

Experiences of Registered Nurses Who Were Not Initially Successful on the NCLEX-RN, Then Subsequently Passed

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Recommended Citation

Kasprovich, Tammy L., "Experiences of Registered Nurses Who Were Not Initially Successful on the NCLEX-RN, Then Subsequently Passed" (2016). *Dissertations (2009 -)*. Paper 611.
http://epublications.marquette.edu/dissertations_mu/611

EXPERIENCES OF REGISTERED NURSES WHO WERE NOT INITIALLY
SUCCESSFUL ON THE NCLEX-RN THEN SUBSEQUENTLY PASSED

By

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A Dissertation submitted to the Faculty of the Graduate School,
Marquette University,
In Partial Fulfillment of the Requirements for
The Degree of Doctor of Philosophy

Milwaukee, Wisconsin

May 2016

ABSTRACT
EXPERIENCES OF REGISTERED NURSES WHO WERE NOT INITIALLY
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Tammy Kasprovich PhD, RN

Marquette University, 2016

In the past decade, there has been little research conducted regarding individuals' stories about not initially being successful on the nursing licensure examination (NCLEX-RN). An unsuccessful licensure examination attempt may affect the individual personally and profoundly in ways that could influence their future success. Learning from registered nurses' experiences may contribute to developing new strategies to promote graduate nurses' initial success, which could help alleviate the nursing shortage. The purpose of this research study was to explore, using a narrative method, the experiences of registered nurses who were not initially successful the NCLEX-RN, then subsequently passed.

Personal Construct Theory (PCT) was used to guide this study. PCT is used to explain how individuals make sense of critical events in their lives. A purposive sample was used for sample recruitment. Fifteen participants were individually interviewed one-time. Data analyses were conducted using both manual and electronic coding, through multiple phases of thematic identification. Rigor was ensured by meeting quality criteria for qualitative research, such as using field notes and careful auditing. Four major themes were identified: (a) pressures all-around, (b) the stigma of being unsuccessful, (c) correcting the problem, and (d) the ultimate learning experience. Participants identified internal and external pressures that prevented them from being successful on their first attempt. They also expressed awareness of a stigma with being unsuccessful; therefore they chose to maintain privacy about their initial results. After a period of time, participants prepared to retake the NCLEX-RN by engaging in positive self-talk, focusing on content, practicing licensure examination style questions, taking commercial preparation courses, and revising test-taking strategies, among others. After successfully passing the NCLEX-RN, the participants wanted to share with graduate nurses what they had learned from their experiences. Following their initial unsuccessful NCLEX-RN result, participants were deeply affected, but with help and support of family, friends, nursing instructors, and managers, they were able to move forward, change their approaches, and become licensed nurses. Participants also expressed that the processes they undertook toward ultimate success on the licensure examination enabled them to be "better nurses" due to increased sensitivity to others who were encountering challenges.

ACKNOWLEDGMENTS

Tammy Kasprovich, PhD, RN

I had the honor to work with many exceptional individuals and completing this study was possible because of their support and guidance. There is no particular order to which the individuals are mentioned; they all made different and significant contributions.

First, I would like to extend my deepest gratitude and appreciation to all the participants who shared their experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. It was their willingness to talk about their experiences that made this study possible.

I would like to acknowledge and thank my chair, Dr. Leona VandeVusse, for her knowledge, guidance, and patience throughout the years. I truly appreciate all of your time and effort expended to help me achieve a doctoral degree. I cannot express in words how much you have helped me grow and learn personally and professionally.

I would like to thank my committee members, Dr. Kristin Haglund and Dr. Kathryn Schroeter, for your patience, guidance, and support. I truly appreciate you both being a part of my committee, along with your shared knowledge and encouragement to help me be successful.

I would like to thank Dr. Julie Ellis for her continual encouragement and willingness to read my chapters. I could not have gotten through my first three chapters without your assistance and I will always remember your kindness.

Lastly, I would like to thank all of the individuals who supported me throughout my doctoral degree. First and foremost, thank you to my husband, Craig, who continually supported me throughout the years. I would like to thank my friends and colleagues Deb Bartoshevich, Dr. Jill Berg, Barbara Brenzel, Dr. Susan Cole, Dr. Gladys Simandl, Dr. Heather Vartanian, and Marie Webster for their support and encouragement.

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CHAPTER ONE

INTRODUCTION

Nursing students anticipate graduating from nursing school and becoming registered nurses (RNs) which requires them to successfully pass the National Council Licensure Examination for Registered Nurses® (NCLEX-RN) to earn the RN credential. After graduation, 29 states allow newly graduated nursing students to work as graduate nurses (GNs) prior to becoming licensed (Appendix A). However, when GNs fail the NCLEX-RN, they are then denied the opportunity to work as RNs, which can cause problems for the individuals and society. This denial of the RN credential to practice can cause individuals to feel frustration, anger, shame, and guilt about not being successful on the licensing examination. The fear of not passing again may impede GNs from being successful on the second attempt. It is imperative that nurse educators, administrators, fellow nurses, and other healthcare professionals understand the experiences of RNs who have taken the NCLEX-RN more than once.

Purpose

The purpose of this study was to describe the experiences of RNs who were not initially successful on the NCLEX-RN, then subsequently passed, to learn how to promote future passing and success. The research question used to guide this study was: “What do RNs report about their experiences of not initially being successful on the NCLEX-RN, then subsequently passing?” This research study might help elaborate ways for individuals to cope with taking high-stakes licensure examination, such as the NCLEX-RN, and thereby increase passing rates.

Background

NCLEX-RN Development

The American Nurses Association (ANA) was the first organization to develop a licensure examination for GNs in 1955 (Schwarz, 2005). In 1978, the National Council State Boards of Nursing (NCSBN) began developing and administering the paper and pencil examination, which consisted of 300 NCLEX style questions (Schwarz, 2005) and was offered twice a year over a two-day period in large rented halls. The NCLEX-RN was reported as pass or fail without numerical values in 1988 (Schwarz, 2005). In 1994, the NCLEX-RN was converted from a paper and pencil examination to a computerized adaptive testing (CAT) exam. This examination is based on level of ability and the total number of questions administered can range from 75 to 265 to determine either a pass or fail result (Roa, Shipman, Hooten, & Carter, 2010; Schwarz, 2005).

The NCSBN converted to the CAT exam because it could be offered year round, with typically shorter testing times in less stressful environments, and most importantly, provided the ability to measure a candidate's competence level with greater efficiency (Schwarz, 2005). When candidates answer the first question correctly, the level of difficulty will increase and therefore the next question is more challenging. If candidates answer the next question incorrectly, the level of difficulty will become easier, therefore allowing a 50/50 attempt to answer the question correctly. When candidates have completed 75 questions, the computer will evaluate the candidates' ability. Once candidates have shown with 95% certainty that they competently answered the questions, they passed the NCLEX-RN. If candidates cannot achieve this 95% certainty at any time

during the examination, then they receive failing notifications.

Increasing difficulty of passing NCLEX-RN. Since 1994, the NCLEX-RN has become increasingly difficult to pass due to the increased knowledge and skill needed by entry-level RNs to care for higher acuity clients, see Table 1 (Schwarz, 2005). The NCSBN Board of Directors reevaluate the passing standard every three years based on a practice analysis of new RNs. Prior to increasing the passing standard, the NCSBN Board of Directors evaluate the annual summaries of candidates' performance on the NCLEX-RN, results from the annual standards survey, and personal knowledge about client acuity levels (NCSBN, 2011). The annual standards survey is given to employers and educators to gather their opinions regarding the competence needed for entry-level nurses. On April 1, 2013, the NCSBN again decided to increase the difficulty of the NCLEX-RN from $-.16$ to $.00$ logits (NCSBN, 1994-2015). In December 2015, the NCSBN Board of Directors voted to keep the passing standard at $.00$ logits (NCSBN, 2015). "A logit is a unit of measurement to report relative differences between candidate ability estimates and item difficulties" (NCSBN, 2013). This significant change in the logits was determined to be necessary because nurses need to have higher levels of knowledge and skills to meet the increasing complexity of clients' needs. The ramifications of this change meant that individuals have to be correct on more of the difficult questions to be successful on the NCLEX-RN.

Steps in NCLEX-RN test development. Prior to a question becoming an operational item on the NCLEX-RN, it has to go through a strategic process. The three main steps include: (a) scope of practice analysis, (b) item construction, and (c) pretesting (NCSBN, 2011).

Table 1

Changes to the NCLEX-RN--Years and Logits, Indicating Increasing Difficulty over Time

Years (starting April 1 st of that year)	Logits
1994-1995	-.4766
1995-1998	-.42
1998-2004	-.35
2004-2007	-.28
2007-2010	-.21
2010-2013	-.16
2013-2016	-.00
2016-current	-.00

Note. Adapted from “NCLEX Statistics from NCSBN” retrieved from <https://www.ncsbn.org/1232.htm>. Copyright (1994-2015) by National Council State Boards of Nursing (NCSBN). Adapted from “Passing Standard” retrieved from <https://www.ncsbn.org/2630.htm>. Copyright (2015) by National Council State Boards of Nursing (NCSBN). Logit = A logit is a unit of measurement to report relative differences between candidate ability estimates and item difficulties” (NCSBN, 2013).

Scope of practice analysis. The first step involves analyzing scope of nursing practice by having thousands of RNs participate in a survey to identify what entry-level RNs do on a daily basis and how frequently. The NCSBN performs a practice analysis every three years to remain abreast about what the expectations of new RNs are when entering into the nursing profession (Roa et al., 2010; Schwarz, 2005).

Item construction. The second step of examination development was item construction. Individuals volunteer to become item writers and are chosen by each state board of nursing (NCSBN, 2011). These individuals are from different demographic areas, practice areas, and educational settings. Every year approximately 140 individuals are invited for a four-day item-writing workshop (NCSBN, 2011). Each item is based on particular nursing content. After the items are initially developed, subject matter experts

analyze the items to ensure they are related to entry-level nursing practice. Once an item is reviewed for content appropriateness, other panels review it, for example, items are sent to the Editorial Panel for review of each item's clarity, grammar, punctuation, and spelling. Lastly, the items are sent to the Sensitivity Panel to look for gender or ethnicity bias and corrections are made appropriately.

Pretesting, the third step in NCLEX-RN item development is to add items into existing CATs that are not used to determine candidates' scores. Instead, differential item functioning analysis (DIF) is calculated after sufficient candidates' responses have been accumulated with operational pretest items. DIF is referred to as the potential of operational items being answered differently based on gender or race/ethnicity (Woo & Dragan, 2012). DIF exists when two or more groups differ on answers even though their level of ability to answer questions remains constant (Woo & Dragan, 2012). A minimum of 400 candidates must respond to an item before a statistical analysis can be done on the item (NCSBN, 2011). If any item was found to have statistically significant DIF, it was removed from the testing pool and reviewed for content bias. If the item truly measures content related to entry-level knowledge, the item was returned to the test pool. If the item does not test entry-level knowledge, the item was reconstructed or removed. Overall, less than 2% of all items flagged for statistical DIF were removed (Woo & Dragan, 2012).

Reliability and validity. The NCLEX-RN is considered a high stakes examination to protect the public from practitioners who may not be competent to practice as RNs and therefore those candidates fail. The NCSBN has set high standards related to the validity and reliability of the NCLEX-RN. The validity of the NCLEX-RN

needs to measure competencies that display safe and effective practice along with distinguishing those candidates who were competent from those who were not (NCSBN, 2011). The reliability of the NCLEX-RN is determined by achievement of consistent results that identify passing or failing candidates who display different levels of competency (NCSBN, 2011).

A threat to validity of the NCLEX-RN is a candidate taking the examination for another candidate. The NCSBN has limited this threat by implementing the following security measures, such as strict identification procedures, palm-vein scan, and monitoring at the testing centers (NCSBN, 2011). A more plausible threat to validity was having candidates with advance knowledge about the NCLEX-RN questions. The NCSBN continues to monitor the examination and Internet sites to make sure candidates were not sharing NCLEX-RN questions with others. If candidates shared NCLEX-RN questions, an investigation by the NCSBN would be conducted and steps to further secure the NCLEX-RN would be taken (NCSBN, 2011). According to NCSBN (2011), the organization strives to ensure that the examination is reliable, “psychometrically sound,...content is valid, and...legally defensible” (Woo & Dragan, 2012, p. 29).

Statement of the Problem

Nurse educators and administrators are invested in promoting student success, including passing the NCLEX-RN. For example, Eddy & Epeneter (2002) interviewed GNs and RNs about their experiences with taking the NCLEX-RN. Prior to 2014, there were only three other published studies that had focused on GNs who failed the NCLEX-RN and their experiences related to this failure (Griffiths, Papastrat, Czekanski, & Hagan, 2004; Poorman & Webb, 2000; Vance & Davidhizar, 1997). Recently, after a decade-

long gap in the literature, three other studies have surfaced on GNs' experiences who reportedly had failed NCLEX-RN. Two dissertators have conducted research studies on the topic (Atemafac, 2014; Silva, 2014) and McFarquhar (2006, 2014) published a research study focused on the lived experiences of RNs and the factors that led to their success after multiple attempts on the NCLEX-RN. When individuals are unsuccessful the NCLEX-RN on their first attempt, they were personally affected. The schools of nursing they attended may also be effected.

Impact of NCLEX-RN Pass Rates on Schools of Nursing

If there are too many GNs from a school of nursing are continually not successful on the NCLEX-RN on the first attempt, their school of nursing will be placed on monitoring by the state board of nursing for two years. During the monitoring period, the school of nursing has to show progress by writing reports on how they have improved their NCLEX-RN pass rates. For example, in the state of Wisconsin, a school of nursing might be placed on monitoring if its pass rate was below the national average and the z-score was above 1.96 (Wisconsin Board of Nursing, 2008). The national average pass rate varies from year to year, but in the last ten years the first time NCLEX-RN pass rates ranged from 81.8%-90.34%, as noted in Figure 1 (NCSBN, 1994-2015).

The z-score indicates how many standard deviations a particular raw score was above or below the group means (Huck, 2008). If the school of nursing consistently remains above the 1.96 z-score, then the school of nursing could lose state board approval and professional accreditation, based on having scores too far from the expected mean. This is a considerable amount of pressure on schools of nursing and educators to promote GNs' success, including passing the NCLEX-RN.

Figure 1

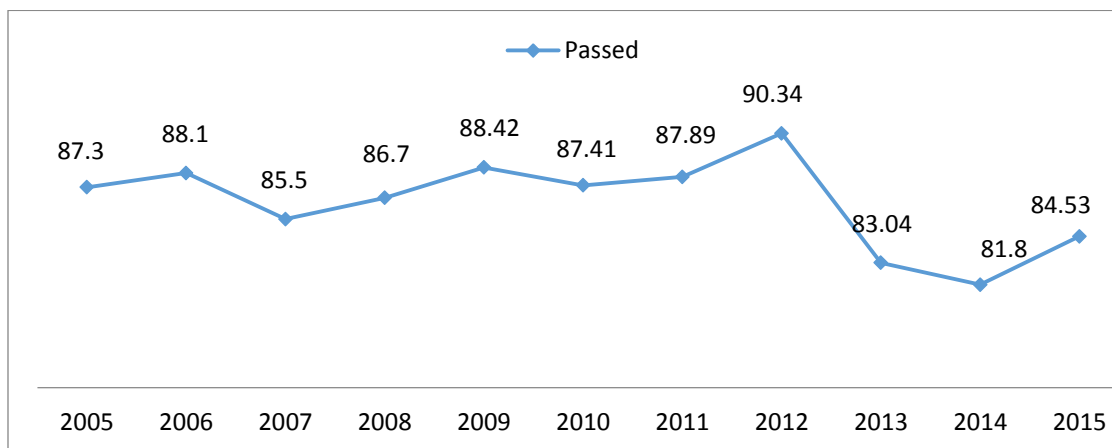
NCLEX-RN First Time Pass Rates in Past Decade

Figure 1. Adapted from “NCLEX statistics from NCSBN” retrieved from <https://www.ncsbn.org/1232.htm>. Copyright (1994-2015) by National Council State Boards of Nursing (NCSBN).

Impact on Individuals Who Do Not Pass NCLEX-RN

Individuals who are unsuccessful on the NCLEX-RN may be devastated by this experience emotionally and psychologically. Failure has been associated with significant emotional distress, such as low self-esteem, increased self-doubt in one’s abilities, fear of future results, lack of coping strategies, and professional consequences (Griffiths et al., 2004). Some of the critical professional consequences can include the loss of GNs’ jobs, to which they were being oriented, and being demoted to nurse externs or certified nursing assistants. Individuals who are not successful initially on the NCLEX-RN may feel embarrassed about coworkers’ reactions since the GNs are then no longer eligible to function in the new nursing role to which they were being oriented. Furthermore, individuals who were not successful on the NCLEX-RN face financial strain related to losing their new GN salary and having to repay student loans (Roa et al., 2010). This financial burden enhances the individual’s anxiety, doubt, and fear of failing when taking

the NCLEX-RN for the second time. It is possible that those individuals who are unsuccessful the NCLEX-RN may leave the nursing profession due to their inability of passing the licensure examination, which would contribute to worsening the nursing shortage. Thus, it is critical to learn from individuals who were not initially successful on the NCLEX-RN, but then passed, to promote future success and coping strategies for GNs.

There has been a tremendous amount of literature related to academic predictors of NCLEX-RN success, which will be reviewed in Chapter 2 (Alexander & Brophy, 1997; Abbott, Schwartz, Hercinger, Miller, & Foyt, 2008; Arathuzik & Aber, 1998; Barkley, Rhodes, & Dufour, 1998; Beeman & Waterhouse, 2001; Beeson & Kissling, 2001; Bondmass, Moonie, & Kowalski, 2008; Briscoe & Anema, 1999; Campbell & Dickson, 1996; Crow, Handley, Morrison, & Shelton, 2004; Daley, Kirkpatrick, Frazier, Chung, & Moser, 2003; Elkins, 2015; Endres, 1997; Haas, Nugent, & Rule, 2004; Landry, Davis, Alamedia, Prive, & Renwanz-Boyle, 2010; McCarthy, Harris, & Tracz, 2014; McGahee, Grambling, & Reid, 2010; Sayles, Shelton, & Powell, 2003; Seldomridge & DiBartolo, 2004; Silvestri, 2010; Spurlock & Hunt, 2008; Stuenkel, 2006; Trofino, 2013; Truman, 2012; Uyehara, Magneussen, Itano, & Zhang, 2007; Vandenhouten, 2008; Waterhouse & Beeman, 2003; Yin & Burger, 2003). In spite of the amount of attention to predictors of success, there remains a gap in the nursing literature regarding accurately predicting those who would be unsuccessful (Haas et al., 2004; Harding, 2010; McGahee et al., 2010; Seldomridge & DiBartolo, 2004; Waterhouse & Beeman, 2003). Two of the authors who studied various predictors indicated that this gap was relatively small due to the low percentage of GNs who fail the NCLEX-RN

compared to the number of GNs who were successful (McGahee et al., 2010; Seldomridge & DiBartolo, 2004). However, learning from the perspectives of those who were not initially successful, then passed in this study, may enhance knowledge about promoting success.

Significance to Nursing

Nurses in various professional roles are concerned about success rates on the NCLEX-RN. The three groups I focused on are: (a) nurse educators, (b) practitioners and administrators, and (c) researchers.

Education

One of the primary objectives for schools of nursing is to have high first time pass rates for those GNs taking the NCLEX-RN (DiBartolo & Seldomridge, 2008). State boards of nursing and national accreditation bodies require acceptable NCLEX-RN pass rates as a recognized outcome measures for a school of nursing to remain accredited. If a school of nursing does not meet acceptable NCLEX-RN pass rate standards, they may find themselves in danger of losing state board approval and professional accreditation (Eddy & Epeneter, 2002). A consequence of losing state board approval would result in GNs not having the distinction of graduating from an accredited school of nursing. Another consequence for a school of nursing that is not achieving an acceptable NCLEX-RN pass rate is the inability to recruit new students to their nursing program (DiBartolo & Seldomridge, 2008). This study can assist nurse educators, administrators, fellow nurses, and other healthcare professionals to gain insights into the experiences of those GNs who were not initially successful on the NCLEX-RN and learn new information

about additional alternatives to preparing for this examination.

Practice, including Administration

Approximately 13.7% of the GNs who take the NCLEX-RN did not pass on the first attempt during the past decade (NCSBN, 1994-2015). Most individuals continued to take the NCLEX-RN until they are successful, however other individuals may never retake the NCLEX-RN once they were unsuccessful. If schools of nursing are graduating students, but they were not successful on the NCLEX-RN, the graduates will not be able to practice as RNs. Under the new healthcare reform legislation and the recent Institute of Medicine Report (IOM) on the future of nursing, an even greater need for qualified nurses will exist in the future (IOM, 2010). The national nursing shortage is expected to exceed 1.05 million RNs by 2022 (American Association of Colleges of Nursing, 2014). Some of the reasons for the nursing shortage included an increase in the older client population and RNs leaving nursing due to fatigue or retirement (American Association of Colleges of Nursing, 2014; Roa et al., 2010). The nursing shortage places pressure on schools of nursing to graduate students who will be successful on the NCLEX-RN. It is possible that this study can contribute to better understanding individuals' experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. These insights potentially could be applied to improve overall first time pass rates.

Research

In the past, the bulk of the literature on NCLEX-RN results has been related to academic predictors, demographic data, interventions, and the use of commercial tests to prepare new graduates for the NCLEX-RN. These are reviewed in Chapter 2. However,

most of these research studies have been conducted in single nursing institutions, which make it difficult to generalize the findings. Authors have attempted to predict NCLEX-RN success and failure, but have been better able to predict success than failure. Despite all the research conducted on academic predictors, demographic data, and the use of commercial tests to predict NCLEX-RN success, as the pass rates decline, increasing numbers of GNs are unsuccessful on the NCLEX-RN.

Crow et al. (2004) stated that identifying predictors of success has been challenging for authors. In addition, there have been certain predictors of success that were a focus of the majority of research studies, such as Scholastic Aptitude Tests (SAT)/American College Test (ACT) scores, nursing courses letter grades, the number of C grades in nursing courses, pre-nursing grade point average (GPA), nursing GPA, cumulative GPA, and commercial tests used in schools of nursing. The majority of studies that included demographics focused on age, race/ethnicity, and gender. Nonacademic predictors were less frequently studied, but when present, they consisted of psychological variables such as self-esteem, self-efficacy, test anxiety, and family responsibilities and demands. Details from the studies reviewed about predictors are provided in Chapter 2.

This study contributes to the extant research in several ways. For example, I summarize the published literature on academic, demographic, and non-academic predictors of NCLEX-RN success. I also add the perspectives of the RNs I interviewed who were initially unsuccessful and subsequently passed NCLEX-RN. Their perspectives can provide critical insights into ways to facilitate success among future GNs on the nursing licensure examination.

Definitions

It is important to have clear, concise definitions of those concepts that were fundamental to this study. When analyzing data and presenting themes from the participants, it is important to share an understanding of these major concepts used throughout the study.

Associate Degree in Nursing (ADN)

Individuals can achieve an ADN degree at a community college within 2-3 years. Individuals who pursue an ADN will take liberal arts courses, such as English, math, history, psychology, social and behavioral sciences, along with anatomy and physiology, microbiology, chemistry, nutrition, and nursing courses. After completion of an ADN degree, individuals are eligible to take the NCLEX-RN, which is the same licensure examination administered to individuals with Bachelor's of Science in Nursing (BSN) degrees. Individuals with ADN degrees typically provide direct client care and may practice in numerous settings.

Bachelor's of Science in Nursing (BSN)

An individual who pursues a BSN obtains a four year degree by attending a college or university. A baccalaureate-prepared individual takes all of the courses that were required for the ADN, along with research, community, leadership, and nursing informatics. These additional courses are to prepare BSN RNs to pursue professional roles beyond the bedside. Some of the others professional roles may include academia, administration, consultation, and research. A BSN-prepared individual takes the same NCLEX-RN as one who has an ADN to become a licensed RN.

Corollaries

In Personal Construct Theory (PCT), which is the theoretical framework used in this study, corollaries are defined as statements that better explain individuals' thought processes and how people learn from their previous experiences. Thus, corollaries introduce the notions of construction, interpretation, and replication of events (Kelly, 1995, 1991). Corollaries explain the ways people structure personal knowledge and socially interpret their experiences.

Critical Event

A critical event is an experience that has a profound effect on an individual, personally or professionally (Webster & Mertova, 2007). This profound effect can be identified by how it impacted an individual in his or her personal or professional life. In essence, this critical event has led to a change in an individual's understanding or worldview (Webster & Mertova, 2007). A critical event is dependent upon how an individual interprets his or her experiences. In this study, the critical event examined is a participant's lack of initial success on NCLEX-RN, followed by subsequently passing.

Graduate Nurse (GN)

A GN stands for graduate nurse who has graduated from an accredited ADN or BSN degree-granting school of nursing. The GN status allows an individual to have temporary authorization to practice as a nurse prior to becoming a licensed RN. The length of time a GN license is authorized is based on the recommendations of each state board of nursing (Appendix A). However, a GN license is voided after passing or failing the NCLEX-RN.

High-Stakes Examination

A high-stakes examination is one that is important and has major consequences for the test-taker. In addition, a high-stakes examination draws a clear line between those who pass or fail. The NCLEX-RN is considered a high-stakes examination, because it grants individuals the legal right to practice as RNs or may prevent an individual from becoming RNs. As a high stakes examination, it necessitates high standards to ensure that the NCLEX-RN is valid and tests appropriate nursing content (NCSBN, 2011). In this study, the fact that RN licensure is the goal of the GNs who takes the NCLEX-RN underscores the high-stakes nature of this examination and the results received.

NCLEX-RN (Nursing Licensure Examination)

The National Council Licensure Examination for Registered Nurses (NCLEX-RN) is a computerized adaptive testing (CAT) exam offered by the National Council of State Boards of Nursing (NCSBN). It is a high-stakes examination that safeguards the public by having all GNs demonstrate a basic level of knowledge by successfully passing prior to becoming licensed as RNs. The NCSBN strives to ensure that the NCLEX-RN is reliable, “psychometrically sound, ...content is valid, and ...legally defensible” (Woo & Dragan, 2012, p. 29). In this study, individuals’ reactions to their results on NCLEX-RN are the major focus of interest.

Registered Nurse (RN)

A RN is an individual who has graduated from an accredited school of nursing and has successfully passed the NCLEX-RN. RNs provide and coordinate patient care, collaborate with other health care specialists, and offer emotional support to clients and

their families (Bureau of Labor Statistics, n.d.). In addition, RNs collaborate with healthcare disciplines in the managing of clients with complex medical problems. Lastly, RNs can work in many different environments in the healthcare field, but must maintain their licensure to practice.

Report of a Story/Narrative

A report of a story/narrative is defined as an individual's thoughts, feelings, opinions, beliefs, memories, images, impressions, and ideas related to personal or professional life events. Individual participants were asked to provide their stories related to taking the NCLEX-RN during personal, face-to-face interviews. These stories include any of the above possibilities, but are not limited to them.

Chapter One Summary

There was a paucity of literature regarding individuals' stories about not being initially successful on the NCLEX-RN. Although there has been an extensive focus related to academic predictors of NCLEX-RN success in the extant literature there are individuals who continue to be unsuccessful on the licensure examination. This lack of literature makes it difficult for GNs, nurse educators, administrators, fellow nurses, and other healthcare professionals to understand the reasons behind their lack of success. The purpose of this research study was to describe the experiences of RNs who were not initially successful on the NCLEX-RN, then subsequently passed. Their insights also are used to gain additional strategies to promote others' future success and coping.

CHAPTER TWO

REVIEW OF LITERATURE

GNs struggle with passing the NCLEX-RN on the first attempt for many different reasons. Two possible reasons may be that the NCLEX-RN is ever changing and has become increasingly more difficult to pass on the first attempt (DiBartolo & Seldomridge, 2008). To better understand what other factors may prevent GNs from being successful on the NCLEX-RN, an extensive review of the literature was completed.

The philosophical underpinning chosen for this research study was constructivism. Constructivism was selected for this study because the aim of this inquiry was to understand individuals' experiences (Guba & Lincoln, 1994). Personal Construct Theory (PCT) was selected as the theoretical framework, because individuals construct and reconstruct their interpretations of the world based on their experiences. Through analyzing individuals' interpretations, others can learn about those experiences (Kelly, 1995, 1991).

Philosophical Underpinning: Constructivism

Guba and Lincoln originally termed constructivism as “naturalistic inquiry” and developed a new paradigm that would challenge other previous tenets of the scientific world (Appleton & King, 1997). The aim for inquiry in constructivism is *understanding* and *reconstruction* of previous interpretations that are held by individuals (Guba & Lincoln, 1994). Researchers and participants can initially hold on to their interpretations; however, it was important to remain open as more knowledge is gained. Guba and Lincoln (1994) state that all of the paradigms can be classified by three basic questions

focusing on ontological, epistemological, and methodological.

The ontological question is “what is the form and nature of reality, and therefore, what is there that can be known about it?” (Appleton & King, 1997; Guba & Lincoln, 1994). Realities are constructed from multiple, tangible and intangible mental constructions based on individuals’ interpretations, which are subjective and alterable. In addition, individuals interpret and develop different meanings related to the same event. It is necessary to share these to better understand individuals’ perspectives about their realities.

The epistemological question is “what is the nature of the relationship between the knower and would-be knower and what can be known?” (Appleton & King, 1997; Guba & Lincoln, 1994). Researchers and participants are interactively linked for the findings to be “literally created” as the research study progresses (Guba & Lincoln, 1994). From the epistemological point of view, knowledge is created when researchers and participants interact. For individuals to benefit from new knowledge, it is important that results of these inductions and analyses be shared with a wider audience.

The methodological question is “how can the inquirer (would-be knower) go about finding out whatever he or she believes can be known?” (Appleton & King, 1997; Guba & Lincoln, 1994). Interpretations are refined and elicited when there are interactions between researchers and participants (Guba & Lincoln, 1994). Interview questions need to be broad and general to allow participants to construct meaning from their experiences. During this interaction, it is important for researchers to accept that participants may hold different interpretations than researchers. The point of seeking participants’ interpretations is to seek commonalities and differences that can be

disseminated to broaden individuals' perspectives about the life experiences being studied.

