$) were divided into three categories based on the summed total of the SETTI-NE scale using percentiles in SPSS. The lower 33.3 percentile included scores of 166 and below and represented the low teacher self-efficacy group. This group was labelled group one ($n = 118$, 33.52%). The top 66.6 percentile included scores over 189 and represented the high teacher self-efficacy group. This group was labelled group 3 ($n = 128$, 36.36%). Scores between 166 and 189 represented the moderate teacher self-efficacy group and was labelled group two ($n = 106$, 30.11%).

Group One: Low Teacher Self-Efficacy

Group one consisted of 118 participants ($n = 118$) with a median age group of 51-55 years old. The median for years of teaching experience was 6-10 years. The median for years of clinical nursing experience was 11-15 years. Of the participants in this study, 53 participants indicated their highest level of formal education was the doctoral level ($n = 53$, 44.94%). Males comprised 3.4% of this subsample. The highest subscale score was in instructor behaviors (M 2.97). The lowest subscale score was in the domain of clinical practice ($M = 2.74$; Table 4.17).

Group Two: Moderate Teacher Self-Efficacy

Group two consisted of 106 participants (n = 106) with a median age group of 56-60 years 5clinical nursing experience was 16-20 years. Of the participants in this study, 58 participants indicated their highest level of formal education was the doctoral level (n = 59, 72%). Males comprised 6.6% of this subsample. The highest subscale score was in course preparation (M = 3.64). The lowest subscale score was in the domain of clinical practice (M = 3.37; Table 4.17).

Group Three: High Teacher Self-Efficacy

Group three consisted of 128 participants (n = 128) with a median age group of 56-60 years. The median for years of teaching experience was 6-10 years. The median for years of clinical nursing experience was 16-20 years. Of the participants in this study, 85 participants indicated the highest degree of formal education was the doctoral level (n = 85, 66.41%). Males comprised 2.3% of this subsample. The highest subscale score was in course preparation (M=3.93). The lowest subscale score was in the domain of clinical practice (M=3.78; Table 4.17).

Table 4.17

Group Comparison Data

Group	*n*	Age (Mdn)	Yrs Nursing (Mdn)	Yrs Teaching (Mdn)	Doctoral Ed (*n*)
Group 1	118	51-55	11-15	6-10	53
Group 2	106	56-60	16-20	11-15	58
Group 3	127	56-60	16-20	6-10	85

Group	Total Score ($M \pm SD$)	Course Prep ($M \pm SD$)	TeachBeh ($M \pm SD$)	Exam&Eval ($M \pm SD$)	ClinPrac ($M \pm SD$)
Group 1	145.50 ± 18.23	$2.94 \pm .52$	$2.97 \pm .39$	$2.77 \pm .49$	$2.74 \pm .48$
Group 2	178.62 ± 6.32	$3.64 \pm .24$	$3.56 \pm .21$	$3.48 \pm .31$	$3.37 \pm .29$
Group 3	197.11 ± 5.11	$3.93 \pm .13$	$3.89 \pm .14$	$3.87 \pm .17$	$3.78 \pm .24$

Qualitative Results

Participant Selection

The levels of efficacy groups were filtered by those who indicated they were willing to participate in the qualitative strand of this study. This resulted in 228 willing participants, 62.77% of total quantitative participants, 76 in group one (low teacher self-efficacy), 66 in group two (moderate teacher self-efficacy), and 86 in group three (high teacher self-efficacy). A total of 38 emails were sent to selected participants inviting their participation in an individual interview (Appendix J). Participants were first selected based on levels of efficacy generated in the quantitative phase then by years of nursing experience within the group. Interviews were conducted based on scheduling convenience of the participant.

All transcripts were coded in aggregate then further analyzed by the level of efficacy group. At the beginning of analyzing the interviews, each participant was assigned a random pseudonym by the researcher that were then used throughout. This student researcher maintained

a handwritten reflective journal and research log as the transcriptions were being analyzed. These were later converted to digital format and added to the files for the study. The handwritten logs were then destroyed.

Demographics and Findings

Group One (Low Teacher Self-Efficacy) Demographics

Group one consisted of three females age groups 41-45, 46-50, and 61-65 years old. Years of nursing experience were 2-3, 35, and 11-15 years meeting the aim of interviewing varying years of nursing experience. Years of experience teaching were all 2-3 years. Highest level of nursing education were Ph.D., MSN, and DNP respectively. Total survey scores were 157, 148, and 118, respectively. Consistent with the overall sample was the highest subscale, instructor delivery and behaviors, and the lowest subscale, varied from the overall sample and was examination and evaluation. (Table 4.18).

Table 4.18

Group One Interview Participants' Demographics

	Age	Gen	Yrs Nurs	Yrs Teach	Scales (*M*)				
					Total	Course Prep	Instr Beh	Exam & Eval	Clinical practice
Alice	41-45	F	2-3	2-3	157	3.30	3.43	2.54	3.07
Faith	56-60	F	35	2-3	148	2.90	2.93	2.38	3.36
Bella	46-50	F	11-15	2-3	118	2.40	3.00	2.08	1.79
Total					141 ± 16.67	2.87 ± .14	3.12 ± .22	2.35 ± .19	2.74 ± 68

**Group One (Low Teacher Self-
Efficacy) Findings**

Personal Efficacy

Each of these participants had limited bedside nursing experience, before transitioning to

other clinical roles then entering education. They all shared confidence in teaching earlier

courses (basic nursing skills) and noted that having repetition with teaching the same course

helped develop confidence. All had two to three years academia as well. One left academia but

continues to teach in the clinical environment. The others focused on games or activities in the

classroom to supplement the flipped classroom.

After 15 years of bedside nursing, Alice shared that her interest in a faculty role was

greater than teaching at the bedside by stating, "I really wanted research more than teaching."

Other participants in this group, such as Bella, with only two to three years of bedside nursing

stated that she always knew she wanted to teach. Faith, with over 35 years of nursing

experience, was required to go into academia to retain the clinical position she held as Director

of Professional Practice. Faith continues to teach communication skills to nurses in the hospital

setting while remaining adjunct with college. "I was a nurse navigator for a while, then I went to

neuro-oncology, brain cancer, and started doing a lot of high-risk, multi-center trials. I fell in

love with research," said Alice.

Teaching Efficacy

Course Preparation. This group tended to describe course preparation activities in terms

of preparing for a day's session. Bella stated that she prepares for class at least a month in

advance and then adds in material as she goes and collects everything that she created and takes

it all in. When Alice was asked to teach a course that nobody wanted to teach, pharmacology,

she found she had no foundation or experience in that, thus it negatively impacting her confidence and requiring more work in the preparation phase.

Instructor Behaviors. This was the highest domain for this group. Alice commented that she really likes gamification and is researching that topic. However, she also stated that COVID interrupted her early in her career causing her to have to pivot and teach online before she had even established a teaching style. Alice also felt least prepared to manage students.

Bella stated that she hears positive feedback on "all my activities" and describes her teaching style:

> They should come into the classroom prepared. They should have done all the reading, videos, whatever. All the material and have a pretty good grasp and understanding. And then the idea is after they get a brief lecture from their faculty, they go into like using activities. So that's what I based most of my design on was that type of teaching.

Examination and Evaluation. This was the lowest scoring domain for this group. This domain includes activities associated behaviors in the classroom that affect student learning. This also includes using constructive peer feedback and suggestions to improve teaching. This group was highly influenced by peer feedback. Alice shared that teaching the same course allowed her confidence to grow and then her creativity and innovative ideas grew as well.

Clinical Practice. This domain measured almost lowest and is not surprising as none of the three interviewed teach in the clinical setting and do not utilize simulation in their academic teaching practice. Bella teaches part-time, didactic only. Faith never taught clinical but taught communication skills to clinical nurses. Alice did mention that she feels confident teaching the early skills and she enjoys seeing the students "get it" when she is introducing concepts.

Group One Summary

This group had little bedside nursing experience, confidence in teaching early skills, and repetition or course assignment allowed self-efficacy to grow. All commented on other interest that teaching. This group gained confidence through course repetition and teaching in their areas of expertise.

**Group Two (Moderate Teacher
Self-Efficacy) Demographics**

Group two consisted of two females, age groups 51-55, and 61 and older, and one male, age group 36-40 years. Years of nursing experience were 6-10, >35, and 2-3 years clinical experience, respectively. This met the study aim of interviewing varying levels of nursing experience. Years of teaching experience were 11-15, 31-35, and 4-5 years respectively. Highest level of formal education were Ph.D., MSN, and Ph.D., respectively. Total survey scores were 171, 182, and 184. The highest subscale score collectively for this group was in course preparation. The lowest subscale collectively for the group was in clinical practice (Table 4.19).

Table 4.19

Group Two Interview Participants' Demographics

	Age	Gen	Yrs Nursing	Yrs Teach	Measures				
					Total	Course Prep	Instr Beh	Exam & Eval	Clinical practice
Jean	51-55	F	4-5	6-10	171	3.70	3.71	3.08	3.00
Helen	61 and >	F	>35	31-35	182	3.60	3.71	3.62	3.36
James	36-40	M	2-3	11-15	184	4.0	3.86	3.62	3.07
Total					179 ± 5.72	3.77 ± .17	3.76 ± .07	3.44 ± .25	3.14 ± .15

**Group Two (Moderate Teacher
Self-Efficacy) Findings**

Personal Efficacy

In general, this group is committed to nursing and have a passion for their specialty.

Helen remarked, *"I never wanted to be a nurse. I was totally unsure what I wanted to do with my*

life, especially in high school. However, there were not many options available." But she went

on to say, *"Once I was in nursing, I was totally sold, totally enamored. Like I couldn't believe*

that there was so much to learn and so many challenges and such diverse options."

Jean stated she would be getting report from a nurse, and the nurse would say things like,

"you got the crazy train today," and having a family member with a mental illness, Jean would

say, "One that offends me, and two, you are letting your opinion negatively impact your care

[emphasis added]," that got me wanting to educate people better about mental health.

Teaching Efficacy

Course Preparation. This was the highest domain for this group. They are generally

often overprepared for class and practiced lecture before going before class. Helen was asked to

teach a course that she felt was way out of my area of expertise and just the anticipation of

having to teach that was very stressful. She added, *"I felt like I would be doing a disservice to*

my students." James plans his lessons by using the course objectives as his guide and planning

the semester out noting the class sessions that reflect on certain objectives.

Helen recognized in an RN-BSN course she was teaching that she was working with

nurses who did not want to be her class. So, she worked on relating her content to their preferred

specialty.

Instructor Behaviors. This group was very interesting in engaging students and going

beyond the lecture. They often made curriculum alignment connections and spoke to specific

instructional methods as well. Helen said, *"You don't have to have all the answers. Because the questions are more important and engaging, the class is what is really, really engaging."* Helen stated she would "always try to figure out, what is the best way to engage them around this particular content?" and James liked to use scenarios for his students to ponder and then discuss to engage them. Jean and mentioned using storytelling as technique: "I have a ton of stories that I can relate to concepts."

