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THE RELATIONSHIP BETWEEN PERCEIVED STRESS AND ACADEMIC SELF-EFFICACY TO THE ACADEMIC PERFORMANCE OF UNDERGRADUATE NURSING STUDENTS

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by

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Dedication

To my husband, Davin Pierre Sr., my beautiful children, Davin Jr., and Faith Pierre.

To my beloved mother, Regina Tullous. This is for you. This amazing achievement would not have been possible without your love, support, and encouragement. I love you all with all my heart.

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Abstract

THE RELATIONSHIP BETWEEN PERCEIVED STRESS AND ACADEMIC SELF-EFFICACY TO THE ACADEMIC PERFORMANCE OF UNDERGRADUATE NURSING STUDENTS

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When nursing students fail and are required to repeat a course in a pre-licensure nursing program, they are at risk for attrition. While nursing student attrition is a problem with recognized consequences to the student, school, and profession, the incidence of students who fail a required course and need to repeat it has had little attention. Despite research addressing students' experiences with course failure, little describes strategies and interventions to support the retention and success of these students. The first manuscript, *Student Repeaters in Baccalaureate Nursing Programs: A Concept Analysis*, provided a foundation that enhanced the conceptual understanding of nursing students repeating a course. A review of the literature discovered minimal information documenting the frequency of student repeaters and measures to ensure their success after failure; therefore, the second manuscript, *Course Repetition in Pre-licensure Nursing Students: A Scoping Review*, provides a critique and synthesis of available literature on course repetition in pre-licensure nursing students. The third manuscript, *The Relationship between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students*, presents the primary research study. A descriptive,

correlational design was used to examine the relationships between perceived stress and academic self-efficacy to undergraduate nursing students' academic performance. Quantitative data was collected from demographic surveys, the student nurse stress index (SNSI), and the academic self-efficacy scale (ASES). Data were analyzed using t-tests and logistic regression analyses. Statistically significant associations between perceived stress, academic self-efficacy, and select demographic characteristics collectively predicted the academic performance of undergraduate nursing students.

Chapter 1: Overview of the Dissertation Research Focus

In the United States, between 2012 and 2018, attrition rates of nursing students ranged from 30% to 80%, with 80% of attrition occurring within students' first year of the program (American Association of Colleges of Nursing, 2019). Internationally, researchers noted that nursing student retention is also an issue, with attrition rates reported to be over 30% (Buchan et al., 2019). Reasons for such high attrition rates include academic failure, financial hardships, family commitments, health concerns, lack of support, and stress from the classroom and clinical environments (Abele et al., 2013; Elmir et al., 2019; Handwerker, 2018; Lewis, 2018; Lewis et al., 2018; Lewis et al., 2021). Because academic failure contributes most significantly to the loss of student nurses resulting in high attrition rates (Karsten & DiCicco-Bloom, 2014; Lewis, 2018), nursing programs must investigate these reasons for attrition and seek to understand how to meet the needs of their student population.

One group of nursing students at risk for attrition are those that have failed and need to repeat a required nursing course (Handwerker, 2018; Lewis et al., 2018; Lewis, 2019). When nursing students fail a required course, they must decide whether to return and repeat the course or leave their nursing program altogether. Students who decide to leave their program rather than repeat after a course failure may leave with substantial debt and no improvement to their educational or employment status (Lewis, 2018; Lewis, 2019). Those students who decide to return and repeat the failed course accumulate additional financial costs, endure the consequences of delayed graduation and entry into the nursing workforce, and are placed at higher risk for subsequent failure (Lewis, 2019; Lewis et al., 2021). Nursing student repeaters are a population with immense potential that have met the rigorous admission criteria to be admitted into their nursing program but may require additional support to succeed.

Retention and attrition challenges within nursing programs are well reported in the literature (Elmir et al., 2019; Karsten & DiCicco-Bloom, 2014; Lewis, 2018; Lewis et al., 2018; Lewis, 2019). However, for the population of nursing student repeaters, strategies and interventions that may impact their success are limited. One reason for such inadequate research on this population is that student repeaters are often an unrecognized subgroup within nursing programs and may not be represented separately in reported educational outcomes data (Lewis, 2019). Consequently, developing and evaluating interventions are challenging because nursing programs do not specifically target their academic interventions solely toward students who have failed a course that now needs repeating (Lewis, 2019). Therefore, one intent of this dissertation was to highlight the incidence of nursing students who repeat failed courses within baccalaureate nursing programs and determine which support strategies and interventions would have the most significant influence on their retention and success.

Introduction of Manuscripts

In building this program of research, the researcher sought to understand the concept, *student repeater*, as it related to student success. The first manuscript located in chapter two, *Student Repeaters in Baccalaureate Nursing Programs: A Concept Analysis*, enhances the conceptual understanding of students repeating a course by exploring numerous definitions and perspectives through presentations of a model case, borderline case, related case, and a contrary case. Throughout the literature review, limited information was available documenting the frequency of students who repeated failed courses, their experiences of repeating, and measures nursing programs were implementing to ensure success among these students. The second manuscript found in chapter three, *Course Repetition in Pre-licensure Nursing Students: A Scoping Review*, is a pre-print version of the manuscript published in the *Journal of Professional*

Nursing. It provides a review, critique, and synthesis of the available literature on course repetition in pre-licensure nursing students and identifies the gap in the literature concerning this population. The third manuscript found in chapter four, *The Relationship Between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students*, describes the primary research study that sought to examine the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students and explore if demographic characteristics and academic factors contributed to students' academic performance. This descriptive, correlational study examined a convenience sample of 238 nursing students currently enrolled in accredited baccalaureate nursing programs in Texas. The researcher used descriptive statistics, logistic regression, and conducted *t*-test analyses. In completing this dissertation, the researcher filled a gap in nursing education by increasing knowledge connected to nursing students who repeat failed courses and how variables such as perceived stress, academic self-efficacy, and academic factors affected students' success.

Chapter 2: Student Repeaters in Baccalaureate Nursing Programs: A Concept Analysis

Abstract

Aim: The purpose of the article is to provide an in-depth analysis of the concept of student repeaters as it pertains to baccalaureate nursing students.

Background: Course failure in undergraduate nursing programs is a growing concern. Some students choose to repeat the failed course, while others withdraw from their respective nursing programs contributing to program attrition. In 2018, undergraduate nursing programs reported a 35% increase in attrition rates in undergraduate nursing programs.

Method: The researcher used Walker and Avant's (2019) eight-step concept analysis procedure as the organizing framework to explore the concept of student repeaters in the current literature.

Results: The researcher identifies the defining attributes of student repeaters', their antecedents, and the theoretical and practical application in baccalaureate nursing programs. Sample cases further illustrate the concept.

Conclusion: Further research is needed to identify the circumstances that affect student repeaters and facilitate student retention in nursing programs.

Key Words: nursing education, undergraduate nursing students, student repeaters, academic course failure, and attrition.

Student Repeaters in Baccalaureate Nursing Programs: A Concept Analysis

With the intensifying nursing shortage, educational institutions are hastening to prepare students for licensure and quick entry into the nursing workforce (Jeffreys, 2020). However, the retention of students in nursing programs has become a significant problem, creating difficulties in alleviating the nationwide nursing shortage. Although efforts to admit nursing students into professional programs have recently increased, complex issues remain, contributing to the decline in student retention. Some of these factors include fewer financial resources, decreased perceptions of support, higher numbers of outside work hours, and at-risk nursing students (Abele et al., 2013; Handwerker, 2018; Jeffreys, 2012; Lewis et al., 2018).

Nursing students who may potentially decrease program retention are those who have failed a required nursing course and need to repeat it. Little attention is given to this population in the literature (Lewis et al., 2018; Lewis, 2019). One reason for such limited attention is that student repeaters are a hidden subgroup within nursing programs, and educators may not explicitly identify these students in reported nursing education outcomes (Lewis, 2019). Understanding what defines a student repeater and the consequence of repeating a failed course is paramount to both program and student retention.

Using Walker and Avant's (2019) method, the purpose of the article is to provide an in-depth analysis of the concept of student repeaters as it pertains to baccalaureate nursing students. Background, identification of uses, and conceptual definitions of student repeaters are introduced, followed by the concept's defining attributes. Next, constructed cases, including model, borderline, related, and contrary cases of the concept, are presented. Then, the antecedents, consequences, and empirical referents of student repeaters are provided.

Background

Researchers often examine the success and failure of nursing students. However, there is minimal research focused on nursing students who fail a required course and must repeat it to remain in their nursing program (Elmir et al., 2019). Students who fail a required nursing course are at a crossroads and must decide if they want to return and repeat the failed course or withdraw from the program (Elmir et al., 2019; Lewis, 2018). The risk for student attrition rises for students who decide to repeat a required nursing course. In 2016, the Accreditation Commission for Education in Nursing (ACEN) provided attrition rates for nursing students in the United States and found that 15% to 29% of nursing students withdrew or were dismissed involuntarily from their program (ACEN, 2016). Two years later, Lewis et al. (2018) reported that the attrition rates in undergraduate nursing programs were significantly higher at 50%, indicating a 20% to 35% increase in student attrition.

With the heightened attention student attrition and retention have received in the literature, sparse findings remain concerning nursing students who repeated a failed course in undergraduate programs (Elmir et al., 2019; Lewis, 2018). Lewis (2019) suggested that the insufficient literature findings on students after course failure resulted from the way nursing programs publicly reported student outcomes. Quantitative data that researchers collected did not distinguish between dismissed students, students who withdrew, or those who re-enroll after course failure.

Nursing programs are not required to report how many nursing students fail and repeat required courses. A statistic that may suggest the prevalence of student repeaters is the on-time completion rate (Lewis, 2018). According to the U.S. Department of Education (2015), the cumulative number of graduating students, out of a defined cohort, who complete their academic

plan within a specified time, determines on-time completion. The ACEN (2020) determined that nursing students should complete the program within 150% (six semesters) of the stated program length, beginning with enrollment in the first nursing course. Although on-time completion rates do not entail explanations for extended timeframes that students may incur, this statistic can possibly provide information about students' status, leaves of absence, or repeating a course in nursing programs (Lewis et al., 2018).