In nursing research, the application of constructivism has been used because the underlying principles reflect the values of the nursing profession (Wilson & Clissett, 2010). The principles associated with the constructivist paradigm address questions related to the nature of reality: the relationship of the knower to the known, the possible limited ability to generalize or identify causal linkages, and the roles of others' values (Wilson & Clissett, 2010). The nature of reality represents informed construction, which occurs at particular times in individuals lives (Wilson & Clissett, 2010). In addition, the nature of reality is viewed as pluralistic, which means that during research studies there might be many different interpretations that can be made (Appleton & King, 2002). The relationship of the knower to the known is the interaction between researchers and participants. This interaction is essential to understanding the phenomenon of interest (Wilson & Clissett, 2010). In addition, individuals construct meanings about their experiences through interactions with others (Appleton & King, 2002). Lastly, the nature of constructions is dependent on how individuals placed meanings on their constructions (Appleton & King, 2002).

Constructivists believe that the concept of causality is misleading because individuals' process interpretations, which are not done in a linear manner (Appleton & King, 2002). In constructivism, articulating values is essential for knowledge construction, however, values are influential in different ways. Researchers' own beliefs, interpretations, and values can influence their studies (Appleton & King, 2002) and need to be examined to avoid undue bias. The selected theoretical framework and

methodology researchers likely have roots in both assumptions and value positions that also need to be considered (Appleton & King, 2002). Likewise, it is preferable if researchers avoid being influenced by the presence of values that may be embedded within the research setting (Appleton & King, 2002). Awareness of values and possible related biases need to be examined and made explicit as researchers are conducting studies.

Appleton and King (1997) stated that constructivism has a lot to offer nurse researchers who want to study “real life” situations. Constructivism helps individuals construct their own interpretations regarding their personal experiences. Lastly, individuals’ interpretations were constructed through interaction between researchers and participants. My philosophical stance as researchers was that constructivist principles applied to the proposed study facilitated a greater understanding of RNs, from their own perspectives, who were not initially successful on the NCLEX-RN, then subsequently passed.

Theoretical Framework: Personal Construct Theory

In 1955, George Kelly presented PCT as an alternative to other theories related to human understanding. The philosophical position of PCT is constructive alternativism, which means that individuals’ interpretations of the world are adaptable and can be revised or replaced (Kelly, 1995, 1991). To deal with the real world, individuals create alternative constructions to allow them to explore other options and views on their current situations.

Fundamental Postulate of PCT

The fundamental postulate of PCT was that individuals formulate constructs based on how they anticipate events (Kelly, 1995, 1991). In this study, the term constructs that Kelly (1995, 1991) used in PCT was replaced by the term interpretations to assist with understanding of the theoretical framework. Individuals use interpretations to understand the world in which they live in. These interpretations make the world more predictable and allow individuals to make sense of what is happening in the world. As time progresses, individuals' interpretations are amended based on their experiences.

Corollaries of PCT

There were eleven corollaries that Kelly (1995, 1991) inferred from the fundamental postulate. Corollaries are defined as statements that better explain individuals' thought processes and how people learn from their previous experiences. There were eleven corollaries that Kelly (1995, 1991) identified which included (a) construction, (b) experience, (c) individuality, (d) choice, (e) sociality, (f) commonality, (g) organizational, (h) dichotomy, (i) range, (j) modulation, and (k) fragmentation. In this study, I focused on four of the corollaries that best fit with the qualitative approach I was using; they are: (a) construction, (b) experience, (c) individuality, and (d) commonality. I used these four corollaries as foundational to my data analysis and how I reported the findings and my interpretations.

Construction corollary. The construction corollary is defined as individuals anticipating “events by construing their replication” (Kelly, 1995, 1991, p. 50, p.35). Individuals understand current or future events based on similar past events. As

individuals analyze their interpretations, they pay attention to recurrent themes to help them make sense of the event that is happening (Kelly, 1995, 1991).

Experience corollary. The experience corollary is used to explain how individuals' interpret various events based on their past experiences (Kelly, 1995, 1991). Understanding an experience is achieved through interpreting and reinterpreting the events, not simply being present at the events (Kelly, 1995, 1991). For individuals to experience events, they must see orderliness in the sequence of events (Kelly, 1995, 1991). Individuals' predictions about how events happened are validated and invalidated, which then either strengthen or weaken their interpretations.

Individuality corollary. The individuality corollary is used to acknowledge that individuals differ from each other based on their interpretations of events (Kelly, 1995, 1991). These individual differences are based on unique approaches to similar events. Although individuals interpret differently, they also can find common ground with others who have undergone comparable events.

Commonality corollary. The commonality corollary was defined as individuals sharing similar interpretations based on their experiences (Kelly, 1995, 1991). In the PCT, individual corollary is balanced by the different approaches in commonality corollary. The commonality corollary was based on how two individuals can be involved in the same events, but interpret and experience the event differently (Kelly, 1995, 1991). In addition, two individuals may interpret the same event and share similar conclusions regarding the event.

Application of PCT to this Study

It is important when designing an interview using PCT that the interviewer did

not disregard any information the participant provides that was inconsistent with the interviewer's beliefs (Gucciardi & Gordon, 2008). The endeavor of the interview is to view the experiences from individuals' perspectives, not from the interviewers'. During the interview, interviewers display a credulous approach by respecting what participants are saying (Gucciardi & Gordon, 2008). This means no matter what participants are saying or doing during the interview, interviewers remained open.

According to PCT, for individuals to make sense of their interpretations, such as not initially being successful on the NCLEX-RN, they had to construct and reconstruct that particular event. In this study, these individuals were encouraged to explain their alternative interpretations to help explore other aspects of being successful on the NCLEX-RN on a subsequent attempt.

Theoretical Framework Related to Philosophical Underpinning

The researcher chose PCT as an appropriate theoretical framework because of the fundamental belief that individuals' interpret their experiences. The theoretical framework was complemented by constructivism. This was reinforced by the philosophical position of PCT being identified as constructivist alternativism. The tenets of both PCT and constructivism acknowledge that individuals process and interpret their own feelings and meanings regarding their personal experiences. The theoretical framework and philosophical underpinning form the foundations of this study, as explained in Chapter 3. However, it was important to first review the available literature about the experiences, academic and nonacademic predictors, and focused interventions prior to graduation, that have been identified related to NCLEX-RN success.

Outline of the Literature

Articles for this review of literature were collected from the following databases: Cumulative Index to Nursing and Allied Health Literature (CINAHL), Google Scholar, Health Source: Nursing Academic Edition, and Medline. The primary search was conducted in CINAHL, because it is the main database for nursing publications. Keywords used to focus on the search were: *NCLEX-RN*, *experiences*, *predict*, and *interventions*. The search concentrated on the time period from 1994 to the present due to the transition of the NCLEX-RN from a paper and pencil examination to a CAT exam over two decades ago. Reference lists from each publication were examined for additional pertinent research. The search yielded 43 research studies, which the researcher placed into three major organizational categories including: (a) seven qualitative studies that focused on individuals' experiences, (b) 28 studies and one meta-analysis related to academic and nonacademic predictors of NCLEX-RN success, and (c) seven studies that focused on specific interventions related to academic preparation for the NCLEX-RN prior to graduating. All of the studies were reviewed to synthesize the information for this review of literature and multiple tables are presented to provide ready access to the summarized information.

A total of 43 studies were reviewed and presented to enhance understanding of the extant literature. The first studies are the seven qualitative ones that provided the basis for this study. Next, the majority of studies (29) that focused on quantitative academic predictors are examined. Among the quantitative and qualitative studies reviewed, three in each category also focused on nonacademic predictors. Finally, the seven studies that focused on specific interventions prior to graduation are examined.

In the seven qualitative studies, the authors used the term “failed” to describe GNs who were not successful on the NCLEX-RN. Therefore, I used the term “failed” when referring to their studies. However, for my study, I chose not to use the term “failed” because of the negative connotations associated with the word “failure”. The phrase that I chose to use instead was “not initially successful” on the NCLEX-RN. However, when describing the literature, I continue to use the term “failed”, because it was the term used by the others studying this phenomenon.

Individuals’ Experiences related to NCLEX-RN Failure

There have been seven qualitative research studies that explored GNs and RNs experiences related to the NCLEX-RN, as shown in Table 2 (Atemafac, 2014; Eddy & Epeneter, 2002; Griffiths et al., 2004; McFarquhar, 2006; Poorman & Webb, 2000; Silva, 2014; Vance & Davidhizar, 1997). One of these studies focused on the lived experiences of RNs who were unsuccessful multiple times on the NCLEX-RN and the factors that lead to their success (McFarquhar, 2006). One study interviewed GNs and RNs about their experiences with the NCLEX-RN (Eddy & Epeneter, 2002). Five qualitative research studies explored the experiences of GNs who were unsuccessful on the NCLEX-RN (Atemafac, 2014; Griffiths et al., 2004; Poorman & Webb, 2000; Silva, 2014; Vance & Davidhizar, 1997). Each qualitative study focused on individuals’ experiences differently.

Vance and Davidhizar (1997) performed a review of literature regarding the factors that impacted NCLEX-RN success and how individuals coped with failure. Poorman and Webb (2000) and Griffiths et al. (2004) interviewed GNs about their experiences with failing the NCLEX-RN, while Eddy and Epeneter (2002) interviewed

both RNs who successfully passed the licensure examination, and those who were still GNs, regarding their NCLEX-RN experiences. McFarquhar (2006, 2014) interviewed RNs regarding their lived experiences with failing the NCLEX-RN and what factors helped them successfully pass the licensure examination. Atemafac (2014) focused on the consequences of GNs failing the NCLEX-RN. Silva (2014) examined the lived experiences of GNs who take the NCLEX-RN multiple times.

Vance and Davidhizar (1997) conducted a literature review identify strategies that assisted individuals to cope with failing the NCLEX-RN. A few of the strategies suggested by the authors to assist individuals who failed the NCLEX-RN included obtaining a tutor, meeting with a faculty member to discuss strategies to be successful, and providing support to the individuals.

Poorman and Webb (2000) individually interviewed ten GNs who failed the NCLEX-RN and were preparing to retake the licensure examination. Nine out of ten GNs were successful on the NCLEX-RN by the end of the treatment program. Participants kept a daily log describing their perceptions, thoughts, or experiences related to the NCLEX-RN. Three themes emerged: (a) living the failure, which consisted of losing identity and doubting abilities, (b) wanting support from others, and (c) daring to hope, which consisted of seeing future success (see Table 2). The participants who failed the NCLEX-RN stated they felt like it was a “weight they carried” with them every day. In addition, the participants stated they “lost part of their identity” and confidence in

Table 2

Summary of Qualitative Research Related to Failing the NCLEX-RN Experiences in Chronological Order

1 st Author & Year	Purpose of the Study	Total (n)	Results
Vance (1997)	Review nursing literature related to factors that affected passing the NCLEX-RN and strategies to assist graduates to cope with failure	No n identified	Authors suggested graduates who failed should set an appointment with a faculty member to review strategies for success the second time. A tutor was recommended to help each graduate stay on track.
Poorman (2000)	Gain a richer understanding of experiences in failing and preparing to retake the licensure examination	10 ^a	The following themes emerged from the research study: (a) living the failure, which consisted of losing identity and doubting abilities, (b) wanting support from others, and (c) daring to hope, which consisted of seeing future success.
Eddy (2002)	Identify themes to assist faculty in understanding NCLEX-RN experience from students' perspectives on the first time attempt of passing or failing	19 ^{a,b}	Themes derived from (n = 10) first attempt passers: (a) accepted responsibility for learning, (b) were proactive in test preparation, (c) took examination when they felt ready, and (d) used stress management techniques as coping mechanisms Themes derived from (n = 9) first time failures: (a) believed others were responsible for their failure, (b) unable to manage stress well, and (c) took examination when they did not feel ready
Griffiths (2004)	Present the voices of unsuccessful candidates, their responses to failure, their perspectives on the factors that contributed to their failure, and the changes that led to subsequent success	21 ^a	After surveys were sent to administrators in nursing programs for distribution to graduates who had failed the licensure examination, those GNs who responded and were willing to participate in telephone interviews formed the sample. During phase one graduates stated they had: (a) poor program preparation, (b) inadequate study habits, (c) lack of knowledge on how to prepare for the NCLEX-RN, (d) lack of confidence, (e) inability to control anxiety, (f) poor test taking skills, (g) overwhelming family responsibilities, and (h) employment concerns. Phase two of the study focused on how individuals coped with the failure and what effects it had on their personal integrity and career aspirations. The participants stated they had: (a) low self-confidence, (b) increased self-doubt, (c) changes in self-perception, and (d) fear of not passing a repeat examination. Most of the participants sought support from their personal network and were reluctant to share outside of this network. Coaching and mentoring by faculty until NCLEX-RN success were strategies that benefited individuals prior to retaking the NCLEX-RN.

1 st Author & Year	Purpose of the Study	Total (n)	Results
McFarquhar (2006, 2014)	Examine the lived experiences of GNs who failed the NCLEX-RN, as perceived by the participants once they were RNs and the factors that helped them become successful.	18 ^b	The following themes emerged: (a) temporarily decreased psychological well-being, (b) social distress, (c) an innate desire to achieve and accomplish, (d) external factors, (e) problems learning and knowing content, (f) need for a remediation program, (g) inadequate preparation, and (h) perseverance.
Atemafac (2014)	The consequences that new graduates faced when they failed the NCLEX-RN and how they could be successful on subsequent attempts.	17 ^a	Graduates reported they were depressed, isolated, and financially strained after failing the NCLEX-RN. Twenty-one themes emerged: (a) took review classes, (b) engaged in depressive and isolation mode, (c) contemplated factors of failure, (d) repayment of loan, (e) no school support, (f) waning support from spouses, (g) focusing on content-based learning, (h) using different studying strategy, (i) reduction distractions, (j) developing confidence, (k) strengthening the motivation to study, (l) existing career and job responsibilities, (m) familial responsibilities, (n) financial problems, (o) psychological fears/anxiety/exam phobia, (p) various distractions, (q) unsupportive family, (r) effective strategies in studying and retaining information, (s) motivation to study beyond extended hours and requirement, (t) seeking support from family and friends, and (u) prioritization.
Silva (2014)	The lived experiences of graduate nurses who failed the NCLEX-RN multiple times.	9 ^a	Three themes were identified: (a) blaming, (b) being alone and needing support, and (c) questioning.

Note. Only the first author's last name and year is identified in the table. Please see reference section for more details. ^a = graduate nurses (GNs); ^b = registered nurses (RNs).

themselves. The GNs also expressed that they were receiving inadequate support from families or friends. A recommendation from the researcher is to contact graduates after failing the licensure examination to help them overcome their own feelings of self-doubt and negative emotions to prepare them to retake the NCLEX-RN.

Eddy and Epeneter (2002) interviewed GNs and RNs individually regarding their NCLEX-RN experiences. This study had ten RNs who were initially successful and nine GNs who were not. Distinct differences were noted between the themes derived from the two groups. Themes derived from ($n = 10$) first attempt passers: (a) accepted responsibility for learning, (b) were proactive in test preparation, (c) took examination when they felt ready, and (d) used stress management techniques as coping mechanisms. Themes derived from ($n = 9$) first time failures: (a) believed others were responsible for their failure, (b) unable to manage stress well, and (c) took examination when they did not feel ready. The former respondents appeared prepared while the latter reported less preparation and more problems. Despite the differences, both GNs and RNs expressed that nothing specifically prepared them to answer NCLEX-RN questions.

Griffiths et al. (2004) found similar results to Eddy and Epeneter (2002). Griffiths et al. (2004) performed a qualitative study by examining the factors that contributed to NCLEX-RN failure that was conducted in two phases. The first phase consisted of approximately 25 surveys being mailed to each of 11 nursing programs for a total of 275 surveys. The authors asked the Deans of Nursing to forward the surveys to those individuals who failed the NCLEX-RN. Twenty-one surveys were returned, although it is unknown how many were actually distributed.

During phase one graduates stated they had: (a) poor program preparation, (b) inadequate study habits, (c) lack of knowledge on how to prepare for the NCLEX-RN, (d) lack of confidence, (e) inability to control anxiety, (f) poor test taking skills, (g) overwhelming family responsibilities, and (h) employment concerns.

In the second phase, the authors performed telephone interviews with those 21 GNs who responded and had provided contact information. These interviews focused on how individuals coped with the failure and its effects on their lives. The second phase of the study identified that GNs who failed the NCLEX-RN reported they encountered emotional distress such as (a) low self-confidence, (b) increased self-doubt, (c) changes in self-perception, and (d) fear of not passing a repeat examination. A recommendation was made by the authors that faculty identify at-risk students earlier in the nursing program.

McFarquhar (2006, 2014) performed a qualitative study focusing on the RNs' perceptions of factors that led to success after multiple attempts on the NCLEX-RN. Eighteen RNs from associate degree programs were interviewed. The findings included eight themes: (a) temporarily decreased psychological well-being, (b) social distress, (c) an innate desire to achieve and accomplish, (d) external factors, (e) problems learning and knowing content, (f) need for a remediation program, (g) inadequate preparation, and (h) perseverance.

Participants reported feeling disappointed, depressed, and sought to avoid people after failing the NCLEX-RN. As the participants reflected on their experiences, they stated that not knowing what to expect from the NCLEX-RN, distractions, inadequate

preparation, and poor test-taking skills contributed to their failure on the licensure examination. After a period of time, the participants were able to accept that they failed the NCLEX-RN and aspired to be successful on their subsequent attempts. In addition, participants stated the support they received from family and friends motivated them to retake the NCLEX-RN. The participants stated they were successful on the NCLEX-RN after taking review courses, adequately preparing, increasing their confidence levels, and taking the licensure examination when they were ready and knew what to expect. Recommendations for positive social change to improve NCLEX-RN pass rates to include mandatory comprehensive review courses and peer-mentoring programs.

Atemafac (2014) conducted a qualitative study focused on the consequences for GNs who failed the NCLEX-RN. Participants were chosen from a testing review center that offered assistance with passing the NCLEX-RN. Seventeen participants agreed to be a part of the study and were interviewed individually. The findings included twenty-one themes: (a) took review classes, (b) engaged in depressive and isolation mode, (c) contemplated factors of failure, (d) repayment of loan, (e) no school support, (f) waning support from spouses, (g) focusing on content-based learning, (h) using different studying strategy, (i) reduction distractions, (j) developing confidence, (k) strengthening the motivation to study, (l) existing career and job responsibilities, (m) familial responsibilities, (n) financial problems, (o) psychological fears/anxiety/exam phobia, (p) various distractions, (q) unsupportive family, (r) effective strategies in studying and retaining information, (s) motivation to study beyond extended hours and requirement, (t) seeking support from family and friends, and (u) prioritization.

The participants in this study talked about changes they were making to be

successful on the NCLEX-RN on subsequent attempts. These changes included: (a) focusing on content-based learning, (b) using a different studying strategy, (c) reducing distractions, (d) developing confidence, and (e) strengthening the motivation to study. The author recommended that nursing school program directors and faculty develop strategies to ensure NCLEX-RN success, such as implementing NCLEX-RN preparation courses within curricula.

Silva (2014) examined the lived experience of GNs after multiple NCLEX-RN failures. Nine participants were each interviewed one time. Three themes were identified: (a) blaming, (b) being alone and needing support, and (c) questioning (see Table 2). The GNs initially reported it was someone else's fault that they did not pass the NCLEX-RN. Some of the participants expressed that after failing multiple times, they felt family, faculty, and other individuals abandoned them. The participants felt that their families did not understand what the participants were emotionally going through after failing the NCLEX-RN. In addition, some participants commented that faculty would not help them when they sought assistance. Participants questioned the reasons why they failed the NCLEX-RN and what could they do to be successful on the NCLEX-RN. Recommendations made by the author included the use of standardized testing packages in nursing programs. In addition, the author recommended for staff educators and nurse managers be supportive of individuals who were not successful on the NCLEX-RN by helping them identify and overcome their problems to be successful on future attempts.

Review of the Literature: Academic and Nonacademic Predictors

A thorough presentation of academic and nonacademic predictors is detailed in the next several sections of this chapter. Academic predictors are factors that may impact

students' educational performance in relation to NCLEX-RN success. I categorized the academic predictors identified in the literature into four types, each with subsets, as follows: (a) demographics, such as age, race/ethnicity, and gender; (b) admission requirements, including pre-college SAT/ACT scores and any previous degrees; (c) progression requirements, considering grades received in particular nursing courses and specifically the number of C or lower grades in nursing courses; and (d) end of nursing program requirements, comprised of Grade Point Averages (GPAs) and performance on commercially available preparatory tests. Nonacademic predictors were factors that do not directly measure students' performance in relation to NCLEX-RN success.

Nonacademic predictors identified in my review of literature consisted of: (a) self-esteem, (b) self-efficacy, (c) test anxiety, and (d) family responsibilities and demands.

After the predictors are explained in detail, results of focused intervention studies prior to graduation are presented. Next, difficulty in predicting NCLEX-RN failure and discriminant analysis used to predict NCLEX-RN success and failure is discussed. Finally, I critique the studies and discuss the gap in the literature that formed the basis for this study.

Overview of the Presentation of the Predictor Literature

The bulk of the literature on NCLEX-RN performance was quantitative and most of these studies focused predominantly on academic predictors of success and/or failure. During the review of literature, it was found that many of the independent variables consisted of academic predictors, particularly those focused on success; failure appeared to be more difficult to predict. Relatively little research has been conducted on nonacademic predictors.

Since 1996, there has not been a meta-analysis study conducted on academic or nonacademic predictors. I decided that it was vital to conduct a review of literature that focused on the predictors related to NCLEX-RN success or failure in the past two decades. Therefore, I began with the meta-analysis that was published shortly after the examination changed CAT delivery. To facilitate the synthesis of this portion of the quantitative studies in the literature review, I categorized the 29 studies according to whether authors examined academic and/or nonacademic predictors, based on the independent variables that were studied. Nonacademic predictors are discussed separately in further detail later in this chapter, although many appeared in studies along with the academic predictors.

An overview of key factors I identified when reviewing the authors who reported on varied types of NCLEX-RN predictors is presented in Table 3. Studies are listed in chronological order of publication, to provide an impression of changes over time in what was studied and the sorts of results obtained.

Table 3

Overview of Studies that Included Demographic and Academic Predictors for NCLEX-RN Success, in Chronological Order of Publication

1 st Author (Year)	Type of Nursing Program	Demographics			Admission requirements		Progression Requirements		End of nursing program requirements	
		Age	Race/ Ethnicity	Gender	SAT/ACT scores	Previous degrees	Nursing course grades	Number of C grades or less in nursing courses	GPA's	Commercial tests: ATI, ERI, HESI, Mosby, NLN
Campbell (1996)	1	S	S	NS	S				S	S
Alexander (1997)	2	NS			B		B		S	S
Endres (1997)	2	NS	NS			NS		S	B	S
Arathuzik (1998)	2								S	
Barkley (1998)	2						S	S		S
Briscoe (1999)	3	S	S						NS	S
Beeman (2001)	4	NS		NS	B		S	S	S	
Beeson (2001)	2	NS		NS				S	S	S
Daley (2003)	2	B	B	NS	B		B		B	S
Sayles (2003)	3		S	NS	NS		S		B	B
Waterhouse (2003)	2						S	S		
Yin (2003)	3	NS	NS	NS	NS	NS			B	
Crow (2004)	1		S	NS	S		S			B
Haas (2004)	4	NS	S	NS	B				B	
Seldomridge (2004)	2						S	S	S	S
Frith (2005)	2									S
Stuenkel (2006)	2				S		B		S	B
Uyehara (2007)	2		NS				B		S	B
Abbott (2008)	4					NS	S		S	S
Bondmass (2008)	2									B
Spurlock (2008)	2									B
Vandenhouten (2008)	2	S			B		B		B	B
Landry (2010)	1	NS	NS	NS		S	B		B	

1 st Author (Year)	Type of Nursing Program	Demographics			Admission requirements		Progression Requirements		End of nursing program requirements	
		Age	Race/ Ethnicity	Gender	SAT/ACT scores	Previous degrees	Nursing course grades	Number of C grades or less in nursing courses	GPAs	Commercial tests: ATI, ERI, HESI, Mosby, NLN
McGahee (2010)	2				NS		B		NS	S
Silvestri (2010)	2						B			
Truman (2012)	3	NS	NS	NS	B			S	B	
Trofino (2013)	3	NS		NS	NS		B			
McCarthy (2014)	2									S
Elkins (2015)	2				S					S

Note. Only the first author's last name and year is identified in the table. Please see reference section for more details. S: Statistically significant related to NCLEX-RN success; NS: No significance related to NCLEX-RN success; B: Both significant and non-significant variables related to NCLEX-RN success. SAT = Scholastic Aptitude Test; ACT = American College Test; GPA = Grade Point Average; ATI = Assessment Technologies Institute; ERI = Educational Resources Inc.; HESI = Health Education Systems Inc.; NLN = National League for Nursing

1 = several types of nursing programs included; 2 = BSN program(s) only; 3 = ADN program(s) only; 4 = accelerated & upper division program(s) only.

Also included were the types of nursing programs from which data were reported, and the summary identification of whether results were significant (S), non-significant (NS), or consisted of some of both (B). In subsequent tables, for each study reviewed, the first author and total sample size were identified; these were key aspects when interpreting and reviewing the results. In addition, the actual significant and non-significant results of each study reviewed are detailed in the tables that appear throughout the review of literature. Therefore, tables are used to succinctly summarize the studies regarding academic predictors, including commercial tests. Later, focused interventions prior to graduation are also discussed and presented in table form.

Closer Examination of Studies on Predictors

In Table 4, I provide detailed summary data from most of the 29 quantitative studies that focused on predictors, organized according to the type of nursing program that was studied. Table 4 contains sample size information and summarized results from the predictor studies. I also categorize the types of nursing programs and the number of studies focused on particular degrees into the following categories: multiple nursing degree-granting programs studied together (3) which included the meta-analysis, and then those programs identified exclusively as either ADN (5), BSN (18), or accelerated and upper division level programs (3). In each of these sub-sections, I present the studies in chronological order of publication date, and alphabetically by first author when years of publication were the same. The specific predictors examined in each study and the results, including whether they were significant and/or nonsignificant, also are noted.

There were four quantitative studies that I did not include in Table 4 because they were not focused on multiple possible predictors like the 25 studies that are summarized

there. Three of the 29 quantitative studies that were reviewed only provided information on commercial tests and not any other predictors, so they are summarized in Table 5 (Bondmass et al., 2008; McCarthy et al., 2014; Spurlock & Hunt, 2008). In addition, one study addressed both commercial tests and focused interventions (Frith, Sewell, & Clark, 2005), and studies about specific interventions are explained in Table 6. These four studies that did not include multiple predictors but only reported commercial test results and/or focused interventions are all detailed in later tables in this chapter. In general, I often include studies that contain particular characteristics in more than one of my literature summary tables, so that I could represent the multiple aspects of predictors that other authors had examined.

Demographics (Age, Race/Ethnicity, and Gender)

In my review of the literature, I focused on the various demographics used to represent those individuals who participated in the studies. Demographics included age, race/ethnicity, and gender. I focused on these particular demographics because these three variables were studied frequently in the literature related to NCLEX-RN success.