Examination and Evaluation. This was the lowest scoring domain for this group which includes the ability to evaluate student progress toward course goals as well as using feedback from peers and students to improve teaching. James used student course evaluations data and watched as the data started pouring in from semester to semester, to see if his efforts and changes were going in a positive direction. Jean commented on watching when students "light comes on" as they grasp a concept as a means of formative evaluation.

During her career, Helen had the opportunity to attend lectures as a student:

I was watching what happened with the students and the best part was we all had to pitch in in terms of creating the exams. Then I was there, of course for administering the exams. This was way before computers existed. Oh my God, what an experience! And then afterwards I graded the exams. We did it all by hand. We item analyzed every item.

Clinical Practice. This domain assesses activities that promote learning in the clinical environment, including simulation. Jean teaches clinical as an adjunct and commented on the difficulties associated with teaching in a new environment without being acclimated to the site. She related that when energies are spent trying to find people, stuff, and resources, it detracts from time could be spent teaching.

Group Two Summary

      The two members of this group with clinical experience relayed a passion for their

clinical specialty. The one with limited clinical experience was teaching entry level courses and

skills and relayed her comfort teaching that material. This group, like group one, gains

confidence by teaching in their area of clinical expertise.

**Group Three (High Teacher Self-
Efficacy) Demographics**

      Group three consisted of two females, age groups 51-55 and 61>, and one male in age

group 46-50. Years of nursing experience were 11-15, 2-3, and 21-25, respectively. Years of

teaching experience were 26-30, > 35, and 6-10 years. Highest level of formal education were

DNP, Ph.D., and Ph.D., and total survey scores were 204, 201, and 201. The lowest subscale

was in clinical practice. All three of the participants interviewed in this level rated their self-

efficacy in instructor behaviors with a perfect score. Both course preparation and examination

and evaluation were rated just below them (Table 4.20).

Table 4.20

Group Three Interview Participants' Demographics

	Age category	Gen	Yrs Nursing	Yrs Teach	Measures				
					Total	Course Prep	Instr Beh	Exam & Eval	Clinical practice
Daniel	46-50	M	21-25	6-10	201	3.9	4.0	4.0	3.86
Connie	61 and >	F	2-3	>35	201	4.0	4.0	3.92	3.86
Evelyn	51-55	F	11-15	26-30	204	4.0	4.0	4.0	4.0
Total					202 ± 1.41	3.96 ± 47	4.0 ± 0.0	3.97 ± 04	3.91 ± .07

Group Three (High Teacher Self-Efficacy) Findings

Personal Efficacy

This group had a passion for teaching and transitioned into teaching roles early in their nursing careers. Connie stated, "My mother decided for me that I would be a nurse…I knew the minute I hit the clinical that clinical nursing was not my idea of a good time." Connie later entered administration and stayed there for 25 years. She stated that nursing as a profession did not make sense to her until she got into her Ph.D. program, where she commented that she learned about approaches to research to which she added, "Secondary to that became, how do I understand this? How do other people understand this? How can I help people to understand this?" Evelyn began as an LPN but states that while she was in her registered nurse program, she got "the education bug" when she had the opportunity to teach community education classes. Daniel, who has been a nurse for over 21 years, first transitioned to education in the hospital, then to the university.

Teaching Efficacy

Course Preparation. This was the highest domain for this group. Members of this group looked at course outcomes to guide what the daily material should be (Evelyn and Daniel). When Daniel was assigned unfamiliar material, he compensated by doing a lot of preparation for that class session.

Instructor Behaviors. This group spoke a lot about engaging the students, helping them make connections, and bringing clinical to the classroom. Connie does this through storytelling. Bringing clinical back to the classroom. Evelyn stated that she felt confident in bringing clinical to the classroom and helping students put pieces together, while Daniel states his strength is making sure he can get his knowledge out to the students in a way they can understand.

Student evaluation comments still plagued this group to some degree. Connie mentioned that early on, she gave a grade to a student and then the student "came after me" and she did not know how to respond.

Examination and Evaluation. This was the lowest scoring domain for this group. Evelyn remarked that while had a good structure on while to build, she was not confident on being able to do anything with test questions other than what had been done before, kind of recycling the previous questions. Daniel learned early on that teaching was the easy part, giving feedback and how to evaluate everything was the hard part.

Clinical Practice. Sharing experiences in the clinical environment in the classroom. Making their own connections between theory and practice and sharing that with the students. "I feel pretty confident in my clinical skills", said Evelyn and continued:

> I have expertise, but is my practice the most current? Could I step on a unit and be one of the top nurses? Probably not because there are going to be things that I'm not going to know how to do with technology, but as far as basic nursing care and being able to step in and provide care and learn the unit, I could do that very quickly.

Connie added, "I would say to the students, look guys, I am not a clinician. I mean I do clinical work because it makes me a better teacher. I don't teach because I want you to understand how to do clinical. I want you to understand how to become a nurse and do the job well."

Group Three Summary

Each member of this group commented on bringing clinical to the classroom and sharing experiences. They also discussed how to convey the information to the students so they could understand and attribute this to their doctoral education. Unlike groups one and two, this group

had less difficulty teaching in an area outside their expertise, focusing on teaching methods rather than content.

Years of Nursing Experience

When analyzed through the lens of years of experience at the bedside, it was found that the group with the most years of nursing experience, all commented that teaching, whether academic or hospital, was based around about a passion for their clinical specialty, implying high personal efficacy. The only other pattern found was that of support. Faculty at each level of nursing experience and each level of nursing experience commented on either positive support, "my mentor was great," or lack of support, "It was just, here is your book, go teach," in transitioning to the world of academia.

Qualitative Results Summary

Nine participants were interviewed representing varying levels of nursing experience in each of the three levels of teacher self-efficacy. Interview results were presented in relation to the code book created by Bandura's teacher self-efficacy theory and the domains of the survey used in the quantitative strand (Appendix N). Group one had little bedside nursing experience, even though they varied in the years of clinical nursing. They each expressed confidence in teaching early skills, and repetition or course assignment allowed self-efficacy to grow. In group two, the two members with clinical experience relayed a passion for their clinical specialty. The one with limited clinical experience was teaching entry level courses and skills and relayed her comfort teaching that material. Each member of group three commented on bringing clinical to the classroom and sharing experiences. They also discussed how to convey the information to the students so they could understand and attribute this to their doctoral education.

Integrative Findings

As age and years of teaching grow, as does confidence and comfort in trying new strategies. Data also supported the NLN's recommended use of mentoring new faculty. With the extreme skew of older faculty, this raises the questions of who will mentor novice faculty. This also relates to comments that new faculty have difficulty processing student evaluations, especially early on and especially negative ones. This potentially connects to Bandura's affective state as a source of self-efficacy if negative feedback leads to low self-efficacy and potentially leaving teaching.

Across all levels, scores were lowest in clinical practice. If the concept that personal efficacy is related to expertise in clinical practice, then teacher efficacy needs more emphasis in training of faculty. This could be attributed to many factors, including using simulation centers for simulated activities or lack of educational training to connect theory and practice through education theory. Regardless, faculty must be able to connect these learning activities to the classroom and clinical settings for them to contribute to knowledge gains in students.

CHAPTER V

DISCUSSION

The purpose of this study was to identify variables influencing nurse educator self-efficacy and describe nursing faculty characteristics related to varying teacher self-efficacy scores. The quantitative strand of this study used the SETTI-NE survey to measure the overall self-efficacy score as well as each of the for subscales, course preparation, instructor delivery and behaviors, examination and evaluation, and clinical practice. The scores on the overall efficacy were divided into three groups, low teacher self-efficacy, moderate teacher self-efficacy, and high teacher self-efficacy. Within each of these three groups three participants were selected for three categories of nursing experience, five years or less, 10-15 years, and 21and greater. Individual interviews were conducted with each of these nine participants to conduct the qualitative strand of this study using a content analysis approach to multiple case studies.

Research Question One

Q1   What is the perceived self-efficacy of academic nurse educators and specifically in the domains of course preparation, instructor behavior, evaluation and examination, and clinical teaching as measured by the SETTI-NE survey?

This first research question was answered by the descriptive and inferential statistics performed on the data collected. Consistent with current literature, this sample population was predominantly female (96%) and the largest age group was 61 and older (37.2 %). There was no correlation with gender and total SETTI-NE scale ($p = .879$), course preparation ($p = .643$), instructor behaviors ($p = .950$), evaluation and examination ($p = .414$) or clinical practice ($p = .900$). Since the gender group for individuals identifying as male was very small, this lack of

correlation should not be assumed as a generalizable finding. As the nursing profession continues to recruit more males to the field, this is a correlation that could be investigated further.

Age was correlated with the SETTI-NE total scores ($p = .002$), and subscales course preparation ($p < .001$), instructor behaviors ($p = .004$), and clinical practice ($p = .002$), but did not correlate with evaluation and examination ($p = .085$). This is consistent with a study by Nugent et al., who also documented that older nurse educators had higher teacher self-efficacy scores in a group of 346 faculty (1999).

With the rapid change in healthcare setting, concerns could be raised as to the relevance of the clinical experience of faculty who have not been in the clinical environment for many years. Some faculty have been teaching for 30 years or greater yet are expected to teach new students how to learn and function in a very different landscape than the one in which they practiced. However, this study demonstrated a positive correlation between age and SETTI-NE scores suggesting that age alone is not a factor in teacher self-efficacy, that requires further exploration due to the extreme skew in the age groups in this study.

Fang and Kesten (2017) projected that one-third of faculty would retire within 10 years, 2027. Similarly, this study showed 37.2% of respondents 61 years or older keeping it in line with her predictions now in 2022. Also, of concern is only 20.2% of the respondents in this study are 45 or younger. This indicates that with the projected retirement age of 65.1 years (Fang & Kesten, 2017), this alarming trend will likely continue.

Additionally, the number of years of academic teaching was also correlated with the total SETTI-NE score ($p = .379$), however, the years of clinical experience as an RN was not ($p = .084$). Previously, Nugent et al. found a similar result in 1999 related to academic teaching and

self-efficacy, however no other studies were found correlating years of clinical experience with the SETTI-NE in a sample of nurse educators. These findings are consistent with Bandura's theory highlighting that mastery experiences have a significant influence on teaching self-efficacy, but as postulated, clinical experience does not.

Analysis of the highest level of nursing education completed provided some unclear results. The difference between DNP and Ph.D. in roles in academia is unclear, so two groups were created, doctoral (combined DNP and Ph.D., $n = 169$) and nondoctoral ($n = 182$). This resulted in a statistically significant Spearman's rho for the total scale and each of the subscales except evaluation and examination. Descriptive statistics showed the doctoral group scored higher in each of these categories.