As course failure significantly affects nursing student retention, identifying interventions to support student repeaters to continue and complete their education may positively influence their retention (Lewis, 2018). However, nursing programs do not specifically target their academic interventions solely towards students who have failed a course that now requires repeating (Lewis, 2018). Strategies implemented to improve nursing student retention include flexible program scheduling and peer, family, and faculty support (Jeffreys, 2012, 2020). Other strategies such as peer mentorship, faculty coaching, early at-risk interventions, and counseling after test failure are helpful (Handwerker, 2018; Lewis, 2018). Although student repeaters are a hidden subgroup within nursing programs, nursing academia must recognize students at-risk for non-progression and distinguish how to intervene to facilitate student success. Having an in-depth understanding of the term student repeaters may inform these efforts.

Concept Identification and Uses

Identifying the concept of student repeaters began by exploring dictionary and conceptual definitions of the concept in three steps. The term student was defined first, followed by repeaters, and then student repeaters.

Definitions

According to the Merriam-Webster Online Dictionary (n.d.), the term "student" is described as a scholar, learner, one who studies, and an attentive and systematic observer. The Oxford Dictionary (n.d.) describes a "student" as a person studying at a college or university to enter a particular profession. Synonyms for "student" include pupil, novice, apprentice, and scholar (Merriam-Webster, n.d.).

In academia, students undergo rigorous training to acquire knowledge and develop skills across many educational disciplines such as medicine, dentistry, psychology, pharmacy, and nursing. However, a student can be devoted to a subject in other contexts, whether academic or not. For example, someone learning how to cook, a baby learning how to walk, or an athlete understanding a new sport can be described as a student. Having a genuine desire to learn and the willingness to do hard intellectual work to achieve an understanding further defines the term (Simanek, 2017).

The Tech Terms Computer Dictionary (n.d.) characterizes a "repeater" as an electronic device in a communication channel that increases the power of a signal for retransmission, allowing the signal to travel further. Individuals who can compute wireless networks like Wi-Fi commonly use repeaters. Since the term repeater falls outside of the context of nursing students who repeat a failed course, the verb tense, repeat, will be defined. Therefore, the term student repeaters will be assigned using the root verb, to repeat.

The Merriam-Webster Online Dictionary (n.d.) describes the term "repeat" as to make, do, or perform again and to go through or experience again. Synonyms include reiterate, duplicate, repetition, and replay (Merriam-Webster, n.d.). According to the Oxford Dictionary

(n.d.), the word “repeat” means to say or write something again and to happen more than once in the same way.

In narrative works, the term “repeat” functions to reinforce a concept, thought, or idea for a reader to understand (Merriam-Webster, n.d.). Writers also utilize the process of repetition to generate a greater focus on a particular subject to intensify its meaning. From a financial aspect, repeat payments or recurring billing cycles occur when customers authorize a merchant to charge them repetitively for goods or services on a prearranged schedule (Kagan, 2021). These goods or services can include cable bills, cell phone bills, gym membership fees, and magazine subscriptions.

In primary education, student repeaters are lower-achieving students retained in the same grade for an extra year (Goos et al., 2013). Schools consider grade retention helpful to low achieving students by providing additional time to improve their academic ability. Additionally, some researchers believe grade retention will improve students' inadequate academic progress and help emotionally immature students develop (Goos et al., 2013).

From 2017 to 2019, the Association of American Medical Colleges (AAMC, 2020) defined “student repeater” by Medical College Admission Test (MCAT) examinees who tested more than once. The data revealed that students obtained higher scores on their second MCAT attempt, increasing their scores by more than four points (AAMC, 2020). Therefore, second attempt scores can represent applicants' best scores, providing a better chance of acceptance into medical schools.

Lewis (2018) and Lewis (2019) describe student repeaters as those who have completed the rigorous admission requirements and challenging foundational pre-requisite work yet subsequently fail a required nursing course and return to retake the course. Although nursing

students who repeat a required course can experience delays towards program completion and graduation, these students are committed to fulfilling their goal of becoming a nurse, demonstrate a desire to be successful, and are willing to put forth the effort to repeat the course.

Attributes of Student Repeaters

According to Walker and Avant (2019), the heart of a concept analysis is the collection of characteristics most often associated with the concept, known as the defining attributes. Determining the defining attributes is vital to establishing the concept as a unique entity. The defining attributes of student repeater are to experience again and the desire to be successful.

To Experience Again

To experience again is encountering the same knowledge, skill, or practice from observation or participation in a particular activity more than once (Merriam-Webster, n.d.). When a student repeats a course, they undergo the experience of re-enrolling in the course again, adjusting to a new cohort, and obtaining the same knowledge and instruction in the classroom or clinical setting (Handwerker, 2018; Lewis, 2018). Re-experiencing the same course may elicit similar emotions that the student experienced previously. According to Handwerker (2018), students returning to repeat a course described heightened feelings of stress and anxiety from the previously failed course.

Desire To Be Successful

The desire to be successful is the conscious effort towards something that produces a favorable or satisfying outcome (Merriam-Webster, n.d.). Students' motivation and persistence often mirror their desire to be successful (Betts et al., 2017; Rafii et al., 2019). Motivation is the driving force of most academic pursuits and a factor that determines whether students complete their academic programs at colleges or universities (Saeedi & Parvizy, 2019). Persistence is the

continuation of effort in the face of adversity, often described as an outcome of high motivation (Karabulut et al., 2015). Students who demonstrate higher motivation and persistence levels are willing to continue their education to achieve their goals successfully.

Constructed Cases of Student Repeaters

Model Case

A model case illustrates the use of a concept and contains all defining attributes (Walker & Avant, 2019). A first-year nursing student enrolls in a fundamentals course. At the end of the semester, the student receives a non-passing letter grade and fails the course. If the student decides to return, the institution's program policy will allow the student to repeat the failed course. The student meets with the faculty and explains that she has known since she was young that she wanted to be a nurse and is willing to do whatever it takes to achieve her goal (desire to be successful). After the faculty approves the student's entry into the repeated course, the student meets with her advisor to re-enroll into the fundamentals course (to experience again). The advisor guides the student through the enrollment process again, and counsels her about the emotional well-being associated with repeating a course. When the next semester begins, the student attends the repeated fundamentals course and experiences similar emotions of stress and anxiety encountered in the previous semester (to experience again).

Borderline Case

A borderline case in the Walker and Avant (2019) method includes most, but not all, of the defining attributes of the concept. Using the premise of the model case as the setting for the borderline case, when the student is unsuccessful in the fundamentals course, the student is hesitant about returning to repeat the failed course. When the faculty and student meet, the student shares feelings of apprehension as they will no longer be with their cohort, and they are

repeating a course that was difficult to comprehend. It is at this moment that a student often loses their motivation to continue. Although the student expresses their uncertainty about repeating the course, the faculty still approves the student's entry into the repeated course. The student decides to meet with their advisor and re-enroll in the course (to experience again).

Related Case

Related cases are similar to the concept of interest and contain some defining attributes (Walker & Avant, 2019). Related cases of a student repeater include pupil, novice, replay, and duplicate. A pupil is a person in school under a tutor or teacher (Merriam-Webster, n.d.). While pupil is consistent with the term student, novice describes a new or inexperienced person in a field or situation (Merriam-Webster, n.d.). According to Merriam-Webster's Online Dictionary, replay is an occurrence that closely follows a previous event's pattern (Merriam-Webster, n.d.). For example, when a student fails a required course, they can replay the experience of taking the required course again; however, the term lacks an understanding of students repeating the course because of their desire to be successful. Finally, duplicate means to be the same and produced by the same process (Merriam-Webster, n.d.). Duplicating consists of students experiencing the same course again through the same process but lacks an understanding of students repeating a course because of their desire to succeed.

Contrary Case

A contrary case illustrates the concept that appears unclear or not present (Walker & Avant, 2019). A senior-level nursing student is enrolled in a medical-surgical course. The student received a non-passing letter grade and failed the course. When the student meets with the faculty to discuss her performance, the student appears shocked they did not pass and cannot conceive the possibility of enrolling in the course again. Typically, if a student is going to

second-guess their career path, it occurs at a time such as this. The student may receive approval to repeat the course but declines to meet with their advisor to re-enroll in the failed course. The student no longer demonstrates a desire to succeed and has a strong disinterest in experiencing the medical-surgical course again.

Antecedents of Student Repeaters

Antecedents are events that must be present before the occurrence of a concept (Walker & Avant, 2019). The antecedents of student repeaters are poor academic performance, course failure, and a readiness to repeat a failed course. Poor academic performance occurs when students fall below the expected standards of a required nursing course and receive a non-passing letter grade. Students who perform poorly have a high probability of academic failure and may require temporary or ongoing interventions to succeed academically (Abele et al., 2013; Handwerker, 2018). In addition to academic challenges, decreased motivation, and family and financial issues, a lack of support often contributes to a student's poor academic performance (Abele et al., 2013; Lewis, 2018, 2019).

Students experience course failure when they do not meet the grade requirements to pass. Course failure comes as a shock for most students because they have met the rigorous admission criteria and have the academic potential to be successful. Once course failure ensues, Hardwerker (2018) described nursing students as having feelings of sadness and disappointment, realizing the difficulty and rigor that the course entailed. The transition to nursing coursework is challenging and a significant reason for course failure among nursing students (Lewis et al., 2018).

Nursing students who failed a required course must decide if they plan to return to school and repeat the failed course. Once the student has decided to repeat the required course, the

preparation of re-enrolling, initiating support strategies, and completing the course is pertinent to student retention. Elmir et al. (2019) noted that students sought out more targeted support that assisted with their transition into nursing programs and provided better study skills. Other students emphasized their need to cut back their work hours and create schedules for study time at home (Elmir et al., 2019). Students need to be prepared to make the necessary changes to repeat a failed course and achieve success.

Consequences of Student Repeaters

The outcome or events that occur because of the concept are the consequences. The consequences of student repeaters can be positive or negative. The positive consequences of student repeaters include successfully passing a repeated course, retention in nursing programs, increased graduation rates, taking the National Council Licensure Exam (NCLEX-RN), and employment in the nursing workforce (Jeffreys, 2014). In addition, Hart and Swenty (2015) noted that students who successfully passed repeated courses were perceived to have increased self-efficacy, self-confidence, and positive coping skills.