Table 4

Summary of Research Related to Academic Factors as Predictors of NCLEX-RN Success, According to Type of Nursing Program and Publication Date**

1 st Author (Year)	Purpose of the study	Total (n)	Details of results, indicating whether significant (with relevant P values) or not
Meta-Analysis and Other Studies Including Multiple Types of Nursing Programs			
Campbell (1996)	Determined specific predictors of success on the NCLEX-RN and to what extent can success be predicted [Meta-analysis]	47 ^a	S: Age ($p < .05$) in five out of the six studies, race/ethnicity ($p < .05$) in two out of four studies, GPA ($p < .05$) in 31 out of 47 studies, SAT scores ($p < .05$) in six out of 16 studies, ACT scores ($p < .05$) in seven out of nine studies, test anxiety ($p < .05$) in two out of three studies, and self-concept/self-esteem ($p < .05$) in one out of three studies NS: Gender, cognitive learning style, social support, and situational variables
Crow (2004)	Identified specific requirements across multiple BSN programs, educational interventions that might positively impact NCLEX-RN success, and the best predictors of NCLEX-RN success	160 ^b	Aggregated student data across programs. S: Ethnicity findings indicated that percent of Caucasian students positively correlated with passing ($r = .19, p = .02, n = 143$) and percent of Hispanic students negatively correlated ($r = -.25, p = .01, n = 105$), SAT scores negatively correlated ($r = -.4, p = .03, n = 34$), On NLN tests, two positively correlated, mental health nursing ($r = .55, p = .02, n = 18$) and community health nursing ($r = .55, p = .02, n = 9$), also satisfactory clinical proficiency noted ($p = .03, n = 74$) NS: Gender
Landry (2010)	Identified differences among students in 3 types of nursing programs (master's entry, university-based BSN, & satellite BSN) and determined characteristics that were associated with first-time success on the NCLEX-RN	3 ^b	S: A prior bachelor's degree ($p = .000$) across all three types of nursing programs S: In the master's entry program: Previous bachelor's degree ($p = .05$), nursing GPA ($p = .05$), cumulative GPA ($p = .05$), course grades in the following: Health assessment ($p = .05$), nursing skills lab ($p = .05$), foundations ($p = .05$), medical surgical ($p = .05$), medical surgical practicum ($p = .05$), pathophysiology ($p = .05$), and maternal and child nursing ($p = .05$) NS: In the master's entry program: Age, race/ethnicity, and gender

1 st Author (Year)	Purpose of the study	Total (n)	Details of results, indicating whether significant (with relevant P values) or not
			<p>S: In the university-based BSN program: Previous bachelor's degree ($p = .05$), nursing GPA ($p = .05$), cumulative GPA ($p = .05$), course grades in the following: health assessment ($p = .05$), foundations ($p = .05$), medical surgical ($p = .05$), medical surgical practicum ($p = .05$), pathophysiology ($p = .05$), mental health ($p = .05$), and maternal and child nursing ($p = .05$)</p> <p>NS: In the university-based BSN program: Age, race/ethnicity, gender, and nursing skills lab course grade</p> <p>S: In the satellite BSN program: Previous bachelor's degree ($p = .000$), nursing GPA ($p = .05$), cumulative GPA ($p = .05$), and course grade in pathophysiology ($p = .05$)</p> <p>NS: In the satellite BSN program: Age, race/ethnicity, and gender</p>
ADN Programs			
Briscoe (1999)	Examined selected academic variables explored primarily with BSN student populations to determine if these same variables could predict success or failure on the NCLEX-RN for students in an ADN program	38 ^c	<p>S: Age > 35 years old ($p < .05$) and race/ethnicity ($p < .05$)</p> <p>NS: Pre-admission GPAs</p>
Sayles (2003)	Determined if successful completion of the ADN program and success on the NCLEX-RN were correlated to scores on the Educational Resources, Nurse Entrance Exam, and Pre-RN Exams	78 ^c	<p>S: Race/ethnicity ($p = .03$), nursing GPA ($p = .02$), and nursing course grade in concepts related to circulation and oxygenation through the life span ($p = .021$)</p> <p>NS: Gender, stress levels, and learning style, ACT scores, and overall GPA</p>
Yin (2003)	Examined the relationship of pertinent variables including	325 ^c	S: GPA > 2.95 prior to nursing admission ($p < .024$), GPAs in natural science courses ($p < .018$), and introductory psychology course ($p < .002$)

1 st Author (Year)	Purpose of the study	Total (<i>n</i>)	Details of results, indicating whether significant (with relevant P values) or not
	demographics,, previous degree information, and performance data about various high school and college courses identifiable at admission with NCLEX-RN success		NS: Age, race/ethnicity, gender, ACT scores, previous degree, high school GPA or rank, high school course GPAs in science and English
Truman (2012)	Compared GNs of a rural ADN program who were initially successful on the NCLEX-RN and those GNs who failed their initial attempt at the NCLEX-RN using admission and program criteria to identify predictors of success	188 ^c	S: SAT verbal score > 509.09 ($p= .03$), pre-admission GPA ($p= .011$), nursing GPA > 2.65 ($p= .000$), and fewer C grades in nursing courses ($p= .000$) NS: Age, race/ethnicity, gender, SAT math score, and science GPA
Trofino (2013)	Analyzed which of the ADN program criteria have the strongest relationships with first time pass rate on the NCLEX-RN	99 ^c	S: Course grades in: Pharmacology ($p= .0003$), medical surgical nursing ($p= .006$), psychiatric nursing ($p= .0004$), leadership nursing ($p= .0004$), and advanced medical-nursing ($p= .002$) NS: Age, gender, ACT scores, SAT scores, high school GPA, course grades in: Anatomy and physiology I and II, psychology, human growth and development, microbiology, fundamentals, and maternal child nursing
BSN programs			
Alexander (1997)	Identified admission, progression, and exit variables that predict performance on the NCLEX-RN	188 ^c	S: SAT verbal scores ($p= .0001$) course grades in: Childbearing ($p= .0001$), nursing adult I ($p= .0001$), and mental health ($p= .0001$); and GPA ($p= .0001$) NS: Age; SAT math, course grades in: Nursing fundamentals, child/family, nursing adult II, nursing seminar, introductory psychology, anatomy and physiology I and II, communication, developmental psychology, microbiology, elementary chemistry, organic chemistry, and introductory sociology

1 st Author (Year)	Purpose of the study	Total (n)	Details of results, indicating whether significant (with relevant P values) or not
Endres (1997)	Determined the relationship between different variables and the performance of white, African American, and foreign-born BSN graduates on the NCLEX-RN	150 ^c	S: Pre-admission GPA ($p < .01$), nursing GPA ($p < .01$), cumulative GPA ($p < .05$), and number of D or F grades in nursing courses ($p = .004$) NS: Age, race/ethnicity, medical surgical GPA, and previous licensed practical nurse degree
Arathuzik (1998)	Identified academic and nonacademic factors associated with NCLEX-RN success	79 ^c	S: Cumulative GPA ($p < .05$) NS: None
Barkley (1998)	Identified variables with greatest predictive value for with NCLEX-RN success	81 ^c	S: Course grades in: Pediatric nursing ($p = .000$), mental health ($p = .000$), obstetrics ($p = .001$), adult health I ($p = .000$), adult health II ($p = .000$), critically ill ($p = .000$), and the number of C grades in theory or clinical courses was negatively correlated with NCLEX-RN success ($p = .000$) NS: None
Beeson (2001)	Identified predictors of success for BSN GNs on the NCLEX-RN exam	505 ^c	S: GPAs in biology, physiology, sophomore, junior, and senior years in nursing, also all nursing courses GPA ($p < .0001$), with no C grades throughout junior year nursing courses ($p < .0001$) NS: Age and gender
Daley (2003)	Evaluated students' demographic, nursing program variables, and standardized test scores to determine whether significant differences existed with students who were successful on the NCLEX-RN	224 ^c	S: Mosby group: Age ($p < .001$), pre-admission GPA ($p = .005$), ACT scores ($p = .005$), course grades in: Anatomy ($p = .009$), pathophysiology ($p < .001$), didactic senior medical surgical ($p < .01$), clinical senior medical surgical ($p < .001$), and cumulative GPA > 3.0 ($p < .05$) NS: Mosby group: Race/ethnicity, gender, course grades in: Chemistry I and II, social science, and zoology S: HESI group: Ethnicity ($p < .001$), didactic senior medical surgical final course grade ($p = .004$), and final cumulative grade ($p = .04$)

1 st Author (Year)	Purpose of the study	Total (n)	Details of results, indicating whether significant (with relevant P values) or not
			NS: Age, gender, prerequisite GPA, ACT scores, course grades in: Chemistry I and II, anatomy, social science, pathophysiology, and clinical senior medical surgical
Waterhouse (2003)	Predicted student success on the NCLEX-RN licensure with using a simple, easy calculated method	538 ^c	S: Psychopathology course grade ($p < .0002$), wellness nursing course grade ($p < .0001$), restorative nursing I and II course grades ($p < .001$), and number of C+ or lower grades ($p < .001$) NS: None
Seldomridge (2004)	Identified the best models for predicting NCLEX-RN success and failure at preadmission, after one year of nursing school, and prior to graduation	168 ^c	S: Course grade in pathophysiology ($p = .000$), test average in introductory and advanced adult medical surgical courses ($p = .000$), number of C grades in all nursing courses ($p = .000$), pre-admission GPA ($p = .008$), and cumulative GPA ($p = .000$) NS: Course grades in: anatomy and physiology, chemistry I, and statistics
Stuenkel (2006)	Explored the predictive value of various standardized examinations and achievement measures for NCLEX-RN performance, focusing on students likely to fail	312 ^c	S: Admission GPA ($p \leq .05$), SAT scores ($p \leq .05$), course grades in: Medical surgical I and II ($p \leq .05$) and pathophysiology ($p \leq .05$) NS: Course grades in: pharmacology, maternal child, mental health, and leadership
Uyehara (2007)	Identified the predictors of program success, withdrawal, and NCLEX-RN success	218 ^c	S: Fundamentals course grade ($p = .004$), and nursing GPA ($p = .006$) NS: Race/ethnicity, course grades in: Pathophysiology, adult health nursing I and II, mental health nursing, maternal newborn, and pediatric nursing
Vanden-houten (2008)	Determined significant factors that predict NCLEX-RN outcomes success and/or failure	296 ^c	S: Age ($p = .005$), ACT composite score ($p = .001$), course grades in: Pharmacology ($p = .044$), nursing care of adults I ($p = .002$), community health: family focused nursing ($p = .042$), community health: population specific nursing ($p = .003$), and cumulative GPA ($p = .000$) NS: High school GPA, ACT scores in: English, math, reading, and science, course grades in: Professional foundations nursing, fundamentals of nursing care, health

1 st Author (Year)	Purpose of the study	Total (n)	Details of results, indicating whether significant (with relevant P values) or not
			assessment, pathophysiology I and II, nursing care of adults II, maternity and women's health care, introduction to nursing research, pediatric nursing, nursing leadership and management, advanced concepts in nursing care of adults, professional practice issues, gerontological nursing, and psychosocial nursing
McGahee (2010)	Examined student academic variables from a BSN program to determine which factors may be predictive of student success on the NCLEX-RN	153 ^c	S: Theoretical foundations course grade ($p= .001$) NS: ACT/SAT scores, science GPA, course grades in: fundamentals, health assessment, and pathophysiology
Silvestri (2010)	Identified the effect of selected academic, nonacademic, and self-efficacy variables on NCLEX outcome	183 ^c	S: Medical surgical course grade ($p= .000$) and self-efficacy expectations ($p= .007$) NS: Worry, health, work, personal and social, financial, home and family events, college course grades in: Chemistry, fundamentals, pharmacology, and leadership/management
McCarthy (2014)	Explored pre-program and in-program factors related to first time past rates on the NCLEX-RN	794 ^c	S: Prenursing GPA ($p< .001$), ATI TEAS scores in the following: Reading ($p< .001$), math ($p< .001$), science ($p< .001$), and English ($p< .008$), also, ATI scores in: Fundamentals ($p< .001$), medical surgical care ($p< .001$), nursing care of children ($p< .001$), mental health ($p< .001$), and maternal newborn ($p< .001$) NS: None
Elkins (2015)	Investigated the possible predictors of success in completing a BSN program and NCLEX-RN success	136 ^c	S: Preprogram GPA ($p< .05$), anatomy course grade ($p< .05$), ACT ($p< .05$), and HESI ($p< .05$) NS: Physiology grade

1 st Author (Year)	Purpose of the study	Total (<i>n</i>)	Details of results, indicating whether significant (with relevant P values) or not
Accelerated nursing programs or Upper Division Only Nursing Programs			
Beeman (2001)	Identified variables with the greatest predictive value related to the CAT NCLEX-RN and the extent to which success can be accurately predicted	538 ^c	S: SAT math ($p < .05$), course grades in the following: Biology I and II ($p < .05$), physiology ($p < .05$), nursing foundations ($p < .05$), pathophysiology I and II ($p < .05$), psychopathology ($p < .05$), wellness nursing ($p < .05$), restorative nursing interventions I and II ($p < .05$), and nursing research ($p < .05$), the number of C+ or lower grades in nursing courses showed a negative correlation with NCLEX-RN success ($p < .0001$), also sophomore and senior year GPAs ($p < .05$) NS: Age, gender, and SAT verbal score
Haas (2004)	Predicted student success on the NCLEX-RN	368 ^c	S: Race/ethnicity ($p = .011$), verbal SAT ($p = .001$), and nursing GPA ($p \leq .000$) NS: Age, gender, math SAT, and overall GPA
Abbott (2008)	Identified variable that predicted NCLEX-RN success	127 ^c	S: Senior complex course grade ($p = .02$) and higher GPAs NS: Previous degree

Note: **exceptions were 3 studies that only provided data on commercial tests as predictors; all of these studies were detailed separately (in Table 5). Only the first author's last name and year is identified in the table. Please see reference section for more details. S: Statistical significance related to NCLEX-RN success; NS: No significance related to NCLEX-RN success; GPA = grade point average; SAT = Scholastic Aptitude Test; ACT = American College Test; BSN = Bachelor's of Science in Nursing; ADN = Associate Degree in Nursing; GN = graduate nurse; TEAS = Test of Essential Academic Skills offered by ATI. ^a = number of studies included; ^b = number of nursing programs studied; ^c = number of students included.

Age

In a meta-analysis done nearly 20 years ago, Campbell and Dickson (1996) found that almost 50% of the studies they reviewed did not include the age of the participants. However, in the studies they included that did include age as an independent variable, it was generally a predictor of NCLEX-RN success. Since their meta-analysis was published, almost half of the quantitative studies (13 out of 29) included data about age as a possible predictor for NCLEX-RN success, as shown in Table 3. However, only four of the studies reported age as a significant predictor, detailed in Table 4. Daley et al. (2003) reported statistical significance between age (> 23 years) and NCLEX-RN success with the Mosby group ($p < .001$), along with commercial test results; all of the latter data will be reported in Table 5. Nine out of 13 studies did not find age to be a predictor of NCLEX-RN success (see Table 3). Overall, age was not found to be a statistically significant factor associated with NCLEX-RN success.

Race/ Ethnicity

Of the 29 studies reviewed that focused on academic predictors of success, approximately a little more than one-third (11 or 37.9%) studied race/ethnicity as an independent variable, as summarized in Table 3. Five out of the 11 studies did not find statistical significance with race/ethnicity and NCLEX-RN results, as noted in Table 3 and 4 (Endres, 1997; Landry et al., 2010; Truman, 2012; Uyehara et al., 2007; Yin & Burger, 2003). Daley et al. (2003) and Sayles et al. (2003) reported statistical significance with Caucasian GNs compared to non-white GNs on the NCLEX-RN (see Table 4). Crow et al. (2004) found that being classified as “Caucasian” was statistically

significant ($p = .02$) with NCLEX-RN success compared to being classified as “Hispanic.” In contrast, Haas et al. (2004) found that there were significant differences ($p = .011$) between race/ethnicity and that being classified as “Hispanic” had the highest NCLEX-RN success compared to being classified as “Caucasian,” “African American,” and “Asian”. However, there were only two Hispanic GNs who took the NCLEX-RN and both of them were successful (Haas et al., 2004). This research finding should be interpreted with caution because of the relatively small sample size for comparison groups. This was an example of statistically significant findings that may not actually be meaningful.

Three authors reported that there were no statistical differences among Whites, Hispanics, and African Americans with Associate Degree preparation (Endres, 1997; Truman, 2012; Yin & Burger, 2003). Briscoe and Anema (1999) found statistical significance ($p < .05$) with individuals of African descent ($n = 5$) who were classified as international students from African countries. This finding of statistical significance also should be viewed with caution, because all five of the African descent individuals failed the NCLEX-RN compared to those of other races and ethnicities. The five African descent individuals who failed may have had language or cultural differences related to healthcare experiences they had in other countries.

Gender

Gender was included as an independent variable in 11 out of 29 studies as a predictor for NCLEX-RN success. Gender as an independent variable has shown no statistical significant differences with NCLEX-RN success in any of these studies, as noted in Table 3. Gender continues to be analyzed as a predictor of NCLEX-RN success;

however, in almost 20 years not one study has shown that gender was statistically significant in relationship to NCLEX-RN success.

Admission Requirements

Another area of academic predictors was admission requirements prior to entering the nursing program. The admission requirements included pre-college SAT/ACT scores and occasionally previous degrees. SAT/ACT scores were frequently used as independent variables to analyze whether these variables were predictive of NCLEX-RN success.

Scholastic Aptitude Tests (SAT)/American College Test (ACT) Scores

Many colleges and universities require the SAT/ACT test scores as a preadmission criterion. Nearly half (14 or 48.3%) of the studies used SAT or ACT scores as independent variables to predict NCLEX-RN success (see Table 3). In ten out of 14 studies, the authors found significant correlations between SAT or ACT scores and NCLEX-RN success, as detailed in Table 4 (Alexander & Brophy, 1997; Beeman & Waterhouse, 2001; Campbell & Dickson, 1996; Crow et al., 2004; Daley et al, 2003; Elkins, 2015; Haas et al., 2004; Stuenkel, 2006; Truman, 2012; Vandenhouten, 2008).

Beeman and Waterhouse (2001) also analyzed these predictor variables (verbal and math SAT scores), but only the math portion of the SAT score was correlated ($r = .16$, $p < .05$) with passing or failing the NCLEX-RN. On the other hand, the SAT verbal portion was found to be statistically significant ($p < .05$) as a predictor of NCLEX-RN success in other studies reviewed (Alexander & Brophy, 1997; Haas et al., 2004; Truman, 2012). Overall, higher SAT scores were related to NCLEX-RN success.

Vandenhouten (2008) analyzed each category of the ACT test, which included English, math, reading, and science. None of the individual subjects, nor the cumulative ACT score, predicted NCLEX-RN success. Elkins (2015) found a correlation between ACT scores and passing the NCLEX-RN. When students scored a 24 or higher on the ACT, 98% of those students passed the NCLEX-RN. If students scored 21-23 on the ACT, 85% of those students were successful on the NCLEX-RN. When those students who scored a 20 or below on the ACT, 58% of those students successfully passed the NCLEX-RN. It would be worthwhile to examine the predictive value of ACT and SAT test scores on NCLEX-RN success in a larger, more comprehensive study. Further investigation in this area was indicated.

Previous Degrees

There were only four studies in which previous degrees prior to attending a nursing program were used to predict NCLEX-RN success (Abbott et al., 2008; Endres, 1997; Landry et al., 2010; Yin & Burger, 2003). Abbott et al. (2008) examined GNs from an accelerated baccalaureate nursing program. These authors found that grades from a senior level complex care course, and having a previous post-secondary degree, were statistically significant ($p = .01$). However, there was no direct correlation between having a previous degree and NCLEX-RN success. Endres (1997) found similar non-significant results with those who held previous licensed practical nurse degrees and NCLEX-RN success. In addition, Yin and Burger (2003) found no statistical significance between previous degrees and NCLEX-RN success. Landry et al. (2010) was the only study to report statistical significance ($p = .000$) for those with a previous bachelor's degree and NCLEX-RN success. These findings raise more questions, such as what

types of degrees may be associated with nursing licensure success. Given the number of second degree nursing programs that have opened, this relationship would be an important area to investigate further.

Progression Requirements

Another area of academic predictors was progression requirements. The progression requirements included nursing course grades and number of C grades in nursing courses throughout nursing school. I chose these progression requirements from the predictor studies because nursing course grades and the number of C grades were frequently analyzed as independent variables by these authors to examine whether they were predictive of NCLEX-RN success.

Nursing Courses

Over half (16 or 55.2%) of the authors examined individual nursing courses and whether these courses were predictors of NCLEX-RN success, as summarized in Table 3. The details for each study that examined this aspect are presented in Table 4. Related to nursing focused courses, Barkley et al. (1998) found a strong correlation ($r = .58, p = .000$) between pediatric nursing course grades and NCLEX-RN success. This was not reported in other studies reviewed. However, maternal-child course grades showed statistical significance ($p < .05$) with NCLEX-RN success in four out of six research studies that examined this particular predictor (Alexander & Brophy, 1997; Barkley et al., 1998; Landry et al., 2010; Trofino, 2013). In nine out of 10 studies reviewed in which the authors assessed the impact of medical surgical nursing course grades and NCLEX-RN success, they reported statistical significance ($p < .05$) (Alexander & Brophy, 1997;

Barkley et al., 1998; Daley et al., 2003; Landry et al., 2010; Seldomridge & DiBartolo, 2004; Silvestri, 2010; Stuenkel, 2006; Trofino, 2013; Vandenhouten, 2008).

Grades in foundational science courses also appeared to have had some effects. Authors in two studies reported statistical significance ($p < .05$) between pharmacology course grades and NCLEX-RN success (Trofino, 2013; Vandenhouten, 2008). In addition, authors in five additional studies reported that the pathophysiology course grades showed statistical significance with NCLEX-RN success, as detailed in Table 4 (Beeman & Waterhouse, 2001; Daley et al., 2003; Landry et al., 2010; Seldomridge & DiBartolo, 2004; Stuenkel, 2006). Specifically, Seldomridge and DiBartolo (2004) indicated that for each letter grade increase in the pathophysiology course, the odds of passing the NCLEX-RN improved by nearly a multiple of five. While many different courses were examined, no clear pattern related to predicting NCLEX-RN success was noted.

Number of C or lower grades in nursing courses

Seven authors examined the number of C or lower grades in nursing courses and the relationship with NCLEX-RN success (summarized in Table 3). All seven of the authors reported statistical significance, as detailed in Table 4 (Barkley et al., 1998; Beeman & Waterhouse, 2001; Beeson & Kissling, 2001; Endres, 1997; Seldomridge & DiBartolo, 2004; Truman, 2012; Waterhouse & Beeman, 2003). Beeman and Waterhouse (2001) reported that the best overall predictor for NCLEX-RN success was the number of C+ or lower grades in nursing courses ($r = -.39, p < .0001$). This meant those GNs who achieved grades higher than a C+ would likely pass the NCLEX-RN. On the other hand, those GNs who achieved a C+ or lower would likely fail the NCLEX-RN.

Similarly, Barkley et al. (1998) found a relationship between the number of C grades and the likelihood of NCLEX-RN failure. They reported that if students earned more than three C grades in any nursing courses, they likely would fail the NCLEX-RN (Barkley et al., 1998).

Beeson and Kissling (2001) stated that the most significant predictor of NCLEX-RN success was having no C grades throughout students' junior year nursing courses ($p < .0001$). The authors suggested that if a student received one C in a nursing course, the likelihood of success on the NCLEX-RN would be 84%. If the student received three C grades, the likelihood of passing would drop to 51%. Seldomridge and DiBartolo (2004) reported a similar pattern. They found that among individuals who had five or more C grades in their junior year nursing courses, only 50% of them passed the NCLEX-RN on the first attempt. On the other hand, those GNs who had no C grades in their junior year nursing courses had a 100% pass rate on the NCLEX-RN. These findings should be viewed with caution, as these studies had relatively small sample sizes, and each study included only a single nursing institution. However, the patterns provide evidence that further research is indicated. Insufficient work has been done in this area that may indicate greater need for possible future interventions for students prior to taking the licensure exam, based on grades they received in nursing courses.

End of Nursing Program Requirements

Another focus related to academic predictors included performance on end of nursing program requirements. These program requirements were completed throughout the course of study or during the last semester. The end of nursing program requirements included GPAs and commercial tests. Authors apparently chose these progression

requirements because GPAs and commercial tests were frequently used as independent variables to analyze whether these variables were predictive of NCLEX-RN success.

Grade Point Averages (GPAs)

Of the 29 studies reviewed, almost three-fourths (21 or 72.4%) examined GPA as an independent variable (summarized in Table 3). The majority of authors focused on cumulative GPA, however other authors examined science GPA, GPA prior to nursing school, and/or nursing GPA. GPA prior to nursing school was found to be statistically significant in eight out of the nine studies reviewed that examined this variable, as detailed in Table 4 (Beeson & Kissling, 2001; Daley et al., 2003; Elkins, 2015; Endres, 1997; McCarthy et al., 2014; Stuenkel, 2006; Truman 2012; Yin & Burger, 2003). Specifically, Yin & Burger (2003) reported that a GPA > 2.95 prior to admission to nursing school was the strongest predictor of NCLEX-RN success ($p < .024$).

Both cumulative and nursing GPAs were found to be statistically significant ($p < .05$) with NCLEX-RN success in 13 studies, as detailed in Table 4 (Alexander & Brophy, 1997; Beeman & Waterhouse, 2001; Beeson & Kissling, 2001; Campbell & Dickson, 1996; Daley et al., 2003; Endres, 1997; Haas et al., 2004; Landry et al., 2010; Sayles et al., 2003; Seldomridge & DiBartolo, 2004; Truman, 2012; Uyehara et al., 2007; Vandenhouten, 2008). Notably, Beeman and Waterhouse (2001) reported small to moderate correlations between sophomore year GPA ($r = .28, p < .05$) and senior year GPA ($r = .32, p < .05$) with NCLEX-RN success. Vandenhouten (2008) found the strongest correlation between cumulative GPA and NCLEX-RN success: GNs who had GPAs greater than 3.26 were 26 times more likely to be

successful on the NCLEX-RN.

Commercial Tests

Two thirds of the quantitative studies detailed and reviewed previously (20 or 69%) included the use of commercial tests as variables and their predictive value on NCLEX-RN success. During the review of literature, it was evident that different commercial tests were available and used as predictors for NCLEX-RN success. Due to the need to focus on these studies and their results in detail, all those dealing with commercial tests were separately summarized in Table 5. Therefore, several of these studies appear in more than one of the tables.

The five major commercial firms that offer these tests include: Assessment Technologies Institute (ATI), Educational Resources Inc. (ERI), Health Education Systems Inc. (HESI), Mosby Assess Test, and National League for Nursing (NLN). The companies' tests are intended to prepare students for the NCLEX-RN; many of their products have several testing components or sections and not all of the sections were purchased by every school. Therefore, in Table 5, the complexity in the results includes the different sections of the commercial tests used and whether they were significantly predictive in each study or not.

Table 5

The Use of Commercial Tests as Possible Predictors for NCLEX-RN Success, According to Type of Test with Chronological Order of Publication

Commercial tests	1 st Author & Year	Total (n)	Results
Assessment Technologies Institute (ATI)	Vandenhouten (2008)	296 ^b	S: Fundamentals ($p = .000$), maternal newborn ($p = .001$), medical surgical ($p = .009$), leadership ($p = .012$), community ($p = .03$), pharmacology ($p = .019$), and RN comprehensive predictor ($p = .000$) NS: Nursing care of children and mental health
	McCarthy (2014)	794 ^b	Varied sections of ATI TEAS exam and ATI topics reported: S: TEAS: Reading ($p < .001$), math ($p < .001$), Science ($p < .001$), and English ($p < .008$); ATI: Fundamentals ($p < .001$), medical surgical ($p < .001$), nursing care of children ($p < .001$), mental health ($p < .001$), and maternal newborn ($p < .001$)
Educational Resources Inc. (ERI)	Sayles (2003)	78 ^b	S: NET math scores ($p = .01$), NET reading scores ($p = .003$), NET score composite and percentile ($p = .001$), and Pre-RN exam score and percentile ($p < .003$) NS: NET scores test taking
	Bondmass (2008)	147 ^b	Varied sections of ERI exam reported: S: Fundamentals ($p < .005$), nutrition ($p < .005$), growth and development ($p < .005$), gerontology ($p \leq .000$), medical surgical adult I ($p < .005$), medical surgical adult II ($p \leq .000$), Pre-RN assessment ($p < .005$), RN assessment ($p \leq .000$), critical care ($p \leq .000$), critical thinking ($p < .005$), community health ($p < .005$), therapeutic communication ($p \leq .000$), and mock NCLEX ($p < .005$) NS: Mental health ERI exam, pharmacology ERI exam, and maternal child ERI exam

Commercial tests	1 st Author & Year	Total (n)	Results
	McGahee (2010)	153 ^b	S: ERI RN assessment score ($p = .03$)
Health Education Systems Inc. (HESI)	Daley (2003)	224 ^b	S: HESI exit exam score ($p = .002$) and HESI exit exam probability score ($p = .001$)
	Frith (2005)	142 ^b	S: HESI exit exam score ($p < .0001$)
	Abbott (2008)	127 ^b	S: HESI exit exam scores ($p = .03$)
	Spurlock (2008)	179 ^b	S: The first HESI exit exam mean score ($p \leq .005$) NS: The final HESI exit exam mean score
	Elkins (2015)	136 ^b	S: HESI ($p < .05$)
Mosby Assess Test	Campbell (1996)	47 ^a	S: Mosby Assess Test ($n = 3$) and 2 out of 3 studies found significant results ($p < .05$) NS: One study did not find significant results with Mosby Assess Test
	Endres (1997)	150 ^b	S: Percentile rank on the Mosby Assess Test above 21 ($p < .001$)
	Beeson (2001)	505 ^b	S: Mosby Assess Test > 222.7 ($p < .0001$)
	Daley (2003)	224 ^b	S: Mosby Assess Test raw score, percentage of items correct, and percentile ($p < .001$)
	Uyehara (2007)	218 ^b	S: Mosby Assess Test ($p = .0003$)

Commercial tests	1 st Author & Year	Total (n)	Results
National League for Nursing (NLN)	Campbell (1996)	47 ^a	Reported on specific sections of the NLN test from multiple studies: S: NLN pre-nursing ($n = 1$) ($p < .05$), one study found significant results ($p < .05$), with NCLEX-RN success S: NLN Comprehensive Achievement Test for Baccalaureate Students ($n = 3$), 2 out of 3 programs found significant results ($p < .05$) related to NCLEX-RN success NS: One study did not find significant results with NLN Comprehensive Achievement Test for Baccalaureate Students
	Alexander (1997)	188 ^b	S: NLN Comprehensive Achievement Test for Baccalaureate Students ($p = .0001$)
	Barkley (1998)	81 ^b	Reported on specific sections of the NLN test: S: Adult ($p = .000$), obstetrics ($p = .000$), pediatric ($p = .000$), mental health ($p = .000$)
	Briscoe (1999)	38 ^b	Reported on specific sections of the NLN test: S: Adult health care across the community part 1 ($p < .01$), and adult health care across the community part 2 ($p < .01$)
	Crow (2004)	160 ^c	Reported on specific sections of the NLN test from different nursing programs: S: NLN mental health nursing exam ($p = .02$, $n = 18$) and NLN community health nursing exam ($p = .02$, $n = 9$) NS: Pharmacology, adult health, pathophysiology, and maternal child
	Seldomridge (2004)	168 ^b	S: Percentile score on the NLN Comprehensive Achievement Test for Baccalaureate Students ($p = .000$)

Commercial tests	1 st Author & Year	Total (n)	Results
	Stuenkel (2006)	312 ^b	Reported on specific sections of the NLN test: S: Adult care exam ($p \leq .05$) and community exam ($p \leq .05$) NS: Maternal-child exam and mental health exam
	Uyehara (2007)	218 ^b	Reported on specific sections of the NLN test: S: Adult health comprehensive test ($p < .0001$), maternal newborn comprehensive test ($p = .018$), and pediatric nursing comprehensive test ($p = .003$) NS: Pre-nursing, verbal, math, science, and mental health comprehensive test

Note: S: Statistically significance related to NCLEX-RN success; NS: No significance related to NCLEX-RN success. ATI = Assessment Technologies Institute; TEAS = Test of Essential Academic Skills; ERI = Educational Resources Inc.; NET = Nurse Entrance Test; HESI = Health Education Systems Inc.; NLN = National League for Nursing; NLNCATBS = NLN Comprehensive Achievement Test for Baccalaureate Students
^a = number of studies included; ^b = number of students included; ^c = number of nursing programs studied

Assessment Technologies Institute (ATI). ATI exams were one of the commercial tests used by schools of nursing to prepare nursing students for the NCLEX-RN. There was limited published research related to ATI exams and NCLEX-RN success (McCarthy et al., 2014; Vandenhouten, 2008). Vandenhouten (2008) reported primarily significant results related to NCLEX-RN success on many of the sections tested, as noted in Table 5. According to Vandenhouten (2008), all of the ATI exams were more accurate at predicting success than failure. The importance of predicting failure would be to identify those individuals who were at risk prior to taking the NCLEX-RN. If ATI exams could predict those individuals who would fail the NCLEX-RN, then interventions could be implemented prior to taking the exam. For example, the fundamentals section of the ATI exam was able to classify NCLEX-RN success 100% ($n = 184$), whereas for NCLEX-RN failure, this part of the exam was able to classify only 8.7% of them correctly ($n = 2$ of 23). Although the comprehensive predictor exam was also able to classify NCLEX-RN success 100% of the time ($n = 265$), it did not correctly classify any of the students who failed ($n = 27$).

McCarthy et al. (2014) explored preprogram and in-program factors that related to first time NCLEX-RN pass rates. Preprogram factors were tested with the ATI Test of Essential Academic Skills (TEAS) that students had prior to nursing school. The TEAS consisted of reading, math, science, and English and all were statistically significant ($p \leq .008$) and correlated with NCLEX-RN success. In-program factors were the ATI content exam sections such as fundamentals, medical-surgical nursing, mental health, nursing care of children, and maternal newborn. All of the content specific exams were statistically significant ($p \leq .001$) when compared to students' success on the NCLEX-

RN. Based on these findings, these authors recommended that faculty use ATI testing to identify those students who would be at-risk for not successfully passing the NCLEX-RN.