Research Question Two and Hypotheses

Q2   Is there a correlation between teacher self-efficacy scores and total years of working in direct patient care as a registered nurse?

H_{02} There will be no significant correlation between teacher self-efficacy scores as measures by the SETTI_NE survey and total years of working in direct patient care as a registered nurse.

H_{A2} There will be a significant correlation between teacher self-efficacy scores as measures by the SETTI_NE survey and total years of working in direct patient care as a registered nurse.

There was no significant difference between years of nursing experience and total SETTI-NE score ($r_s (350) = .084, p = .114$). Therefore, the null hypothesis was retained as there was no significant correlation between years of nursing experience and total scale or any of the subscales.

Studies in the discipline of education, proposed that in teaching, Bandura's self-efficacy theory contained two components, personal efficacy, belief in one's own abilities, and teacher efficacy, belief that students will benefit from their educational offering (Allinder, 1995). It was

Nugent et al. (1999) who first proposed that "a faculty member who has a thorough knowledge of the content is clinically competent is likely to have a strong sense of personal efficacy, believing in the ability to offer requisite knowledge and skills for students" (p. 230). Since that time, this notion has been neither proven nor challenged. However, it is well known that being a good nurse does not automatically make one a good teacher. And even then, there is a difference in teaching in a classroom and teaching in the clinical environment. Many experts have reiterated that the classroom and clinical environments are separate entities each requiring a different skill set (Benner et al., 2010; Billings & Halstead, 2016). This was further reinforced as the NLN created separate certifications, Certified Academic Nurse Educator (CNE®), and Certified Academic Clinical Nurse Educator (CNE®cl) (Christensen & Simmons, 2019).

Research Question Three

Q3   How do nurse faculty of varying teacher self-efficacy scores characterize their teaching behaviors and development of self-efficacy?

This question was answered in the qualitative strand of this study using a content analysis approach to the multiple case studies of nine participants. Across all groups, faculty expressed confidence in their own clinical practice and teaching in their area of expertise, supporting a higher self of self-efficacy in expert nurses. Each level also cited a lack of confidence when asked to teach subjects not in their expertise. This supports Bandura's assumption that self-efficacy is task and context specific.

The three participants in the low teacher self-efficacy group had the fewest years of bedside nursing experience, with years in administrative or other roles in the clinical environment. However, they had confidence in teaching early skills and noted that repetition of teaching the same course allowed their confidence to grow. Each person in this group had another interest in an academic role, in addition to teaching, such as research. Bandura (1997)

proposed that efficacy plays a central role in the cognitive regulation of motivation. He states

that people They were all still in the clinical environment at least in some way, either teaching

clinical or working in addition to teaching.

In the low teacher self-efficacy group, the highest scores were in the domain of instructor

behaviors which includes employing innovative teaching strategies to use in the classroom. Each

of the qualitative participants take part in a shared curriculum that uses a flipped classroom style,

so faculty may be less experienced with course development and evaluation methods as indicated

in the SETTI-NE scores. It is unknown if this was related to the scores but may warrant more in-

depth investigation as all three participants commented on some aspect of this structure.

In the qualitative data, the lowest score for all levels of self-efficacy was in the subset of

clinical practice. In the qualitative strand, this was reflected in comments related to not having

experience or education with evaluating students and harkens to being unprepared for the

complex role of the nurse educator (Booth et al., 2016; Dreifuerst et al., 2016; Fitzgerald et al.,

2020). This domain also included questions related to simulation, which is now ubiquitous with

nursing education, and is consistent with only 12% of this population stating that they used

simulation in their practice. This could be teachers are relying on simulation centers/staff;

however, this stifles the possibility of bringing simulation to the classroom an emerging teaching

strategy.

The moderate teacher self-efficacy group all related a passion for their clinical specialty,

including the one with limited bedside experience who was comfortable teaching entry level

skills. This group's lowest subscale was in clinical practice. This is also consistent with Nugent

et al. (1999) work who inferred that even with a strong self of personal efficacy, teacher efficacy

may still be undeveloped. This group's highest subscale was in course preparation which includes skills typical to teaching.

The high teacher self-efficacy group all commented on efforts to bring clinical to the classroom setting. Each of them also commented on how to convey the information to the students in a way they could comprehend. This highly efficacious group were all doctoral prepared (Ph.D. and DNP) and mentioned such things as student engagement, aligning teaching strategies with learning outcomes, and planning lessons based on student place within a curriculum, things not typically taught until the doctoral level.

The qualitative finding that faculty with doctoral preparation, either DNP or Ph.D., were making connections between clinical and classroom, through teaching methods that helped students understand the material and bridge the theory to practice gap in the classroom, not just in clinical. This contradicts the strictly quantitative studies previously reporting no correlation between level of education and self-efficacy scores (Dozier et al., 2019; Nugent et al., 1999). This qualitative data further explained that the personal efficacy component of the teacher self-efficacy score may not be associated with years of clinical experience as suggested previously, but rather how that expertise more closely relates to education theory. This supports literature that supported the concept of teaching as a separate expertise (Benner et al., 2010; Booth et al., 2016; Cangelosi et al., 2009; Halstead, 2018).

This study confirmed previous findings that teaching experience leads to higher self-efficacy (Dozier et al., 2019; Nugent et al., 1999; Shin et al., 2021), which is an enactive mastery experience, that Bandura suggested is the most influential source of self-efficacy information (Bandura, 1997). This higher level of self-efficacy affects cognitive processes, motivational processes, such as affective processes, such as and selection processes (Bandura, 1977, 1994,

1997). This means that people with high self-efficacy may set higher goals, be motivated to meet those goals, choose more challenging tasks, and readily undertake challenging activities (Bandura, 1977, 1994, 1997). This explains why those with higher self-efficacy were making connections between their teaching activities and the student outcomes.

Graduate Preparation

Those in the high teacher self-efficacy group spoke of engaging students and connecting theory to practice in the classroom. The quantitative data showed an increasing percent of doctoral prepared faculty with each level of self-efficacy, yet all three interview groups had the same percent of doctoral prepared faculty, and only the highly efficacious group spoke to engaging students by employing philosophical foundations to guide teaching strategies. This finding warrants further investigation as it may also relate to experience and years in academia or any number of other factors. These findings are consistent with the basic elements of Bandura's self-efficacy theory, most notably, mastery experiences and social persuasion. Teacher self-efficacy may influence faculty instructional methods as well as student engagement (Tschannen-Moran & Hoy, 2001) which was supported by this study as faculty with higher self-efficacy scores who were interviewed spoke to trying new strategies and employing strategies that engaged students.

Clinical Experience

This study adds evidence that clinical expertise needs to be connected to education theory to influence teacher behaviors. This supports Nugent et al. (1999) conclusions that even with a strong sense of personal efficacy, teacher self-efficacy may be less developed. It also contradicted quantitative previous findings that showed no correlation between formal education and teacher self-efficacy (Dozier et al., 2019; Nugent et al., 1999). This qualitative data showed

that irrespective of doctoral preparation, only those with a higher level of teacher self-efficacy were making connections between educational theories and teaching behaviors.

Just as new nurses have difficulty bridging the theory to practice gap as they enter the profession, new faculty may have difficulty translating their clinical practice back to the classroom and conveying this information in a way to aids in student learning (Candela et al., 2015; Dreifuerst et al., 2016; Garner & Bedford, 2021; McNelis et al., 2019; Summers, 2017). Participants with higher levels of teacher self-efficacy addressed this concern specifically during interviews by making the connections in the classroom in ways that connect with students. The quantitative strand demonstrated a positive correlation between doctoral prepared faculty and higher scores on the total survey score and each of the subscales.

Significance

As confidence grows, the ability to learn from all experiences, both positive and negative, grows. Promoting positive and effective transitions from clinical expertise to educator success is one way nursing education can increase retention of new faculty who may in turn engage students in innovative teaching strategies. With looming faculty retirements, schools of nursing should concentrate on professional development activities that focus on education theory and methods that will help faculty in all stages to select pedagogical methods that will close the theory to practice gap thus better preparing new graduate nurses for practice, reduce cost to organizations (Lockhart, 2020), allow aging nurses to retire (Fang & Kesten, 2017), and reduce mortality (Needleman et al., 2011).

Limitations

Limitations are aspects of the study that decrease generalizability of the findings (Sutherland, 2017, p. 57). The quantitative strand of this study may be limited by excluding

faculty teaching in ADN programs, excluding faculty teaching in the clinical environment exclusively, insufficient stratification of the SETTI-NE scores, and construct limitations of the novice researcher. The lack of males in this study limits generalizing any results to this gender. Limitations of the qualitative strand include inclusion of case representatives across the range of SETTI-NE scores. A more comprehensive qualitative study would provide an opportunity for theme generation in the areas explored.

Recommendations for Education

Given the findings of this study, it is recommended that schools of nursing focus professional development activities on training in education theory, which showed potential link to teaching methods. It would also be beneficial to consider any training in education theory over clinical years in practice, which showed no relation to teacher self-efficacy, when hiring new faculty.

As Bandura suggested, weak efficacy beliefs, as may be found in new faculty, as easily negated by disconfirming experiences (Bandura, 1997, p.43) which can happen with negative student evaluations that often have no accountability. So, even when we tell faculty to "take them with a grain of salt" they can be devastating early on. Schools of nursing should consider how faculty, especially novice faculty, receive student feedback to ensure they can use them for growth, rather than becoming despondent or self-doubting.

As the highly efficacious group all commented on grounding their teaching practice in clinical practice, and faculty nationwide are aging, nursing school administrators should consider how to ensure their faculty are current in their clinical practice.

Recommendations for Future Research

This study focused on bachelor's faculty yet there are still many associate degree programs educating new nurses, future research should investigate this population. Associate degree programs offer a faster way to graduate new nurses who then may continue with an RN-BSN degree completion program, making them a viable solution to answering the need in the current nursing shortage.

Since perceived self-efficacy is just the belief that one can do certain behaviors, investigating if there are corresponding teaching practices should be studied. The fact that all levels of self-efficacy scored lowest in clinical practice, this should be further investigated to ensure determine the impact of this on teacher behaviors.

This study was designed to investigate the academic preparation of faculty in detail, but the findings in the qualitative piece of this mixed methods study, warrants further exploration into any relationships with high teacher self-efficacy and their academic preparation.

Summary

As nursing looks for new ways to transform the education landscape and better align with needs of today's students and today's healthcare environment, teacher self-efficacy is an area that has been well-studied in other fields and warrants further investigation in nursing. Bandura's theory of self-efficacy offers four sources of self-efficacy, mastery experiences, vicarious experiences, social persuasion, and affective state. This mixed methods study investigated this concept in the context of nursing education and explain its impact on teacher behaviors in the nursing classroom. This study first used the Self-Efficacy Toward Teaching Inventory-Nurse Education (SETTI-NE) to measure perceptions of self-efficacy in bachelor's degree nurse educators in the classroom in total, and each of four subsets, course preparation, teacher

behaviors, examination and evaluation, and clinical practice. Next, this quantitative strand divided the total sample into three levels which were used to select participants for the second, qualitative strand which looked at varying years of nursing experience at each of the three self-efficacy levels, low teacher self-efficacy, moderate teacher self-efficacy, and high teacher self-efficacy.