The negative consequences of student repeaters include delayed graduation and involuntary dismissal from nursing programs due to program policies. Delayed graduation occurs because students remain in academic programs longer than the suggested timeframe. Nursing students who fail a required course must wait until the program offers the course again. Due to the cohort model of nursing education, student repeaters may not always gain entrance into the required course because of student capacity and limited faculty (Edmonds, 2013; Lewis, 2018). Therefore, this delays a student repeater's progression towards graduation.

Nursing programs generally state that a student may only repeat a required course once. However, there are cases when a school permits a student to repeat a required nursing course,

and the student fails again. When this happens, the school may no longer allow the student to remain as a nursing major (Lewis, 2018; Lewis et al., 2018). As a result, students pay a personal price of loss of time, money, and the goal of becoming a registered nurse (Lewis, 2018).

Empirical Referents

Empirical referents are how defining attributes are identified or measured (Walker & Avant, 2019). No standard empirical measures could be located for "student repeaters". However, evaluating students' desire to be successful may be determined by their motivation and persistence. The academic motivation scale (AMS) is a frequently used instrument that assesses academic motivation in various academic environments (Rafii et al., 2019). The AMS is comprised of several subscales that measure students' intrinsic (to know, to accomplish, to experience) and extrinsic (external, identified regulation) motivation (Vallerand et al., 1992). Thus, utilizing the AMS can explore internal and external motivators to determine student's willingness to continue and complete their education.

A descriptive study of nursing students' persistence used the college persistence questionnaire (CPQ) to identify students at risk of attrition and determine the variables that best distinguish undergraduates who will and will not persist (Betts et al., 2019). Data from the CPQ noted that institutional commitment, academic and social integration, and student support services were critical variables in the decisions of at-risk nursing students to persist through their nursing education.

Conclusion

As a result of the concept analysis of student repeaters, the defining attributes of experiencing again and the desire to be successful were determined by the researcher. Therefore, the researcher defines student repeaters as students who failed a required nursing course and

chose to re-experience the course again because they desire to achieve their goal of becoming a nurse successfully. As there is limited literature pertaining to student repeaters, this analysis clarifies the meaning of student repeaters.

Student repeaters in nursing programs are a unique population that requires a multifaceted approach, including academic and support structures, to ensure they meet the academic standards of the course (Elmir et al., 2019). However, the literature remains inadequate about interventions implemented to create successful outcomes among student repeaters. Although students' motivation and persistence to remain in repeated courses is pertinent to their retention, addressing adverse outcomes correlated to repeating a course like student attrition is also essential. Further research will be necessary to identify the circumstances that affect student repeaters, facilitate student transition and retention in nursing programs, and identify interventions that solely support student repeaters (Elmir et al., 2019; Lewis, 2019).

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Chapter 3: Course Repetition in Pre-licensure Nursing Students: A Scoping Review

Abstract

Significance of Problem: Nursing student attrition is a global issue affecting students, nursing programs, and the profession. One group of nursing students at risk for attrition are those that have failed and need to repeat a required nursing course. These students experience academic consequences such as delayed graduation and entry into the workforce, further contributing to the nursing shortage. Unfortunately, current literature about nursing student repeaters remains inadequate, and evidence of support measures is minimal.

Purpose: This scoping review aims to summarize the literature on course repetition in pre-licensure nursing students and identify gaps in the literature about this population.

Methods: Arskey and O'Malley's (2005) five-step procedure was used as the organizing framework to explore course repetition in pre-licensure nursing students.

Results: There were twenty articles relevant for this scoping review. The findings revealed nursing student repeaters are at an increased risk for subsequent failure and attrition. Students experienced shock, sadness, and uncertainty when course failure ensued. Nursing students sought additional help while repeating failed courses, but interventions solely harnessed towards student repeaters can be beneficial.

Conclusion: Nursing student repeaters are a unique population that requires a multifaceted approach, including academic and non-academic support structures, to ensure they meet the educational standards of the repeated course. Future studies regarding this population should include progression policies' impact on student success and strategies and interventions that create positive outcomes among student repeaters.

Keywords: academic probation, attrition, course repetition, fail, failure, nursing student, retention

Course Repetition in Pre-licensure Nursing Students: A Scoping Review

The retention of nursing students is a significant issue. In the United States, 30% to 50% of nursing students fail to finish their program and do not receive their degree (Fagan & Coffey, 2019; Kukkonen et al., 2016; Lewis, 2019). Internationally, researchers in the United Kingdom noted that nursing student retention is also an issue, with attrition rates reported to be over 30% (Buchan et al., 2019). Such high attrition rates are often a result of the rigorous nature of pre-licensure nursing programs. Currently, 58% of students entering pre-licensure nursing programs will obtain their degrees (American Nurses Association [ANA], 2019). One reason for such low completion rates is that not every student progresses through their nursing program according to the curriculum plan (Lewis, 2019). Nursing students who fail a required course and need to repeat it experience academic consequences such as delayed graduation and entry into the workforce, putting themselves at increased risk for attrition (Elmir et al., 2019; Lewis, 2018). Nursing student attrition is a critical issue affecting the student and their family, the program, and the profession. As a result, students endure financial and psychological hardships, waste educational resources, and healthcare communities cannot meet the demand of available nurses, further contributing to the current nursing shortage (ANA, 2019; Hadenfeldt, 2012).

Although many have examined nursing student attrition, researchers have provided limited attention to nursing students that fail and repeat a required course. Lewis et al. (2018) note an underrepresentation of nursing student repeaters since most nursing schools are not required to report the number of students who fail and return to repeat a course. With state boards of nursing and accrediting agencies requiring schools of nursing to report program outcomes such as gender, ethnicity, and National Council Licensure Examination (NCLEX-RN) pass rates, the incidence of student repeaters in pre-licensure nursing programs has become a

hidden subgroup (National League for Nursing, 2017). Nursing student repeaters are a specific population that deserves attention. These students have met the criteria for admission into their nursing program and may have been successful in other courses before failing (Lewis et al., 2018; Lewis et al., 2021). In addition, student repeaters have made the conscious decision to return and repeat the course with hopes of achieving success in their attempt. Nursing student repeaters are a population with immense potential but may require different support to succeed in their program.

With such sparse literature examining nursing student repeaters, a scoping review is ideal for summarizing and disseminating the current research findings and identifying gaps in the existing literature (Arskey & O'Malley, 2005). Scoping studies have become an increasingly adopted approach that differs from other types of literature reviews. Arskey and O'Malley (2005) and Levac et al. (2010) explain that scoping reviews include a greater range of study designs and methodologies and aim to provide a descriptive overview of reviewed material without critically appraising or synthesizing evidence from individual studies. Scoping reviews also allow researchers to incorporate grey literature or research produced outside academic publishing, which may diminish publication bias (Davis et al., 2009). Therefore, this scoping review aims to summarize the literature on course repetition in pre-licensure nursing students and identify gaps in the literature about this population.

Background

The current literature does not comprehensively explore nursing students who repeat failed courses (Lewis, 2018). While academic failure is the most common reason for nursing student attrition, there are varied and individualized reasons for the lack of academic progress (Handwerker, 2018; Lewis, 2018). Researchers have found that students did not expect the level

of academic rigor they experienced in nursing school, while other students noted limited financial resources and social support, contributing to their academic failure (Dante et al., 2016; Karsten & DiCicco-Bloom, 2014; Lewis et al., 2018). Strategies and interventions to support nursing students who repeat failed courses may positively impact their progression. However, nursing programs do not specifically target their academic interventions solely toward students who have failed a course that now needs repeating (Lewis, 2019). Although nursing programs have implemented interventions to improve student progression and retention, statistical correlations between interventions that separated repeaters from non-repeaters have received minimal attention (Lewis et al., 2018). Therefore, it is difficult for educators to know what type of support would be specifically helpful to student repeaters.

There is little empirical evidence concerning interventions to support nursing student repeaters in different pre-licensure programs. However, studies conducted within associate and baccalaureate degree nursing programs have demonstrated similar findings, which include dealing with uncertainty and shock after course failure, struggling to meet workload expectations while repeating, and perceptions of limited support during course failure (Handwerker, 2018; Karsten & DiCicco-Bloom, 2014; Lewis, 2019). These findings suggest specific interventions for nursing student repeaters; however, researchers have yet to conduct studies implementing these interventions. Therefore, utilizing the scoping review methodology in this study will provide an opportunity to map out the available literature on student repeaters, identify gaps in knowledge about this population, and provide a basis for recommendations that may aid in student repeaters' success.

Methods

Design

The methodology for this scoping review was based on the framework outlined by Arskey and O'Malley (2005). The review included the following key steps: 1) identifying the research question, 2) identifying relevant studies, 3) study selection, 4) charting the data, 5) organizing, summarizing, and reporting the results, and 6) consultation exercises. The consultation exercise is an optional step that includes advisement from experts in the area of research (Arskey & O'Malley, 2005). For this review, one nursing professor and a librarian from the University of Texas at Tyler were consulted during the development of the research questions, search terms, and inclusion and exclusion criteria. The researcher guided the review with the question, 'what is known about course repetition in pre-licensure nursing students?'

Data Sources and Search Strategy

The researcher implemented the initial search in June 2022, consulting with a librarian to identify keywords and develop a search strategy. The strategy for searching the literature included several databases such as PubMed, CINAHL, ProQuest, ERIC, Scopus, and Web of Science. The researcher selected comprehensive databases covering all aspects of course repetition in pre-licensure nursing students. The search terms included a combination of subject headings, terms, and keywords such as "nursing students," "nursing student repeaters," "attrition," "academic failure," "course repetition," "academic probation," "academic progression," "student retention," and "nursing education." Considering the lack of literature, the researcher identified and extracted eligible studies between 2000 and 2022.