Educational Resources Inc. (ERI). ERI exams were another option for schools of nursing to use to help prepare students for the NCLEX-RN. Sayles et al. (2003) discovered several portions of the nurse entrance test (NET) sections of the ERI that were statistically significant with NCLEX-RN success, as noted in Table 5, although the NET scores that specifically examined test taking skill were not. NET measures an individual's reading comprehension, mathematical and social skills, and learning styles (Bondmass et al., 2008). Bondmass et al. (2008) found that graduates who were successful on the NCLEX-RN scored significantly higher on 13 out of 16 available ERI sectional exams (see Table 5). McGahee et al. (2010) included only the ERI RN assessment score in the study and reported statistical significance. None of the three authors of these studies reported data regarding accuracy of the ERI exams in predicting failure on the NCLEX-RN.

Health Education Systems Inc. (HESI). For approximately 15 years, the HESI corporation has been publishing validity studies related to the HESI exit exam. The first validity study was done in 1999 and had a 97.4% positive predictive value of NCLEX-RN success (Lauchner, Newman, & Britt, 1999). Since the first HESI exit validity study, there have been eight additional studies. The ninth HESI exit validity study found the predictive accuracy of NCLEX-RN success with the HESI Exit was 96.61% (Zweighaft, 2013). This percentage remained within the range of the previous eight validity studies that were reported (96.36% to 99.16%). Of those GNs who scored a 900 or higher on the

HESI exit exam, 96.61% passed the NCLEX-RN on the first attempt.

Interestingly, there were no reported predictions made for NCLEX-RN failure from HESI Corporation until Spurlock and Hunt (2008) studied the disparity between what was expected and observed with the HESI exit exams and NCLEX-RN outcomes. The authors found that 22 out of 167 (13.2%) GNs expected to pass actually failed the NCLEX-RN, whereas 10 out of 12 GNs who were expected to fail subsequently passed the NCLEX-RN, resulting in an 83.3% pass rate. Spurlock and Hunt (2008) reported difficulty in predicting failure accurately in regards to the NCLEX-RN.

Abbott et al. (2008) reported statistical significance with HESI exit scores and NCLEX-RN success (in Table 5). Frith et al. (2005) studied a baccalaureate program that implemented the HESI exit exam prior to graduation. On average, GNs who passed the NCLEX-RN had higher mean scores on the HESI exit exam compared to those GNs who were unsuccessful (928 versus 790). Frith et al. (2005) reported statistical significance between the HESI exit exam and NCLEX-RN success, as noted in Table 5.

Elkins (2015) studied HESI exit scores compared to NCLEX-RN pass rates. The study results indicated that those students who scored 950 or above all successfully passed the NCLEX-RN. When students scored 900-949 on the HESI exit exam, 91% of those students passed the NCLEX-RN. However, among those students who scored an 850-899 on the HESI exit exam, 94% were successful on the NCLEX-RN. Although they had scored lower on the HESI exit exam, the latter group had a higher percentage of passing than those students who had scored higher on HESI. This discrepancy warrants further investigation with a larger, more

comprehensive study. According to the researcher, the HESI exit scores can predict success on the NCLEX-RN. The researcher recommended using the HESI exit exam to identify and target help for those students who scored below 850 by providing remediation and interventions prior to taking the NCLEX-RN.

Daley et al. (2003) studied a cohort that completed the Mosby Assess Test and a cohort that completed the HESI exam. In either cohort, GNs who obtained higher raw scores on the Mosby Assess Test (93.8 ± 10.7 versus 77.5 ± 11.6) or on the HESI exit exam ($67.6 \pm .2$ versus $48.0 \pm .9$) were more successful on the NCLEX-RN, as noted in Table 5. In the HESI cohort, completion of the HESI exit exam ($n = 103$) was voluntary and GNs who completed the exam also were more successful on the NCLEX-RN than the Mosby Assess cohort ($n = 121$). The authors analyzed exams comparing specificity, positive and negative predictive values, and test efficiency. They found the voluntary HESI exam scores to be stronger in all three areas when compared to the reported Mosby Assess Test.

Mosby Assess Test. Authors in five of the studies reviewed had investigated associations between the Mosby Assess Test and NCLEX-RN success (see Table 5) (Beeson & Kissling, 2001; Campbell & Dickson, 1996; Daley et al., 2003; Endres, 1997; Uyehara et al., 2007). Endres (1997) included only the percentile rank on the Mosby Assess Test as an independent variable and reported statistical significance. According to Beeson and Kissling (2001), the odds of failing the NCLEX-RN was reduced by 150%, for each increase of ten percentage points on the Mosby Assess Test. Uyehara et al. (2007) reported statistically significant results between the Mosby Assess Test and NCLEX-RN success, as did Beeson and Kissling (2001), Campbell and Dickson (1996),

Daley et al. (2003), and Endres (1997).

National League for Nursing (NLN). Several authors examined whether there were statistically significant differences between NLN achievement tests and NCLEX-RN success, as noted in Table 5 (Alexander & Brophy, 1997; Barkley et al., 1998; Briscoe & Anema, 1999; Campbell & Dickson, 1996; Crow et al., 2004; Seldomridge & DiBartolo, 2004; Stuenkel, 2006; Uyehara et al., 2007). Alexander and Brophy (1997) reported statistical significance between NCLEX-RN success and the NLN Comprehensive Achievement Test for Baccalaureate Students (NLNCATBS). Barkley et al. (1998), Briscoe and Anema (1999), Crow et al. (2004), Stuenkel (2006), and Uyehara (2007) all reported statistical significance among several NLN tests and NCLEX-RN success.

Seldomridge and DiBartolo (2004) reported statistical significance between NCLEX-RN success and the percentile score on the NLNCATBS. The authors reported that for each increase of ten percentage points on the NLNCATBS, the odds of passing the NCLEX-RN increased almost eleven-fold. Logistic regression was completed and the percentile score on the NLNCATBS was able to accurately predict the NCLEX-RN pass rate 94.7% of the time. In contrast, the percentile score on the NLNCATBS could only predict NCLEX-RN failure 25% of the time.

Nonacademic Predictors

Academic predictors have been extensively studied related to NCLEX-RN success, although the findings have been inconsistent. There have been fewer authors who studied nonacademic predictors. Nonacademic predictors are factors that may affect individuals' performance either emotionally, socially, or both. The following

nonacademic predictors were identified from the review of literature: (a) self-esteem, (b) self-efficacy, (c) test anxiety, and (d) family responsibilities and demands.

Self-Esteem, Self-Efficacy, and Test Anxiety

Six studies examined individual internal factors that could negatively affect GNs' success on the NCLEX-RN (Arathuzik & Aber, 1998; Campbell & Dickson, 1996; Eddy & Epeneter, 2002; Griffiths et al., 2004; Poorman & Webb, 2000; Silvestri, 2010). Campbell and Dickson (1996) performed a meta-analysis and examined self-enhancement variables, including cognitive/learning style, self-concept/esteem, and test anxiety, to see if there were any correlations with NCLEX-RN success. Test anxiety ($n = 5, p < .05$) and self-concept/esteem ($n = 5, p < .05$) were two variables that correlated with NCLEX-RN success. Across the studies a comprehensive view of findings has not been published in the last two decades since the meta-analysis (Campbell & Dickson, 1996).

Arathuzik and Aber (1998) recruited a convenience sample of 79 nursing students from a single institution. The purpose of the study was to identify academic and nonacademic predictors related to NCLEX-RN success (Arathuzik & Aber, 1998). Those individuals who self-reported feelings of anger, anxiety, guilt, or loneliness during nursing school negatively correlated with NCLEX-RN success ($r = -.24, p < .05$).

Eddy and Epeneter (2002) found in their qualitative study (see Table 2) that individuals reported they were confident prior to the NCLEX-RN, but those who failed stated they were unable to cope with their anxiety levels during the exam. Poorman and Webb (2000) reported that individuals who had failed the licensing exam doubted their nursing knowledge and the ability to be successful in the future. In addition, Griffiths et

al. (2004) stated that those individuals who failed the NCLEX-RN reported lower self-confidence and changes in their self-perception.

Silvestri (2010) was the only research study that compared NCLEX-RN success to self-efficacy. Self-efficacy expectations were described as individuals' beliefs about their ability to accomplish goals such as passing the NCLEX-RN and becoming licensed as RNs. Silvestri (2010) obtained permission to use the General Perceived Self-Efficacy Scale developed by Scholz, Gutierrez, and Schwarzer (2002) to measure self-efficacy expectations. The Self-Efficacy Scale is a 10-question instrument and has good internal consistency, with Cronbach alpha coefficients ranging from 0.76-0.90 (Silvestri, 2010). In Silvestri's study, the Cronbach alpha coefficient was .963. The study revealed that individuals who reported high self-efficacy expectations on this instrument regarding their abilities were more likely to be successful ($p = .007$) on the NCLEX-RN (Silvestri, 2010).

Family Responsibilities and Demands

A few of the studies included the impact of family responsibilities and demands on overall NCLEX-RN success (Arathuzik & Aber, 1998; Griffiths et al., 2004; Silvestri, 2010). Arathuzik and Aber (1998) found a significant, but weak negative correlation ($r = -.29$) between NCLEX-RN success and fewer family responsibilities and demands, in other words, family issues and work did have some negative impact on GNs' success. Silvestri (2010) described home and family demands as out-of-school events that individual students encountered while in nursing school, but these events were not statistically significant when correlated with NCLEX-RN success in the final adjusted logistic regression. Further research is needed in this particular area to see if family

responsibilities and demands may influence NCLEX-RN success.

The majority of literature focused on academic predictors related to NCLEX-RN success. However, there has been little research conducted regarding nonacademic predictors such as self-esteem, self-efficacy, test anxiety, and family responsibilities and demands. Nonacademic predictors may be another factor in determining whether GNs will succeed on the NCLEX-RN and it is imperative to conduct studies on the impact of these individual characteristics and life events.

Focused Interventions to Promote NCLEX-RN Preparation Prior to Graduation

Eight research studies focused on different strategies that were conducted as interventions prior to taking the NCLEX-RN to increase the overall pass rates of various schools of nursing, as shown in Table 6 (Anderson, 2007; Davenport, 2007; Herrman & Johnson, 2009; Johnson, 2009; Frith et al., 2005; Morton, 2008; Sisford & McDaniel, 2007; Stark, Feikema, & Wyngarden, 2002). These may be a reaction to the pressure that schools of nursing are under to maintain acceptable pass rates. These particular interventions focused on student support and knowledge enhancement to improve NCLEX-RN pass rates. I categorized three types of interventions during the review of literature: (a) individual self-assessments, (b) remediation courses, and (c) faculty led NCLEX-RN review courses.

Three research studies focused on individual self-assessments as an intervention to promote NCLEX-RN success (see Table 6) (Anderson, 2007; Johnson, 2009; Stark et al., 2002). Self-assessments included individuals' strengths and weaknesses related to using commercial tests, test-taking skills, managing events related to anxiety, and preparing in advance for the day of testing. The purpose of the individual plans was to

empower the students to be properly prepared for the actual NCLEX-RN. Anderson (2007) developed a program where faculty would meet individually with nursing students about their ERI RN Computer Assisted Test and NCLEX-RN preparation strategies. Students were expected to identify strategies related to their knowledge deficits identified in the ERI Computer Assisted Test exam.

Johnson (2009) introduced a program that offered students different methods to properly prepare for the NCLEX-RN, as noted in Table 8. The students were held accountable to identify those methods that would work for them. Neither Johnson (2009) nor Stark et al. (2002) reported any results regarding NCLEX-RN success after their programs were completed.

Faculty at one school of nursing developed a remediation course for senior nursing students who did not achieve a score of 850 on the HESI exit exam (Sisford & McDaniel, 2007). Forty-seven students out of 87 (54%) did not achieve the 850 on the exit exam. These 47 students participated in a remediation course, and then retook a second version of the exit exam. An additional 18 out of 47 students achieved a passing score after the remediation course (Sisford & McDaniel, 2007). However, there were no NCLEX-RN results reported in relation to HESI exit exam scores.

Table 6

Summary of Research Related to Focused Interventions to Promote NCLEX-RN Preparation Prior to Graduation

1 st Author & Year	Purpose of the study	Total (n) Students	Results
Individual self-assessments			
Stark (2002)	Presented self-assessment and planning to empower senior nursing students to prepare for the NCLEX-RN	No <i>n</i> identified	Students became empowered to be successful on the NCLEX-RN by engaging them in individualized plans based on their strengths and weaknesses
Anderson (2007)	Reviewed the process of implementing an individualized student advisement program	No <i>n</i> identified	The authors stated that the individualized student advisement plan could not properly determine whether students would or would not be successful on NCLEX-RN
Johnson (2009)	Described a structured personal preparation program prior to taking the NCLEX-RN that focused on nutrition, rest, study schedule, exercise, spiritual and emotional balance, play, and prayer	No <i>n</i> identified	No results reported regarding how effective this program was related to NCLEX-RN pass rates
Remediation class			
Sisford (2007)	Reported on a 15-week remediation course to improve students' scores who had not achieved ≥ 850 (predetermined by the school of nursing) on the HESI commercial exit exam, prior to taking NCLEX-RN	47	<p>After the remediation course, the students' scores were significantly improved ($p < .001$) from prior to the remediation course to after it ($M = 735.63$ to 810.17)</p> <p>Eighteen out of 47 students achieved ≥ 850 after completion of the remediation course</p> <p>No NCLEX-RN results reported in relation to the HESI scores</p>

1 st Author & Year	Purpose of the study	Total (<i>n</i>) Students	Results
Faculty led NCLEX-RN preparatory course			
Frith (2005)	Reported on how one baccalaureate program's journey from low first-time pass rate to greater student and program success	142	Increase in NCLEX-RN pass rates from 83% to 90% after implementation of the Integrated Clinical Concepts Course
Davenport (2007)	Reported on how a Midwestern University addressed their pass rate issue with a proactive, comprehensive, and integrated NCLEX-RN success plan that focused on offering ATI content and exit exams, test-taking seminars, learning style assessment, requirement of a set number of practice licensure exam type items; also shared NCLEX-RN preparation resources, study guide questions for practice, promotion of the use of study groups, and a focused advising form that was completed	259	Preliminary data has shown that the ATI comprehensive predictor exam differentiates between those students who pass and those who fail the NCLEX-RN. Students who passed the NCLEX-RN had higher cumulative GPAs than those students were failed.
Morton (2008)	Identified how a NCLEX-RN review was incorporated in an existing structured learning assistance program that was offered at the university. This program was required for students who did not achieve a B or greater in pharmacology (first clinical semester) and three medical surgical courses (second, third, and fourth clinical semesters). The program took 2 to 4 hours extra a week and consisted of: (a) reviewing study guides of lecture topics, (b) preparing for tests, (c) receiving homework assistance, and (d) working through exercises to increase note-taking and time management skill	110	An increase in NCLEX-RN pass rates from 65% to 92% after implementation of the remediation program; although no statistics were reported.
Herrman (2009)	Described one baccalaureate program's method to assist with student success on the NCLEX-RN using a senior seminar course that focused on study skills, NCLEX-RN content review, and personal preparation plans	No <i>n</i> identified	No results reported

Note. Only the first author's last name and year is identified in the table. Please see reference section for more details. *M* = mean; HESI—Health Education Systems Inc.; ATI—Assessment Technologies Institute.

Several authors developed review courses focusing on NCLEX-RN content and student preparation for the licensure examination, as noted in Table 6 (Davenport, 2007; Herrman & Johnson, 2009; Frith et al., 2005; Morton, 2008). The purpose of the faculty-led review courses was to offer students a comprehensive course to foster professional skills and enhance NCLEX-RN success. Frith et al. (2005) developed an Integrated Clinical Concepts course to increase HESI exit exam scores and NCLEX-RN pass rates. The Integrated Clinical Concepts course included: (a) support for test anxiety and negative self-talk, (b) content review, (c) test-taking strategies, and (d) practice questions. The Integrated Clinical Concepts course led to an increase in the HESI Exam scores and NCLEX-RN pass rates (see Table 6).

Davenport (2007) developed a comprehensive plan to be implemented over four semesters to increase NCLEX-RN success due to the limited research available on effective strategies to improve pass rates. However, no results were reported after the implementation of the comprehensive plan. Herrman and Johnson (2009) developed a seminar course to increase students' success on the NCLEX-RN. A thorough description of the seminar course was provided, however no results related to NCLEX-RN success was reported. Morton (2008) developed a structured learning assistance program that required students, who did not achieve Bs in particular courses, to study specific types of materials for an extra 2-4 hours per week. After the implementation of the structured learning assistance program, the school of nursing NCLEX-RN pass rate increased from 65%-92%.

Difficulty of Predicting NCLEX-RN Failure

Several authors described how difficult it was to predict NCLEX-RN failure (Haas et al., 2004; Harding, 2010; McGahee et al., 2010; Seldomridge & DiBartolo, 2004; Spurlock & Hunt, 2008; Yoho, Young, Adamson, & Britt, 2007; Waterhouse & Beeman, 2003). Spurlock and Hunt (2008) stated that most schools of nursing have generally low rates of NCLEX-RN failures, which makes predicting failure a challenge. Two studies found that exit examinations did not accurately predict failure (Spurlock & Hunt, 2008; Yoho et al., 2007). Yoho et al. (2007) discovered that only 15.8% of GNs predicted to fail the NCLEX-RN actually failed. This inconsistency with predicting failure makes it difficult for schools of nursing to identify those GNs who are at risk for failing the NCLEX-RN.

McGahee et al. (2010) used logistic regression to predict NCLEX-RN success and failure. The following independent variables were included: science GPA; ERI RN assessment exam; and course grades in fundamentals, theoretical foundations, health assessment, and pathophysiology to predict NCLEX-RN success and failure. The findings indicated that these variables predicted seven students to fail and six of the seven did fail (85.7%). Additionally, Haas et al. (2004) used discriminant function analysis to predict NCLEX-RN success and failure and discovered that 61.2% (19 of 31) of GNs who were predicted to fail actually failed the NCLEX-RN. Even though several authors stated it was difficult to predict NCLEX-RN failure, McGahee et al. (2010) and Haas et al. (2004) were able to accurately identify more individuals who would fail the NCLEX-RN than reported in other studies. It may be important and more informative to consider multiple variables in the future when trying to predict success and/or failure.

Discriminant Analysis of Academic Predictors

There were authors who used discriminant analysis procedures to attempt to predict success and failure on the NCLEX-RN (Beeman & Waterhouse, 2001; Haas et al., 2004). This approach was associated with more consistent prediction of NCLEX-RN failure than in other research studies. Beeman and Waterhouse (2001) used a variety of predictors for discriminant analysis including age, race/ethnicity, gender, SAT scores, biology grades, nursing course grades, and GPAs. The authors were able to properly classify 94% of GNs who passed and 92% of GNs who failed the NCLEX-RN. Beeman and Waterhouse (2001) reported the most accurate results related to predicting NCLEX-RN failure. Hass et al. (2004) correctly classified 71% of GNs who were successful and 61% GNs who failed. Since nearly two thirds of the graduates who failed were correctly identified in the study, Hass et al. (2004) questioned whether an intervention prior to taking the NCLEX-RN might help these at-risk students to be successful. No other analyses of these data have been published in the past decade.

Critique of Research Studies' Limitations

One of the most prevalent study limitations observed throughout the review of literature was the lack of generalizability from the predominantly quantitative research. One of the reasons for lack of generalizability was that most of the studies were conducted in single nursing institutions, with variable samples and the studies were conducted differently. A second reason for lack of generalizability was race/ethnicity. Although 12 of the research studies used race/ethnicity as an independent variable, there were very small numbers of individuals who were identified as Hispanic, African

American, or individuals of African descent. A third reason for lack of generalizability was gender and was not predictive of NCLEX-RN success in any of the research studies, which could be due to the fact that NCLEX-RN questions undergo additional testing to assure they are gender neutral.

Twenty out of the 29 quantitative studies stated hypotheses or research questions. In these 20 studies, the analysis and results were clearly stated. Statistical tests were clearly identified and used to describe if a relationship or difference existed between the independent and dependent variables. The majority of the studies displayed the findings in a table format containing the variables and the statistical test results. Therefore, 20 out of 29 authors clearly presented their studies and followed the steps they had outlined. However, the remaining nine quantitative studies did not clearly report their approaches or findings (Abbott et al., 2008; Alexander & Brophy, 1997; Arathuzik & Aber, 1998; Beeson & Kissling, 2001; Frith et al., 2005; McGahee et al., 2010; Truman, 2012; Waterhouse & Beeman, 2003; Yin & Burger, 2003).

There has only been one meta-analysis study that was conducted two decades ago (Campbell & Dickson, 1996). Since 1996, there has been an increased amount of research conducted on academic predictors related to NCLEX-RN success. A current meta-analysis would be beneficial to educators, administrators, and fellow nurses to identify contemporary patterns or relationships related to NCLEX-RN success.

There were a few authors who questioned the reliability of their own studies because of changes with the admission criteria and nursing curriculum over time (Crow et al., 2004; Daley et al., 2003; McGahee et al., 2010). Seldomridge and DiBartolo (2004) raised concerns about multicollinearity issues with several predictor variables,

such as grades in nursing courses and GPAs, and the number of C grades and GPAs, which were all highly correlated with one another. When variables were highly correlated, the computations required will be compromised without proper statistical adjustments (Polit & Beck, 2012).

Five out of the seven qualitative research studies were clear in describing their procedures and results (Atemafac, 2014; Eddy & Epeneter, 2002; McFarquhar, 2006; Poorman & Webb, 2000; Silva, 2014); however, two did not. Vance & Davidhizar (1997) did not properly identify the purpose of the study, the sample size, data collection method, or the findings. The results in Griffiths et al. (2004) were all reported together without any distinctions, which makes it difficult to discern whether the participants experienced a few or all of the findings. In addition, Griffiths et al. (2004) utilized a survey instrument to gain insight into GNs' perspectives about academic and practical factors that may have influenced their passing or failing the NCLEX-RN. However, the instrument did not go through a rigorous validation process and the authors recommended that in the future it include more open-ended questions for the GNs to answer.

All seven of the intervention studies initiated during nursing school described how each institution implemented the interventions thoroughly. However, five out of seven interventions did not identify the number of participants in their studies (Anderson, 2007; Davenport, 2007; Herrman & Johnson, 2009; Johnson, 2009; Stark et al., 2002). For the majority of these interventions, the authors also did not describe any results from the interventions that were implemented (Anderson, 2007; Davenport, 2007; Herrman & Johnson, 2009; Johnson, 2009; Sisford & McDaniel, 2007; Stark et al., 2002). This lack of results limits the applicability to other settings and whether other schools of nursing

might choose to replicate any of the interventions.

Gaps in the Literature

While there has been a sizeable amount of literature related to academic predictors of NCLEX-RN success, gaps in the literature remain. One gap is the limited number of research studies that identified GNs' experiences after they failed the NCLEX-RN. There was one research study that focused on the experiences of RNs who failed the NCLEX-RN after multiple attempts. Additionally, there have been limited studies conducted on nonacademic predictors such as self-esteem, self-efficacy, test anxiety, and family responsibilities and demands related to NCLEX-RN success. These types of studies would offer nurse educators, administrators, and fellow nurses insights about the experiences of GNs who were not initially successful on the NCLEX-RN.

Another gap in the literature is accurately predicting NCLEX-RN failure (Haas et al., 2004, Harding, 2010, McGahee et al., 2010, Seldomridge & DiBartolo, 2004, Spurlock & Hunt, 2008; Yoho et al., 2007; Vandenhouten, 2008; Waterhouse & Beeman, 2003). Two of the authors indicated that this gap is related to the small percentage of GNs who were failing the NCLEX-RN compared to the number of GNs who were successful (McGahee et al., 2010, Seldomridge & DiBartolo, 2004). However, when 57 out of 339 (16.9%) participants in both studies failed the NCLEX-RN, it appears to be a large enough sample to possibly begin to identify factors that could predict failure (see Table 7).

Table 7

Numbers Representing the Passing and Failing on the NCLEX-RN

Authors	Total number of participants	Passed the NCLEX-RN on the first attempt	Failed the NCLEX-RN
McGahee (2010)	153	132 (86.3%)	21 (13.7%)
Seldomridge (2004)	186	150 (80.6%)	36 (19.4%)

Note. Adapted from "NCLEX-RN Success: Are There Predictors?" by T. McGahee, L. Grambling, & T. Reid, 2010, *Southern Online Journal of Nursing Research*, 10, p. 219. Copyright 2010 by the Southern Online Journal of Nursing Research. Adapted from "Can Success and Failure be Predicted for Baccalaureate Graduates on the Computerized NCLEX-RN?" by L. Seldomridge & M. DiBartolo, 2004, *Journal of Professional Nursing*, 20, p. 364. Copyright 2004 by Elsevier Inc.

Every year, there were approximately 90,000-160,000 GNs who pass the NCLEX-RN on the first attempt (see Table 8). NCSBN reports statistics regarding those individuals who pass or fail on the first attempt and repeaters. Repeaters were individuals who have taken the NCLEX-RN more than once and the data is difficult to access, because the repeaters were lumped together. Over the last decade, approximately 10% to 18% percent of GNs were unsuccessful on the NCLEX-RN on the first attempt (NCSBN, 1994-2015). In 2014, the highest number of GNs failed the NCLEX-RN compared to previous years, likely due to the increased difficulty of the NCLEX-RN.

Commercial tests have been utilized in schools of nursing throughout the United States and continue to be applied widely in the attempt to meet the current national NCLEX-RN passing standards. However, the use of commercial tests within schools of nursing can be costly to the students and/or the schools themselves. Further research about the benefits and drawbacks of using commercial tests and NCLEX-RN success is necessary to determine the risk/benefit ratio.

Table 8

NCLEX-RN Pass Rates 2005-2015

Year	Number of candidates who passed on first attempt (n) (%)	Number of candidates who failed on first attempt (n) (%)	Total number of candidates who took the NCLEX-RN (total n)
2005	86,590 (87.3%)	12,597 (12.7%)	99,187
2006	97,538 (88.1%)	13,175 (11.9%)	110,713
2007	102,240 (85.5%)	17,340 (14.5%)	119,580
2008	111,948 (86.7%)	17,173 (13.3%)	129,121
2009	119,109 (88.42%)	15,599 (11.58%)	134,708
2010	123,151 (87.41%)	17,738 (12.59%)	140,889
2011	127,074 (87.89%)	17,509 (12.11%)	144,583
2012	135,714 (90.34%)	14,512 (9.66%)	150,226
2013	128,793 (83.04%)	26,305 (16.96%)	155,098
2014	128,699 (81.78%)	28,673 (18.22%)	157,372
2015	133,458 (84.53%)	24,424 (15.47%)	157,882
Total	1,294,314 (86.3%)	205,045 (13.7%)	1,499,359

Note. Adapted from “NCLEX Statistics from NCSBN” retrieved from <https://www.ncsbn.org/1232.htm>. Copyright (1994-2015) by National Council State Boards of Nursing (NCSBN).

Study Assumptions

For this study, the following assumptions were made:

1. Schools of nursing strive to obtain above national average pass rates on the NCLEX-RN by their graduates.
2. There is a lack of research in relation to individuals’ experiences after not initially being successful on the NCLEX-RN.
3. Individuals will be truthful about their experiences related to not initially being

successful, then subsequently passing, the NCLEX-RN.

4. Individuals who took the NCLEX-RN within the last 3 years will adequately remember their experiences related to the NCLEX-RN.
5. The NCLEX-RN examination processes have remained the same throughout the study.

Research Question

The purpose of this study is to describe experiences of registered nurses who were not initially successful on the NCLEX-RN, then subsequently passed, to promote future success. The overall research question is: “What do RNs report about their experiences of not initially being successful on the NCLEX-RN, then subsequently passing?” It was my goal to learn from the experiences of RNs who have taken the NCLEX-RN more than once and describe the findings. This study may provide insights for nurse educators, administrators, fellow nurses, and others healthcare professionals by identifying strategies from the participants’ experiences that could potentially increase NCLEX-RN pass rates.

Chapter Two Summary

In this chapter, the philosophical underpinnings, theoretical framework, and review of literature have been described. The philosophical underpinning and the theoretical framework chosen for this research study were constructivism and PCT, respectively. The aims of inquiry when using constructivism and PCT helps individuals to make sense of their experiences through construction and reconstruction of their life events. The review of literature focused on academic and nonacademic predictors,

commercial tests, and strategies to help nursing students prior to taking the NCLEX-RN. This study addressed a major gap in the research by analyzing the perspectives of the participants. In the process, I also searched for additional strategies included in the participants' data that could be used to promote success and coping for individuals taking NCLEX-RN.

CHAPTER THREE

RESEARCH DESIGN AND METHODS

In the previous chapters, a thorough review of literature was conducted and gaps related to individuals' experiences and predicting failure on the NCLEX-RN have been identified. I chose an exploratory, descriptive, narrative method design for this study to be able to learn from individuals about their experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. In addition, the methods for this research study, along with data analysis strategies, are explored in this chapter.

Exploratory, Descriptive, Narrative Method Design

In qualitative research, narrative method is often used to allow individuals' stories to be told to illuminate real life situations. Through systematic qualitative analyses and synthesis of the stories, deeper, richer meanings can be identified. Literary theorists, philosophers, historians, theologians, psychologists, anthropologists, sociologists, educators, and nurse researchers have used narrative methods (McCance, McKenna, & Boore, 2001). Nurse researchers have used narrative method to gain insights into human responses to health events and life transitions.

Narrative method is "a veritable garden of cross-disciplinary hybrids" (Riessman, 2008). According to Owens (2007), narrative method is a combination of ethnographic approaches, counseling therapy, phenomenology, and social constructionism. In narrative method, ethnographic approaches, such as participant observation and field notes, can be used to assist with gaining insights regarding individuals' experiences.

According to Bold (2012), "narrative method is central to human experience and

existence” (p. 17). This method allows individuals an opportunity to share experiences related to a particular time in their lives. Owens (2007) stated that narrative is defined as both a method and a story. The method is the process by which the researcher collects and translates the stories. The story is provided by individuals describing their own and others’ experiences about their lives at particular times (Owens, 2007). It is important that, within narrative method, the context is clarified to elicit maximal understanding.

When using narrative method, the collection of participants’ stories reveals the meanings, values, and beliefs of the time and place in which they lived or are currently living. Furthermore, narrative method can serve an important function of amplifying voices of those who would not normally be heard (Owens, 2007). Individuals may tell stories about situations that have led to critical events. Critical events are those that have impacted individuals’ performance in their personal or professional roles, such as becoming RNs (Webster & Mertova, 2007). In addition, critical events typically impact the storytellers, but are not identified as critical until after the events have happened. The critical nature of the events becomes more evident to participants as the stories are being told. Webster and Mertova (2007) stated that critical events are not based solely on the events themselves, but on the effects the events has on individuals.