In the quantitative strand, the study analyzed 352 responses to the survey and found a positive correlation between years of teaching experience, supporting previous studies, and a lack of correlation with years of nursing experience. While there was a weak correlation between age and total self-efficacy, this needs further exploration as this study violated statistical assumptions to this accept this finding. It also found positive correlation between doctoral prepared faculty and teacher self-efficacy that warrants further investigation.

The qualitative strand found that the low teacher self-efficacy group developed their confidence through repetition of teaching the same course. All levels developed confidence through teaching courses in their clinical specialty where they brought experiences from their clinical background into the classroom. The highly efficacious group commented more on teaching methods than content. This highly efficacious group finding supports claims that nursing education needs to accept that nursing education is a specialty in itself and include a focus on education theory in addition to nursing expertise.

REFERENCES

Aebersold, M. (2018). Simulation-based learning: No longer a novelty in undergraduate

education. *OJIN: The Online Journal of Issues in Nursing, 23*(2).

https://ojin.nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/O

JIN/TableofContents/Vol-23-2018/No2-May-2018/Articles-Previous-Topics/Simulation-

Based-Learning-Undergraduate-Education.html

Aldridge, M. D. (2017). Nursing students' perceptions of learning psychomotor skills: A

literature review. *Teaching and Learning in Nursing, 12*(1), 21-27.

https://doi.org/10.1016/j.teln.2016.09.002

Allinder, R. M. (1995). An examination of the relationship between teacher efficacy and

curriculum-based measurement and student achievement. *Remedial and Special*

Education, 16(4), 247-254.

American Association of Colleges of Nursing. (2008). *The preferred vision of the professoriate*

in baccalaureate and graduate nursing programs.

www.aacn.nche.edu/publications/position/preferred-vision.

American Association of Colleges of Nursing. (2020a). *Nursing faculty shortage fact sheet*.

www.aacn.nche.edu/media -relations/FacultyShortageFS.pdf

American Association of Colleges of Nursing. (2020b). *Fact sheet: The Doctor of Nursing*

Practice (DNP). https://www.aacnnursing.org/Portals/42/News/Factsheets/DNP-

Factsheet.pdf

Armor, D., Conry-Osequera, P., Cox, M., Kin, N., McDonnel, L., Pascal, A., Pauly, E., &
Zellerman, G. (1976). *Analysis of the school preferred reading programs in selected Los
Angeles minority schools.* https://eric.ed.gov/?id=ED130243

Ashton, P. T., Webb, R. B., & Doda, N. (1983). *A study of teachers' sense of efficacy.*
https://eric.ed.gov/?id=ED231834

Assarroudi, A., Nabavi, F. H., Armat, M. R., Ebadi, A., & Vaismoradi, M. (2018). Directed
qualitative content analysis: The description and elaboration of its underpinning methods
and data analysis process. *Journal of Research in Nursing, 23*(1), 42-55.
https://doi.org/10.1177/1744987117741667.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change.
Psychological Review, *84*(2), 191–215.

Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist, 44*(9),
1175–1184. https://doi-org.unco.idm.oclc.org/10.1037/0003-066X.44.9.1175

Bandura, A. (1994). Self-efficacy: toward a unifying theory of behavioral change. In V.S.
Ramachaudran (Ed.). *Encyclopedia of human behavior* (Vol. 4, pp. 77-81). Academic
Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. Academic Press,
1998).

Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman and Company.

Bandura, A., & National Institute of Mental Health. (1986). *Social foundations of thought and
action: A social cognitive theory*. Prentice-Hall, Inc.

Bednash, G., Breslin, E. T., Kirschling, J. M., & Rosseter, R. J. (2014). PhD or DNP: Planning

    for doctoral nursing education. *Nursing Science Quarterly, 27*(4), 296-301.

    https://doi.org/10.1177/0894318414546415

Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). *Educating nurses: A call for radical*

    transformation. Jossey-Bass.

Berman, P., McLaughlin, M. W., Bass, G., Pauly, E., & Zellman, G. (1977). *Federal programs*

    supporting education change, Vol. VII: Factors affecting implementation and

    continuation. US Office of Education Department of Health, Education, and Welfare.

    https://eric.ed.gov/?id=ED140432

Billings, D. M., & Halstead, J. A. (2016). *Teaching in nursing: A guide for faculty* (5th ed.).

    Elsevier.

Booth, T. L., Emerson, C. J., Hackney, M. G., & Souter, S. (2016). Preparation of academic

    nurse educators. *Nurse Education in Practice*, *19*, 54-57.

    http://dx.doi.org.unco.idm.oclc.org/10.1016/j.nepr.2016.04.006

Bourne, M. J., Smeltzer, S. C., & Kelly, M. M. (2021). Clinical teacher self-efficacy: A concept

    analysis. *Nurse Education in Practice, 52*, 103029-103029.

    https://doi.org/10.1016/j.nepr.2021.103029

Brauneis, L., Badowski, D., Maturin, L., & Simonovich, S. D. (2021). Impact of low-fidelity

    simulation-based experiences in a pharmacology classroom setting in prelicensure

    graduate nursing education. *Clinical Simulation in Nursing, 50,* 43-47.

    https://doi.org/10.1016/j.ecns.2020.10.002

Bressan, V., Bagnasco, A., Aleo, G., Timmins, F., Barisone, M., Bianchi, M., Pellegrini, R., & Sasso, L. (2017). Mixed-methods research in nursing: A critical review. *Journal of Clinical Nursing, 26*, 2878-2890. https://doi.org/10.1111/jocn.13631

Bristol, T., Hagler, D., McMillian-Bohler, J., Wermers, R., Hatch, D., & Oermann, M. H. (2019). Nurse educators' use of lecture and active learning. *Teaching and Learning in Nursing, 14*(2019), 94-96. https://doi.org/10.1016/j.teln.2018.12.003.

Britton, K. L. (2017). *Descriptive comparative study of nursing faculty self-efficacy in the simulation setting* [Unpublished Doctoral Dissertation]. Capella University.

Brown, T., & Sorrell, J. (2017). Challenges of novice nurse educator's transition from practice to classroom. *Teaching and Learning in Nursing*, *12*(3), 207–211. https://doi.org/10.1016/j.teln.2017.03.002

Bullin, C. (2018). To what extent has doctoral (PhD) education supported academic nurse educators in their teaching roles: An integrative review. *BMC Nursing, 17*(1), 6-6. https://doi.org/10.1186/s12912-018-0273-3

Candela, L., Gutierrez, A. P., & Keating, S. (2015). What predicts nurse faculty members' intent to stay in the academic organization? A structural equation model of a national survey of nursing faculty. *Nurse Education Today, 35*(4), 580-589. doi: 10.1016/j.nedt.2014.12.018

Cangelosi, P., Crocker, S., & Sorrell, J. M. (2009). Expert to novice: Clinicians learning new roles as clinical nurse educators. *Nursing Education Perspectives*, *30*(6), 367.

Cataudella, S., Carta, S. M., Mascia, M. L., Masala, C., Petretto, D. R., Argus, M., & Penna, M. P. (2021). Teaching in time of the COVID-19 pandemic: A pilot study on teachers' self-esteem and self-efficacy in an Italian sample. *International Journal of Environmental Research and Public Health, 18*(8211). https://doi.org/10.3390/ijerph18158211.

Christensen, L., & Simmons, L. E. (2019). The academic clinical nurse educator. *Nursing Education Perspectives Online, May/June 2019*, 196.

Cooley, S. S., & Gagne, J. C. (2015). Transformative experience: Developing competence in novice nursing faculty. *Journal of Nursing Education*, 55(2), 96-100. doi: 10.3928/01484834-20160114-07

Cotter, K. D., & Clukey, L. (2019). "Sink or swim": An ethnographic study of nurse educators in academic culture. *Nursing Education Perspectives*, *40*(3), 139-143. doi: 10.1097/01.NEP.0000000000000434

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Sage Publications, Inc.

Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications, Inc.

Creswell, J. W., & Plano Clark, J. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage Publications, Inc.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry & research design: Choosing among five approaches* (4th ed.). SAGE.

Crocetti, J. (2014). Nursing clinical faculty self-efficacy following an orientation using simulation. *Nursing Education Perspectives, 35*(3), 193-194. https://doi.org/10.5480/12-819.1

Culp-Roche, A., Hardin-Fanning, F., Tartavoulle, T., Hampton, D., Hensley, A., Wilson, J. L., & Wiggins, A. T. (2021). Perception of online teacher self-efficacy: A multi-state study of nursing faculty pivoting courses during COVID 19. *Nurse Education Today, 106*, 105064-105064. https://doi.org/10.1016/j.nedt.2021.105064

Daikeler, J., Bošnjak, M., & Manfreda, K. L. (2020). Web versus other survey modes: An updated and extended meta-analysis comparing response rates. *Journal of Survey Statistics and Methodology*, *8*(3), 513–539.

Dembo, M. H., & Gibson, S. (1985). Teachers' sense of efficacy: An important factor in school improvement. *The Elementary School Journal, 86*(2), 173-184.

Dewart, G., Corcoran, L., Thirsk, L., & Petrovic, K. (2020). Nursing education in a pandemic: Academic challenges in response to COVID-19. *Nurse education today, 92*, 104471. https://doi.org/10.1016/j.nedt.2020.104471

Dozier, A. L., Hsiao, E., Dees, D. C., Noviello, S., & Bochenko, M. J. (2019). An investigation of nursing faculty teacher efficacy in nursing schools in Georgia. *Association of Black Nursing Faculty Journal*, *30*(2), 50-57.

Dreifuerst, K. T., McNelis, A. M., Weaver, M. T., Broome, M. E., Draucker, C. B, & Fedko, A. S. (2016). Exploring the pursuit of doctoral education by nurses seeking or intending to stay in faculty roles. *Journal of Professional Nursing, 32*(3), 202-212.

Fang, D., & Kesten, K. (2017). Retirements and succession of nursing faculty in 2016–2025. *Nursing Outlook, 65*(5), 633-642. https://doi.org/10.1016/j.outlook.2017.03.003

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs-principles and practices. *Health services research, 48*(6 Pt 2), 2134–2156. https://doi.org/10.1111/1475-6773.12117

Fitzgerald, A., McNelis, A. M., & Billings, D. M. (2020). NLN core competencies for nurse educators: Are they present in the course descriptions of academic nurse educator programs? *Nursing Education Perspectives, 41*(1), 4-9. https://doi.org/10.1097/01.NEP.0000000000000530

Gaffney, M. K., Chargualaf, K. A., & Ghosh, S. (2021). COVID-19 disruption of nursing education and the effects on students' academic and professional confidence. *Nurse Educator, 46*(2), 76-81. https://doi.org/10.1097/NNE.0000000000000986

Gardner, S. S. (2014). From learning to teach to teaching effectiveness: Nurse educators describe their experiences. *Nursing Education Perspectives*, *35*(2), 106-11.