Inclusion and Exclusion Criteria

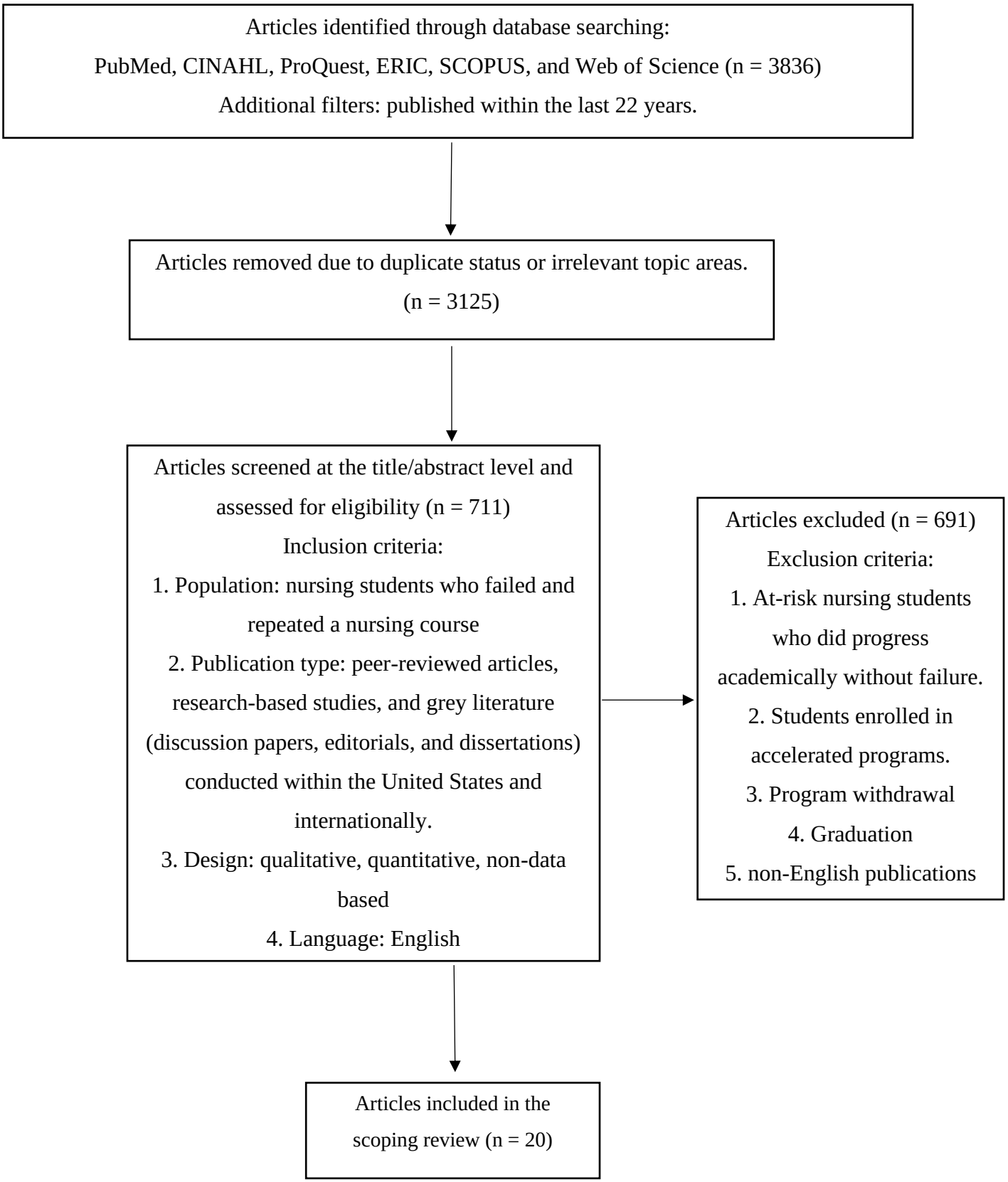
The researcher selected studies based on inclusion and exclusion criteria. Inclusion criteria included articles on nursing students enrolled in pre-licensure nursing programs that failed a course that required repeating to progress academically. The literature considered for this review comprised peer-reviewed articles, research-based studies, literature reviews, and grey literature conducted within the United States and internationally. Due to the sparse literature concerning nursing student repeaters, expanding the search of studies internationally would provide a greater selection of literature to examine and report regarding this population. Exclusion criteria included literature about at-risk students who did progress academically without failure, students who voluntarily withdrew from their program, students enrolled in RN to BSN nursing programs, and students who already graduated from their pre-licensure nursing program. In addition, the researcher excluded literature published in languages other than English.

Following the Arskey and O'Malley (2005) framework, the researcher screened 3,836 articles for inclusion. After removing duplicate or irrelevant articles, 711 articles remained. The researcher then reviewed the abstracts and titles of these articles. As a result, the researcher identified twenty abstracts for full-text review, concluding that all twenty were relevant for the scoping review.

Results

The articles included in the review consisted of six based on quantitative research, twelve based on qualitative research, and two literature reviews. Figure 1 shows the literature review process, and Table 1 (see Appendix A) details the studies included in the scoping review.

Figure 1. Literature Review Flowchart



Quantitative Studies

There were six articles based on quantitative studies analyzed for this review. The research articles published between 2012 and 2021 included reports from the United States and Italy. Abele et al. (2013) and Hadenfeldt (2012) both used exploratory retrospective approaches, while Bryer (2012) used an experimental quantitative approach, Bulfone et al. (2020) performed a prospective follow-up, and Lewis et al. (2018) and Lewis et al. (2021) utilized a descriptive quantitative design. The research articles from the Unites States included two studies on associate degree nursing (ADN) students, one study focused on baccalaureate nursing (BSN) students, one study that collected data on nursing student repeaters in a specific state, and one study that examined course repetition policies across nursing programs in the United States. The one study conducted in Italy occurred within the university setting of a BSN program. The findings from these quantitative studies identified several themes.

Incidence of Nursing Student Repeaters

With such limited attention given to nursing student repeaters, Lewis et al. (2018) conducted two studies on the incidence of this population. In the first study, performed in a single state in the United States, the findings showed that 41% of students in an ADN program repeated a course, while the rate of course repetition in BSN programs was only 15% (Lewis et al., 2018). Although 70% of the study's respondents were from ADN programs, the results may not fully depict the incidence of repeaters in BSN programs.

Course Failure

Nursing students who repeat courses within pre-licensure programs are at an increased risk for attrition (Lewis et al., 2021). For example, the American Association of Colleges in Nursing (2019) noted attrition rates in BSN programs are as high as 50%, whereas the attrition

rates within ADN programs are 42%. Since course failure contributes most significantly to the loss of nursing students, it is critical that nursing programs identify the reason behind students' academic failure, provide opportunities, if any, to repeat the failed course, and utilize resources to help them become successful in their nursing program.

Three studies demonstrated associations between repeating a failed course and program attrition. Abele et al. (2013) and Hadenfeldt (2012) found that nursing course failure and course repetition correlated with involuntary withdrawal from nursing programs. Bulfone et al. (2020) examined if specific factors such as self-efficacy, motivation, and sociodemographics in nursing students who were at risk of failure or were repeating a failed course predicted their academic failure. The results suggested that older males were at increased risk of failing and repeating a course. In addition, students who exhibited lower levels of self-efficacy increased their risk for failure in nursing programs.

Progression Policies

Lewis et al. (2021) studied progression policies after course failure within nursing programs in a follow-up study. Their study found that students enrolled in ADN programs repeated courses 11.5% more than those enrolled in accelerated BSN and Master's-prepared nursing programs. In addition, their study showed geographic reports, revealing a lower incidence of course repetition in the west (8.2%) and a higher incidence in the south (13.1%). Regarding program policies, 91% of nursing programs permitted students to repeat after failure; however, 64% of programs only allowed one repetition, 27% permitted two repetitions, and less than 8% approved up to three repetitions after course failure. The study further noted a broad range of inconsistencies within program policies, suggesting examining conditions for repeating

failed courses and if policies inhibited academic success in student repeaters (Crow & Bailey, 2015; Lewis et al., 2021).

Interventions

Despite the adverse outcomes of nursing student repeaters, some evidence suggests that support from nursing programs may provide successful outcomes for these students. Bryer (2012) reports on a quality improvement project describing the impact of a peer tutoring program supporting nursing students who returned to repeat a failed course. Bryer (2012) offered this program to help nursing student repeaters' academic and emotional needs. The program resulted in the academic success of eight of the eleven program participants.

Overall, the quantitative studies showed the incidence of student repeaters in pre-licensure nursing programs and emphasized the need for adequate progression policies. However, the lack of literature on nursing student repeaters is evident. In addition, factors that contribute to students failing courses and possible program withdrawal remain unknown. Researchers have suggested academic and non-academic factors that may contribute to nursing students failing and needing to repeat a course, but they are better described in qualitative studies.

Qualitative Studies

There were twelve articles based on qualitative studies analyzed for this review. The articles from 2001 to 2022 included two based on dissertation research. Handwerker (2018) and Jakubec et al. (2020) both used a phenomenological approach, while Owen (2020) and Lewis (2018) used a narrative inquiry approach, Karsten and DiCicco-Bloom (2014) performed a grounded theory, and Elmir et al. (2019) utilized a descriptive qualitative design. The article by Lewallen and DeBrew (2012) was part of a more extensive qualitative descriptive investigation

in a single state. However, the last three qualitative articles by Crow and Bailey (2015), Litchfield (2001), and Diekelmann and McGregor (2003) do not specify a qualitative methodology.

The qualitative studies sought a comprehensive understanding of students' experiences with failing and returning to repeat a course. Five of the studies took place in a BSN program, while seven of the studies were in ADN programs. With qualitative research, the number of participants in each study was relatively small, ranging from 5 to 19 nursing students. Nevertheless, the findings noted various parallels from these studies, with similar concepts identified: 1) nursing students struggled with the academic workload, underestimating the academic rigor associated with nursing school (Elmir et al., 2019; Karsten & DiCicco-Bloom, 2014; Litchfield, 2001), 2) nursing students demonstrated a lack of confidence after course failure and experienced emotions such as shock, uncertainty, and disbelief (Elmir et al., 2019; Handwerker, 2018; Jakubec et al., 2020; Lewis, 2016; Litchfield, 2001), 3) nursing students utilized more academic resources after failing a course and changed their study habits when preparing for course exams (Elmir et al., 2019; Jakubec et al., 2020; Owen, 2020), 4) nursing students who repeated courses needed help from faculty, friends, family, and other student repeaters (Crow & Bailey, 2015; Elmir et al., 2019; Karsten & DiCicco-Bloom, 2014; Tonelli, 2022), 5) nursing students exhibited desires to want to finish the program although returning was hard (Handwerker, 2018; Lewis, 2018), 6) returning to school required nursing students to minimize external factors such as working too many hours—creating a balance between work, family, and school (Owen, 2020; Tonelli, 2022), and 7) nursing students utilized methods such as counseling and frequent visits with their advisors after returning from course failure (Litchfield, 2001; Owen, 2020).