As the researcher using narrative method, I am able to explore critical events in the lives of individuals through interviewing. The objective of interviewing is to have individuals share their stories related to those critical events. When interviewing individuals, it is important to use open-ended questions, with prompts available, to facilitate additional sharing. Prompting is reformulating the original response to gain further clarification and elaboration of the subject matter (Owens, 2007). It is also

essential to encourage reflection and recollection of the critical event (Webster & Mertova, 2007). The use of narrative method in this research study provided GNs the opportunity to share their experiences related to not initially being successful on the NCLEX-RN, then subsequently passing and becoming RNs.

Recruitment Procedure

Institutional Review Board (IRB) approval for the protection of human subjects was obtained from Marquette University (Appendix B). I used the consent template, offered by Marquette University Office of Research Compliance, which was adjusted to represent the researcher's specific requirements when developing the informed consent form to be used for the study (Appendix C).

Following IRB approval, a recruitment advertisement was sent to *Nursing Matters* (Appendix D). The recruitment advertisement described the purpose of the study, eligibility criteria, approximately how long the interview would last and that it would be audiotaped, the participant's incentive, and my contact information. Participants were recruited primarily from word of mouth. I also emailed the recruitment advertisement to colleagues, coworkers, and former students, requesting that they distribute the information to other nurses to locate anyone who was not initially successful but subsequently passed the NCLEX-RN. Recruitment snowballed from these types of referrals. Participants contacted me if they were interested in the study. I proceeded to ask the participants a few questions related to the inclusion criteria. If the participant fit the inclusion criteria, a mutually agreeable date, time, and place for the interview was established. I scheduled the interview within one to two weeks after the phone or email conversation occurred. In addition, I was aware that participants might forget about or

decide not to participate in the study. Two days prior to the interview, I called or emailed, based on the participant's preference, to confirm the appointment time and location. The interviews ranged from 25 to 108 minutes in length; each participant determined the length of time by telling her/his own story until indicating it was complete.

Sample Recruitment

A purposive sample was used for sample recruitment. In addition, I used snowball sampling by asking participants to refer friends, colleagues, and/or acquaintances to be part of the study. Participants were RNs who were not initially successful on the NCLEX-RN, then subsequently passed. Inclusion criteria included: (a) adults who is at least 18 years of age, (b) currently registered nurses who were not initially successful on the NCLEX-RN then subsequently passed within the last three years, after any number of unsuccessful attempts prior to receiving a RN license, and (c) proficient in speaking and reading English. Exclusion criteria included: (a) individuals who had not taken the NCLEX-RN, (b) RNs who passed the NCLEX-RN on the first attempt, and (c) a lack of proficiency in English that would prevent informed consent or completion of the interview.

Memories related to emotional events can last long over the course of many years and be recalled more accurately than neutral events (Barclay & Wellman, 1986; Belli, 1998; Levine & Safer, 2002). The NCLEX-RN experience are emotional or critical events for individuals, particularly if they are unsuccessful, which may then enhance their recall. In addition, if an individual has to make several major changes rapidly, such as a demotion at work and/or a need to pay student loans unexpectedly, these consequences

can contribute to the meaningfulness and memory of a critical event. The final stressor is that GNs cannot practice nursing without passing the licensure exam.

Barclay and Wellman (1986) conducted a study with three participants who tracked three memorable events Monday thru Friday on note cards. Participants were interviewed after completing four months of tracking their memorable events at one, three, six, 12, and 28 months. At 28 months individuals were able to recall 79% of their previous memorable events accurately (Barclay and Wellman, 1986). Thus, I chose to have one of the inclusion criteria to include RNs who were not initially successful on the NCLEX-RN within the last 3 years.

The sample for this study was recruited primarily from word of mouth. I placed an article in *Nursing Matters* [a Wisconsin-based nursing newsletter] and had one response from a RN who graduated in 1991 and did not meet the inclusion criteria for the study. In addition, I sent emails on two separate occasions in the summer of data collection to the local chapters of minority-affiliated nursing associations in an attempt to enhance diversity of the sample. Although I contacted them and offered to come to a meeting to explain the study, I received no responses; they may have had reduced programming during that time frame.

I used the support of others individuals to assist with the recruitment process. I talked about the study outside healthcare delivery systems to colleagues, friends, acquaintances, and anyone else who might know RNs who were not initially successful on the NCLEX-RN within three years after graduation from nursing school. Gledhill, Abbey, and Schweitzer (2008) found that word of mouth recruited the majority of the participants for their study involving older adults and sexuality. However, I was aware

that word of mouth was dependent on RNs having shared that they were not initially successful on the NCLEX-RN with other individuals. Yet, word of mouth is an easy, inexpensive, low effort recruitment strategy that could yield participants for this research study (Gledhill et al., 2008). All of the participants for this study were recruited by word of mouth.

Sample Demographics

Age, race/ethnicity, and marital status. In this study, the mean age of the fifteen participants was 26.8 years old with the majority (75%) of the participants in their 20s when they first took the NCLEX-RN. Thirteen of the participants were female and two were male. Regarding race and ethnicity, two participants self-identified as Asian, two as Hispanic or Latino, and eleven as white. Marital status varied; twelve of the participants were never married, two participants were married, and one participant was divorced.

Educational preparation and employment. The participants were asked what type of nursing program from which they graduated. Two of the participants had bachelor's degrees in fields other nursing, but also completed nursing degrees. The remaining 13 graduated from Bachelor's of Science nursing programs, which differed from the national and Wisconsin demographic samples as shown in Table 10. Twelve of the participants at the time of the interview were currently employed at an acute care hospital, and three worked in various community based and elderly settings. At the time of the interview, only three of the 15 participants stated they were still employed at the same facility as they were when they first took their licensure examination.

Number of NCLEX-RN attempts, GPAs, and NCLEX-RN preparation. The participants self-reported the number of times they took the NCLEX-RN before successful passing. The majority of participants (10, or 66.7%) took the NCLEX-RN twice and were successful on their second attempts. The remaining five (33.3%) of the participants were successful on the NCLEX-RN on their third or subsequent attempts.

The self-reported GPAs ranged from 2.9 to 3.8 with a mean GPA of 3.22. The participants were asked to report what commercial tests they used to help them prepare for the NCLEX-RN, if any. The commercial test could have been used prior to, during nursing school, or after being unsuccessful on the NCLEX-RN (Table 9). The majority (86.7%) of the participants used more than one commercial test to help them prepare for the NCLEX-RN.

Table 9

Commercial Tests Used to Prepare for the NCLEX-RN

Commercial tests	Study participants ($n = 15$)
ATI	6
HESI	12
Hurst	9
Kaplan	9
Mosby	0
NLN	1
Total (6 tests)	37*

Note. All fifteen participants used at least one commercial test to prepare them for the NCLEX-RN.

*Total would exceed 100%, because 86.7% of the participants used more than one commercial test to prepare for the NCLEX-RN. ATI = Assessment Technologies Institute; HESI = Health Education Systems Inc.; NLN = National League for Nursing.

Sample Description Summary

I interviewed a total of 15 participants for this study. Each participant described his/her experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. The participants varied in relation to gender, race/ethnicity, the number of times they took the NCLEX-RN, employment, and commercial tests they took prior to the NCLEX-RN. Based on the 2008 national sample survey for RNs and 2014 Wisconsin RN survey report, which are the most recent available data, the participants for this study were similar to the national and Wisconsin demographic samples except for the highest level of education they completed. The study sample demonstrates greater diversity in gender and race/ethnicity compared to nationally and Wisconsin demographics, as shown in Table 10. As for education level, the majority of the participant's highest level of completion was BSNs, which is double the number of BSNs nationally and in Wisconsin. The intent was not to have an exactly representative sample in comparison to the national or state data, but to interview participants who were willing to talk about their experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. Therefore, the sample needed to conduct the study was obtained.

Table 10

Gender, Race/Ethnicity, and Education Level related to Percentage of Registered Nurses

Variable	Study Participants (<i>n</i> = 15)	Nationally (2008 data)	Wisconsin (2014 data)
Gender			
Male	13.3%	6.6%	6.9%
Female	86.7%	93.4%	93.1%
Ethnicity			
Asian	13.3%	5.8%	1.4%
Hispanic or Latino	13.3%	3.6%	1.8%
White	73.4%	83.2%	95.1%
Education Level			
Diploma	0%	15.5%	7.8%
Associates Degree in Nursing	6.7%	37.2%	36.2%
Bachelors of Science in Nursing	86.7%	47.2%	44.1%

Note. Adapted from “The National Sample Survey of Registered Nurses, 2008,” by the U. S. Department of Health and Human Services Health Resources and Services Administration (2010) and the “Wisconsin 2014 RN Survey Report,” by the Wisconsin Department of Workforce Development (2014).

Adequacy of Sample Size

In qualitative research, the goal of the researcher is to adequately describe and interpret data including outliers, instead of searching for statistical averages and generalizing the findings. According to Polit and Beck (2012), there were no fixed rules related to sample size in qualitative research, rather data collection can continue until there is data saturation. Data saturation is achieved when no new information is being obtained and redundancy of the data has been documented (Polit & Beck, 2012). Sandelowski (1995) stated an adequate sample size is a matter of judgment and should be based on the intended purposes of sampling for the study. In my view, data saturation was achieved with a sample of 15 participants, based on redundancy of the data and no new information being obtained.

Setting

The setting for data collection was important to allow me to conduct interviews in a quiet, uninterrupted environment (Lichtman, 2013). The majority of the participants chose the time and place such as a coffee shop where the interviews were conducted. I wanted the participants to choose the time and place to increase their comfort levels during the interviews. When the participant was unable to identify a place for the interview, I suggested a local coffee shop or library near the participants' home that offered a private space. The location and time of the interview was mutually agreed upon between each participant and me. The participants were offered to meet at a local library, but all of them declined this offer. Fourteen of the participants agreed to be interviewed at coffee shops and one participant chose a private office space. Prior to the interviews being conducted private spaces within the coffee shops were chosen by me. Even though there were background noises during the interviews the participants were easily heard in the audio recordings to ensure accuracy during transcription. Lastly, I traveled to southeastern Wisconsin and northern Illinois to perform interviews.

Data Collection Method

Audiotaped interviews were the primary data collection method in this study. Prior to initiating the interview the written informed consent form was read through with each prospective participant. When any and all remaining questions about the study process were answered, each participant signed the informed consent form, agreeing to be in the study and to be digitally voice recorded. Participants were told prior to voice recording that at any time before or during the interview, they were free to leave without

consequences. All fifteen of the participants remained in the study and were interviewed and digitally voice recorded. Each participant was interviewed individually to capture the essence of his or her unique experiences. The participants were open and honest during the interviews and told their stories with few hesitations. I generally used prompts to ask for clarification of individuals' meanings at various points in their stories.

I informed the participants that what they said during the interviews would be kept confidential. In addition, I asked the participants to avoid using proper names during the interviews, and instead use terms such as "my aunt", "my friend," "my partner," or "my professor," as appropriate. Interview questions were open-ended with prompts used to allow the participants maximal opportunity to share their experiences related to the NCLEX-RN (Appendix E). I used verbal and nonverbal cues to facilitate the flow of the interviews. Additionally, it was important that I applied strong listening skills, was engaged in the interview, and also skilled at interpersonal interaction, so that the data collected from the interviews were rich in description of the phenomenon of interest (Rossman & Rallis, 2012). The overall research question was: "What do RNs report about their experiences of not initially being successful on the NCLEX-RN, then subsequently passing?"

Interviewing Approach

It is important to elicit meaningful and useful data in qualitative studies. I developed a sufficient rapport with each participant during the initial contact, setting up to the interview, and during the informed consent process (Lichtman, 2013). I explained to each participant my background and how I started working with individuals who were not initially successful on the NCLEX-RN, then subsequently passed.

In narrative method, interviewing is a conversation between two equals rather than a question and answer session in which the researcher develops the research questions and also steers the course of the interview (Owens, 2007). With this method, in narrative work, it is important to acknowledge that the participant is the expert about his or her NCLEX-RN experiences and that the researcher is there to learn, which may also help reducing the power imbalance between the participant and researcher.

I worked to lessen the power imbalance by allowing the participants to choose the time and location of the interview. In addition, I used an unstructured approach with prompts for the interviews. During the interviews, I allowed the participants to talk openly about their experiences related to taking the NCLEX-RN more than once. Lastly, I prompted or asked questions to clarify what a participant was saying at various points and requested additional descriptions.

During the interview process, participants at times would become more aware of their feelings about the NCLEX-RN experience and display further emotions. I remained open and sensitive to these changes (Munhall, 2012). Three of the participants did become emotional during the interview. At those points, I asked the participants if they would like to take a break or continue with the interviews. All three of the participants chose to continue with the interviews. After the interview was complete, each participant was asked to complete the demographic questionnaire (Appendix F) which all fifteen participants did. Just before each participant was leaving, he or she received a copy of the informed consent that the participant and I signed and given the gift card incentive of \$25.00 for participation. Additionally, each participant was offered a list of available mental health resources in their local areas, which was provided by me to facilitate

discussion of his or her emotional distress. At the time of the interview, none of the participants chose to accept the mental health resources list.

After each interview, I kept a reflexive journal in a Word document. I identified key statements or words that the participant spoke about during the interview. In addition, I focused on whether my physical presence, personal beliefs, knowledge of the subject matter, and responses may have influenced the participant in any way. Being reflexive in narrative method and providing reflections to the narratives were key elements to achieving ethical, rigorous, qualitative research (Bishop & Shepard, 2011). In narrative method, the researcher needs to have high levels of reflexivity and flexibility, being aware of any internal and external influences that might affect the understanding of the experiences under investigation (Hardy, Gregory, & Ramjeet, 2009; Owens, 2007). I continually examined my personal subjectivity during and after the interviews to meet standards.

A professional transcriptionist who has experience with researchers in the past maintained confidentiality while transcribing the audio recordings of the interviews. After the interviews were transcribed, I listened to each interview three times to ensure the interview was transcribed verbatim and removed participant identifiers. After each transcript was checked for accuracy and deidentified, the audio recording was erased from the recorder. The anonymous transcribed interviews are to be kept indefinitely in a locked file in the researcher's private locked office.

Data Analysis

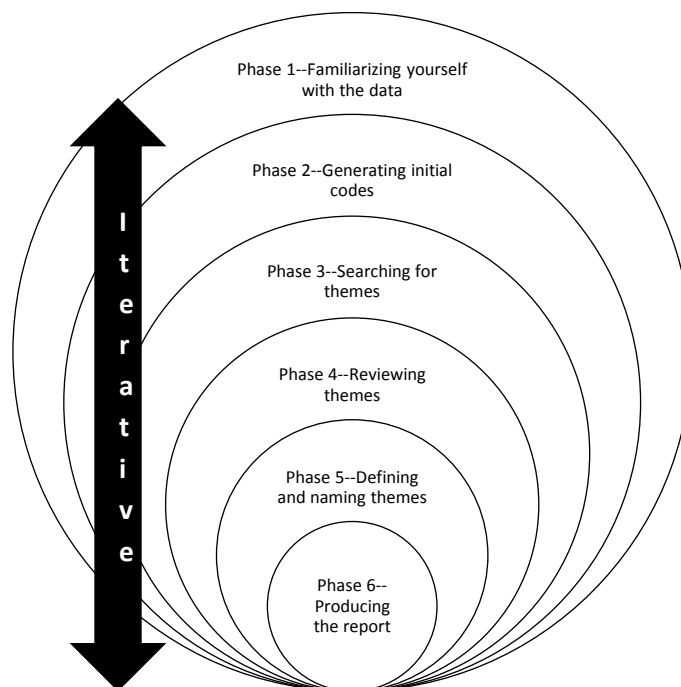
A systematic approach to data analysis enhanced the rigor of the study. Data analysis began with the first interview and continued until the end of the study.

Consistency is important with data analysis in narrative method. I not only guided the interviews and collected data, but also was a central part of interpretation of the data. To enhance rigor within the study, I wrote in a reflexive journal noting key statements or words the participants spoke about along with bracketing my thoughts, feelings, beliefs, and opinions during the interviews. Bracketing is when researchers set aside their preconceived beliefs, biases, emotions, and assumptions during data collection and analysis (Tufford & Newman, 2012).

In this reflexive journal, I pondered the six phases of thematic analysis. It was important for me to remember the different phases of thematic analysis were not a linear process, but an iterative one (Braun & Clark, 2006). An iterative process is when the researcher goes back and forth between data collection and the different phases of data analysis (Braun & Clark, 2006; Lichtman, 2013).

Braun and Clark (2006) identified six phases to thematic analysis coding which include (a) familiarizing yourself with your data, (b) generating initial codes, (c) searching for themes, (d) reviewing themes, (e) defining and naming themes, and (f) producing the report. See Figure 2 for a portrayal of this process.

Figure 2: Thematic Process for Data Analysis*



*Figure 2: Adapted from “Using thematic analysis in psychology,” by Braun & Clark, 2006, *Qualitative Research in Psychology*, 3, p. 16.

The first phase of familiarization occurs with reading and rereading the data along with recording my initial thoughts, opinions, and ideas in a reflexive journal. It was imperative to become familiar with the data through immersion by reading and rereading the transcripts. I reviewed all the transcripts carefully before and during coding the data.

After reviewing the transcripts several times, I decided to manually code and developed a coding template with different color pens. The red pen reflected when participants talked about the NCLEX-RN, the light green pen reflected when participants were getting or giving advice, the dark green pen reflected when participants received support from family or friends, the dark blue pen reflected strategies, study resources, preparation for the NCLEX-RN, the purple pen reflected the pressures participants felt prior to or during the NCLEX-RN, and the light blue pen reflected participants’ feelings

and thoughts prior to, after being unsuccessful, and after being successful on the NCLEX-RN. After manually coding with the coding template, I reread the transcripts and wrote words or phrases in the side margins reflecting on what the participants were saying within the transcripts.

The second phase involved generating initial codes, which consists of being systematic with coding throughout the entire data set. I actively searched for repeated words and phrases within the data by taking notes and identifying codes by using the coding template (Braun & Clark, 2006). It was imperative that I systematically went through the data giving full and equal attention to each aspect (Braun & Clark, 2006). This allowed me to identify data points that formed patterns across different interviews and those that were outliers. I wrote down issues, thoughts, and concerns regarding generating initial codes in my reflexive journal.

After coming up with initial codes through manually coding, I started to use NVivo 10TM to electronically code the data. I uploaded all fifteen deidentified transcripts into NVivo 10TM. Afterwards, I did a word frequency query to identify any other words that frequently appeared throughout the transcripts that I may have overlooked with manually coding. Afterwards, I did a text search using the following words pressures, devastated, and NCLEX-RN. I chose these words because they were frequently stated throughout the transcripts.

The third phase of data analysis included collating codes into potential themes by gathering relevant data. I used NVivo 10TM to reexamine the codes and compile generic themes. During this process, I began to identify the relationships between the codes, themes, and sub-themes (Braun & Clark, 2006). My thoughts and decisions concerning

the interpretations of the data were included in the reflexive journal. During this phase, two of the initial themes became main themes and I realized that two of the themes needed to be reworked. I scrutinized the data excerpts under each theme before altering or adjusting any of them. I chose to reconstruct two of the themes along with adding new data excerpts. In addition, I discovered that two of the themes identified did not truly represent the data found within the transcripts, I further reflected on them. I realized that I needed greater clarity, so I consciously used bracketing to identify and limit the influence of my preconceived beliefs. After reflecting on previous codes found in phase two I continually referred back to the transcripts to make sure the data from the transcripts represented the themes. The reflexive journal was a benefit when clarifying and bracketing my own perspectives while I adequately examined those words expressed by participants during data analysis.

The fourth phase involved reviewing themes, which was done by checking them against coded excerpts and the entire data set. Braun and Clark (2006) stressed that a theme should clearly have distinguishable distinctions from other themes. It was important to review all the excerpts under each theme, ensuring there was a coherent pattern. I conducted a thorough review of the themes and data excerpts under each theme. However, several of the sub-themes needed work because the sub-themes did not represent what the participants were saying. At this point, I reread the transcripts and reworded the sub-themes. After rewording the sub-themes, I identified new data excerpts to adequately classify the sub-themes. Lastly, I reread the transcripts to identify themes or sub-themes that were missed earlier. I did not identify any new themes or sub-themes.

The second level of the fourth phase included consideration of the validity of individual themes in relation to all of the data. I reviewed all of the previous data excerpts that were placed under each theme and sub-theme and identified those data excerpts that best fit. If the data excerpt did not fit, then I reworked it. After completing this step, I reread the transcripts to ensure that the themes and sub-themes represented the entire data set.

The fifth phase involved defining and naming each theme, which I did by analyzing and reevaluating all of the excerpts under each theme, organizing them in a coherent manner, and renaming or redefining any to improve clarity. In this phase, it was important to describe how each theme answered the overall research question, which I did in my reflexive journal. I clearly defined the themes by describing each within a couple of sentences in the reflexive journal (Braun & Clark, 2006).

The sixth phase was producing the report, which included themes, sub-themes, and data excerpts, along with a concise, accurate, and logical story about the data. In this phase, I reviewed whether the report provided sufficient evidence about how the data represented each theme (Braun & Clark, 2006). In the end, the themes and sub-themes from the participants were used to reconstruct their stories in a meaningful, comprehensive manner. It was important for me to continue to reflect on the data analysis process in the reflexive journal to gain additional insights that were pertinent to the themes. At the conclusion of the study, I also plan to send those participants who provided re-contact information a summary of the research findings (Appendix C), so they can see the results in relationship to the entire study.

Methodological Rigor

Validity and reliability in narrative research cannot be judged based on the definitions used in quantitative research. For this reason, I chose to use qualitative criteria and terms to describe the validity and reliability, which are summarized in Table 11. The terms I used are: credibility, transferability, dependability, and confirmability.

Credibility is similar to internal validity and is defined as the degree that the data, data analysis, and findings were accurate and trustworthy (McMillan & Wergin, 2010). To address credibility issues, I created field notes identifying the procedures and processes in a clear and concise manner to prove ‘trackable variance’ in a reflexive journal. I share these selectively to emphasize the culmination of the results. For instance, after each interview I wrote down key words that the participant stated that stood out to me. As I conducted more interviews, I referred back to these key words to begin to identify similarities and differences. Additionally, I identified and tracked my biases, opinions, hunches, analytic ideas, and insights in the reflexive journal stored on my password protected computer, adding to and reviewing it regularly to strengthen the study.

To further enhance credibility, I invited three coders to read through the same three transcripts that I had selected as particularly informative. The coders were: (a) a RN qualitative research expert, (b) a hospital nursing director, and (c) a staff RN who all had passed NCLEX-RN on the first attempt. The RN qualitative research expert has had past experience with coding qualitative data. The hospital nursing director and staff RN did not have any specialized training in coding qualitative data. They were chosen because they have worked with individuals who were unsuccessful on the NCLEX-RN.

For all three of the coders, I wanted them to identify words, phrases, or statements that caught their attention while reading the transcripts.

The three coders worked independently and met with me individually. Prior to the individual meetings, I did not inform the coders of the potential themes or sub-themes that I had identified during data analysis. The coders were asked three questions: (a) what did you learn from the three participants' transcripts; (b) what are your thoughts, feelings, and beliefs about the participants' experiences related to not initially being successful on the NCLEX-RN, then subsequently passing; and (c) suggestions or thoughts for future assistance with individuals who were unsuccessful on the NCLEX-RN. I took notes during the meeting with each coder and transcribed the notes after these meetings. Each coder confirmed what I was learning from the participants and also highlighted information that they found to be particularly relevant. The RN qualitative researcher expert emphasized that the participants used self-talk to help them get through not initially being successful on the NCLEX-RN. The hospital director noted that the participants clearly articulated the stigma of being seen as an incompetent nurse. The staff RN commented that all of three of the participants did not seek help until after they were not initially successful on the NCLEX-RN. She stated that the participants expressed that they did not want to disappoint other individuals or themselves, but that they knew they could not move forward until they passed. After transcription, I identified the themes or sub-themes that coincided with data analysis conducted by me. Credibility was achieved because each coder independently commented on all four of the main themes.

Transferability is similar to external validity and is the extent to which the

findings can be applied to other groups of individuals (Petty, Thomson, & Stew, 2012). I described the demographics of the participants in the study, including gender, age, race/ethnicity, marital status, type of nursing program from which they graduated, highest degree completed, any college degrees in other fields, current employment status, whether the place of employment was the same as when they initially took the NCLEX-RN, number of attempts on the NCLEX-RN, self-reported cumulative GPA, and commercial tests taken in preparation, so others can also judge the applicability of the data to other groups of GNs who may be taking the licensure examination. I provided sufficient details about the participants to assist with transferability. Ultimately, it was my decision about the demographic information gathered, so that the results would be consistent with the population I was studying. All of the participants provided relevant data that was useful in the final reporting.

Dependability is related to reliability and is defined as the extent to which the study can be repeated (Petty et al., 2012). To address issues of reliability, I completed field notes regarding the procedures and processes during data collection and analysis in a reflexive journal. Although no two people would likely obtain identical results from the same data, the processes I used were all documented and are able to be tracked.

Confirmability is the extent to which the findings were a product of the data analysis and not biases of the researcher (Petty et al., 2012). I established confirmability by identifying my biases and opinions in a reflexive journal related to the subject matter prior to, during the coding of the data, and after meeting with the three other coders. My biases were also questioned by my three-person dissertation committee and I worked to address and clarify any biases the members noted. Ultimately, my well-scrutinized work

is the best possible representation of the data I collected, through the use of many strategies I implemented to assure trustworthiness of the study and findings.

Table 11

Criteria for Quality in Qualitative Research—Establishing Trustworthiness

Criteria	Implementation	Evaluation
Credibility (truth value)	<ul style="list-style-type: none"> • Reflexive journal • Use of coders 	<ul style="list-style-type: none"> • Identify biases, opinions, hunches, analytic ideas, and insights • Invite three coders individually: (a) a RN qualitative research expert; (b) a hospital nursing director; and (c) a staff RN who all passed NCLEX-RN on the first attempt, to read over the same three transcripts and examine the data, & provide their independent feedback
Transferability (applicability, fittingness)	<ul style="list-style-type: none"> • Purposive/snowballing sampling • Demographic questions completed at the interview 	<ul style="list-style-type: none"> • Recruit participants who were initially not successful on the NCLEX-RN then passed • Track demographics of the participants in the study, such as gender, age, race/ethnicity, married, and highest degree completed
Dependability (consistency, auditability)	<ul style="list-style-type: none"> • Field notes of procedures and processes • Reflexive journal 	<ul style="list-style-type: none"> • Identify the procedures and processes in a clear and concise manner to prove ‘trackable variance’ • See credibility evaluation, above
Confirmability	<ul style="list-style-type: none"> • Field notes of data analysis processes • Reflexive journal • Use of coders 	<ul style="list-style-type: none"> • See dependability evaluation, above • See credibility evaluation, above • See credibility evaluation, above

Note. Adapted from “Ready for a Paradigm Shift? Part 2: Introducing Qualitative Methodologies and Methods” by N. Petty, O. Thomson, & G. Stew, 2012, *Manual Therapy*, 17, p. 382. Copyright 2012 by Elsevier Inc.

Study Limitations

A potential limitation to this research study was the ability of individuals to accurately recall their experiences related to the NCLEX-RN. Levine and Safer (2002) stated that emotions were partially reconstructed based on individuals' current feelings. Those individuals who coped successfully with their NCLEX-RN experience tend to base their past emotions on their current emotional state. If I had chosen to interview those who had only been unsuccessful on their licensure examinations, they would likely still have been actively coping with their NCLEX-RN experiences, which might result in a tendency to exaggerate their current emotional state (Levine & Safer, 2002). I decided that I wanted participants to be able to explain the full range of their experiences, from the initial lack of success to becoming licensed by passing the examination. I also wanted to identify any advice that they might include in their stories that could help other GNs who would be taking the NCLEX-RN. I was aware that participants may not remember every detail of their NCLEX-RN experiences with accuracy; however, my focus was on what each individual's self-report included.

One of the major criticisms of narrative method can be the lack of transferability because the participants' stories reflect specific events and times in their life. Thomas and Magilvy (2011) stated that to assist with transferability a researcher needed to describe the participant's demographic data. In addition, Hardy et al. (2009) believed that transferability can be overcome by choosing a transparent and theoretically based approach to analysis, such as Braun's and Clark's (2006) thematic analysis.

My relative inexperience as a researcher can be considered a limitation, especially if the researcher does not properly interview participants. In narrative method, during the

interview process, an inexperienced researcher can encounter common problems such as failing to suggest prompts which could contribute to loss of some of the richness and thickness of the descriptions and meaning of the participant's story (Munhall, 2012). Participants also may feel intimidated or try to please me. During this study, I remained open-minded and avoided any suggestion of hierarchy between me and the participant. However, my professional nursing background as a practicing nurse and educator, while not experienced in formal qualitative research techniques, did include extensive open-ended interviewing techniques and active listening with clients and nursing students. In addition, I have personal experience preparing individuals prior to the NCLEX-RN and working with individuals who were not initially successful to help them become successful.

Another limitation could be finding RNs who were initially successful on the NCLEX-RN who also wanted to share their experiences related to the NCLEX-RN. I was aware that there was a lot of knowledge that could be gained from these RNs, but their experiences were not relevant to the specific purpose of this study. Therefore, I promoted the study by word-of-mouth and emphasizing to many nurses I encountered that I was specifically seeking RNs who were not initially successful on the NCLEX-RN, to increase the chance of finding eligible participants. After a period of time, I was able to find and interview 15 participants for this study.

Human Subjects Protection

There was minimal risk for participants in this study. At times, participants may be initially fearful of being digitally voice recorded, however during the informed consent process, I showed how small the recorder was and how it worked. I was aware

that some RNs were embarrassed about not initially being successful on the NCLEX-RN and did not want to participate in the study. In addition, those who decided to participate in this study may have been concerned that others might learn that they were not initially successful on the NCLEX-RN. Participants were reassured that all identifying data would be removed from the interview transcripts before analysis and all information revealed in this study would protect their confidentiality.

To ensure confidentiality, all individual data were assigned an arbitrary number rather than the participant's name or other identifying details. With publication of the participants' names and identifiable details never appear included. Paper documents, including demographic questionnaires and consents which have identifiable data on them, are stored in a locked file in my private locked office that only I can access, in case they were needed throughout the study. After being transcribed by a professional transcriptionist and checked thoroughly for accuracy while I removed any identifying information, I deleted the audio recordings from the recorder. Deidentified transcriptions are being kept on my computer indefinitely. Any hard copies of the anonymous transcribed interviews will be kept for seven years in a locked file in my private locked office and then shredded. Research records may be inspected by Marquette University Institutional Review Board or its designees and (as allowable by law) state and federal agencies.