Garner, A., & Bedford, L. (2021). Reflecting on educational preparedness and professional development for early-career nurse faculty: A phenomenological study. *Nurse Education Practice*, *5*(53). doi: 10.1016/j.nepr.2021.103052

Garner, S. L., Killingsworth, E., Bradshaw, M., Raj, L., Johnson, S. R., Abijah, S. P., Primala, S., & Victor, S. (2018). The impact of simulation education on self-efficacy towards teaching for nurse educators. *International Nursing Review*, *65*, 586–595

Greenway, K., Butt, G., & Walthall, H. (2019). What is a theory-practice gap? An exploration of the concept. *Nurse Education in Practice, 34*(2019), 1-6, https://doi.org/10.1016/j.nepr.2018.10.005

Halstead, J. (2018). *NLN core competencies for nurse educators: A decade of influence.* National League for Nursing.

Hsieh, H., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research, 15*(9), 1277-1288. https://doi.org/10.1177/1049732305276687

Huston, C. L., Phillips, B., Jeffries, P., Todero, C., Rich, J., Knecht, P., Sommer, S., & Lewis, M. P. (2018). The academic-practice gap: Strategies for an enduring problem. *Nursing Forum (Hillsdale), 53*(1), 27-34. doi:10.1111/nuf.12216

Hutchings, P., Huber, M. T., & Ciccone, A. (2011). *The scholarship of teaching and learning reconsidered: Institutional integration and impact.* Wiley & Sons.

Institute of Medicine (US) Committee on Quality of Health Care in America. (2000). Linda T. Kohn, Janet M. Corrigan, & Molla S. Donaldson (Eds.), *To err is human: Building a safer health system.* National Academies Press (US). doi: 10.17226/9728

Institute of Medicine (US). (2010). *The future of nursing: Focus on education.* https://www.nationalacademies.org/hmd/~media/files/reportfiles/2010/The-Future-of-Nursing/Nursing Education 2010 Brief.pdf.

Ironside, P. M. (2004). Covering content and teaching thinking: Deconstructing the additive curriculum. *Journal of Nursing Education, 43*(1), 5-12. www.healio.com/nursing/journals/jne

Ironside, P. M., & Valiga, T. M. (2007). Creating a vision for the future of nursing education: Moving toward excellence through innovation. *Nursing Education Perspectives, 27*(3), 120-121. www.journal.lww.com/neponline

Irwing, P., & Hughes, D. (2018). Test development. In P. Irwing, T. Booth, & D. J. Hughes (Eds.), *The Wiley handbook of psychometric testing: A multidisciplinary reference on survey, scale and test development* (pp. 3-47) John Wiley & Sons Ltd.

Ivankova, N. V., Creswell, J. W., & Stick, S. L. (2006). Using mixed-methods sequential explanatory design: From theory to practice. *Field Methods*, *18*(1), 3–20. https://doi.org/10.1177/1525822X05282260

Jones, M. (2017). Career commitment of nurse faculty. *Research and Theory for Nursing Practice, 31*(4), 364-378. doi: 10.1891/1541-6577.31.4.364

Kallio, H., Pietilä, A., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: Developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing, 72*(12), 2954-2965. https://doi.org/10.1111/jan.13031

Kellar, S. P., & Kelvin, E. A. (2013). *Munro's statistical methods for health care research* (6th

    ed.). Wolters Kluwer Health

Khanshan, S. K., & Yousefi, M. H. (2020). The relationship between self-efficacy and

    instructional practice of in-service soft disciplines, hard disciplines and EFL teachers.

    Asian-Pacific Journal of Second and Foreign Language Education, 5(1).

    https://doi.org/10.1186/s40862-020-0080-8

Kleinheksel, A. J., Rockich-Winston, N., Tawfik, H., & Wyatt, T. R. (2020). Demystifying

    content analysis. *American Journal of Pharmaceutical Education, 84*(1), 7113.

    https://doi.org/10.5688/ajpe7113

Klenke-Borgmann, L. (2020). High-fidelity simulation in the classroom for clinical judgment

    development in third-year baccalaureate nursing students. *Nursing Education*

    Perspectives, 41(3), 185–186. https://doi.org/10.1097/01.NEP.0000000000000457

Kubin, L. (2020). Using an escape activity in the classroom to enhance nursing student learning.

    Clinical Simulation in Nursing, 47, 52-56. https://doi.org/10.1016/j.ecns.2020.07.007

Leidl, D. M., Ritchie, L., & Moslemi, N. (2020). Blended learning in undergraduate nursing

    education – A scoping review. *Nurse Education Today, 86,* 104318-104318.

    https://doi.org/10.1016/j.nedt.2019.104318

Lippke, S. (2020). Self-efficacy theory. In V. Zeigler-Hill & T. K. Shackelford (Eds.),

    Encyclopedia of personality and individual differences (pp. 4722-4727). Springer.

    https://doi-org.unco.idm.oclc.org/10.1007/978-3-319-24612-3_1167

Lockhart, L. (2020). Strategies to reduce nursing turnover. *Nursing Made Incredibly Easy!:*

    18(2), p. 56. doi: 10.1097/01.NME.0000653196.16629.2e

Martin, N. K., Sass, D. A., & Schmitt, T. A. (2012). Teacher efficacy in student engagement, instructional management, student stressors, and burnout: A theoretical model using in-class variables to predict teachers' intent to leave. *Teaching and Teacher Education, 28*(4), 546-559. https://doi.org/10.1016/j.tate.2011.12.003

McKim, A. J., & Velez, J. J. (2015). Exploring the relationship between self-efficacy and career commitment among early career agriculture teachers. *Journal of Agricultural Education. 56*(1), 127-140. doi: 10.5032/jae.2015.01127

McNelis, A. M., Dreifuerst, K. T., & Schwindt, R. (2019). Doctoral education and preparation for nursing faculty roles. *Nurse Educator, 44*(4), 202-206. https://doi.org/10.1097/NNE.0000000000000597

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research* (4th ed.). Jossey-Bass.

Mokhtar, A., Maouloud, V. M., Omowunmi, A. K., & Bin Nordin, M. S. (2021). Teachers' commitment, self-efficacy and job satisfaction as communicated by trained teachers. *Management in Education*. https://doi.org/10.1177/08920206211019400

National League for Nursing. (2005). *Transforming nursing education* [Archived Position Statement]. http://www.nln.org/docs/default-source/about/archived-position-statements/transforming052005.pdf?sfvrsn=6

National League for Nursing. (2021). *Age of full-time nurse educators by rank, 2021*. https://www.nln.org/docs/default-source/research-statistics/age-of-full-time-nurse-educators-by-rank-2021.pdf?sfvrsn=8c092506_3

Needleman, J., Buerhaus, P., Pankratz, S., Leibson, S., Stevens, S., & Harris, M. (2011). Nurse staffing and inpatient hospital mortality. *New England Journal of Medicine, 364*, 1037-1045. Doi: 10.1056/NEJMsa1001025
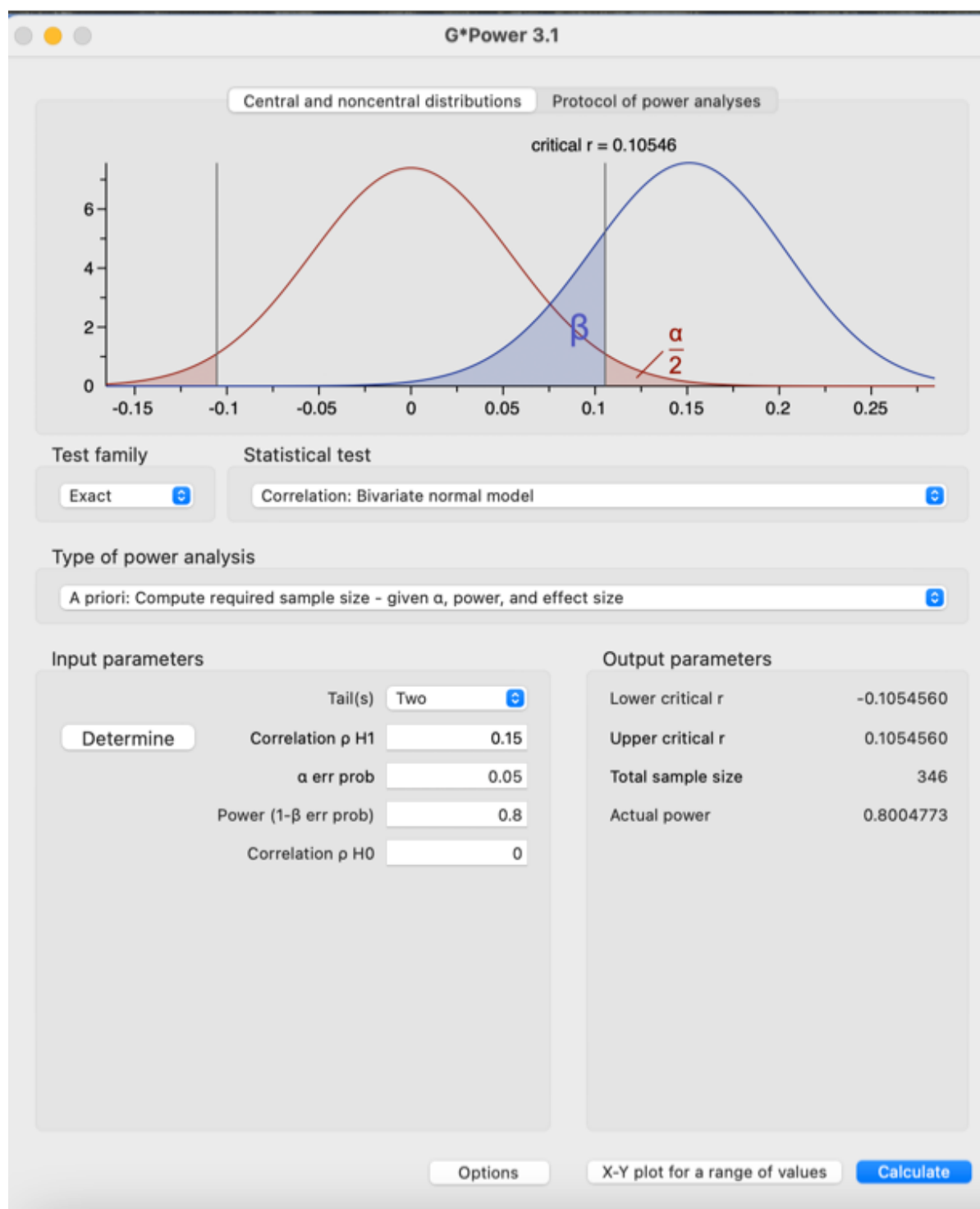
Nguyen, V. N. B., Forbes, H., Mohebbi, M., & Duke, M. (2017). Development and validation of an instrument to measure nurse educator perceived confidence in clinical teaching. *Nursing & Health Sciences, 19*(4), 498-508. doi:10.1111/nhs.12373

Noble, H., & Smith, J. (2015). Issues of validity and reliability in qualitative research. *Evidence-Based Nursing, 18*(2), 34-35.