The qualitative researchers also provided similar recommendations. Elmir et al. (2019), Handwerker (2018), Lewis (2016), and Owen (2020) stressed the importance of support strategies to facilitate the retention and success of nursing student repeaters. Lewis (2018) and Handwerker (2018) suggested a peer mentorship group involving successful student repeaters, while Owen (2020) discussed the importance of peer tutoring after course failure. Furthermore, the researchers highlighted the importance of faculty support and increased communication between faculty and students to assist with their transition after course failure (Crow & Bailey, 2015; Karsten & DiCicco-Bloom, 2014). Another recommendation was to evaluate nursing program curricula at designated times to ensure faculty focused on learning goals more than performance goals (Crow & Bailey, 2015; Karsten & DiCicco-Bloom, 2014). Lastly, progression policies and procedures should be clear to students at the beginning of the nursing program, not following a course failure. Crow and Bailey (2015) and Lewis (2018) encourage faculty to meet with students immediately after course failure to devise individualized success plans.

Literature Reviews

Two articles based on non-data-related research included one article reviewing the literature on nursing students who fail and repeat courses and one article describing spiritual support for nursing student repeaters. The literature review article by Lewis (2019) revealed that nursing student repeaters had been a population of concern in nursing education for years. Various authors noted that nursing student repeaters have the potential to be successful in their program, but many students require additional support (Lewis, 2019). Due to the lack of literature exploring ways to support this population, student repeaters are at an increased risk for subsequent course failure and attrition in nursing programs (Lewis, 2019).

Wynn's (2017) article describing spiritual support for nursing student repeaters suggests integrating spirituality as a coping mechanism for students who have failed. With the rise of college attrition partially due to mental health challenges, Wynn (2017) notes that spiritual care in nursing education can decrease stress and facilitate learning. Wynn (2017) recommends utilizing trained mental health practitioners within nursing programs to support students spiritually as they repeat required nursing courses.

Discussion

Findings from the scoping review revealed that nursing student repeaters are a population of great concern in both ADN and BSN programs. Mooring (2016) notes that course failure significantly impacts the student, the school, and the profession. Some studies mention that academic failure results in students' inability to master course content and perform higher-level learning behaviors, while others credit course failure to work or family responsibilities outside of school, financial challenges, and issues with their health (Bloom, 1956; Kukkonen et al., 2016). Students required to repeat are at an increased risk for poor academic outcomes and may need additional support to succeed in their nursing program.

The identification of nursing student repeaters is not well documented. Since accrediting bodies do not require nursing programs to report this population on nursing education outcomes, national data concerning student repeaters is sparse. However, some accreditors require nursing programs to report program completion rates without requiring data about students who did not complete the program (Lewis et al., 2018; US Department of Education, 2015). To consider interventions to retain nursing student repeaters, it is necessary to highlight the incidence of this population (Lewis, 2018). Further studies that collect data on nursing student repeaters on state

and national levels are imperative to identifying this population and implementing ways to support their progression.

Progression policies are pivotal to the outcomes of nursing student repeaters (Lewis et al., 2021). Nursing schools varied widely in their policies regarding course repetition. Some schools allow students to repeat a failed course once, while others permit up to three repetitions for a failed course. The broad range of these policies raises concerns regarding how many courses a student can repeat. Current progression policies generally concern nursing courses, not prerequisites, and display various guidelines that do not necessarily differentiate how didactic and clinical courses should be repeated (Spector et al., 2020). For example, researchers noted that many progression policies stated that nursing students may only experience two course failures before being dismissed from the program. Those failures can occur in the same course or two different courses, whereas other progression policies state that nursing students may only experience one to two course failures in the same course before program dismissal (Crow & Bailey, 2015; Handwerker, 2018; Lewis et al., 2021). Unfortunately, the articles reviewed provided limited information about clinical course failure and progression within nursing programs. When progression policies differ, it is difficult to compare the outcomes of nursing student repeaters from one school to another (Lewis et al., 2018). Comprehensively investigating progression policies and noting which conditions for repeating are correlated with increased academic success may be a valuable addition to the literature.

Other perspectives regarding nursing student repeaters not thoroughly addressed are interventions and strategies to support these students. One study demonstrated that peer tutoring increased returning nursing students' retention and academic performance (Bryer, 2012). The tutoring program benefited students and improved attrition rates within the school (Bryer, 2012).

Although students utilized the tutoring program while simultaneously repeating a failed course, it would be essential to show how peer tutoring impacts students' progression in different pre-licensure programs and its influence after course failure through program completion.

The qualitative literature provided many factors contributing to nursing students needing to repeat a failed course. Compounding student struggles included work and family obligations, financial challenges, adjusting to rigorous curricula, utilization of resources, and a lack of support (Elmir et al., 2019; Karsten & DiCicco-Bloom, 2014; Lewis, 2018; Litchfield, 2001; Owen, 2020). Unfortunately, the literature does not discuss interventions implemented to address the struggles of nursing student repeaters. It would be valuable for researchers to rigorously evaluate students that fail and consider customized strategies and interventions harnessed toward their success.

Limitations of the Review

There are several limitations to this scoping review. The primary limitation was the lack of quality assessment of the included articles. However, the goal of a scoping review is to simply identify research previously conducted, not necessarily to assess quality. Arskey and O'Malley (2005) emphasize that a scoping review does not seek to appraise the quality of evidence and consequently cannot determine whether certain articles provide robust or generalizable findings. While the quality assessment was not the goal of the research, researchers should consider quality before applying these findings to policies and interventions for nursing student repeaters. Other limitations include excluding studies not published in English and the limited number of databases utilized. Articles published in other languages may have provided additional pertinent information.

Conclusion

This scoping review evaluated studies on nursing students who failed a required course that now needs repeating. Nursing student repeaters are a unique population that requires a multifaceted approach, including academic and non-academic support structures, to ensure they meet the educational standards of the repeated course (Elmir et al., 2019). However, public reports do not separate student repeaters in nursing education outcomes, and they are considered a hidden subgroup (Lewis, 2018; Lewis et al., 2018). Researchers have conducted quantitative and qualitative studies on nursing student repeaters, highlighting students' desire to finish their program despite failure, which provides insight into their perspectives of lack of support and familial and financial challenges, and identifies ways to minimize external factors that may lead to course failure or program withdrawal.

Nursing student repeaters are a population at substantial risk for subsequent course failure and attrition (Lewis, 2019). Failure and repeating required nursing courses often include delayed graduation and entry into the workforce. In addition, students also experience emotional hardships such as shock and sadness after course failure, feeling challenged to seek other support measures to progress. Unfortunately, evidence of support measures for student repeaters is minimal. Although very few studies explored interventions to increase student retention, additional research is necessary to identify ways to support their success.

Future research on nursing student repeaters should include studies that identify the incidence of this population in nursing schools, progression policies and their impact on students' success, and the implementation of specific supports and their outcomes. Findings from these studies may provide educators with better ways to retain nursing student repeaters, which benefits the students, the school, and the nursing workforce.

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Chapter 4: The Relationship Between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students

Abstract

Significance of problem: Student attrition is an essential issue in nursing education, resulting in adverse effects on the student, the school, and the profession. One group of nursing students at risk for attrition are those that have failed and need to repeat a required nursing course. Nursing students who repeat required coursework often have immense potential but may require different supports to succeed in their program. Current literature about interventions implemented to create successful outcomes among student repeaters remains inadequate.

Purpose: This research study aims to examine the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students. The study will also explore if demographic characteristics and academic factors contributed to students' academic performance.

Theory: Jeffreys's Nursing Universal Retention and Success (NURS) model provides the framework for the study.

Research questions: The research questions for this study are:

1. What are the descriptive demographic characteristics and academic factors of the study population?
2. What is the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students?

3. Are there select demographic characteristics (hours worked, hours spent studying, and age) that predict academic performance after controlling for perceived stress and academic self-efficacy?
4. What is the difference in perceived stress between nursing students who have repeated a failed course and nursing students who have never failed a course (academic performance)?
5. What is the difference in academic self-efficacy between nursing students who have repeated a failed course and nursing students who have never failed a course (academic performance)?

Methods: A descriptive correlational study design will be conducted, and a convenience sample of 184 nursing students currently enrolled in accredited baccalaureate nursing programs will be recruited. The study will take place over eight weeks in the spring 2023 academic semester. A demographic survey, the Student Nurse Stress Index (SNSI), and the Academic Self-Efficacy Scale (ASES) will be the instruments utilized in the study.

Planned analyses: Data will be analyzed using descriptive statistics, logistic regression, and t-tests.

Keywords: nursing students, nursing education, attrition, retention, perceived stress, self-efficacy

The Relationship Between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students

Problem and Significance

High attrition rates and low numbers of nursing graduates are common issues among many schools of nursing (Jeffreys, 2020). According to the American Association of Colleges of Nursing [AACN] (2019), on average, attrition rates are 50% for students enrolled in baccalaureate nursing programs. Merkley (2016) noted attrition rates of nursing students ranged from 30% to 80%, with 80% of attrition occurring within students' first year of the program. High attrition rates are a societal concern as healthcare demands continue to rise due to an increasingly aging and ethnically diverse population. Communities cannot meet the need of available nurses (AACN, 2019; Cleveland et al., 2019). Therefore, nursing programs must investigate reasons for attrition and seek to understand and meet the needs of their student population.