Prior to the three coders reading the same three transcripts, each coder completed the training in human subjects required by Marquette University. The three coders completed the National Institutes of Health (NIH) online human subjects assurance program at <http://phrp.nihtraining.com/users/login.php>. Each coder gave me a copy of

the training certificate prior to reading the transcripts. In addition, copies of the training certificates were forwarded to the Office of Research Compliance at Marquette University.

Chapter Three Summary

In this chapter, the research design, sample size, setting, data collection, analysis approaches, and the procedures were described. Narrative method of qualitative research was the methodological choice for this study to obtain rich data about the phenomenon of interest. The six phases of thematic data analysis of narratives were explained, along with the processes used to assure rigor. Lastly, potential limitations of the study and a description of the protection of human subjects are provided.

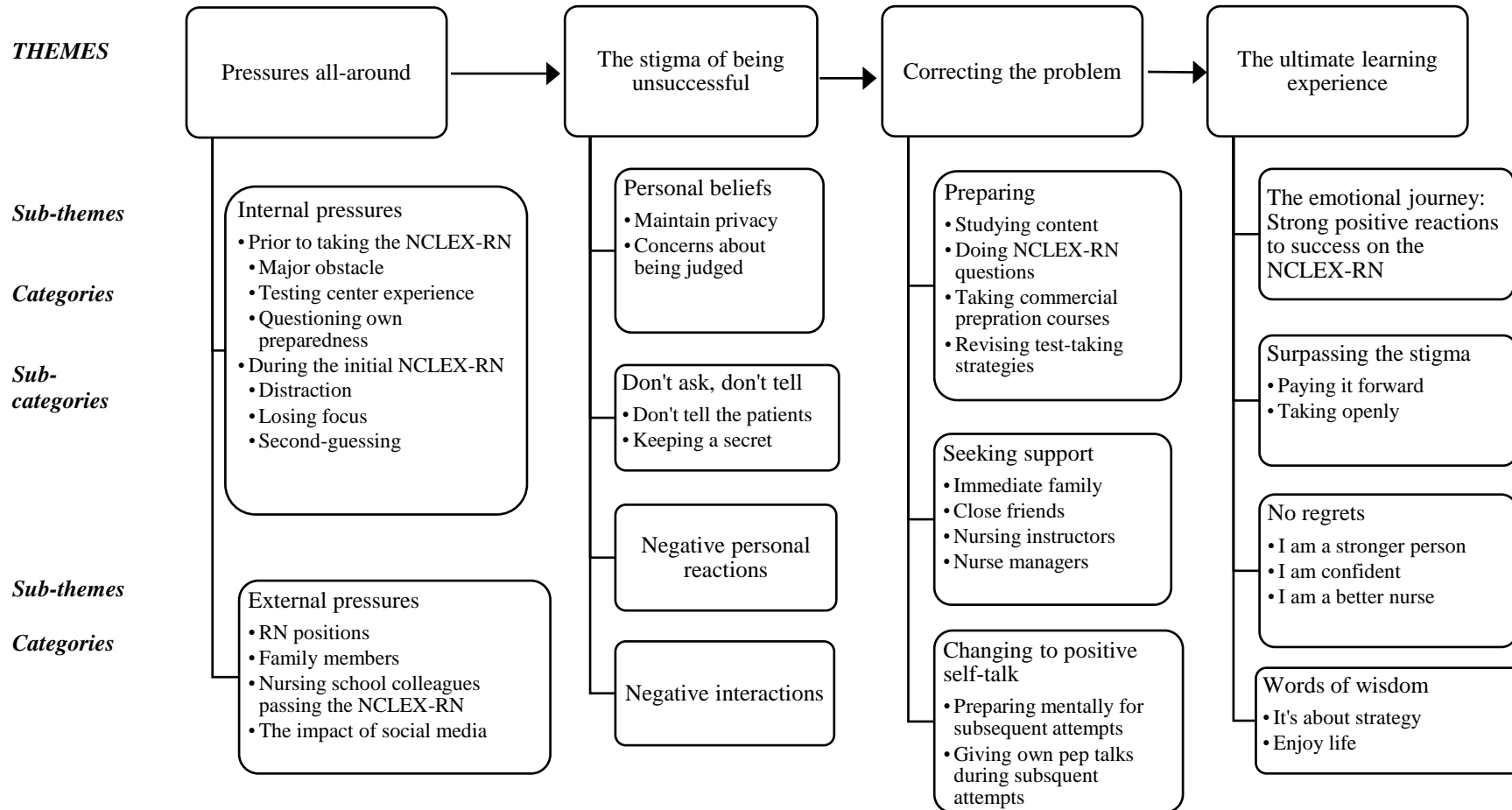
CHAPTER FOUR

RESULTS

In this chapter, the 15 participants' findings related to their experiences of not initially being successful on the NCLEX-RN, then subsequently passing, are discussed in detail. In my opinion, the participants were open and honest about their experiences related to taking the NCLEX-RN more than once. The participants' openness was facilitated by my interviewing style. It may have helped that, at the time of the interviews, all of the participants were RNs and were able to reflect on how their experiences related to the NCLEX-RN had affected their lives in different ways. There were four main themes that I identified: (a) *pressures all-around*, (b) *the stigma of being unsuccessful*, (c) *correcting the problem*, and (d) *the ultimate learning experience*. The themes, sub-themes, categories, and subcategories are summarized in Figure 3 for ease of reference. All are described with exemplar quotes from the participants in greater detail throughout Chapter 4. I used quotations from all of the participants during the course of reporting the findings. I tracked them initially to assure a thorough representation of the findings. I used a range of 4-10 quotes from each participant, with an average of 5.3 per participant.

Figure 3

Themes, Sub-themes, Categories, and Subcategories.



Introduction to the Presentation of Findings

I strategically organized the themes in a particular order based on the topics the participants spoke about during their interviews, which was often chronological. Interview questions were open-ended with prompts to allow the participants to speak freely about their experiences with not initially being successful on the NCLEX-RN then subsequently passing. The participants generally started the interviews by talking about how they prepared and took the NCLEX-RN the first time. Afterwards, the participants talked about their feelings and thoughts related to not initially being successful on the NCLEX-RN. The participants further discussed how they prepared to retake the licensure exam. Lastly, the participants commented on how appreciative they were for not initially being successful on the NCLEX-RN. Overall, the four major themes along with sub-themes, categories, and subcategories, reflected the experiences of the participants taking the NCLEX-RN more than once.

The first major theme, *pressures all-around*, reflected how participants responded to those perceived internal and external pressures prior to and/or during the NCLEX-RN on the first attempt. The second major theme, *the stigma of being unsuccessful*, reflected the participants' emotions and beliefs after not initially being successful on the NCLEX-RN. The third major theme, *correcting the problem*, reflected the processes the participants conducted prior to retaking the NCLEX-RN, including positive self-talk as well as support they sought. The last major theme, *the ultimate learning experience*, consisted of the participants' reflections about their experiences after successfully passing the NCLEX-RN and becoming RNs.

Theme 1: Pressures All-Around

The theme, *pressures all-around*, reflected how participants responded to the internal and external pressures they felt prior to and/or during the NCLEX-RN on the first attempt. Two sub-themes emerged: (a) *internal pressures* and (b) *external pressures*.

The participants described in detail their thoughts, feelings, and beliefs about the internal and external pressures that affected their first time experience on the NCLEX-RN.

Internal pressures. The sub-theme, *internal pressures*, included the participants' own thoughts about their knowledge base, abilities, confidence, self-esteem, and anxiety levels prior to and/or during the NCLEX-RN. The sub-theme, *internal pressures*, has two categories: (a) *prior to taking the NCLEX-RN the first time* and (b) *during the initial NCLEX-RN experience*. The category, *prior to taking the NCLEX-RN the first time*, has three subcategories, which consisted of: (a) *major obstacle*, (b) *testing center experience*, and (c) *questioning own preparedness*.

Prior to taking the NCLEX-RN the first time. All fifteen participants spoke about their thoughts, feelings, and opinions prior to taking the NCLEX-RN. One of the participants gave a rich description of all of the complex concerns that were experienced the night before taking the NCLEX-RN for the first time:

The pressure I mean—of course the fear the fear of failing. Everybody should have that, that helps you be successful, but—it's really about the pressure you put on yourself. You try to do whatever you need to do to ease yourself, snack, a movie, or just a night out with your friends, whatever it takes for you to relax. That night before, you just thinking about the future, you thinking about your career. You feel like right when you pass that test it's gonna be like balloons and money falling from the sky, I mean it was great. The night before it, it feels—man, I can feel it now. You got goosebumps, because you've never done this before. Remember that, you've never done this before. You don't know what it's gonna be, robots talking to me, a bunch of nurses there looking at me, but it's crazy how that little private room is going to make you feel. It's just you and yourself and your mind and your heartbeat....Did I get the right breakfast? Did I review enough? Did I look at my content review? Do I know all my content?

Should I review cardiovascular stuff real quick? I think I don't know everything about it, but can you really remember all the content in healthcare? [#10]

Several of the participants recalled specific aspects about their thoughts and concerns prior to taking the NCLEX-RN for the first time. Among the participants who did talk about their experiences, I identified three subcategories from the category, *prior to taking the NCLEX-RN*: (a) *major obstacle*, (b) *testing center experience*, and (c) *questioning preparedness*.

Major obstacle. Two of the participants talked about how the NCLEX-RN represented a major obstacle that kept them from “doing those great things” in their lives and becoming a RN. One participant stated this exam kept her from moving forward with her professional life:

I felt this test was a huge barrier for me to move on and do those great things. It was telling me I can't do that. That's what I was thinking about going into the test which was a lot of stress. It doesn't help. [#8]

Another participant expressed her concern that she could not move forward in life. The participant was a nurse intern who practiced under a licensed RN and needed to pass the NCLEX-RN before she was able to practice on her own:

I knew I couldn't move on, I couldn't be a nurse I couldn't be practicing until I passed this exam. I felt like I had more pressure. Because I was practicing as a RN without the license if that makes sense. I was this nurse extern. I worked as a RN under someone else with me the whole time, but I did everything a RN would do. [#4]

Some of the participants expressed concern that their future employment hinged on them passing the NCLEX-RN.

Testing center experience. Four of the participants gave detailed descriptions of their thoughts and perceived experiences while at the testing center. One of the

participants remembered, prior to starting the NCLEX-RN, how she felt it was an intense process and was concerned that she may break a rule that would jeopardize whether or not she would be able to continue to take the NCLEX-RN on that particular day:

The whole process of this NCLEX, you're told it's intense, but it's just like—it's worse than if you went to jail. You walk in there and you can't have anything on you. I felt guilty, I didn't take my phone in with me, I left it in my car. The whole time I was thinking they probably think I have some wire on me, that's how they make you feel. You go in, you read this form that tells you—all I remember is brain dumping. I remember when I would take an exam I would write lab values really quick, after the exams passed out and we were told to flip the paper whatever. I knew myself, I would change answers. If I had something to look back at, and have a little note to remind myself so I wouldn't be confused later on, whether or not it's on the test or not, then I'd be okay. I was afraid to write a single thing on that whiteboard before the exam started because it was considered brain dumping and you would be excused out of the room and automatically failed. [#4]

A second participant was “freaked out” because wearing wristbands into the NCLEX-RN was not permitted. The participant spoke about the effects this had prior to taking the NCLEX-RN:

I couldn't even—I wear these every day of my life, just for myself, my bands. Live strong, and my breast cancer one, so when I was asked to take those off, for me that's like a personal thing. That freaked me out. [#12]

Several of the participants spoke about how the policies and procedures at the testing center increased their anxiety about the NCLEX-RN.

Questioning own preparedness. Two of the participants commented about how they remembered having residual doubts about their preparedness prior to taking the NCLEX-RN:

I just knew. Again intuition, I knew I did enough. I shouldn't say I did enough, I knew I did exactly what everyone told me I needed to do, and I knew I was

prepared that way, but there was something in the back of my mind saying, it's not time yet. You're not ready. [#7]

I scheduled and rescheduled my test like twice....Because, I didn't feel like I was prepared and got nervous. I didn't want to know whether or not I was going to fail or pass. I just wanted to keep it there. [#8]

Participants talked about how the internal pressures affected them prior to taking the NCLEX-RN. Participants reported these internal pressures caused them to become anxious and upset. The participants were able to reflect on their thoughts and emotions and stated they wished they had approached the NCLEX-RN differently the first time.

During the initial NCLEX-RN attempt. The category, *during the initial NCLEX-RN attempt*, participants described their thoughts and feelings. Three subcategories were identified based on what the participants reported they experienced: (a) *distraction*, (b) *losing focus*, and (c) *second-guessing*. The participants were cognizant of what was happening, but stated they were unable to focus on the NCLEX-RN questions during the exam.

Distraction. Eight of the participants gave detailed descriptions about what they were thinking during these first NCLEX-RN attempts. Often participants reported focusing on the question number instead of the questions during the exam. The NCLEX-RN is an adaptive exam, which is based on the participant's level of ability. The total number of questions administered can range from a minimum of 75 to the maximum of 265. The participants can pass or fail at any number between 75 and 265. Two of the participants talked about gradually losing confidence in their knowledge and abilities to be successful during the NCLEX-RN:

I was taking the test and the closer I was getting to 75, the more anxious I was becoming because it was the number. Everyone was talking about 75 in my class.

It did not stop. It went to 85, did not stop. That made me more anxious. My heartbeat, I was actually feeling and checking my pulse. It was over the top. Then, I started crying in the middle of the test, and I took a break. I went to the bathroom, washed my face, told myself in the mirror, my name, comma RN. [#13]

During the test I thought I was doing pretty well, and all of a sudden, I was expecting 75 questions, I kept on looking at that number at the top and finally it comes to 75 questions and I was like, okay, maybe 100 or 115, and all of a sudden it gets to that, didn't happen. I started getting so sick of the test I just started clicking because I was just so over it. I wanted it done, I didn't care if I passed or failed at that point because I was so anxious and I was even angry at the time too. [#2]

Seven of the participants were focused on whether the questions displayed on their computers were getting easier or harder and if these questions would put them above or below the threshold to pass the NCLEX-RN, as two selected samples show:

I just didn't know, like should I just get to the next question? Every question counts. Will it take me above that threshold? Will it take me below? I shouldn't be thinking about it. One question you don't get right, maybe the next one will be better. You're only thinking about the little tips your teacher told you, is the next question easier or harder? I don't wanna be like letting you know subliminally, but some things might be easier for you or harder for you than another person, so you shouldn't be thinking about that. [#10]

That whole thing about like you know, getting select all that apply....you're doing really well. I started counting my select all that apply and I started counting you know, I didn't even take breaks, I was just counting until—I was actually, I was seeing if the question was above the passing level or below the passing level. That was my concern. [#13]

Almost half of the participants during the NCLEX-RN focused on the number or type of questions instead of answering each of the questions to the best of their ability.

Losing focus. Two of the participants commented on losing focus during the exam, which made it difficult for them to answer NCLEX-RN questions:

Some of them, I had to reread it. I think I was zoning out. It was just sometime—I do this sometimes when I'm really stressed out during a test, I zone out, and I go back and reread the questions.... Then I think you're taking too long on this question, hurry up to answer this question. That's when I started to just click and click. That was—I just zoned out and started thinking about other stuff. I don't know why. I know that was something I did sometimes in school. I would zone out and just answer questions. But, I didn't know how to stop it. [#8]

After doing it the first time and getting all the questions I was like oh god. It took me the whole time....Losing focus, but it was a mixture of everything. Losing focus definitely made me struggle because I would read questions ten times, and then I would just get fed up with it. [#11]

Some of the participants reported that they lost focus during the NCLEX-RN and from that point on they were unable to concentrate and answer the questions.

Second-guessing. Two of the participants reported second-guessing themselves during the NCLEX-RN:

Like answering the questions, I would submit the question and go to the next one. I would second guess myself or ask myself if I went about it the right way. So then your self esteem and your confidence takes a blow and starts decreasing more and more as the test goes on an on....Leaving the first time, I felt shattered I guess in a sense, or very doubtful sort of. I felt kind of numb, I didn't know what to feel. I wasn't sure if I did enough or I didn't. [#5]

So at that point, I was going through questions, and when I would get to the next question I was like, oh crap, I shouldn't have answered that question that way. So I kind of second-guessed myself after I started doing that. That was one of my faults too was second guessing myself because that was one of the things holding me back to answering questions. [#6]

I noted that the participants who reported second-guessing stated their confidence levels also decreased, which they expressed as contributing to their lack of success.

External pressures. The sub-theme, *external pressures*, were factors that the participants perceived affected them the first time they took the NCLEX-RN and were not initially successful. The sub-theme, *external pressures*, had four categories: (a) *RN*

positions, (b) family members, (c) nursing school colleagues passing the NCLEX-RN, and (d) the impact of social media.

RN positions. Some of the participants had been offered RN positions prior to taking the NCLEX-RN. Two of them acknowledged that having RN positions prior to taking the NCLEX-RN was stressful for them, as shown by one example:

I think another part of the problem was I had a lot riding on this. There was a lot contingent on this exam. My job was one of the things that were contingent on it. That's also when I was working a lot too, as a graduate nurse. [#3]

Participants who accepted a RN position stated this created an external pressure on them prior to taking the NCLEX-RN for the first time.

Family members. One of the participants reflected on how difficult it was to explain to family members that even though she was graduating from nursing school she was not a RN until she successfully passed the NCLEX-RN. After explaining this process to the family members, she felt a tremendous amount of pressure from them regarding when she planned on taking the NCLEX-RN:

They'd be like, yay you're graduating. I'm like yeah, they're like, so you're getting a job right away, I'm like I still have to take the NCLEX, it's kind of a big deal. I'm kind of an anxious test taker, so that didn't help. I tell them that and then the next question I got forever from every single person, "When are you gonna take it? When are you gonna take it?" I felt a lot of pressure to take it, which is why I don't think I was successful the first time, I didn't do it when I was ready. I just did it to get it done with. [#11]

This participant reported that the interactions with her family created anxiety and pressure within herself to take the NCLEX-RN before she thought she was ready.

Nursing school colleagues passing the NCLEX-RN. Three participants expressed how it bothered them when their nursing school colleagues informed them that

they passed the NCLEX-RN. These participants expressed there was extra pressure prior to taking the NCLEX-RN for the first time, as shown by this example:

I am typically the person to study months on end everybody was taking it before me and I think that added pressure big time. I know because I'd be on a trip—we took a trip right after school. While we were there I had a friend tell me “Oh I passed”. It didn't ruin my vacation, obviously I was happy for her, but at the same time it was like, ugh. It was the fact that you're seeing people do it, now you have to do it. You need to go at it as much as you can, so I think right off the bat I was kind of under the gun because I was seeing everybody else pass, and that added stress and pressure and thinking about it too much every day. That was a problem. [#12]

Some of the participants stated they were excited for their nurse colleagues who passed the NCLEX-RN, however this created external pressures for remaining GNs prior to their own first attempt at the NCLEX-RN.

The impact of social media. Two of the participants stated they did not appreciate any extra pressure, which they reported feeling when other peers posted on social media sites that they successfully passed the NCLEX-RN and/or had obtained employment as RNs:

I didn't wanna hop on any social media, I didn't even want to hear about the success of others because I didn't want more pressure on myself. I'm happy for everyone, of course, but I didn't want to put no personal pressure. You're so focused on yourself that study time. [#10]

Yes, but in a way, I think this time I was more like pressured because everyone knew in my class when my day was. Everyone was getting jobs and posting on Facebook here's my ID card as a RN. I'm happy for them but as a person you feel left out, behind. [#13]

Some of the participants reported that hearing about others' success made them feel like they had been left behind and this created an external pressure on themselves.

Summary of Theme 1: Pressures All-Around

The theme, *pressures all-around*, reflected different internal or external pressures the participants felt had affected their concentration prior to and during the licensure exam. After not initially being successful on the NCLEX-RN, participants reported a sense of knowing that they were not originally ready to take the exam. The participants indicated they were not surprised when they were not initially successful, due to the reported internal and external pressures they felt prior to and during their initial NCLEX-RN attempts.

Theme 2: The Stigma of Being Unsuccessful

The theme, *the stigma of being unsuccessful*, addressed how the participants reported feeling stigmatized after not initially being successful on the NCLEX-RN. Four sub-themes were identified: (a) *personal beliefs*, (b) *don't ask, don't tell*, (c) *negative personal reactions*, and (d) *negative interactions*. The sub-theme, *personal beliefs*, has two categories: (a) *maintain privacy* and (b) *concerns about being judged*. These participants expressed how deeply they were affected when they were not initially successful on the NCLEX-RN.

Personal beliefs. Participants stated that they believed there was stigma when individuals were unsuccessful on the NCLEX-RN. The participants wanted to maintain their privacy and were concerned, when not initially being successful on the NCLEX-RN, about being judged by colleagues or patients. In this sub-theme, the term “patients” is used instead of clients, because this was the word the participants stated during their interviews.

Maintain privacy. Eleven participants spoke about maintaining their privacy regarding their initial NCLEX-RN. In addition, participants expressed concern that other

people may question their competence or ability to be a RN if they knew the initial results. Two of the participants commented about how the stigma of not initially being successful on the NCLEX-RN affected them:

It is the stigma. Going to nursing school is—how should I say it? You're only there to be successful. You wanna show everyone you're successful and competent. Even though you know this test doesn't show how competent, how genuine of a nurse you are, you don't want to deal with the shame of someone like, they got it, and you didn't. You don't wanna put more pressure on yourself. [#10]

I think I still haven't come to complete terms about being able to tell people because I feel there's just a negative aspect to it. Maybe she isn't that good of a nurse because she couldn't pass the NCLEX the first time. I still feel like there's still negativity around it. Really haven't admitted to it to people. I only told one person in my family that I wasn't successful still. [#11]

Five participants described their reasons for not posting their initial NCLEX-RN results on social media sites. Two of the five participants spoke about using social media, but did not want to post their initial NCLEX-RN results. “Oh no; I take failing very seriously. I will not post a single thing about it.” [#12]

“I didn't express that in social media at all. I use social media a lot. I didn't feel like that was something I needed to share. I needed to keep it private with the people I'm closest with.” [#5]

Participants stated because they were not initially successful on the NCLEX-RN they needed to maintain privacy about the results.

Concerns about being judged. Three of the participants expressed concerns, when they were not initially successful on the NCLEX-RN, about being judged by colleagues or patients. In addition, participants acknowledged that individuals might believe they were failures and decided not to publicly share their initial NCLEX-RN results, as shown by three examples. “I just didn't want them to judge me, and I just felt

like they don't need to know, that's all. I told people that did need to know and I felt confident in that." [#15] "How they were gonna judge me. I'm a failure, that kind of thing. Everyone sharing how good they did and I'm the only one the shares how bad I am, how are they gonna see me?" [#9] "I don't know why I feel like everyone judges me. God and me should be the only one that judges. I feel like that's just how society is, everyone judges everyone." [#4] These participants were concerned that other people would judge them negatively because they were unsuccessful on the NCLEX-RN. The participants stated that they wanted their maintain privacy.

Don't ask, don't tell. The sub-theme, *don't ask, don't tell*, had two categories: (a) *don't tell the patients* and (b) *keeping a secret*. The category, *don't tell the patients*, was about not telling the patients represented the participants not wanting their patients to know about their initial NCLEX-RN results. The category, *keeping a secret*, was the participants not revealing their initial NCLEX-RN results to colleagues.

Don't tell the patients. After not initially being successful on the NCLEX-RN, participants who were working in healthcare chose not to share their NCLEX-RN results with patients. One of the participants commented that she did not want her patients thinking she was a bad nurse based on the number of times she took the NCLEX-RN. "Yes, I was worried they would think I would be a bad nurse, or I was dumb that I couldn't pass two times." [#14]

Another participant also stated she was concerned that patients would think she was incompetent or a bad nurse if they were aware of the initial NCLEX-RN results:

Patients would also say like, where's your red badge, everyone else has. I'm like, well I'm still training. I didn't want to tell them I failed so I just told them that I'm still training and haven't taken my test yet. They would ask—people don't get it that when you graduate nursing school, you don't just get your job on the floor

and like are able to work as a nurse. They think that and I explain that to them and they're just like, wow, you have to go through all this testing to be a nurse. [#2]

Some of the participants who were working in healthcare after not initially being successful chose not to tell the patients their NCLEX-RN results. Participants reported that they were worried that the patients would think that they were incompetent nurses.

Keeping a secret. Several participants did not want to share with colleagues that they were not initially successful on the NCLEX-RN. Two of participants gave examples on how they handled the situations when colleagues would approach them:

Seeing a classmate at Target, and so we were talking and she was like, oh how's it going, I said good, you're a nurse at a hospital, my hospital right? I was like yeah! She was like oh how many questions did you get on your NCLEX? I said I got the full 265, and she asked when did you take it? I was like, anyways, my job is going really good, I kind of just changed the subject because I didn't want her to know. [#6]

A lot of times people would ask me where I'm working. I'd say a hospital and they would ask, you got a nursing position? I was like I did have a nursing position. I would kind of brush over it and not really tell them, I'm no longer a nurse. I just didn't say anything. [#7]

A few of the participants commented that they were not comfortable sharing their initial NCLEX-RN results with colleagues, because of the stigma related to being unsuccessful.

Negative personal reactions. All fifteen participants expressed their thoughts and emotions after receiving the notification that they were not initially successful on the NCLEX-RN. Three of the participants described in rich detail about how not passing the NCLEX-RN affected them:

Oh god, when I found out I didn't pass, my...it was like a pit in my stomach, I couldn't focus on anything, I was like "oh, my God" I couldn't even do dishes, I couldn't cook dinner, I was just like "oh, my God" I actually felt very sick to my stomach, I put all my time and effort into school, I was a fairly good student and now...what. I didn't pass this and that those were my initial feelings, I felt like a

failure. I felt I let my family down, and it took me that week to get kind of over it. I didn't do anything I didn't look at any books the week after the test, and I figured...give me that time to just regroup by myself. [#1]

So I did not pass and I was kind of like a train wreck for a few days, I didn't want to do anything, I was mad at the world. Didn't want to try again. I was frustrated and devastated, because I am not used to failing. I don't always pass with flying colors but I passed and got through it. Failing the important milestone, the NCLEX was a big one for me. [#3]

I was pretty heartbroken...I don't know, I just felt like I was like maybe this was not my career. Maybe I should try something else. How am I gonna tell people? Cried a lot. I don't know. I just felt really bad. Then I had to go to a family function for the weekend, camping. That was not what I wanted to do at all. [#11]

Participants commented that they questioned whether they should be RNs or choose another career. All of them chose to stay in nursing and retake the NCLEX-RN.

Negative interactions. After not initially being successful on the NCLEX-RN, three of the participants reported negative interactions with others. These participants perceived that others were being rude to them because of their initial NCLEX-RN results:

There was a nurse that—when I did not pass and became a patient care assistant (PCA) she treated me as if I didn't know how to be a PCA. Granted, there definitely is a learning curve, but how hard is it to change a bed linen? She would come in and just take over, and I would watch how—she probably does that with everyone, but watching her, she didn't do that with everyone, it was just with me. Taking out an IV that's part of a PCA's job, and she would not let me take out a foley. A simple thing that an aid does, I wasn't able to do with her patients. [#7]

Even my manager, she was kind of rude to me. She just because I wasn't a RN at the time, there was still that like “oh you might fail again if you take it again within the three months of your training, so this means I'm gonna have to pay more”. That's how she came off, like she had to pay more people for a longer period of time because you might fail again and so she was also rude. [#2]

A participant reflected on how she felt when a doctor commented on not initially being successful on the NCLEX-RN.

There was one doctor in particular who said to me ‘you’re just not smart enough, just try harder’. That was kind of hurtful. It was something I didn’t expect from that doctor. But, it happened...for them to say that I just need to try harder? Why would I not try hard, that was my response. [#3]

Participants who worked in healthcare perceived that they had negative interactions when it was known that they had been unsuccessful on the NCLEX-RN.

Summary of Theme 2: The Stigma of Being Unsuccessful

The participants described the theme, *the stigma of being unsuccessful*, as potential negative beliefs expressed by colleagues or patients if they knew the participants did not initially pass the NCLEX-RN. They did not want to share their initial results with colleagues or patients because the GNs were concerned that others might think they were incompetent or bad nurses. Some of the participants expressed that individuals treated them negatively and were rude because of their initial NCLEX-RN results.

Theme 3: Correcting the Problem

The theme, *correcting the problem*, reflected the processes participants went through to prepare to retake the NCLEX-RN. Three sub-themes were identified: (a) *preparing*, (b) *seeking support*, and (c) *changing to positive self-talk*. The participants reported using NCLEX-RN study materials and test-taking strategies prior to taking the NCLEX-RN on subsequent attempts. Additionally, the participants sought support from immediate family, close friends, nursing instructors, and nurse managers to help them become successful on the NCLEX-RN. Lastly, the participants reported that they had to change their thought processes and self-talk to reflect a positive approach for their subsequent NCLEX-RN attempts.

Preparing. The participants talked about the different NCLEX-RN books, CDs, and commercial preparation tests they used to help them prepare for retakes. In addition, the participants reported using different test-taking strategies that helped them be successful on the NCLEX-RN. The sub-theme *preparing* has four categories: (a) *studying content*, (b) *doing NCLEX-RN questions*, (c) *taking commercial preparation courses*, and (d) *revising test-taking strategies*.

Studying content. Eight participants reported it was the content that they lacked and needed to work on before taking the NCLEX-RN again. The participants referred to content as reading NCLEX-RN materials, reviewing nursing diseases and processes, and developing concept maps to help them be successful on subsequent attempts. Two of the participants stated how they interpreted the term, content, and how they prepared to retake the NCLEX-RN:

Content, I knew the strategy. It was just the content I was iffy on. I just started thinking like a nurse. I was just like—it all comes down to safety. What is the safest here? When you think like a nurse, you take the test right. Yeah, I started thinking like a nurse and I passed. [#13]

I also bought the Saunders review book because I had already had a vacation planned, thinking I would have already passed my exam....On the plane ride to and from I read my Saunders book, and if I had free time I would read chapters on content. At least it wasn't a dull time between my vacation and my studying for my second exam, I was on top of it constantly. [#5]

Several of the participants reported that it was important to study content prior to retaking the NCLEX-RN.