Nugent, K. E., Bradshaw, M. J., & Kito, N. (1999). Teacher self-efficacy in new nurse educators. *Journal of Professional Nursing, 15*(4), 229-237.

Oermann, M. H., Lynn, M., & Agger, C. A. (2016). Hiring intentions of directors of nursing programs related to DNP- and PhD-prepared faculty and roles of faculty. *Journal of Professional Nursing*, *32*, 173-179

Oermann, M. H., Muckler, V. C., & Morgan, B. (2016). Framework for teaching psychomotor and procedural skills in nursing. *Journal of Continuing Education in Nursing, 47*(6). doi:10.3928/00220124-20160518-10

Patterson, J. A., Chrisman, M., Skarbek, A., Martin-Stricklin, S., & Patel, S. E. (2021). Challenges of preparing nursing students for practice: The faculty perspective. *Journal of Nursing Education, 60*(4), 225-228. doi:10.3928/01484834-20210322-08

Poindexter, K. (2013). Novice nurse educator entry-level competency to teach: A national study. *Journal of Nursing Education, 52*(10), 559–566. https://doi.org/10.3928/01484834-20130913-04

Poulou, M. S., Reddy, L. A., & Dudek, C. M. (2019). Relation of teacher self-efficacy and classroom practices: A preliminary investigation. *School Psychology International, 40*(1), 25–48. https://doi.org/10.1177/0143034318798045

Powers, K. (2020). Bringing simulation to the classroom using an unfolding video patient

    scenario: A quasi-experimental study to examine student satisfaction, self-confidence,

    and perceptions of simulation design. *Nurse Education Today, 86,* 104324-104324.

    https://doi.org/10.1016/j.nedt.2019.104324

Prieto, L., & Altmaier, E. (1994). The relationship of prior training and previous teaching

    experience to self-efficacy among graduate teaching assistants. *Research in Higher*

    Education, 35(4), 481-497.

Remler, D. K., & Van Ryzin, G. G. (2015). *Research methods in practice* (2nd ed.). Sage

    Publications.

Richter, S., & Idleman, L. (2017). Online teaching efficacy: A product of professional

    development and ongoing support. *International Journal of Nursing Education*

    Scholarship, 14(1), 191. https://doi.org/10.1515/ijnes-2016-0033\

Roach, M. (2020). *Jumping off a cliff: An exploratory descriptive study examining the*

    development of self-efficacy in new academic nurse faculty transitioning to classroom

    teaching [Unpublished thesis]. University of Manitoba.

Robinia, K. A., & Anderson, M. L. (2010). Online teaching efficacy of nurse faculty. *Journal of*

    Professional Nursing, 26(3), 168-175. https://doi.org/10.1016/j.profnurs.2010.02.006

Roney, L. N., Westrick, S. J., Acri, M. C., Aronson, B. S., & Rebeschi, L. M. (2017).

    Technology use and technological self-efficacy among undergraduate nursing faculty.

    Nursing Education Perspectives, *38*(3), 113-118, doi:

    10.1097/01.NEP.0000000000000141

Rotter, J. B. (1966). Generalized expectancies for internal versus external control of

    reinforcement. *Psychological Monographs, 80*(1).

Rumjaun, A., & Narod, F. (2020). Social learning theory—Albert Bandura. In B. Akpan & T. J. Kennedy (Eds.), *Science education in theory and practice* (pp. 85-99). Springer. https://link.springer.com/chapter/10.1007/978-3-030-43620-9_7

Schoening, A. M. (2013). From bedside to classroom: The nurse educator transition model. *Nursing Education Perspectives*, *34(*3), 167-72. https://doi.org/10.5480/1536-5026-34.3.167

Shahzad, K., & Naureen, S. (2017). Impact of teacher self-efficacy on secondary school students' academic achievement. *Journal of Education and Educational Development, 4*(1), 48-72. https://doi.org/10.22555/joeed.v4i1.1050

Shin, S., Kang, Y., Hwang, E. H., & Kim, J. (2021). Factors associated with teaching efficacy among nurse educators in hospital settings. *Journal of Clinical Nursing, 30*(7-8), 1111-1119. https://doi.org/10.1111/jocn.15656

Smiley, R. A., Ruttinger, C., Oliverira, C. M., Hudson, L. R., Allgeyer, R., Reneau, K. A., Silvestre, J. H., & Alexander, M. (2021). The 2020 national nursing workforce survey, *Journal of Nursing Regulation, 12*(1), S1-S96. DOI: https://doi.org/10.1016/S2155-8256(21)00027-2.

Summers, J. A. (2017). Developing competencies in the novice nurse educator: An integrative review. *Teaching and Learning in Nursing, 12*(4), 263–276. https://doi.org/10.1016/j.teln.2017.05.001

Sutherland, S. (2017). Introduction to quantitative research. In J. R. Gray, S. K. Grove, & S. Sutherland (Eds.), *Burns and Grove's the practice of nursing research: Appraisal, synthesis and generation of evidence* (8th ed., pp. 37-61). Elsevier, Inc.

Tschannen-Moran, M., & Hoy, A. W. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, *17*(7), 783-805. doi:10.1016/s0742-051x(01)00036-1

Tschannen-Moran, M., Hoy, A. W., & Hoy, W. K. (1998). Teacher efficacy: Its meaning and measure. *Review of Educational Research, 68*(2), 202-248.

Tollerud, T. (1990). The perceived self-efficacy of teaching skills of advanced doctoral students and graduates from counselor education programs. *Dissertation Abstracts International, 51*, 12A.

Valiga, T. M. (2012). Nursing education trends: Future implications and predictions. *Nursing Clinics of North America, 47*, 423-434. doi:10.1016/j.cnur.2012.07.007

Weston, J. (2018). The clinical instructor program: Improving self-efficacy for nurse educators. *Nurse Educator, 43*(3), 158-161. https://doi.org/10.1097/NNE.0000000000000452

Yancey, N. R. (2020). DNP or PhD as a credential for nurse faculty: Choices and consequences. *Nursing Science Quarterly, 33*(3), 217-221. https://doi.org/10.1177/0894318420925052.

Zee, M., & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: A synthesis of 40 years of research. *Review of Educational Research*, *86*(4), 981-1015. doi:10.3102/0034654315626801

APPENDIX A

POWER ANALYSIS

APPENDIX B

SELF-EFFICACY TOWARDS TEACHING INVENTORY
FOR NURSE EDUCATORS

Please rate how confident you are in your ability to be effective in each of the following teaching skills and behaviors on a scale from 1 to 4.

1	2	3	4
Not confident			completely confident

How confident are you in your ability to…….   NC   CC

1	state goals and objectives clearly	1	2	3	4
2	plan teaching methodologies	1	2	3	4
3	write a course syllabus	1	2	3	4
4	plan discussions (in class or online)	1	2	3	4
5	plan teaching and learning activities	1	2	3	4
6	select resources to support student learning	1	2	3	4
7	select relevant readings	1	2	3	4
8	develop student assignments	1	2	3	4
9	state grading criteria	1	2	3	4
10	deliver teaching methodologies	1	2	3	4
11	select and use a variety of teaching strategies	1	2	3	4
12	initiate discussion with students (in class or online)	1	2	3	4
13	draw students into discussions (in class or online)	1	2	3	4
14	communicate at a level that matches student's ability to comprehend	1	2	3	4
15	ask open-ended, stimulating questions	1	2	3	4
16	recognize and respect individual differences	1	2	3	4
17	manage student disagreements with instructor	1	2	3	4
18	communicate consistently both verbally and non-verbally	1	2	3	4
19	show respect for student ideas and abilities	1	2	3	4
20	respond appropriately to students' questions	1	2	3	4
21	respond to student emotional reactions in class	1	2	3	4
22	integrate readings and teaching methodologies	1	2	3	4
23	construct exam questions that require integration of content, critical thinking and self-expression	1	2	3	4
24	construct test questions that are at a cognitive domain of apply or higher (apply, analyze, evaluate, create)	1	2	3	4
25	develop a test plan	1	2	3	4
26	score exams and interpret results	1	2	3	4
27	evaluate student assignments	1	2	3	4
28	utilize exams as learning tools	1	2	3	4
29	provide constructive feedback on exams and assignments	1	2	3	4
30	develop teaching strategies that promote critical thinking	1	2	3	4
31	Set expectations that are appropriate for the level of the learner	1	2	3	4

32	modify teaching strategies based on learner's level of performance	1	2	3	4
33	ask questions in a clinical practice or didactic setting that stimulate critical thinking	1	2	3	4
34	demonstrate confidence in the student	1	2	3	4
35	assist student in patient care or didactic situations that are new	1	2	3	4
36	stimulate the student's interest to learn professional behavior and competence	1	2	3	4
37	use evaluation criteria to appraise student's clinical practice performance	1	2	3	4
38	record and use anecdotal observations as part of clinical practice evaluation	1	2	3	4
39	identify a student having academic/clinical practice difficulty	1	2	3	4
40	direct or advise students who are experiencing academic/clinical practice difficulty	1	2	3	4
41	integrate best practices into simulation-based experience	1	2	3	4
42	develop expected outcomes for simulation-based experiences	1	2	3	4
43	modify simulation facilitation to student's level of experience and competence	1	2	3	4
44	use debriefing after a simulation-based experience to encourage learning	1	2	3	4
45	use simulation expected outcomes as basis for student evaluation	1	2	3	4
46	provide a supportive learning environment for the simulation-based experience	1	2	3	4
47	initiate discussion with a student with a failing grade	1	2	3	4
48	utilize self-evaluation to improve teaching	1	2	3	4
49	arrange for constructive feedback and suggestions from peers	1	2	3	4
50	use feedback from students to improve teaching	1	2	3	4
51	evaluate the expected outcomes of a course	1	2	3	4

From:

Tollerud, T. (1990). The perceived self-efficacy of teaching skills of advanced doctoral students and graduates from counselor education programs (Doctoral dissertation, University of Iowa, 1990). Dissertation Abstracts International, 51, 12A.

Revised by: Nugent, K, Bradshaw, M. and Kilo, N. (1999). Teacher-self-efficacy in new nurse educators. *Journal of Professional Nursing,* Vol IS. (4), 229-237.