Multiple issues increase the risk of attrition. As a result of culminating stressors in academic and social environments, nursing programs lose students. Stressors may include working too many hours outside of school, decreased study time, family obligations, and lack of social support (Elmir et al., 2019; Handwerker, 2018). Each stressor can be significant enough to cause a student to withdraw from their program or be academically unsuccessful (Elmir et al., 2019; Li & Hasson, 2020). Li and Hasson (2020) described similar stressors, such as stretched finances, childcare, and the rigors of academic life, as factors influencing academic failure or withdrawal from nursing school.

Financial costs are also associated with student attrition. The cost of attrition has a negative impact on students and educational institutions (Schneider & Yin, 2011). Students who

do not graduate cost states and the federal government $4 billion in wasted grants and scholarships (Schneider & Yin, 2011). Over the last three years, the American Nurses Association [ANA] (2019) has invested over half a million dollars in its investigation of nursing student attrition. Roos et al. (2016) emphasized a direct correlation between high attrition rates and students who struggle financially. Merkley (2016) provided evidence to support that poor grades place students at risk for failure, increasing their stress and financial burdens, and adding additional time to complete their education. These experiences play a pivotal role in students' decisions to either leave a program prior to completion or return to repeat a failed course.

One group of nursing students at risk for attrition are those that have failed and need to repeat a required nursing course (Handwerker, 2018; Lewis et al., 2018; Lewis, 2019). The literature gives little attention to this population (Lewis et al., 2018). One reason for such limited attention is because student repeaters are an often unrecognized subgroup within nursing programs, and educators may not explicitly identify these students in reported educational outcomes (Lewis, 2019). Since nursing programs are not required to report how many students fail and repeat required courses, measuring the incidence of student repeaters within nursing programs is vital to student outcomes of retention and success.

As course failure significantly affects nursing student attrition, identifying interventions to support student repeaters to continue and complete their education may positively influence their retention (Lewis, 2018). However, nursing programs do not specifically target academic interventions solely toward students who have failed a course that now needs repeating (Lewis, 2019). Throughout the literature, researchers have noted strategies and interventions nursing programs have implemented to improve student retention. Unfortunately, without statistical correlations between interventions that separated repeaters from students that have never

repeated, it is difficult to know what type of support would be specifically helpful to student repeaters (Lewis, 2018).

Academic self-efficacy is positively associated with academic achievement (Byrne et al., 2014; Fenollar et al., 2007). Moreover, Bandura (1993) posited that self-efficacy beliefs increase an individual's motivation to master challenging academic tasks using their acquired knowledge and skills. Similarly, Torres and Solberg (2001) pointed out that a person's self-efficacy beliefs affect their academic performance by influencing their effort, persistence, and perseverance. Therefore, assessing academic self-efficacy within nursing programs may identify at-risk students and help develop strategies and interventions to enhance student retention and success.

Nursing students who have not repeated a failed course may experience similar stressors to those who have repeated a course. Evidence suggests that nursing students experience high stress levels throughout their program, particularly in the beginning and towards program completion (Smith & Yang, 2017). However, despite academic or personal stressors, these students have managed to progress without failure. Rayan (2018) noted that nursing students with acceptable levels of academic self-efficacy could manage the stressors of nursing school more effectively. Nursing students who have successfully progressed through their program without failure utilized resources such as peer mentorship, enrichment programs, faculty advisement, and peer tutoring services (Handwerker, 2018; Jeffreys, 2012, 2020; Rayan, 2018). Therefore, this research study aims to examine the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students. The study will also explore if demographic characteristics and academic factors contributed to students' academic performance.

Review of Literature

Nursing student attrition is a challenge in nursing education, resulting in adverse effects on the student, the school, and the profession (Mooring, 2016). One group of nursing students at risk for attrition are those that have failed and need to repeat a required nursing course (Handwerker, 2018; Lewis et al., 2018; Lewis, 2019). Nursing students who repeat are a population with immense potential but may require different supports to succeed in their program (Elmir et al., 2019; Lewis, 2019). Currently, the literature does not explicitly discuss variables that contribute to student success after course failure. Therefore, this review will examine the current literature about nursing students who repeat a failed course and how two possible associated variables, perceived stress and academic self-efficacy, may affect students' success.

Nursing Student Repeaters

Nursing program curricula require students to master course content, think critically, and perform higher-level learning behaviors such as application, analysis, and synthesis (Bloom, 1956). Popkees and Frey (2016) indicated that nursing students might not comprehend the challenge and rigor of nursing program curricula, resulting in academic failure. However, Kukkonen et al. (2016) noted that academic failure can also result from students' work or family responsibilities outside of school, financial challenges, and personal factors, such as health. When nursing students experience academic failure and need to repeat a course, the consequences are both practical and emotional (Handwerker, 2018; Lewis, 2018). For example, these students extend their time in school, incur additional costs, and delay their entrance into the workforce (Lewis, 2018). In addition, Lewis (2018) noted that stress and the psychological impact of failing a course are challenging and painful for nursing students.

Numerous factors lead to nursing students having to repeat a failed course. In a descriptive, qualitative study, Elmir et al. (2019) explored first-year nursing students' experiences of repeating one or more courses. Nine nursing students participated in semi-structured interviews—three face-to-face and six via telephone. Once the researchers completed the interviews and analyzed the data, four themes emerged: struggling to meet workload expectations, making the adjustment from pre-nursing to the professional component, utilizing academic supports and resources, and having the strength to continue. Elmir et al. revealed that academic and peer support were valuable sources of encouragement to meet course benchmarks of passing the failed course. Despite students experiencing setbacks in meeting workload expectations and academic standards, they demonstrated resilience and hardiness to continue their nursing program (Elmir et al., 2019).

In a phenomenological study, Handwerker (2018) interviewed a purposive sample of 11 nursing students, using open-ended questions to collect information on their experience returning to and succeeding in nursing school after a failure. Many themes emerged from the study, the most relevant being students' feelings of uncertainty, shock, and sadness. Course failure comes as a shock for most students because they enter nursing programs academically strong. Once course failure ensues, Handwerker described nursing students as having feelings of sadness and disappointment, realizing the difficulty and rigor of the course. Handwerker (2018) suggested that nursing programs outline expectations for beginning nursing students, which may improve their transition from pre-nursing to the professional nursing program.

For many nursing programs, students who repeat a failed course must be successful on their second attempt or face program dismissal. In general, nursing programs measure a student's success by their grade in a particular course (Daley et al., 2003). Daley et al. (2003) noted that

students who earn mostly As and Bs in nursing courses have a 97% chance of success in their nursing program and passing the National Council Licensure Examination (NCLEX-RN) on their first attempt. Conversely, grades of C, D, or F are inversely related to nursing program success and first-time NCLEX pass rates. Universal grading scales implemented within undergraduate nursing programs determine that a grade of C or higher defines success in a course (Daley et al., 2003). Therefore, it is imperative for nursing student repeaters to meet the benchmark in the repeated course, enhancing their ability to progress within the program. Unfortunately, limited studies discuss interventions to support nursing students who are repeating failed courses. Although the literature notes recommendations for student repeaters, researchers have yet to conduct studies implementing these recommendations to identify ways to improve student success. Therefore, student repeaters are at a higher risk for subsequent failure, which may result in the school no longer allowing the student to remain a nursing major (Lewis, 2018; Lewis et al., 2018).

Factors leading to students' academic failure and the challenges they incur when attempting to repeat the failed course are well documented in the literature. With the pressure students experience to remain in their nursing program, perceived stress is evident and frequently reported (Guo et al., 2019; Smith & Yang, 2017; Terp et al., 2019). Jeffreys (2020) emphasized that all students will experience some degree of stress; however, a student's coping skills and ability determine how they manage those stress levels. Smith and Yang (2017) purported that self-efficacy counteracts the adverse effects of stress in nursing students and influences positive academic outcomes. Jeffreys (2020) asserted that despite setbacks, students with high self-efficacy tend to accept challenges to persist and succeed more readily.

Perceived Stress

Nursing students may experience varying degrees of stress throughout their time in school. According to Bartlett et al. (2016), student nurses report higher stress levels than students pursuing other degrees. Terp et al. (2019) identified stress in nursing students as being higher than those in other health-related fields. Elevated stress levels experienced by nursing students during their education lead to academic failure, higher dropout rates, an increased risk of early-career burnout, and higher job turnover rates (Terp et al., 2019). Ensuring students have adequate stress management techniques should be a priority for nurse educators. A stressful educational experience may prevent prospective nurses from completing their program and entering the workforce.

A range of factors leads to elevated levels of stress in nursing students. In a descriptive, correlational study, Lo (2002) distributed questionnaires to 101 nursing students and found that 81.2% of students identified nursing coursework as their top-ranked stressor, while other high-ranking stressors included finances, family, and health. Zhao et al. (2015) published similar findings, with the most common stressors reported by nursing students as assignments and workload, followed by stress from peers and daily life. Additionally, Zhao et al. (2015) identified students worrying about low grades and being concerned their performance would not meet faculty expectations as the most significant factors correlated to high academic stress. He et al. (2018) found that most nursing students reported clinical placements and being involved in a patient death as sources of stress. The amount of time spent in classroom and clinical settings also affects students' financial and familial responsibilities. When students lose their ability to balance work, school, and home life, they experience elevated levels of stress, leading to low levels of personal well-being (He et al., 2018; Smith & Yang, 2017).

Stress can affect students' well-being. Crary (2013) found a strong correlation between perceived stress and negative mood ($r = .30$, $p < .001$) and perceived stress and physical symptoms ($r = .42$, $p < .001$). Students in the study experienced physical symptoms of stress, including palpitations, chest pain, irregular bowel movements, fatigue, and poor eating habits (Crary, 2013). Boulton and O'Connell (2017) noted similar findings, with stress leading to destructive, emotional, and psychological issues among nursing students—substance abuse, anxiety, and depression. In addition, Lu et al. (2019) found that emotional and physical stressors had a positive correlation with diminished academic performance ($r = .43$, $p < 0.01$) and clinical performance ($r = .21$, $p < 0.05$).