Doing NCLEX-RN questions. Thirteen participants reported doing NCLEX-RN questions they obtained from published review manuals prepared by commercial companies prior to retaking the exam. Additionally, the participants stated that if they

were unsure about content related to the NCLEX-RN style questions they would return to their textbooks, NCLEX-RN study materials, or the Internet to research the content.

Three of the participants shared their strategies for practicing NCLEX-RN type questions:

I had three different books actually, just to give different questions and all that. I would read the questions and I would do like a hundred a day, and it helped a lot. Just I had to remember not to rush through the questions.... [#1]

The week before my exam I did about 100 questions to 200 questions every day. Just doing questions, I didn't study any material unless I wasn't familiar with something then I would look back. I would do more and more questions every day. [#6]

...I would sit on my couch, open the book, look at it and was like, this was fifty questions for two chapters. I think it was 25 questions a chapter, I can do that, this is feasible, I can do that today. When I had nothing to do, I did another two chapters before I went to bed, one chapter, it was a schedule I made for myself. I just—whenever I had some time, whenever I had anything to do, I just took the book wherever I was because I liked doing questions. It was easy for me. [#8]

The majority of participants practiced with NCLEX-RN style questions to help them prepare to retake the exam.

Taking commercial preparation courses. Four participants reported, prior to taking the NCLEX-RN on subsequent attempts, they had invested in additional commercial preparation courses. Although all of the participants had taken at least one commercial preparation course before the first NCLEX-RN, participants chose to take a different commercial preparation course to help them be successful on retakes. Two of the participants commented on how a particular commercial preparation course, Kaplan, was beneficial to them prior to retaking the NCLEX-RN:

But, the second time I did Kaplan. Kaplan, I focused on that. I had done like a Kaplan strategy review book, whatever. That has questions I found out from the review course—there's passing and failing type questions in there. [#13]

The third time it was. I felt—I don't know why, but after Kaplan I felt so much more prepared... I did nothing but Kaplan. I did their pre-coursework, questions, and all the questions they did during the webinars. I did questions and tests afterwards, which were fabulous. You got 75, then 150, then 265. I did all of them. [#12]

Several of the participants choose to take additional commercial preparation courses beyond what they had while in nursing school and prior to their first attempt to prepare to retake the NCLEX-RN.

Revising test-taking strategies. Twelve participants stated that they used test-taking strategies to help them understand how to answer NCLEX-RN style questions. These strategies included: (a) look for key words, (b) do not add any information into the question, (c) use clues to help you answer, (d) pick apart the question, and (e) eliminate answers. Two of the participants reported strategies they used prior to retaking the NCLEX-RN.

...I tried to apply that strategy, I tried to break up from the question, look for keywords all those things they teach you, I even used parts of the decision tree. Not all of it, but some of them are helpful hints. If an answer has this word, it's not never going to be the right answer because that no the way it is. I was using more clues I was trying to be more aware of what the question actually said and not what I wanted the question to say. I was trying extra hard to not put extra things into the question, what if this is happening, what if that is happening, because there are no what ifs in NCLEX. [#3]

I learned how to read the question and then go back and pick apart the question...It told me key words to look for, kind of how the NCLEX class did. Underlined the words you were actually looking for, eliminating two out of the three answers. Elimination. [#15]

Many of the participants reported practicing and applying different test-taking strategies that allowed them to go into the NCLEX-RN on subsequent attempts with more confidence.

Seeking support. The participants decided to seek support from immediate family, close friends, nursing instructors, and nurse managers after not initially being successful on the NCLEX-RN. The participants talked about how important having the support of others to whom they felt close was in helping to prepare to retake the NCLEX-RN. The four categories with *seeking support*, included: (a) *immediate family*, (b) *close friends*, (c) *nursing instructors*, and (d) *nurse managers*.

Immediate family. Thirteen participants commented on the importance of having their immediate family members' support after not initially being successful on the NCLEX-RN. The participants typically informed their family either right away or within a couple of days after receiving their initial NCLEX-RN results. Three of the participants reported how supportive their families were:

After a couple days, then I told my parents. They were really supportive about it and didn't make it a huge deal, just take it a second time around and you'll be fine. At least I had that support system. [#5]

So my mom came over and my dad followed and whatever. They kind of talked me through it saying you'll be fine, it doesn't determine what type of nurse you are. Okay, I'll get myself out of bed, I'll stop crying, I'll wash my face off. Then I go back to the other cabin and we have a great old time over the weekend, no one ever talked about it again so that was good. [#6]

I kind of sulked a little bit. My sister was around. I talked to her, I talked to my dad and my dad was very supportive....Just kind of a lot of comfort. So relying on ... family support was kind of what I did right after initially. [#14]

The participants stated the support they received from family members helped with subsequent success on the NCLEX-RN.

Close friends. Fourteen participants reported relying on close friends after not initially being successful on the NCLEX-RN. Participants stated they appreciated being able to talk with their close friends about their feelings, thoughts, and emotions.

Additionally, the participants were offered advice from friends, such as the NCLEX-RN is a “mind game” and does not define who you are as a person. Three of the participants expressed how grateful they were to have the support of their close friends:

Honestly, my friends that didn't pass, they told me you gotta stop beating yourself up, this exam is a mind game and it doesn't test you as a human being, it tests you on whether you can take an exam or not. [#4]

My one friend who helped me. She had passed the first time and she helped me through a lot of it too.... She kind of told me to not put so much pressure on myself. She's like, it's okay. Don't let the test define you because she knew that's what I was doing and she just tried to talk me off the ledge I guess, for me, trying to give up and all that stuff. [#8]

I told two other people I knew that were unsuccessful, because I was hoping we would be able to boost each other up, which helped....Knowing that they could be strong enough to try and take it again made me feel better. It made me feel better that one of them passed right away. She was pretty much at the same level as me throughout school. That made me feel like there was hope for me. The other one, I think she was actually better at school than I was. She had not passed it multiple times. That made me feel better if I was unsuccessful again, there's still someone out there that's trying. [#11]

Participants reported talking about their thoughts and emotions, prior to retaking the NCLEX-RN, with close friends who gave the participants different perspectives.

Nursing instructors. After not initially being successful on the NCLEX-RN, eight participants sought help from their prior nursing instructors. The participants reported they were embarrassed that they were unsuccessful and did not want to tell their

nursing instructors, but soon realized their help was needed. Three of the participants stated that after contacting their nursing instructors, their personal self-confidence seemed to increase:

I really felt that from my professor, she just really believed in me. Yeah you have your parents and your significant others and your friends pushing you and telling you, but when you have someone that's your professor and sees the potential in you to be not only a good student and a nurse, and to be told you're going to be a great nurse, that really pushed me more and made me feel like I can do this. [#4]

Obviously, what I was doing was not working. I tried to change things up, I did things differently, but obviously I needed to do something else. There wasn't anything else other than coming to my instructor. I hate to say it that way but it's true. Then coming to my instructor and getting help. It was one of the hardest things I think I've done. It was almost harder coming to talk to my instructor than take the NCLEX, not because I found my instructor unapproachable, I was so embarrassed at that point. I was thinking oh my gosh, I've taken it four times, I should have come and talked to my instructor sooner and I just could not do it. That's why it was so hard for me to come. [#7]

My instructor, yeah absolutely. She reminded me like I wasn't unique, that other people had failed. It was more about what do we need to do to pass. I failed, that's the past, what do we need to do now to pass? [#9]

Participants commented they appreciated the advice and encouragement they received from their nursing instructors and that coming to see them had increased their own self-confidence about test-taking.

Nurse managers. In this category, nurse managers were supportive of the GNs who were not initially successful and who worked on their units, compared to those participants quoted earlier who reported they had been treated rudely by their nurse managers. Four participants expressed concern that their nurse managers would be disappointed in them if it became known that they were unsuccessful on the NCLEX-RN.

Participants who were working as GNs had to and did talk with their managers about

their initial NCLEX-RN results. One of the participants appreciated her nurse manager's kind words of support while she was attempting to retake the NCLEX-RN:

Especially when people like my manager on my floor...he would send me e-mails like, I'm sorry to hear about the news, but I want to tell you what kind of person I think you are and how proud we are to know that you work for us and you're not giving up and you're still bound and determined to take the NCLEX again as many times as it takes. [#7]

Participants reported that after telling their initial NCLEX-RN results to their nurse managers, their positive comments and words of encouragement actually provided some relief.

Changing to positive self-talk. The sub-theme, *changing to positive self-talk*, represented the participant's internal thoughts reflecting on their knowledge, abilities, and self-esteem levels. Participants described in great detail their thoughts and feelings related to preparing to retake the NCLEX-RN. The sub-theme, *changing to positive self-talk*, has two categories: (a) *preparing mentally for subsequent attempts* and (b) *giving own pep talks during subsequent attempts*.

Preparing mentally for subsequent attempts. Fourteen participants talked about how they mentally prepared to retake the NCLEX-RN. Participants continually reassured themselves that they knew the content and were smart enough to pass the NCLEX-RN. Two of the participants are quoted here and provided rich descriptions about their internal thoughts prior to retaking the NCLEX-RN:

...being a little bit more confident in my own abilities and that I know I knew my stuff, no more questions or to second guess myself, just go with my gut instinct because that was probably the best, um, we were taught very well so it was kind of like trust your own instincts and go with that, and don't pull out the what ifs of one person you might have had in clinical that was totally off base, just do what the book says, don't vary too far off of that because life experiences don't matter. [#1]

The morning of, I sat in my car outside the place and ate a banana, and just remind myself I could do this, and I'm smart enough to do this, I worked really hard for this, just focusing on breathing and calming myself down. Just trying to stay as relaxed as I could. [#14]

Participants commented that it was important to be positive and confident prior to retaking the NCLEX-RN.

Giving own pep talks during subsequent attempts. Thirteen participants gave detailed descriptions about their thoughts during the NCLEX-RN on subsequent attempts. The participants reported that they needed to give themselves pep talks to increase their confidence levels if they wanted to be successful on the NCLEX-RN. One of the participants commented on how she continually talked to herself during the NCLEX-RN:

The second time I went in there, I kept trying to give myself pep talks and stopped saying you couldn't do this, you can do this, you can pass and be successful; don't worry about anyone else that is there. [#4]

Additionally, participants stated they needed to reassure themselves that they were capable of being successful. Two of the participants described their thoughts during the NCLEX-RN on a subsequent attempt and how they were able to change their thoughts to reflect a positive tone:

But, once I got past 75 questions I thought, I already know I'm gonna have the full 265, there's nothing stopping me, I unlaced my shoes and just relaxed and kept clicking questions. So I got to the first break and my computer just stopped. I was like, no that can't be the last question, I'm not ready to stop taking it. It said are you ready to start taking a break, pause or whatever. I stepped out and went to the bathroom, got something to drink. I kind of just regrouped myself because I already had a headache, I was tired. I was like, okay, you know what, I got another 100 and some questions, just keep going and you'll be fine. [#6]

Let's focus on the questions I know and just move on and not think about it. I think doing that, it allowed me to still maintain my confidence and the low

anxiety level. On that fifth exam, my anxiety was very well controlled until the very end. [#7]

Participants reported that they needed to stop thinking negatively and changed to more positive thoughts during the NCLEX-RN retakes to increase their confidence levels.

Summary of Theme 3: Correcting the Problem

In the third theme, *correcting the problem*, the participants expressed taking ownership of their NCLEX-RN preparation, seeking support from immediate family, close friends, nursing instructors, and nurse managers, along with performing positive self-talk to help them become successful on the NCLEX-RN. The participants gave detailed descriptions about their previous strategies and thoughts on how they worked to correct any prior problems. The participants reported that they decided after not initially being successful that they needed to change their preparation, thoughts, and contacts to ensure that they would be successful on future NCLEX-RN attempts.

Theme 4: The Ultimate Learning Experience.

The theme, *the ultimate learning experience*, represented the participants' emotions, thoughts, and feelings after passing the NCLEX-RN. Four sub-themes were identified: (a) *the emotional journey*, (b) *surpassing the stigma*, (c) *no regrets*, and (d) *words of wisdom*.

The emotional journey: Strong positive reactions to success on the NCLEX-RN. The sub-theme, *emotional journey: strong positive reactions to success on the NCLEX-RN*, represented the participants' thoughts and feelings as they transitioned from being unsuccessful to passing the NCLEX-RN. Initially, the participants spoke about how they were devastated and embarrassed when they were not successful, but they were able to emotionally move forward to retake the NCLEX-RN on subsequent attempts.

After successfully passing the NCLEX-RN, participants were able to reflect on their overall emotional journey.

All fifteen participants commented on how ecstatic they were when they passed the NCLEX-RN. Participants described their emotions shortly after receiving the notification that they were successful on the NCLEX-RN and now were officially RNs, as shown in three examples:

I remember hitting refresh on my computer and it changed to 2016. I probably hit that refresh button another 10-20 times, and it just had this feeling I never experienced before, just hysterically crying. I couldn't—I was having a mini panic attack I'm sure. I was crying, I couldn't—I don't know. Everyone says it's a weight lifted. I still feel like I'm in test mode, I still feel like that. It was like this feeling, but for some reason I feel like it wasn't going to happen and it did happen and I was surprised. I don't know what it was, but finally there was that moment of clarity like I did it. I put effort in and it paid off. Now I'm officially a registered nurse. I have the license and whether or not it's the smallest little letters BSN RN, it makes me eligible to practice and care for patients and do what I wanted to do my whole life. It was just the greatest feeling. [#4]

I treated myself, I went to visit my Grandpa in another state. He goes out there every couple months to avoid the cold. I mellowed out there, I wanted a job, but I wasn't in a rush because I wanted to enjoy the victory per se. [#12]

I was elated. I was jumping around. I was hugging my family, I was really excited. It was more so just the relief of stress. Oh my goodness, I never have to have that feeling ever again. That's what I was most excited about. Never having to be stressed out about it again. [#14]

Participants talked about how excited they were to have finally passed the NCLEX-RN and become RNs.

Surpassing the stigma. The sub-theme, *surpassing the stigma*, represented how the participants were able to move beyond the shame of not initially being successful on

the NCLEX-RN. Two categories were identified: (a) *paying it forward* and (b) *talking openly*.

Paying it forward. Eight participants stated they really wanted to help nursing students and GNs be successful on the NCLEX-RN. It was important to the participants to share their experiences about not initially being successful on the NCLEX-RN with others who still would be taking it. One participant stated how she coached a GN who was not initially successful on the NCLEX-RN:

I actually helped coach someone else that I met through one of the nurses that I had worked with...an agency nurse. She worked at multiple hospitals and said that someone was struggling just like I was with the NCLEX. She wondered if I would meet with her and give her better direction. I thought pay it forward. [#4]

Two of the participants stated how they talked with nursing students about their experiences of taking the NCLEX-RN more than once:

Passing my experience on to newer grads that have to go through this experience in about a month or two months. Passing my experience on to them and then letting them know you'll be fine, don't worry about it, do your questions and work hard. I think it's kind of helping me get through this experience. [#6]

Again, that's why I like talking to students because I can give them that insight that I wish someone would have done for me, just get there and look, this is what you need to do if you want to pass the NCLEX. [#7]

Talking openly. After becoming RNs, three participants stated they were more willing to talk openly about not initially being successful on the NCLEX-RN. Two of the participants reported they were now comfortable talking about their initial results with nursing students, colleagues, and other healthcare professionals. In addition, the participants stated they were no longer embarrassed about being unsuccessful on the NCLEX-RN:

Now I know people that have failed, and I think by sharing just not passing, then that would give them like hey I'm not alone, she failed too, this is what she did. Keep going to pass. If I could do it over, I would definitely have shared like my experience and maybe that's why I went through it, I don't know. [#9]

I wasn't even afraid of the fact I failed my NCLEX in front of respected manager. I told them I did not pass the first time. They asked me what was my biggest failure. I would say this was my biggest failure. I was not afraid. I was empowered. If you don't take me, it's your loss. [#13]

Some of the participants commented that they wanted to share their NCLEX-RN experiences with nursing students, colleagues, and other healthcare professionals. The participants were hoping that sharing their mistakes could help others learn from them.

No regrets. The sub-theme, *no regrets*, reflected on how the participants overcame the challenge of not initially being successful on the NCLEX-RN and learned from their experiences. Participants spoke about how they were now better people and nurses because of taking the NCLEX-RN more than once. In addition, participants stated that not initially being successful on the NCLEX-RN was a valuable learning experience for them. Three categories were identified: (a) *I am a stronger person*, (b) *I am confident*, and (c) *I am a better nurse*.

I am a stronger person. Eleven participants stated that after successfully passing the NCLEX-RN, they were able to reflect on how they have grown since initially taking the exam. Two of the participants described their greater strengths after taking the NCLEX-RN more than once:

I just kind of look at the bigger picture and realize it's made me a stronger person and a better person, better nurse. Of course I wouldn't be a nurse if I didn't pass it. It just made me a stronger person and more confident in myself. [#1]

I think the fact that I had to take it twice kind of actually helped my character...real life does not come down to one test, and that life goes on if you

don't pass the first time. It's okay and it's not worth to get stressed out because what's the worst thing you do, you take it again. It's not the worst thing in the world. It may suck at the time, it is not the worst thing in the world. [#14]

Participants commented that they were stronger people because they took the NCLEX-RN more than once.

I am confident. After successfully passing, seven participants stated they had more self-confidence because they took the NCLEX-RN more than once. Participants described how their NCLEX-RN experiences put life into perspective for them. They stated that they were not going to let their initial lack of success on NCLEX-RN bring them down; they realized they would take the licensure exam until they passed. Three of these participants commented on what they learned from taking the NCLEX-RN more than once:

For me I learned that as hard as it was taking it more than once, that I could do it. In a weird way it really built up my confidence. It showed that I wasn't going to let that get me down. I was bound and determined to pass this NCLEX-RN. [#7]

I know it's not the end of the world if I fail. I can always do it again. It's not so dramatic, you know, so all or nothing. So yeah, I think going into it with the experience that I had and knowing I got through it, then a lot of the anxiety, I definitely feel more confident, it's gonna be okay no matter what. It's not life or death it's okay. [#9]

No, I mean it gives me a confidence boost knowing I can get through something like that and I didn't give up. It was a good experience. I'm not sad that I failed the first time now, and I'm not upset about that. [#15]

After successfully passing the NCLEX-RN, participants reported an increased in their confidence levels.

I am a better nurse. Six participants expressed that not initially being successful on the NCLEX-RN taught them how to handle challenging situations as RNs. Two of the

participants provided rich descriptions on their thoughts on how they now handled challenging situations in better ways while practicing as RNs:

I think it's made me into a better nurse in general because I can handle emergent situations differently and don't freak out like the other nurses. They're like, why aren't you freaking out, I'm like, it's not a big deal, it's just a day of work.... Yeah you might think of it when you leave or what you could have done better but I think that learning, going through the boards and everything, it made me approach things differently. [#2]

I was like if I can get through that, I can make it through this. It was more of a personal challenge of the mind.... I loved how challenging it was because now a challenge at work, I'm like, I can handle this. I've been through challenges before. [#15]

Participants commented that they were appreciative of taking the NCLEX-RN more than once, because they became better RNs. Based on the many efforts they had exerted to become successful the NCLEX-RN on subsequent attempts, participants stated they were now able to handle challenging and stressful situations more calmly than other RNs,

Words of wisdom. The sub-theme, *words of wisdom*, represented the knowledge gained from taking the NCLEX-RN more than once. The participants expressed feeling compelled to offer advice to other individuals taking the NCLEX-RN. Two categories were identified: (a) *it's about strategy* and (b) *enjoy life*.

It's about strategy. Seven participants stated that the NCLEX-RN was about content, knowledge, and strategy. Participants commented that they did not use the best strategies during their first NCLEX-RN compared to subsequent attempts. The strategies the participants referred to were: (a) trust yourself; (b) eliminate two of the answers; (c) read and reread the questions; (d) learn how to answer the questions; (e) think in an organized manner, such as airway, breathing, and circulation; and (f) consider

prioritization. Three of the participants offered a range of advice to help nursing students and GNs be successful on the NCLEX-RN:

I told them be confident in what you know....Trust yourself; trust what your teachers have instructed you. Read the questions twice, and eliminate the most obvious answers. Once those are eliminated then read the question and then answer it and just be prepared. [#1]

Coming to realize it's not if you know the information, it's how you answer the question. If you can answer ABCs and what's most important and prioritization, all that jazz, you'll be fine....That is my advice, study all the resources available. Trust your instinct. [#4]

Definitely, strategy wise and studying wise, focus on the questions. You're not going to learn all that you need to know on the NCLEX-RN, but you can learn strategies and learn how to tackle each question even if you don't know the answer. [#5]

Participants reported different of type of strategies that helped them be successful on the NCLEX-RN and wanted to share these with nursing students and GNs.

Enjoy life. Three participants realized that even though they were not initially successful on the NCLEX-RN, they should not let it consume their lives. Participants decided they should spend time with friends and/or family. One participant stated that life still continues even if you have to retake the NCLEX-RN:

Focus on those questions in those strategies. Don't focus your studies as your life. You have to have a life outside of studying too. You have to have some fun. You're going to be so stressed and so tense if you take the exam, you won't do as well. My biggest advice is mix pleasure along with your studying; you can't make studying your life. It shouldn't be. [#5]

Although they were not initially successful on the NCLEX-RN, some participants expressed the need to maintain a life connected to others around them.

Summary of Theme 4: The Ultimate Learning Experience.

The theme, *the ultimate learning experience*, reflected how open and honest the participants were about their emotions throughout their NCLEX-RN experiences. After receiving their notifications of successfully passing the NCLEX-RN, the participants expressed how ecstatic they were to never have to take the exam again. The participants felt compelled to talk openly and offer words of wisdom about taking the NCLEX-RN more than once to those who were about to take the licensure examination. In the end, the participants commented that they had no regrets and are better nurses because of their NCLEX-RN challenges and experiences.

Chapter Four Summary

The participants were RNs who were not initially successful on the NCLEX-RN, then subsequently passed. The participants passionately spoke about their thoughts, feelings, and emotions related to taking the NCLEX-RN more than once. I presented the four major themes in this chapter: (a) *pressures all-around*, (b) *the stigma of being unsuccessful*, (c) *correcting the problem*, and (d) *the ultimate learning experiences*, along with numerous sub-themes, categories, and subcategories. Participants reported pressures all-around prior to taking the NCLEX-RN for the first time. After not initially being successful, the participants stated there was a stigma with being unsuccessful. The participants chose to correct the problem and prepared to retake the NCLEX-RN. The participants reflected on how their personal learning experiences were ultimately improved by taking the NCLEX-RN more than once.

CHAPTER FIVE

DISCUSSION

In the past decade, there has been little research conducted regarding individuals' stories about not initially being successful on the NCLEX-RN. Due to the paucity of literature on the topic, in my study, I explored RNs' experiences related to not initially being successful on the NCLEX-RN, then subsequently passing. Interpretations of the findings are discussed in detail, followed by the theoretical and practical implications, along with the clinical significance of the findings. Next, I present the implications for nursing practice, education, research, and vulnerable populations. Lastly, I describe the strengths, limitations, and suggestions for future research.

Interpretation of Findings

In reviewing all the findings from this study, I gained additional insights about the RNs' experiences who were not initially successful on the NCLEX-RN. The research question I used to guide this study was: "What do RNs report about their experiences of not initially being successful on the NCLEX-RN, then subsequently passing?" My interpretation of findings is described in further detail, predominantly demonstrating commonalities and differences with the results of other qualitative studies. In addition, I compared my findings with academic predictors such as cumulative GPAs and commercial tests.

Theme 1: Pressures All-Around

In this section, I include both expressions of internal & external pressures that have been reported. I compare what was said by my participants, with what other authors have published to date.

Internal pressures compared. Participants spoke about the pressures they experienced prior to and during the NCLEX-RN that they believed prevented them from being successful on their first attempts. Currently, no prior studies have identified individuals' thoughts, feelings, and emotions prior to taking the NCLEX-RN for the first time. However, several of the participants I interviewed described the NCLEX-RN as a major obstacle for them. As the participants arrived at the testing center to take the licensure examination for the first time, they stated their level of anxiety increased to the point of them questioning their preparedness.

During the NCLEX-RN, the participants from my study described being distracted, losing focus, and second-guessing themselves. In prior studies, varied authors reported similar results to this study. For example, Eddy & Epeneter (2002) discovered that 11 out of 19 (58%) participants were distracted during the NCLEX-RN, noting disruptions such as hearing the keyboards clicking, being too warm, feeling hungry, and having a headache. Eight out of nine (89%) of Eddy & Epeneter (2002) participants who were unsuccessful stated they were distracted, compared to only three out ten (30%) participants who were successful on the NCLEX-RN. McFarquhar (2006, 2014) found that 13 out of 18 (72%) of her participants were distracted during the NCLEX-RN, reporting being overly anxious, lacking concentration, and/or doubting themselves. Her participants who experienced distractions stated that contributed to their lack of success on the NCLEX-RN (McFarquhar, 2006, 2014). Eddy and Epeneter (2002) and Griffiths

et al. (2004) also both reported their participants described feeling anxious during the NCLEX-RN. However, these authors did not identify the number of participants who expressed feeling anxious.

External pressures compared. Prior to taking the NCLEX-RN for the first time, many participants from my study commented on their perceived external pressures, which created internal pressures that affected them from being successful on the first attempt. External pressures consisted of having already been hired into RN positions, family members pressuring the participants to take the examination soon after finishing school, and nursing colleagues verbally telling or posting on social media sites that they had been successful on the NCLEX-RN.

In my study, two participants stated that being hired into RN positions placed extra pressure on them prior to taking the NCLEX-RN for the first time. Additionally, two other studies reported that participants who had accepted RN employment prior to taking the licensure exam stated that these commitments contributed to them not initially being successful on the NCLEX-RN (Atemafac, 2014; Griffiths et al., 2004). Atemafac (2014) discovered that 13 out of 18 (76.5%) participants stated their current RN employment distracted their attention from studying for the licensure examination. Griffiths et al. (2004) reported participants had commented that being employed as RNs prevented them from being successful on the NCLEX-RN; however, the authors did not provide the number of participants who had made this connection.

Theme 2: The Stigma of Being Unsuccessful

In this section, I include expressions about *the stigma of being unsuccessful on NCLEX-RN*. I compare what was said by my participants with what other authors have published to date.

Participants in my study expressed the specific belief that there was a stigma with being unsuccessful on the NCLEX-RN. Due to this perceived stigma, participants wanted to maintain their privacy because they were concerned about being judged negatively by colleagues and patients. There were no prior studies that reported a stigma with being unsuccessful on the licensure examination. However, McFarquhar (2006, 2014) found that nine out of 18 participants (50%) described inducing a self-imposed social isolation after not initially being successful on the NCLEX-RN. The participants choose to speak with family members, but did not want to share their initial results with colleagues. Griffiths et al. (2004) discovered that some of the participants sought support from individuals to whom they were close, but they were adamant that they would not contact their school of nursing or faculty, although the authors did not provide the number of participants who had stated that preference.

Participants in my study spoke about their own negative personal reactions they experienced when they were not initially successful on the NCLEX-RN. The participants used a variety of terms to describe their emotional reactions such as “devastated”, “frustrated”, “upset”, “mad”, “disappointed”, “defeated”, “crushed”, and “heartbroken”. Several studies found similar results (Atemafac 2014; McFarquhar, 2006, 2014; Silva 2014). Atemafac (2014) discovered that 16 out of 17 (94.1%) participants stated they were depressed and isolated themselves from family and friends after not being successful on the licensure examination. Silva (2014) reported that 6 out of 9 (67%)

participants expressed that they were “devastated”, “disappointed”, and “irritated” after multiple attempts of not being successful on the NCLEX-RN.

Similarly, McFarquhar (2006, 2014) found that participants who were not initially successful on the NCLEX-RN displayed a temporary decrease in their psychological and sociological wellbeing. The participants stated they were “disappointed” (13 or 65%) and “depressed” (5 or 27.8%) after finding out they were not successful on the licensure examination. However, according to McFarquhar (2006, 2014), some participants stated they experienced disappointment and depression for few days, whereas other participants experienced these feelings for several months before coming to terms with their initial results, while one participant had stated that not being successful on the licensure examination did not bother her and she just needed to work a little harder to pass (McFarquhar, 2006, 2014).

Three participants from my study who already worked in RN positions in healthcare settings reported negative interactions with colleagues and nurse managers. These participants perceived they were treated rudely because they were initially unsuccessful on the NCLEX-RN. I did not identify this in any other studies.

Theme 3: Correcting the Problem

In this section I include ideas expressed by participants about ways they worked to correct their initial approaches to become successful on NCLEX-RN. I compare what was said by my participants, with what other authors have published to date, about preparing, seeking support, and changing to positive self-talk.

Preparation compared. Participants in this study stated that after a period of time they were able to emotionally move forward to prepare to retake the NCLEX-RN.

They chose to prepare in various combinations of approaches, such as studying content, doing NCLEX-RN questions, taking commercial preparation courses, or revising test-taking strategies. Several authors reported similar results (Atemafac, 2014; Eddy & Epeneter, 2002; McFarquhar 2006, 2014).

After not initially being successful on the NCLEX-RN, participants in my study questioned their depth of knowledge in relation to content. The participants stated they knew they needed to focus on the content prior to retaking the NCLEX-RN. Atemafac (2014) and McFarquhar (2006, 2014) reported similar findings from their participants. Atemafac (2014) reported that 14 out of 17 (82%) participants indicated they needed to focus more on content prior to retaking the NCLEX-RN. McFarquhar (2006, 2014) found that all 18 participants engaged in reviewing content-based learning. These changes in their approaches reportedly increased the participants' understanding of the content, their confidence levels, and their success on the licensure examination.

The participants in my study commented that doing NCLEX-RN style questions helped build their confidence levels prior to retaking the licensure examination. The amount of questions they reported doing daily ranged between 25 and 200 questions. These findings were similar in two studies (Eddy & Epeneter, 2002; McFarquhar, 2006, 2014). McFarquhar (2006, 2014) reported that participants indicated that focusing on NCLEX-RN questions helped them be successful on the retake. Eddy and Epeneter (2002) found that participants who were initially successful on the NCLEX-RN did thousands of questions prior to retaking the examination.

All of the participants in my study spoke about how they began to prepare to take the NCLEX-RN after graduating from nursing school. Participants shared very few

details about how their schools of nursing had prepared them for the licensure examination, except they commented on the commercial tests used during their education. These commercial tests included: (a) ATI, (b) HESI, and (c) Kaplan.

Several of the participants in my study invested in different commercial preparation courses prior to retaking the licensure examination. Participants commented that they felt more prepared to retake the NCLEX-RN since the completion of these additional commercial preparation courses. This finding was similar in several studies (Atemafac, 2014; Griffiths et al., 2004; McFarquhar, 2006, 2014). Atemafac (2014) found that all 17 participants took commercial preparation courses for tutoring purposes prior to retaking the NCLEX-RN. The participants stated these courses boosted their confidence levels. However, Atemafac (2014) did not report whether the participants successfully passed the NCLEX-RN after taking these commercial preparation courses.