Revised and republished by: Garner, S. L., Killingworth, E., Bradshaw, M., Raj, L., Johnson, S. R., Abijah, S. P., Parimala, S., & Victor, S. (2018). The impact of simulation education on self-efficacy towards teaching for nurse educators. *International Nursing Review. 65*(4), 586-595. https://doi.org/10.1111/inr.12455

Revised by: Liverman, W. (2022). Exploring teacher self-efficacy in nurse educators: A mixed method study. (Doctoral dissertation, University of Northern Colorado, 2022).

Contact Shelby L. Garner PhD, RN, CNE at Shelby_Garner@Baylor.edu for use or reprint.

APPENDIX C

SCALE USE PERMISSION

From: Garner, Shelby <Shelby_Garner@baylor.edu>
Sent: Thursday, September 9, 2021 9:46 AM
To: Liverman, Wendi <live5002@bears.unco.edu>
Cc: Henry, Melissa <melissa.henry@unco.edu>
Subject: Re: Scale use permission

Dear Wendy,

Many thanks asking permission. I grant permission for use and reproduction in your dissertation with citation of the article attached. I did reserve the copyright on the scale rather than turning over to the journal. I'm also attaching the word and pdf format of the scale and coding of subscales in an Excel spreadsheet in case those are useful for your work.

Wishing you the best as you complete your research and I look forward to following your work!

All the best,
Shelby

Shelby L. Garner PhD, RN, CNE
Associate Professor and 2021-2022 Baylor Fellow
Fulbright Scholar to India 2016-2018
Baylor University Louise Herrington School of Nursing
333 N. Washington Ave., Dallas, TX 75246
Office: 972-576-9190
Cell: 903-821-6891
To learn more about my research please go to:
http://www.baylor.edu/nursing/index.php?id=929743

"As each has received a gift, use it to serve one another, as good stewards of God's varied grace." 1 Peter 4:10

BU | Baylor University

APPENDIX D

SUMMARY OF SCALE MODIFICATIONS

Received feedback from nursing faculty members, three hold a PhD in nursing, one

holding a CRNA, and one holding a DNP. Their combined feedback and the purpose of this

study led to the decision to delete three questions that were specific to clinical practice solely,

modify wording of four questions so that it could address either clinical or didactic teaching

practice. The final survey for this study will consist of 51 questions.

Deleted:

34. Provide constructive feedback in a supportive manner regarding clinical practice

performance – *specific to clinical practice, study is specific to didactic practice*

38. adjust clinical practice assignments to individual's level of performance and confidence -

specific to clinical practice, study is specific to didactic practice

43. conclude a student's clinical practice performance is failing – *duplicative of 47. Initiate*

discussion with a student with a failing grade, which is not specific to clinical practice

Wording changes:

#	Original wording	#	Changed to:
31	set clinical practice expectations that are appropriate for the level of the learning in patient care areas	31	set expectations that are appropriate for the level of the learner
32	modify clinical teaching strategies based on learner's level of performance	32	Modify teaching strategies based on learner's level of performance
33	ask questions in a clinical practice setting that stimulate problem-solving	33	ask questions in a clinical practice or didactic setting that stimulate critical thinking
36	assist student in new patient care situations	35	Assist student in a patient care/didactic setting that is new

APPENDIX E

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF NORTHERN COLORADO

Institutional Review Board

Date:	01/05/2022
Principal Investigator:	Wendi Liverman
Committee Action:	**IRB EXEMPT DETERMINATION – New Protocol**
Action Date:	01/05/2022
Protocol Number:	2112033572
Protocol Title:	Exploring teacher self-efficacy in nurse educators: A mixed methods study
Expiration Date:	

The University of Northern Colorado Institutional Review Board has reviewed your protocol and determined your project to be exempt under 45 CFR 46.104(d)(702) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require further review from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if and when:

APPENDIX F

RECRUITMENT EMAIL FOR QUANTITATIVE STRAND

Dear Invitee,

My name is Wendi Liverman. I am currently enrolled in the Ph.D. in Nursing Education at University of Northern Colorado and am in the process of writing my dissertation. I am kindly requesting your participation in a doctoral research study I am conducting titled: Exploring Teacher Self-Efficacy in Nurse Educators: A mixed methods study (IRB # 2112033572). The purpose of this research is to determine characteristics of faculty behaviors in the classroom and their relationship to teacher self-efficacy levels. I am interested in exploring all levels of confidence and the impacts on teacher behaviors in the classroom.

This study involves completing basic demographic information and one survey, the Self-Efficacy Towards Teaching Inventory: Nurse Educator (SETTI-NE). You are eligible to participate if you are a nurse educator who has taught at least one face-to-face didactic course in a baccalaureate nursing program. This study involves you completing ten demographic questions and then completing the 51-item Likert survey about your confidence levels in various nursing education activities. This survey should take about approximately 15-20 minutes to complete.

If you would like to participate in the study, please read the Informed Consent letter below. To begin the study, click the survey link at the end.

Your participation in the research will be of great importance to assist in developing nurse educators' self-efficacy and understanding any relationship with instructional behaviors.

Thank you for your time and participation

Sincerely,

Wendi Liverman, MSN, RN

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Exploring Teacher Self-Efficacy in Nurse Educators: A Mixed Methods
Study
Researcher: Wendi Liverman, Doctoral Student, PhD in Nursing Education
e-mail: live5002@bears.unco.edu.

Advisor: Melissa Henry, Ph.D., RN, FNP-C
Professor, Director
School of Nursing
University of Northern Colorado
Phone: 970-351-1735   Email: Melissa.Henry@unco.edu

To better understand nurse educator self-efficacy and its impact on faculty behaviors in
a nursing program, the purpose of this study is to identify variables that influence nurse
educator self-efficacy and describe nursing faculty characteristics related to varying
teacher self-efficacy scores. The results of this study will add to teacher self-efficacy
knowledge specific to nursing and assist nurse educators to update pedagogical
methods and meet the needs of our students as they transition into a more complex and
demanding profession.

As a participant in this research, you will be asked to complete a 51-item survey asking
you to assess your level of self-confidence in performing tasks related to teaching
nursing. The survey will take approximately 15-20 minutes to complete. Following
competition of the survey, select participants will be invited to complete an individual
interview with the researcher to further explore survey results. You are being asked to
provide your name and an email contact, for this purpose only. This information will not
be shared, stored, or used in any other fashion, and will be destroyed after completion
of the study. Participant' information collected as part of this research, even if identifiers
are removed, will not be used or distributed for future research studies.

Risks to you are minimal. The risks inherent in this study are no greater than those
normally encountered in any educational environment. While there is not any direct
benefit to you for participating in this study it is possible what is learned will help
educators to better understand teaching instruction.

Participation is voluntary. You may decide not to participate in this study and if you
begin participation, you may still decide to stop and withdraw at any time. Your decision

will be respected and will not result in loss of benefits to which you are otherwise entitled. Please take your time to read and thoroughly review this document and decide whether you would like to participate in this research study. If you decide to participate, your completion of the research procedures indicates your consent. Please keep or print this form for your records. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Office of Research & Sponsored Programs, University of Northern Colorado, Greeley, CO; 970-351-1910 or nicole.morse@unco.edu.

Please print or save this consent form for your records.

Statement of Consent

I have read the above information. I feel I understand the study well enough to make a decision
about my involvement. By clicking the link below, I understand and agree to the terms described
above. Please indicate your consent by clicking the link below.

Link to Survey:

Survey link

APPENDIX G

SOCIAL MEDIA POSTS

Title: Research Participation Request

Dear Fellow Nurse Educators,
My name is Wendi Liverman. I am currently enrolled in the Ph.D. in Nursing Education at University of Northern Colorado and am in the process of writing my dissertation. I am kindly requesting your participation in a doctoral research study I am conducting titled: Exploring Teacher Self-Efficacy in Nurse Educators: A mixed methods study. The purpose of this research is to determine characteristics of faculty behaviors in the classroom and their relationship to teacher self-efficacy levels. I am interested in exploring all levels of confidence and the impacts on teacher behaviors in the classroom.

This study involves completing basic demographic information and one survey, the Self-Efficacy Towards Teaching Inventory: Nurse Educator (SETTI-NE). You are eligible to participate if you are a nurse educator who has taught at least one face-to-face didactic course in a baccalaureate nursing program. This study involves you completing ten demographic questions and then completing the 51-item Likert survey about your confidence levels in various nursing education activities. This survey should take about approximately 15-20 minutes to complete.

Your participation in the research will be of great importance to assist in developing nurse educators' self-efficacy and understanding any relationship with instructional behaviors.

Thank you for your time and participation

Sincerely,

Wendi Liverman, MSN, RN

Wendi Liverman, PhD Student
University of Northern Colorado

Confidential survey link:
Survey link

APPENDIX H

CONSENT FORM

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Exploring Teacher Self-Efficacy in Nurse Educators: A Mixed Methods
Study
Researcher: Wendi Liverman, Doctoral Student, PhD in Nursing Education
e-mail: live5002@bears.unco.edu.

Advisor: Melissa Henry, Ph.D., RN, FNP-C
Professor, Director
School of Nursing
University of Northern Colorado
Phone: 970-351-1735   Email: Melissa.Henry@unco.edu

To better understand nurse educator self-efficacy and its impact on faculty behaviors in
a nursing program, the purpose of this study is to identify variables that influence nurse
educator self-efficacy and describe nursing faculty characteristics related to varying
teacher self-efficacy scores. The results of this study will add to teacher self-efficacy
knowledge specific to nursing and assist nurse educators to update pedagogical
methods and meet the needs of our students as they transition into a more complex and
demanding profession.

As a participant in this research, you will be asked to complete a 53-item survey asking
you to assess your level of self-confidence in performing tasks related to teaching
nursing. The survey will take approximately 15-20 minutes to complete. Following
completion of the survey, select participants will be invited to complete an individual
interview with the researcher to further explore survey results. You are being asked to
provide your name and an email contact, for this purpose only. This information will not
be shared, stored, or used in any other fashion, and will be destroyed after completion
of the study. Participant' information collected as part of this research, even if identifiers
are removed, will not be used or distributed for future research studies.

Risks to you are minimal. The risks inherent in this study are no greater than those
normally encountered in any educational environment. While there is not any direct
benefit to you for participating in this study it is possible what is learned will help
educators to better understand teaching instruction.

Participation is voluntary. You may decide not to participate in this study and if you begin participation, you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Please take your time to read and thoroughly review this document and decide whether you would like to participate in this research study. If you decide to participate, your completion of the research procedures indicates your consent. Please keep or print this form for your records. If you have any concerns about your selection or treatment as a research participant, please contact Nicole Morse, Office of Research & Sponsored Programs, University of Northern Colorado, Greeley, CO; 970-351-1910 or nicole.morse@unco.edu.

APPENDIX I

DEMOGRAPHIC INFORMATION

How do you identify yourself?