Stress among students can affect attrition within nursing education, student performance, and the inability to cope (He et al., 2018; Jagoda & Rathnayake, 2021). In Jagoda and Rathnayake's (2021) cross-sectional study, approximately 90% of nursing students presented with moderate (78.5%) to high (11.8%) levels of stress. The researchers noted that 25% of nursing students with moderate to high levels of perceived stress experienced academic failure within their first year. Excessive stress for nursing students may interfere with students' learning processes, thereby delaying students' development in clinical and academic skills, progression within the nursing program, and entering the nursing workforce.

Academic Self-Efficacy

Schunk (1991) stated, "academic self-efficacy refers to a student's confidence in his or her abilities to successfully perform academic activities at the desired level" (p. 208). Grounded in Bandura's (1997) self-efficacy theory, it assumes that human achievements depend on one's behaviors, beliefs, and environmental conditions. Moreover, Bandura (1997) and Schunk (1991) emphasized that academic self-efficacy may influence social and emotional self-efficacy beliefs

and is more accessible for students to obtain. Thus, at-risk students learning skills that promote their academic self-efficacy may be beneficial for them even beyond the academic setting (Bulfone et al., 2021; Warchawski et al., 2019).

Prior studies have shown that academic self-efficacy is positively associated with academic achievement (Byrne et al., 2014; Fenollar et al., 2007). Students with strong academic beliefs generate greater interest in scholastic activities by establishing goals and achieving them (Fenollar et al., 2007). In addition, academic self-efficacy affects students' performance by influencing effort, persistence, and perseverance (Torres & Solberg, 2001). So, in turn, promoting increased efforts and building students' persistence may increase their academic self-efficacy.

McLaughlin et al. (2010) indicated that students with high academic self-efficacy did not give up their goals when encountering difficulty in a task. Instead, students monitored and self-regulated their impulses and persevered (McLaughlin et al., 2010). In a similar study, McLaughlin (2008) noted that students with higher academic self-efficacy tend to accept complex tasks because they perceive external demands as challenging rather than stressful situations or threats. In addition, Chemers et al. (2001) indicated that students with high self-efficacy experienced less stress ($r = .39$, $p < .001$), resulting in better health and improved adjustments to higher education environments.

Although academic self-efficacy has an important influence on student's scholastic achievement, few instruments are available in the literature to measure academic self-efficacy in nursing students (Bulfone et al., 2021). The available instruments, such as the College Self-Efficacy Inventory (Solberg et al., 1993) and the College's Academic Self-Efficacy survey (Owen & Froman, 1988), measure academic self-efficacy in higher education institutions and are

not specific to nursing students. However, with the known high attrition rates and low retention rates plaguing nursing programs at similar rates in the United States and internationally, measuring academic self-efficacy in nursing students is pertinent (Handwerker, 2018). In addition, using these instruments may identify at-risk students and guide educators in implementing interventions to improve students' academic self-efficacy.

The Gap in the Literature

The literature review revealed a significant gap concerning nursing student repeaters and the relationship between perceived stress and academic self-efficacy. There is little empirical evidence concerning interventions to support nursing student repeaters. Studies conducted within undergraduate nursing programs discussed the positive impact interventions could have on student repeaters, but researchers have yet to conduct studies incorporating such interventions (Lewis, 2018). Researchers still need to explore specific support strategies to facilitate the retention and support of nursing student repeaters (Elmir et al., 2019). The literature identifies numerous causes of stress that nursing students experience throughout their education. However, there is no research identifying what specifically causes stress in nursing students who must repeat a previously failed course. Research is necessary to understand what stressors influence nursing student repeaters so educators can better guide students toward appropriate support or implement individualized interventions.

Increased focus on how academic self-efficacy influences nursing students is necessary. Researchers highlight academic self-efficacy's importance in improving students' educational performance and achieving learning outcomes. Therefore, it is essential to identify the role of academic self-efficacy on the success of nursing students. However, as Bulfone et al. (2021) mentioned, there is limited research measuring academic self-efficacy in nursing students.

Therefore, assessing the level of academic self-efficacy in nursing students may provide insights into developing strategies that can support students' progression and success in nursing programs.

Theoretical Framework

Of the studies reviewed, most did not incorporate a theoretical basis. However, the underlying commonality in studies incorporating a theoretical basis included Jeffreys's Nursing Universal Retention and Success (NURS) model (Jeffreys, 2012). The initial version of Jeffreys's NURS model was adapted from components of Bean and Metzner's (1985) model of nontraditional student attrition; however, Jeffreys's NURS model focuses on student retention. The NURS model (see Appendix B) presents an organizing framework for examining the multidimensional factors that affect undergraduate nursing student retention and success to identify at-risk students, develop strategies to facilitate success, guide teaching and educational research innovations, and evaluate strategy effectiveness (Jeffreys, 2012).

Nurse educators use Jeffreys’s model to better understand strategies to optimize student outcomes (Jeffreys, 2012). In addition, researchers have utilized Jeffreys's model to explore approaches for faculty to employ that encourage accountability, strategic planning, and action woven throughout the curriculum in all courses. Jeffreys's (2012) NURS model consists of seven components that examine the retention and success of nursing students: student profile characteristics, student affective factors, academic factors, environmental factors, professional integration and socialization, academic and psychological outcomes, and outside climate. Major concepts of the NURS model (see Appendix B2) relevant to the research study are perceived stress and self-efficacy.

Perceived stress. Stress is a psychological outcome inversely related to academic performance and persistence in college students (Gall et al., 2000; Jeffreys, 2012). Nursing students are a population that experience an extensive degree of stress throughout their education. However, some students may underestimate the expected stress levels or encounter dissatisfaction when stress levels arise during nursing courses. When the arousal of internal and external demands exceeds students' adaptive abilities, their capacity to cope with the stressors of nursing school may become too overwhelming (Smith & Yang, 2017). Jeffreys (2012) noted that perceived stress can influence nursing students' intent to stay in school, which can affect the retention and attrition rates of nursing programs.

Self-efficacy. Self-efficacy is an affective factor that can influence students' academic performance (Jeffreys, 2012). Bandura (1993) posited that self-efficacy beliefs affect student outcomes by increasing their motivation and persistence to master challenging academic tasks by fostering their acquired skills and knowledge. With empirical evidence linking self-efficacy as a significant variable to academic performance, commitment, and retention, students with higher levels of self-efficacy will succeed more readily and persist despite setbacks (Bandura, 1993; Jeffreys, 2012; Schunk, 1991).

Conceptual and Operational Definitions

The following table presents the major concepts of the study. Operational definitions for measures of each concept are also included.

Table 1: Conceptual and Operational Definitions

Variable	Conceptual Definition	Operational Definition
Academic Self-Efficacy	Academic self-efficacy is defined as "a characteristic of an individual with strong, resilient,	The Academic Self-Efficacy scale (ASES) (Byrnes et al., 2014) consists of 26 self-rated items that measure the academic context of a

	and realistically appraised self-confidence who views academic tasks as challenging, utilizes available resources and exerts much energy and commitment to perform academic tasks beyond the minimum benchmarks" (Jeffreys, 2012, p. 13).	student's self-efficacy. The ASES uses a 7-point Likert scale that ranges from 1 (not confident at all) to 7 (completely confident). Total scores range from 26 to 182, with higher scores demonstrating higher levels of academic self-efficacy.
Perceived Stress	Perceived stress is "the degree to which an individual endures a negative emotional experience caused by excessive demands or physical or mental demands with which they cannot cope" (Del Prato et al., 2011, p. 110).	The Student Nurse Stress Index (SNSI) (Jones & Johnston, 1999) consists of 22 self-rated items clustered into four factors: academic load, clinical concerns, interface worries, and personal problems. The SNSI uses a 5-point Likert scale ranging from 1 (not stressful) to 5 (extremely stressful). Total scores range from 22 to 110, and higher scores indicate higher levels of perceived stress.
Academic Performance	Academic performance is defined by how well an individual is progressing through the curriculum of their plan of study to meet the institution's expectations for graduation (Denham et al., 2018).	Academic performance will be a dichotomous variable identified by the students' status of either never having failed a nursing course or having failed and successfully repeated a nursing course.
Demographic Characteristics and Academic Factors	Demographic characteristics (e.g., gender, race, age, living arrangements, childcare responsibilities, and employment status).	See Appendix E

	Academic factors are resources students utilize during their nursing program that may have contributed to their academic success (e.g., study hours, classification and enrollment status, and which nursing course was failed and repeated, if applicable).	

Research Questions

Based on the NURS model and a review of the literature, the central research questions for this research study were:

1. What are the descriptive demographic characteristics and academic factors of the study population?
2. What is the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students?
3. Are there select demographic characteristics (hours worked, hours spent studying, and age) that predict academic performance after controlling for perceived stress and academic self-efficacy?
4. What is the difference in perceived stress between nursing students who have repeated a failed course and nursing students who have never failed a course (academic performance)?
5. What is the difference in academic self-efficacy between nursing students who have repeated a failed course and nursing students who have never failed a course (academic performance)?

Research Design

The research study utilized a descriptive correlational design (Creswell & Creswell, 2018). The study aimed to examine the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students and explore if demographic characteristics and academic factors contributed to their academic performance. An advantage to utilizing this design is that researchers collect data concurrently, eliminating the need to follow the study's population over time. In addition, employing this design generated data that assisted in identifying the direction and strength of each relationship.

Methods

Sample

The sample of participants was recruited from a population of nursing students that have failed and successfully repeated a course and those that have never failed a course in baccalaureate nursing programs in Texas. Participants were recruited through student email messages or the announcements section in their learning management system (e.g., Canvas, Blackboard). The primary investigator (PI) provided participation guidelines that discussed information about the study and inclusion and exclusion criteria; this information was distributed electronically during the recruitment period. Inclusion criteria was: (a) currently enrolled as an undergraduate nursing student, (b) enrolled in the professional component of the nursing program, (c) 18 years or older, (d) can read, write, and speak English, and (e) has never failed and repeated a nursing course or has failed and successfully repeated a nursing course. Exclusion criteria included: (a) students enrolled in an accelerated nursing program and (b) students who are currently repeating a nursing course. Upon indication of eligibility to participate, the

participants had the opportunity to review the online consent before beginning the survey (see Appendix G). Participants gave implied consent as evidenced by continuing the online survey.