Griffiths et al. (2004) reported that participants stated their confidence increased after taking commercial preparation courses. The number of participants who stated they took commercial preparation courses was not identified by these authors. McFarquhar (2006, 2014) found that three of the 18 participants (11%) took commercial preparation courses such as Kaplan, to prepare them to retake the NCLEX-RN. After retaking the licensure examination on a subsequent attempt and not passing one of the participants stated that the Kaplan review was not helpful to her.

The participants in my study used test-taking strategies to help them understand how to answer NCLEX-RN style questions. The strategies the participants referred to were: (a) look for key words, (b) do not add any information into the question, (c) use clues to help you answer, (d), dissect the question, and (e) eliminate answers.

McFarquhar (2006, 2014) reported that her participants commented they were not initially successful on the NCLEX-RN because they lacked test-taking strategies. Seventeen out of 18 (94.4%) participants engaged in learning test-taking strategies as they prepared to retake the licensure examination. Eddy and Epeneter (2002) reported that all 19 participants stated that nothing prepared them to answer critical thinking and prioritization questions. In contrast, the participants in my study learned and used test-taking strategies to foster NCLEX-RN success.

Seeking support compared. After not initially being successful on the NCLEX-RN, participants in my study sought support from immediate family, close friends, nursing instructors, and nurse managers. They commented on how important it was for them to have the support of their families. McFarquhar (2006, 2014) found similar results with nine out of 18 (50%) participants stated they were motivated by their families to retake the NCLEX-RN. However, three studies had different findings (Atemafac, 2014; Poorman & Webb, 2000; Silva, 2014). Atemafac (2014) reported the participants did not feel their spouses were supportive of them after not successfully passing the NCLEX-RN. Additionally, Silva (2014) and Poorman & Webb (2000) reported that their participants did not feel supported by their families in general, although they did not specify their spouses.

It was important to the participants in my study that they could rely on close friends after not initially being successful on the NCLEX-RN. Participants appreciated the advice their close friends gave them prior to retaking the NCLEX-RN. McFarquhar (2006, 2014) had similar results and nine out of 18 (50%) of her participants openly shared with their friends that they had been unsuccessful on the NCLEX-RN.

Additionally, Atemafac (2014) participants stated they would be successful when they would retake the NCLEX-RN because of the support they received from their friends. Several authors have shown that receiving support from close friends was vital for participants to move forward and retake the licensure examination (Atemafac, 2014; McFarquhar, 2006, 2014).

In my study, eight participants decided to reach out to their nursing instructors for guidance and support. After not initially being successful on the NCLEX-RN, the participants stated they did not properly prepare for the licensure examination the first time. After meeting with their nursing instructors, these participants stated they were more confident in their abilities to be successful in the future. Griffiths et al. (2004) and McFarquhar (2006, 2014) reported similar findings; to help prepare to retake the NCLEX-RN, their participants sought assistance from prior nursing instructors and received coaching, such as lecture notes and NCLEX style questions. Atemafac (2014) and Silva (2014) reported different findings from their participants. Atemafac (2014) found that seven of the 18 participants (41%) did not receive any support from their school of nursing after graduation. Silva (2014) reported that 3 out of 9 participants (33.3%) were not offered additional support from their schools of nursing. Some of the participants blamed their schools of nursing because of poor learning environments and faculty did not help to identify strategies for success (Silva, 2014). However, the participants in this study did not blame their schools of nursing for being unsuccessful on the licensure examination.

Participants in my study were initially apprehensive to talk with their nurse managers, because they were embarrassed after not successfully passing the NCLEX-RN.

All of my participants who had RN positions informed their nurse managers of their results. The majority of those participants commented that they appreciated the nurse managers' support and words of wisdom. I found no other studies that reported participants talking with their nurse managers about their initial licensure examination results.

Changing to positive self-talk compared. After not initially being successful on the NCLEX-RN, the participants in my study realized they had to change their internal thoughts that were negative to engage in positive self-talk. Participants continually reassured themselves they were smart enough to be successful. Silvestri (2010) found that individuals who had higher self-efficacy expectations prior to taking the NCLEX-RN for the first time successfully passed. McFarquhar (2006, 2014) reported that 13 out of 18 (72.2%) participants continually reflected on what they learned from their past experiences which helped them be successful on subsequent attempts. Other authors identified different ways participants mentally prepared to retake the NCLEX-RN, such as prayer (Johnson, 2009; McFarquhar, 2006, 2014) and visualizing being successful (Poorman & Webb, 2000). In general, in the current literature there is a lack of research conducted on how individuals mentally prepare to take or retake the NCLEX-RN.

Participants in my study gave themselves pep talks during the NCLEX-RN on subsequent attempts. The pep talks consisted of "you can do this", "let's focus on the questions", and "just keep going, you'll be fine". McFarquhar (2006, 2014) and Eddy and Epeneter (2002) had reported similar results. McFarquhar (2006, 2014) found that two out of 18 (11.1%) participants told themselves "you can do it" and to "relax" during subsequent NCLEX-RN attempts. Silva (2014) found that 5 out of 9 (55.6%) participants

blamed themselves for not being successful on the NCLEX-RN. These participants stated they lacked preparation, worked too many hours, had family obligations, and did not put in enough effort to be successful on the NCLEX-RN. In contrast, the participants in my study did not blame themselves, but stated their negative thoughts prevented them from being successful on the licensure examination the first time.

Theme 4: The Ultimate Learning Experience

In this section, I include ideas expressed by participants about their expressions of the *ultimate learning experience* which they achieved by making many changes in their approaches and becoming successful on NCLEX-RN. I compare what was said by my participants, with what other authors have published to date, about participants' emotions.

After successfully passing and becoming RNs, my participants shared their thoughts, feelings, and emotions related to taking the NCLEX-RN more than once. The participants spoke about their initial reactions when they received notifications that they were not successful on the NCLEX-RN. These initial reactions consisted of being devastated, embarrassed, defeated, and frustrated. After a period of time, the participants were able to move forward to prepare to retake the licensure examination. McFarquhar (2006, 2014) reported participants with similar findings. After several days to months, her participants reported being able to accept their initial results and regain confidence in their abilities while preparing to retake the NCLEX-RN.

The participants in my study shared how happy they were after successfully passing the NCLEX-RN. They stated they thought that this day would never come but now they were officially RNs. Additionally, my participants commented they were excited to never have to take the NCLEX-RN again. There were only two research

studies that interviewed RNs after successfully passing the licensure examination (Eddy & Epeneter, 2002; McFarquhar, 2006, 2014). However, the authors of these studies did not report participants' thoughts, feelings, or emotions after successfully passing the NCLEX-RN, so I am unable to make comparisons on these points.

Surpassing stigma, no regrets, and words of wisdom not able to be directly compared to other studies. Finally, the participants in my study offered words of wisdom to nursing students and GNs. They wanted to “pay it forward” and talk openly about what they learned from taking the NCLEX-RN more than once. Additionally, participants stated that studying for the licensure examination should not consume individuals' lives, but they need to have a balance between studying and socializing. Currently, there are no other studies that addressed the advice that individuals' who were not initially successful gave to nursing students or GNs.

After becoming RNs, participants commented they had no regrets with taking the licensure examination more than once. The participants stated they did not want to take the NCLEX-RN ever again, but they appreciated the lessons they learned from it. These lessons consisted of: (a) I am a stronger person, (b) I am more confident, and (c) I am a better nurse. Since passing the licensure examination, the participants in my study commented positively about their NCLEX-RN experiences.

Theoretical and Practical Implications

Theoretical Framework: Personal Construct Theory

The theoretical framework chosen for this study was Personal Construct Theory (PCT). In PCT, the fundamental postulate focuses on how individuals construct and interpret their thought processes based on past experiences to anticipate and predict future

events. I chose four of 11 corollaries that were foundational to PCT during my data analysis and reporting of the findings. These four corollaries included: (a) construction, (b) experience, (c) individuality, and (d) commonality.

The construction corollary is an attempt to examine how participants gather their thoughts about current and future events based on their past experiences. The participants in my study stated they worried about being unsuccessful on the NCLEX-RN again, because of their past experiences. However, participants were able to reassure themselves mentally that the next attempt at the NCLEX-RN they would be successful.

The experience corollary is used to describe how individuals reflected on their past experiences by interpreting and reinterpreting events. The participants reflected on their first NCLEX-RN attempt and made multiple changes to ensure success on subsequent attempts. Participants decided to increase their knowledge base, revise test-taking strategies, and increase their confidence levels to be successful.

The individual corollary is an explanation of how individuals differ from one another based on their construction of the events, which is dependent on their unique perspectives. All fifteen of the participants took the licensure examination more than once, however each participant developed their own interpretations regarding their NCLEX-RN experiences. It was this difference that allowed each individual to tell his/her story about taking the NCLEX-RN more than once and added to the richness of the data analyzed.

The commonality corollary is an explanation of how individuals shared similar interpretations based on the same events. Even though all fifteen of the participants took the NCLEX-RN more than once, similar experiences appeared in their stories. It was

these similar stories that assisted the researcher with developing themes, sub-themes, categories, and subcategories.

The practical implications of my use of the four corollaries of PCT allowed me to understand and formulate interpretations regarding taking the NCLEX-RN more than once. During and after data analysis, it was clear that my participants stated they realized the mistakes they made after not initially being successful on the NCLEX-RN, then corrected the problems to successfully pass the licensure examination.

Clinical Significance

It is vital to understand the experiences of taking the NCLEX-RN more than once for educators, administrators, fellow nurses, and other individuals to be able offer support, words of encouragement, and strategies for future success. An unsuccessful licensure examination attempt may affect the individual personally and profoundly in ways that could influence their future success, and then which could negatively affect the increasing nursing shortage. In 2022, the American Association of Colleges of Nursing (2014) stated the nursing shortage is expected to exceed 1.05 million RNs. The profession of nursing needs GNs to become RNs to help alleviate the nursing shortage and to care for the rapidly growing population that is aging. Learning from RNs' experiences may contribute to developing new strategies to promote GNs' initial success, which could help with alleviate aspects of the nursing shortage.

Implications for Nursing Education

The NCLEX-RN is an important milestone for both GNs and schools of nursing. GNs need to be successful on the NCLEX-RN to become RNs. When GNs are

unsuccessful, they are personally and psychologically affected. In my study, after the RNs acknowledged their thoughts, feelings, and emotions, they were able to move forward to retake the licensure examination. The participants realized they needed to have positive self-talk prior to and during the NCLEX-RN to be successful on subsequent attempts. In addition, they needed to focus on studying content, doing NCLEX-RN questions, taking commercial preparation courses, and revising test-taking strategies. After correcting the problems they self-identified, all of my participants were ultimately successful on the NCLEX-RN. Based on these findings, educators could initiate prior conversations about the importance of preparation and positive self-talk to GNs who are about to take the NCLEX-RN for the first time or on subsequent attempts.

Educators and administrators seek to have high first time NCLEX-RN pass rates. It is important for two reasons: (a) recruitment of new nursing students and (b) state boards of nursing and national accreditation bodies' approval (DiBartolo & Seldomridge, 2008). If a school of nursing has continual low NCLEX-RN pass rates, potential nursing students may not choose to go to that school for nursing. Secondly, if a school of nursing does not meet acceptable pass rates, the administrators could receive a warning about the loss of state board approval, which then could lead to students graduating from an unaccredited school of nursing. In the state of Wisconsin, first time pass rates are reported and represent the performance of that particular school of nursing to the public. Focusing primarily on first time pass rates diminishes the fact there are other factors besides nursing content that can prevent GNs from being successful on the NCLEX-RN. Based on this finding, a recommendation could be made for the state of Wisconsin to

report both first and second-time pass rates for schools of nursing to better inform the public without losing confidentiality for those who have taken the licensure examination.

The participants in my study stated they felt supported by their nursing instructors after not being initially successful at passing the NCLEX-RN. It was difficult for the participants to contact their prior nursing instructors when they received their initial results, however, they reported knowing that they needed additional assistance to be successful on subsequent attempts. The participants commented that their confidence levels increased after meeting with their nursing instructors. It is important for schools of nursing to offer additional support to the graduates from their respective programs if they are not successful on the NCLEX-RN. This support may help the GNs be successful on subsequent attempts.

Implications for Clinical Nursing Practice

As of 2014, the first time NCLEX-RN pass rates were at an all-time low (81.78%) which means there are more individuals who did not successfully pass the licensure examination on the first attempt (NCSBN, 1994-2015). The American Association of Colleges of Nursing is predicting a nursing shortage to exceed 1.05 million and there will be an even greater need for GNs to successfully pass and become RNs (AACN, 2014). The profession of nursing needs more GNs to be successful on the NCLEX-RN because it better serves the graduates, helps alleviate the nursing shortage more rapidly, and grows the profession in need of more RNs.

Twenty-nine states allow individuals to practice as GNs prior to taking the NCLEX-RN. However, when GNs are not initially successful on the licensure examination, their GN licenses are voided. Then GNs can no longer function in the GN

role and are denied the opportunity to work in that capacity. This denial can cause fear of losing future RN positions, decrease in pay, embarrassment, and being exposed to potential negative reactions by colleagues and nurse managers.

After not initially being successful on the NCLEX-RN, most of my participants who had GN positions remained on the unit as nurse externs or certified nursing assistants (CNAs). The participants spoke about the stigma of being unsuccessful and how it had a profound effect on their lives. To help ease the stigma related to being unsuccessful, it would be beneficial for colleagues and nurse managers to offer verbal support and encouragement while reinforcing the importance of successfully passing and the fact that it can be done. This support can help GNs feel like they are not alone. In my study, it has shown that when participants talked with immediate family, close friends, nursing instructors, and nurse managers, their confidence levels increased and they were motivated to retake the NCLEX-RN.

Implications for Nursing Research, Including Quantitative Academic Predictors

The results of this study indicated a need for further research to be conducted with RNs who were not initially successful on the NCLEX-RN, then subsequently passed. There was a lack of research conducted on individuals' experiences with taking the NCLEX-RN more than once. There was one research study that focused on RNs experiences with failing the NCLEX-RN multiple times (McFarquhar, 2006, 2014). In my study, I interviewed RNs who were not initially successful on the NCLEX-RN, then subsequently passed, which is similar to the participants in McFarquhar (2006, 2014) study. Other studies conducted were on GNs who were not initially successful on the NCLEX-RN, however the majority of published qualitative literature was over a decade

old (Eddy & Epeneter, 2002; Griffiths et al., 2004; Poorman & Webb, 2000; Vance & Davidhizar, 1997). Recently, there have been two dissertation studies that looked at GNs' perceptions after not being successful on the NCLEX-RN (Atemafac, 2014; Silva, 2014). However, these studies are different from mine, because they interviewed GNs, not RNs, about their experiences with taking the NCLEX-RN more than once.

While the majority of the research conducted previously focused on academic predictors related to NCLEX-RN success, there was much less done on predicting NCLEX-RN failure. Academic predictors consisted of SAT/ACT scores, nursing course grades, number of C grades or less in nursing courses, GPAs, and commercial tests (see Table 3). Cumulative GPAs were found to be statistically significant with NCLEX-RN success (see Table 3). For example, Vandenhouten (2008) found that students who had GPAs greater than 3.26 were 26 more times likely to be successful on the licensure examination. In contrast to my study, 7 out of 15 participants (46.7%) self-reported GPAs above 3.3 and were not initially successful on the NCLEX-RN.

During the review of literature, I found five commercial tests were reportedly used as academic predictors of NCLEX-RN success (see Table 5). These commercial tests included: (a) ATI, (b) ERI, (c) HESI, (d) Mosby Assess Test, and (e) NLN. The participants in my student stated they used three of them, (a) ATI, (b) HESI, and (c) Kaplan, during nursing school to prepare them for the licensure examination. The participants did not comment on whether they thought these commercial tests were beneficial to their overall NCLEX-RN success.

Even though there is a tremendous amount literature about academic predictors related to NCLEX-RN success, there are still gaps in literature. One of the gaps is

individuals' stories who were not initially successful on the NCLEX-RN. Over the last decade, the numbers of GNs who were not successful on the licensure examination has increased steadily since 2012, from 14,512 to 28,673 (NCSBN, 1994-2015). In 2014, the NCSBN pass rate for first time attempt was at an all-time low of 81.78% (NCSBN, 1994-2015). It would be important for further research to be conducted in this area to identify factors, beyond academic predictors, that may have prevented individuals from not being initially successful on the licensure examination.

Implications for Vulnerable Populations

Individuals who were not initially successful on the NCLEX-RN can be considered a vulnerable population. After not successfully passing the NCLEX-RN, several examples were reported by multiple authors that their participants stated they were devastated, depressed, disappointed, isolated, and embarrassed (Eddy & Epeneter, 2002; Griffiths et al., 2004; McFarquhar, 2006, 2014; Poorman & Webb, 2000; Silva, 2014). My participants commented there was a stigma with being initially unsuccessful on the licensure examination. They expressed that this stigma affected them personally, so that they chose to maintain their privacy and avoided posting their results on social media sites.

My participants also spoke about how deeply they were affected personally and psychologically after not passing the NCLEX-RN on the first attempt. They expressed concern that colleagues and patients would think they were incompetent or would be “bad nurses” in the future. Due to this fear, participants chose not to disclose their initial NCLEX-RN results to colleagues and patients. It is important for individuals to be supportive to those who were not initially successful on the licensure examination. This

support can help those individuals surpass the stigma and move forward to retake the NCLEX-RN and become successful on subsequent attempts.

Strengths and Limitations

A strength of this study included insights gained from RNs were not initially successful on the NCLEX-RN, but subsequent passed. All fifteen participants were able to provide detailed descriptions about their experiences with taking the NCLEX-RN more than once. Another strength was the systematic approach to data analysis. This systematic approach was conducted to ensure qualitative rigor. Braun and Clark's (2006) six phases to thematic analysis were used during data analysis. In addition, a reflexive journal in a Word document was maintained throughout the data analysis process. I also invited three coders to read over the same three transcripts to establish credibility and confirmability.

Limitations to this study were the lack of generalizability and reflecting a finite part of their lives. However, these limitations are common in qualitative research due to the smaller sample size and specific questions related to a specific time in participants' lives. Another limitation is the participants' ability to accurately remember their experiences with taking the NCLEX-RN more than once. In this study, I was not looking for 100% accuracy, but I allowed the participants to tell their stories from what they remembered. Lastly, the majority of interviews were conducted at coffee shops instead of a private location such as a library. The participants were offered to meet in a private location, but declined the offers.

Suggestions for Future Research

In my study, I identified four themes from the data; they are: (a) pressures all-around, (b) the stigma of being unsuccessful, (c) correcting the problem, and (d) the ultimate learning experience. A suggestion for future research would be the need for more qualitative research to explore the experiences of RNs who were not initially successful on the NCLEX-RN, then subsequently passed. This could allow nurse educators, administrators, fellow nurses, and other individuals to better understand what the individuals experience when needing to take the licensure examination more than once.

Despite all of the literature that has been conducted on academic predictors and NCLEX-RN success, there are gaps in correctly identifying factors that impede individuals from being successful on the licensure examination, so they could be practically addressed. A suggestion for future research is to include a focus on nonacademic predictors in relation to NCLEX-RN success. Currently, nonacademic predictors found in research studies have consisted of psychological variables, such as self-esteem, self-efficacy, test anxiety, and family responsibilities, but they have not been widely studied. It is imperative to conduct larger, more comprehensive studies on nonacademic predictors and NCLEX-RN success.

Chapter Five Summary

Participants in my study who were not initially successful on the NCLEX-RN, then subsequently passed, were personally and psychologically affected. However, after seeking support and correcting the problems they identified, they were able to move

forward and retake the NCLEX-RN to become successful on subsequent attempts. The majority of my participants reported being successful on the licensure examination after the second attempt, while the remainder of participants were successful after three or more attempts. After successfully passing, the participants stated they were happy that they finally achieved their RN licensure.

The lessons learned from this study were that individuals who were not initially successful reported needing emotional and psychological support, along with guidance, to help them move forward to retake the NCLEX-RN. The profession of nursing needs RNs who were not initially successful but persisted until they were, because they have encountered a major challenge, altered their approaches, and achieved success. They showed resilience by retaking the NCLEX-RN until they became successful, without expressing bitterness, but by finding new strengths within themselves. Several participants claimed they are “better nurses” because of not initially being successful on the licensure examination; they state they can now better empathize with client difficulties and challenges and assist in problem-solving to overcome them.

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Appendix A

EACH STATE BOARD OF NURSING AND GRADUATE LICENSURE

States	Offer a GN License to Practice
Alabama	Yes
Alaska	Yes
Arizona	No
Arkansas	Yes
California	Yes
Colorado	Yes
Connecticut	No
Delaware	Yes
Florida	No
Georgia	No
Hawaii	Yes
Idaho	Yes
Illinois	Yes
Indiana	No
Iowa	No
Kansas	No
Kentucky	Yes
Louisiana	No
Maine	No
Maryland	Yes
Massachusetts	No
Michigan	Yes
Minnesota	Yes
Mississippi	Yes
Missouri	Yes
Montana	Yes
Nebraska	No
Nevada	Yes
New Jersey	No
New Hampshire	Yes
New Mexico	Yes
New York	No
North Carolina	No
North Dakota	Yes
Ohio	Yes
Oklahoma	No
Oregon	No
Pennsylvania	Yes
Rhode Island	Yes
South Carolina	Yes
South Dakota	Yes
Tennessee	No
Texas	Yes
Utah	No
Vermont	No
Virginia	No
Washington	Yes
West Virginia	No
Wisconsin	Yes

States	Offer a GN License to Practice
Wyoming	Yes

Note. Bolded states offer a GN license to practice prior to RN licensure. Table created from individual state board of nursing websites.

Appendix B

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL LETTER



OFFICE OF RESEARCH COMPLIANCE
 Schroeder Complex, Room 102
 P.O. Box 1881
 Milwaukee, WI 53201-1881
 Phone: (414) 288-7570
 Fax: (414) 288-6281
 Email: orc@marquette.edu
 Web: www.marquette.edu/orc

June 30, 2014

Tammy Kasprovich
 NURS

Dear Ms. Kasprovich:

Thank you for submitting your protocol number HR-2842 titled, "*Experiences of registered nurses who were not initially successful on the NCLEX-RN, then subsequently passed*" to the Office of Research Compliance (ORC). On June 30, 2014, a determination of exempt status was made under the following category or categories:

- Category #2: Educational Tests, Surveys, Interviews, or Observations

Please use only IRB reviewed documents for consent and recruitment. Please find attached the following: consent form.

Changes to your protocol must be reviewed and approved before being initiated, except when necessary to eliminate apparent immediate hazards to human subjects. Minor changes to the project may be emailed to orc@mu.edu. Major changes, or changes affecting participant risk, require submission of an Amendment Form which can be found on the ORC web site.

Please note that you may be required to adhere to MU Policies and/or state and federal laws, some of which are outside the purview of the IRB. More information can be found here: www.mu.edu/orc/irb/policies.shtml. If any adverse events, unanticipated problems, or research subject complaints occur please notify the Office of Research Compliance consistent with IRB policies and procedures.

Please submit an IRB Final Report Form once this research project is complete. Submitting this form allows the ORC to close your file.

If you have any questions or concerns, please do not hesitate to contact me. Thank you for your time and cooperation.

Sincerely,

Benjamin Kennedy

Research Compliance Officer-Human Subjects & Radiation Safety

cc: Dr. Leona VandeVusse, NURS
 Ms. Sherri Lex, Graduate School

BK/rl

Appendix C

MARQUETTE UNIVERSITY
 AGREEMENT OF CONSENT FOR RESEARCH PARTICIPANTS
 Experiences of Individuals who were not Initially Successful on the NCLEX-RN,
 then Subsequently Passed.
 Tammy Kasprovich MSN, RN
 College of Nursing

You have been invited to participate in this research study. Before you agree to participate, it is important that you read and understand the following information. Participation is completely voluntary. Please ask questions about anything you do not understand before deciding whether or not to participate.

PURPOSE: The purpose of this research study is to describe the experiences of registered nurses who were not initially successful on the NCLEX-RN, then subsequently passed. You will be one of approximately 15-20 participants in this research study.

PROCEDURES and DURATION: Your participation will consist of an audiotaped interview lasting approximately one–two hours and a brief demographic questionnaire to be completed at the end of the interview. You will be asked to describe your experiences related to the NCLEX-RN.

RISKS: The risks associated with participation in this study are no greater than you would experience in everyday life. You are under no obligation to share every detail of your experience.

BENEFITS: The benefits associated with participation in this study include being able to talk, be listened to carefully, and perhaps gain new insights about your experiences related to taking the NCLEX-RN. You may not have direct benefits from this study. However, your experience could offer insights to help nurse educators, administrators, fellow nurses, and others to assist graduate nurses to be successful on the NCLEX-RN and to possibly learn ways to assist and improve preparation to promote future success and coping strategies.

CONFIDENTIALITY: All information you reveal in this study will be kept confidential. All your data will be assigned an arbitrary code number rather than using your name or other information that could identify you as an individual. When the results of the study are published, you will not be identified by name. Paper documents including demographic questionnaires and consents which have identifiable data on them will be stored in a locked file in the researcher's private locked office that only the researcher can access, in case they are needed during the study. The audio recordings will be deleted from the tape recorder after being transcribed by a professional transcriptionist and then checked thoroughly for accuracy by the researcher while removing any identifying information. The anonymous transcribed interviews will be kept indefinitely in a locked file in the researcher's private

locked office. Research records may be inspected by Marquette University Institutional Review Board or its designees and (as allowable by law) state and federal agencies.

COMPENSATION: You will receive a \$25 gift card as compensation for completing the one time interview and demographic questionnaire.

VOLUNTARY NATURE OF PARTICIPATION: Participating in this study is completely voluntary. Completion of the study includes the audiotaped interview and filling out the demographic form. You may withdraw from the study and/or stop participating at any time without penalty. Any data you have shared will be retained and your confidentiality protected.

CONTACT INFORMATION: If you have any questions about this research project, you can contact Tammy Kasprovich at tammy.kasprovich@marquette.edu or at 414-915-9913. If you have question or concerns about your rights as a research participant, you may also contact Dr. Leona VandeVusse (Associate Professor and Chair of this research study) at Marquette University at (414) 288-3844. If you have questions or concerns about your rights as a research participant, you can contact Marquette University's Office of Research Compliance at (414) 288-7570 or orc@mu.edu.

I HAVE HAD THE OPPORTUNITY TO READ THIS CONSENT FORM, ASK QUESTIONS ABOUT THE RESEARCH PROJECT, AND AM PREPARED TO PARTICIPATE IN THIS PROJECT.

(Printed Name of Participant)

(Signature of Participant)

Date

(Printed Name of Individual Obtaining Consent)

(Signature of Individual Obtaining Consent)

Date

Consent to Re-Contact [Optional]

If you are interested in receiving a summary of the research findings when the entire study is completed, please provide the following information.

Name: _____

Email address: _____

Telephone: _____

THANK YOU

Appendix D

RECRUITMENT ADVERTISEMENT

PARTICIPANTS NEEDED FOR RESEARCH

Purpose: To describe the experiences of registered nurses who were not initially successful on the NCLEX-RN, then subsequently passed.

Inclusion criteria:

- 1) Currently be a registered nurse
- 2) Initially was not successful on the first attempt or multiple attempts on the NCLEX-RN in the last three years
- 3) Proficient in speaking and reading English

Interview: As a participant in this study, you will be interviewed about your thoughts, feelings, opinions, beliefs, memories, images, impressions, and ideas about your experiences taking the NCLEX-RN more than once.

Time: Your participation would involve a one-time interview lasting approximately 1-2 hours that will be audiotaped, transcribed, and deidentified.

Incentive: In appreciation for your time, you will receive \$25.00 gift card upon completion of the interview.

Contact information: Tammy Kasprovich Marquette University College of Nursing PhD student, at 414-915-9913, or email: tammy.kasprovich@marquette.edu

This study has been reviewed by and received IRB approval through Marquette University Office of Research Compliance.

Appendix E

INTERVIEW QUESTIONS

Central Question:

“What do RNs report about their experiences of not initially being successful on the NCLEX-RN, then subsequently passing?”

Interview Guide:

I am interested in hearing everything you can and want to tell me including your thoughts, feelings, opinions, beliefs, memories, images, impressions, and ideas about your experience taking the NCLEX-RN the first time and not initially being successful, and then retaking it and passing to become a RN?

Sample Prompts:

1. Can you tell me more about that?
2. What else can you tell me about your NCLEX-RN experiences?
3. What was happening in your life when you took the NCLEX-RN the first time and on any subsequent times?
4. What do you learn by the taking the NCLEX-RN more than once?
5. What advice would you offer individuals preparing to take the NCLEX-RN?

Appendix F

DEMOGRAPHIC QUESTIONNAIRE

Study ID#_____

- 1) Gender Female Male

- 2) Age_____ (when you took the NCLEX-RN the first time)

- 3) Race/Ethnicity (“X” only one with which you most closely identify)
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black or African-American
 - d. Hispanic or Latino
 - e. Native Hawaiian or Other Pacific Islander
 - f. White
 - g. Other_____

- 4) What is your marital status (when you took the NCLEX-RN the first time)?
 - a. Never married
 - b. Married
 - c. Separated
 - d. Widowed
 - e. Divorced

- 5) What type of nursing program did you graduate from?
 - a. Associate’s degree
 - b. Bachelor’s degree
 - c. Master’s degree
 - d. Other_____

- 6) What is the highest educational degree you hold in any field?
 - a. Associate’s degree
 - b. Bachelor’s degree
 - c. Master’s degree
 - d. Doctoral degree
 - e. Other_____

- 7) In what, if any, field(s) other than nursing do you hold a degree?
 Other field(s)_____ [please write-in any that apply]

8. What is your current employment?
- a. Academia
 - b. Acute care hospital
 - c. Community health
 - d. Home care
 - e. Nursing home
 - f. Outpatient clinic
 - g. Other _____
9. Are you working at the same place of employment as when you first took the NCLEX-RN?
- a. Yes
 - b. No
10. How many times did you take the NCLEX-RN? _____
11. What was your GPA when you graduated? _____
12. What commercial tests did you use to prepare for taking the NCLEX-RN, if any?
Select all that apply.
- a. Assessment Technologies Institute (ATI)
 - b. Health Education Systems Inc. (HESI)
 - c. Hurst Review Services
 - d. Kaplan
 - e. Mosby Assess Test
 - f. National League for Nursing