☐ Male
☐ Female
☐ Transgender
☐ Do not identify as female, male, or transgender

Indicate your age in years:

☐ 25 or below   ☐ 46 - 50
☐ 26 - 30   ☐ 51 - 55
☐ 31 - 35   ☐ 56 - 60
☐ 36 - 40   ☐ 61 or above
☐ 41 – 45

Indicate your total years of working in the clinical setting as a nurse:

☐ 1 year or less   ☐ 2 – 3 years   ☐ 4 – 5 years   ☐ 6 – 10 years
☐ 11 – 15 years   ☐ 16 – 20 years   ☐ 21 – 25 years   ☐ 26 – 30 years
☐ 31 – 35 years   ☐ > 35 years

Indicate your total years of teaching in academic nursing education:

☐ 1 year or less   ☐ 2 – 3 years   ☐ 4 – 5 years   ☐ 6 – 10 years
☐ 11 – 15 years   ☐ 16 – 20 years   ☐ 21 – 25 years   ☐ 26 – 30 years
☐ 31 – 35 years   ☐ > 35 years

Please select any nursing-related education you have completed:
☐ ADN   ☐ DNP (any focus)
☐ BSN   ☐ PhD
☐ MSN – Nurse practitioner (any focus)   ☐ CRNA (Master's or doctorate)
☐ MSN – Leadership or administration   ☐ Other: *please list*
☐ MSN – Education

Please indicate your *academic* nursing teaching environment experience (current *or* former):

☐ Clinical only
☐ Lab (ie. skills lab)
☐ Classroom/didactic only
☐ Both clinical and didactic

Does your *academic education* practice incorporate simulation? ☐ Yes ☐ No
If yes, please specify which environment includes simulation (Lab, clinical, classroom):

What theoretical courses, clinicals, or labs do you currently teach?

If you have received formal nursing education courses, please identify the type of courses *(select all that apply)*:

☐ Program Evaluation
☐ Instructional technology/teaching strategies
☐ Educational psychology
☐ Curriculum Development
☐ Learning/instructional theory
☐ Other (please list)

Select which of the following areas that the place where you teach has provided training *(orientation, classes, in-services, etc.)*

☐ Instructional technology management
☐ Teaching strategies
☐ Learning/instructional theory

☐ Assessment methods

☐ Simulation
☐ Curriculum development

☐ Classroom

APPENDIX J

QUALITATIVE INTERVIEW RECRUITMENT EMAIL

Dear participant,

Thank you for completing the 51-item survey that completed the first strand of this mixed-methods study. In doing so, you indicated your willingness to take part in the second qualitative strand. This portion of the study aims to describe nursing faculty characteristics related to varying teacher self-efficacy scores and years at the bedside providing direct nursing care. This will consist of an individual interview with myself that should take approximately 30 minutes to an hour.

If you remain willing to participate in this interview, please reply to this email indicating to me your preferred time frames (i.e., weekends, mornings, Mondays, etc.) to schedule an interview. I will then send you some possible interview times to select from.

I have also attached the consent you signed when taking the online survey for your review and to keep for your records.

Again, thank you so much for your willingness to contribute to this study and add to nursing education knowledge. I look forward to hearing from you.

Thank you,

Wendi Liverman, MSN, RN
Ph.D. Candidate, University of Northern Colorado

APPENDIX K

QUALITATIVE INTERVIEW QUESTIONS

Table L1

Interview Questions and Prompts with Theoretical Link

Question	Possible Tool Domain link	Theoretical link
1. Tell me a little about your history as a nurse?	D4	Mastery experience, general confidence as a nurse (affective state)
2. How confident have you been throughout your career in clinical practice?	D1, D4	Self-efficacy development Task-specific
3. When/how did you decide to take a role in education?	D2	Motivation to teach Self-efficacy development Task-specific
3a. Besides teaching patients, did you do any teaching in your clinical position, i.e., precepting, teaching CPR, etc.?		
3b. What part of your nursing education best prepared you for teaching nursing in an academic setting?	D1, D4	Motivation to teach
4. Tell me about your first year of academic teaching, what was your confidence like in the beginning?	D1, D2, D3	Sources of self-efficacy: Mastery experience, task-specific
5. Tell me about a time early in your time teaching as a faculty member in the classroom when you felt confident?	D1, D2, D3, D4	Sources of self-efficacy: Mastery experience
5a. What helped you feel confident?		

Table L1 Continued

Question	Possible Tool Domain link	Theoretical link
6. Tell me about a time early in your time teaching as a faculty member in the classroom when you didn't feel confident? *6a. What made you feel less confident?*	D1, D2, D3, D4	Sources of self-efficacy: Mastery experience
6b. How do you feel your clinical nursing experience influenced these situations?	D1, D2, D4	Sources of self-efficacy: Mastery experience
7. How has the act of teaching in the classroom over time impacted your confidence?	D2	Sources of self-efficacy: Mastery experience
8. Tell me about your onboarding experience in your faculty role? *8a. How did it impact your confidence?*	D1, D2	Sources of self-efficacy: Mastery experience
9. Tell me about any formal education or experience you have in teaching. *9a. How did this impact your confidence in your teaching role?*	D1, D4	Sources of self-efficacy: Mastery experience, vicarious experiences
10. If you can think of one person who has helped your confidence in teaching, who would it be? *10a. How have they helped?*	D1, D2	Sources of self-efficacy: Vicarious experiences, Verbal persuasion
11. How have comments/actions of other faculty members impacted your confidence? How have comments from your students impacted your confidence?	D2, D4	Sources of self-efficacy: Verbal persuasion

Table L1 Continued

Question	Possible Tool Domain link	Theoretical link
12. How do you plan your lesson for the day?	D1, D2, D3	Sources of self-efficacy: Verbal persuasion
12a. What do you base your decision on instructional strategies on?	D1, D2, D3	Sources of self-efficacy: Affective state
12b. How often do you try new teaching strategies?	D1, D2, D3	Sources of self-efficacy: Mastery experience, vicarious experiences
12c. What influences the decision to try a new strategy?	D1, D2, D3	Sources of self-efficacy: Mastery experience
12d. How confident are you when trying a new a teaching strategy?	D1, D2, D4	Sources of self-efficacy: Mastery experience, vicarious experiences
13. Looking back now, if you could do it go back to your first day, what would you tell yourself?	D1, D2	Sources of self-efficacy: Mastery experience, vicarious experiences
13a. Do you think there is anything that would have increased your confidence level at that time?	D2	Sources of self-efficacy: Vicarious experiences, Verbal persuasion

Notes. *D1 is domain 1, course preparation, D2 is domain 2, teacher behaviors, D3 is domain 3, examination and evaluation, D4 is domain 4, clinical teaching

APPENDIX L

PRELIMINARY CODE BOOK

Name of code	Code Description	Examples of code
Course Preparation	Activities associated with preparing courses in nursing	• Stating goals and objectives • Experiences with preparing syllabi • Experiences in planning classroom discussions • Experiences in lesson planning
Teacher Behaviors	Activities describing teacher behaviors in the classroom affecting student learning	• Techniques used to to draw students into discussion • How to recognize and respect individual differences • Experiences when responding to student questions
Exam/Evaluation	Ability to evaluate student progress toward course goals	• Methods used when constructing exam questions • Experience with developing a test plan • Experiences with scoring tests • Any experience with and interpreting results • Any experience with providing constructive feedback
Clinical Teaching	Activities specific to promoting learning in the clinical environment	• How are academic/clinical practice expectations made appropriate for level of the learner • How constructive feedback in academic/clinical practice setting provided • Any ideas to stimulate student interest to learn professional behaviors

APPENDIX M

POSITIONALITY

As a novice faculty member and researcher who has only taught in a small, private, single-purpose college, I seek to understand why some faculty continue to cling to traditional lecture instruction in the face of growing research supporting more active learning methods.

In this study, personal experiences with self-doubt in early teaching may influence interpretation of data. I acknowledge early influences of educational leadership lacking mentorship. Working within a school with a strongly held catholic identity. My early experiences were of frequent reminders of a solid reputation and a resistance to embrace change in a substantial way.

At the start of the pandemic, I had just moved to adjunct status and was able to view the educator role from this very different perspective, feeling more like an outsider within the same organization. As I learn more about the sources of self-efficacy perceptions, this influenced my own self-perception of my role within the organization even though I feel that my teacher self-efficacy continued to grow.

APPENDIX N

FINAL CODE BOOK

Category	Description	Examples/quotes
Personal efficacy	The nurse educator's sense of competency in the discipline	• "I was very confident in my clinical practice." • "I could jump back into the same unit again" • "I have expertise in my clinical area." • "….so I left and went to a float pool job…I ended up mostly in ICU and psych, but that made me a pretty well-rounded nurse."
Teacher efficacy	The nurse educator's sense of competency as an instructor	• Very low confidence in the beginning • "In the beginning, my Dean had more confidence in me that I did."
Course preparation	Activities associated with preparing courses in nursing	• "My PhD. Program prepared me best." • "(I prepare) At least a month in advance. I add in material as I go and just collect everything that I've created and take it in." • "You know every semester I was getting good teaching evaluations every semester."
Instructor behaviors	Activities describing teacher behaviors in the classroom affecting student learning	• "I found I was easily overwhelmed by pushy students." • "I found students really responded to my storytelling." • "How do I understand this? How do others understand this? How can I help people understand this?" • "I learned the easiest part was the teaching….harder part was all the behind the scenes stuff that I never even thought of." • "COVID interrupted me before I had really developed my teaching style." • "I have tons of stories." • "I was more sensitive to students and a self-awareness while I'm up there trying to facilitate class things."

		• "…I moved away from just being a talking head on the stage to now thinking about how to better engage students withing any given class session."
Evaluation and Examination	Ability to evaluate student progress toward course goals	• "Being able to do anything with test questions other than what had been done before. Kind of recycling the previous questions." • "The larder part was giving feedback and how to evaluate everything."
Clinical Practice	Activities specific to promoting learning in the clinical environment	• "I do clinical work because it makes me a better teacher." • "I felt confident when I was teaching in the area of my clinical expertise." • "I think that's really important for helping to make sure we stay grounded in practice."
Academia	Influences of the academic structure.	• "I was teaching in the classroom in an area that I knew I didn't feel confident in." • "It was kind of an honorific position, and basically the Dean just marginalized me. It was terrible." • "I had an orientation to the college, not to the role of teaching." • "Good, supportive role models which made all the difference." • "I really wanted research. I was more interested in that than teaching." • "I 've always been interested in research." • "Really struggling in a hierarchical, fairly white privileged academia setting." • "My experience about how nurses look at education tends to be constrained by the same things I find challenging in academia." • "That makes me very not confident, because if you are wasting your time doing those things, how much of the teaching are actually getting done?" • "I was paired up with a faculty member."

- "We had this big packet full of stuff, like you know, this was HR stuff and this was the college functioning stuff."