The PI utilized a power analysis by Burns and Grove (2009) to determine the convenience sample needed for this study. With a power of .80, an alpha of .05, and a moderate effect size (.30), the results indicated a total sample of 166 participants, 83 for each group. Allowing for 10% attrition, the PI recruited a sample size of 184, with 92 participants in each group.

Protection of Human Subjects

The study proposal was submitted to the University of Texas at Tyler Institutional Review Board (IRB) for approval (see Appendix F). The PI informed potential subjects about the study when they received the participant guidelines during the recruitment period. The participant guidelines explained the purpose of the study, data collection procedures, expectations of commitment, potential risks and benefits of participation, protection of FERPA guidelines, right to withdraw from the study at any time without prejudice, and the PI's contact information.

A critical area that the IRB is responsible for evaluating is the risks and benefits of all human subjects that participate in research studies. An anticipated risk for this research study was that it may cause stress or distraction to nursing students currently enrolled in coursework. The PI allowed the online survey to remain open for approximately two months, allowing enough time for participants to complete the survey without interfering with their coursework schedule. The research study's benefits can influence change within program policies, curricula, and interventions concerning the progression and retention of nursing student repeaters.

Instruments

The PI collected demographic information including gender, race, age, living arrangements, childcare responsibilities, and employment status. In addition, the PI collected information about academic factors such as study hours, academic classification, enrollment status, which nursing course was failed and repeated, if applicable, and resources students utilized during their nursing program (see Appendix E). This information was beneficial in determining how student characteristics and academic factors contributed to their academic performance. The PI evaluated perceived stress using the Student Nurse Stress Index (SNSI) (see Appendix C) developed by Jones and Johnston (1999) and academic self-efficacy using the Academic Self-Efficacy Scale (ASES) (see Appendix D) by Byrne et al. (2014).

The SNSI measured how nursing students perceive their stress within four factors: academic load, clinical concerns, personal problems, and interface worries. The instrument consisted of 22 items and was scored using a 5-point Likert scale ranging from 1 (not stressful) to 5 (extremely stressful). Total scores extended from 22 to 110, with higher scores indicating higher levels of perceived stress. Since 1999, nursing academia has consistently validated the SNSI, and a Cronbach's alpha of > .70 supports the instrument's reliability in measuring perceived stress in nursing student samples.

The ASES measured students' confidence in their ability to achieve various academic tasks. One overall score was calculated by adding the associated numerical responses to each of the 26 questions. With no subscales noted on the instrument, the PI utilized the 7-point Likert scale to determine participants' scores: 1 (not confident), 2 (moderately not confident), 3 (slightly not confident), 4 (unsure), 5 (slightly confident), 6 (moderately confident), and 7 (completely confident). Total scores ranged from 26 to 182, with higher scores demonstrating

higher levels of academic self-efficacy. The ASES is a validated instrument used frequently since 2014 within the discipline of accounting (Byrne et al., 2014). It has demonstrated a Cronbach's alpha of .79 that supports the instrument's reliability in measuring academic self-efficacy. The ASES has also been adapted to other disciplines and student populations, but to date, researchers have not used this instrument with nursing students. The PI obtained permission to use the original ASES and has not modified it specifically for use with nursing students. Therefore, data collected from this aspect of the study will provide the first data set reflecting the use of the ASES in this population.

Data Collection

The PI recruited participants during the spring 2023 academic semester utilizing contact information from online published lists of accredited baccalaureate nursing programs in Texas. The PI distributed initial email invitations with an online survey link and required information regarding study participation to deans, directors, or program coordinators of public or private baccalaureate nursing programs (see Appendix H). The email discussed permission to sample nursing students currently enrolled in the professional component of the nursing program and that all survey responses will be anonymous. The PI requested the school provide the survey link through the students' email or the announcements section in the learning management system (e.g., Canvas, Blackboard). Sampling occurred between February and April 2023. The survey remained open for eight weeks, and the PI emailed nursing programs at weeks four and eight to prompt survey completion. Data was recorded within Qualtrics software and downloaded into the statistical package for social sciences (SPSS) version 28.0 data file for data storage, tabulation, and the generation of statistical analysis.

Analysis

In accordance with best research practices to maintain confidentiality, the PI maintained all electronic responses and research-related data within a password-protected database. Prior to performing the analyses, initial data checks were conducted. For missing data, listwise deletion was used to remove a case from analysis for surveys with 20% or more missing items. For survey items with 80% or more complete items, pairwise deletion was used to exclude a case on a variable-by-variable basis. Testing assumptions that were initiated included the Box-Tidwell procedure and the absence of multicollinearity.

The PI analyzed the study's research questions using descriptive statistics, logistic regression, and t-tests. To avoid a type I error, the Bonferroni correction was utilized (Bannon, 2013). Research question one was examined by descriptive statistics, summarizing the study population's demographic characteristics and academic factors that contributed to student's academic performance. Research question two was analyzed using logistic regression. Since the dependent variable (academic performance in undergraduate nursing students) is categorical and the independent variables (perceived stress and academic self-efficacy) are continuous, logistic regression allowed the PI to assess models to predict the categorical outcome. Research question three was also analyzed using logistic regression. After controlling for perceived stress and academic self-efficacy, the PI inserted select demographic characteristics such as hours worked, hours spent studying, and age into the logistic regression to see if they predicted academic performance in undergraduate nursing students. Research questions four and five were addressed through t-tests. The t-tests examined the differences in perceived stress and academic self-efficacy between nursing students who repeated a failed course and nursing students who never failed a course. Statistical analysis was completed using SPSS version 28.0.

Procedures to Enhance Control

This study included threats to both internal and external validity. The greatest threat to internal validity was history effects. Participants may have events such as assignments, examinations, or projects that may affect the outcome of their perceived stress or academic self-efficacy scores. Another threat to internal validity was attrition. After receiving the online survey link, participants may not complete or submit their survey responses. To control this threat, the initial sample size included an additional 10% of participants to achieve statistical significance and estimated power.

Threats to external validity included the use of self-reported measures for variables in the study, social desirability, and generalizability. Self-reporting is a known limitation in research. An objective measure of perceived stress and academic self-efficacy, such as physical or behavioral responses, would strengthen the external validity and should be explored in the future. Social desirability was another potential threat to the study. The researcher included a statement in the survey reminding participants that all answers are valid and to respond truthfully. Lastly, the participants in the study are all students currently enrolled in the professional component of their baccalaureate nursing program. The homogeneity of the sample limited the generalizability of the findings in this study to students in other nursing programs with similar characteristics.

Assumption testing of the study variables and measurement tools was completed before statistical procedures were applied. The researcher analyzed the dependent variable, the academic performance of undergraduate nursing students, by categories distinguishing nursing students who have repeated a failed course from those who have never failed a course. The reliability of the SNSI and the ASES demonstrated a Cronbach's alpha above .70, indicating an acceptable level of internal consistency. The Kolmogorov-Smirnov test was found to be

statistically significant for academic self-efficacy, $p < .05$, confirming the non-normality of the distribution of scores. Homogeneity was tested, and it was also shown to be violated. Levene's test for equality of variances showed to be significant, $p < .05$; therefore, this analysis did not assume equal variances.

Results

Research Question One

A total of 238 participants were included in this study. The sample consisted of 30 males (12.6%), 185 females (77.7%), six non-binary/third gender (2.5%), and 17 who preferred not to say (7.1%). A majority of the sample consisted of European American/White (n = 88, 37%) and African American/Black (n = 64, 26.9%) participants. Age distribution was between 19-67 years of age (M = 26.29, SD = 8.14). Most participants reported living with a roommate (n = 75, 31.5%) and indicated they were not responsible for arranging childcare for children under 15 years old (n = 190, 79.8%). Participants reported working an average of 12.46 (SD = 13.84) hours each week and spent an average of 20.17 (SD = 12.03) hours studying each week. Most participants indicated they were senior nursing students (n = 140, 58.8%) and were enrolled full-time in school (n = 199, 83.6%). Regarding course failure, 47.9% (n = 114) of participants reported never failing a nursing course, while 46.6% (n = 111) reported failing a nursing course. Of the 46.6% (n = 111) that reported failing a nursing course, 38.7% (n = 92) indicated that they were not currently retaking the course they failed. However, 8% (n = 19) disclosed that they were currently repeating a previously failed course; these participants were immediately exited from the survey due to their ineligibility. For those participants who repeated a failed course, the most common courses repeated included adult health/med-surg (n = 27, 11.3%) and pharmacology (n = 22, 9.2%). However, most of the participants indicated that they only

repeated the course once (n = 82, 34.5%). The frequencies and percentages of the descriptive analyses are presented in Table 2.

Table 2

Demographic Characteristics of Participants

Demographic	*n*	%
Gender		
Female	185	77.7
Male	30	12.6
Non-Binary/third gender	6	2.5
Prefer not to say	17	7.1
Ethnicity		
European American/White	88	37
African American/Black	64	26.9
Native American/Indian	3	1.3
Asian	12	5
Native Hawaiian/Pacific Islander	1	.4
Hispanic	44	17.1
Other	7	2.9
Prefer not to say	19	8
With whom do you live?		
By myself	50	21
With a roommate	75	31.5
With spouse/significant other	35	14.7
With spouse/significant other and children	32	13.4
With parents	42	17.7
With just my children	4	1.7
Are you responsible for arranging childcare for children under the age of 15 years?		
Yes	44	18.5
No	194	81.5

Current classification in nursing program		
Sophomore	8	3.4
Junior	77	32.4
Senior	140	58.8
Enrollment classification		
Part-time	26	10.9
Full-time	199	83.6
Have you failed a nursing course?		
Yes	111	46.6
No	114	47.9
Are you currently retaking a failed course?		
Yes	19	8.0
No	92	38.7
Which nursing course did you fail?		
Health Assessment	14	5.9
Fundamentals	10	4.2
Pharmacology	22	9.2
Pathophysiology	6	2.5
Adult Health/Medical-Surgical	27	11.3
Maternal Health	1	.4
Pediatrics	7	2.9
Community Health/Population Health	1	.4
Other	3	1.3
How many times did you retake the failed course?		
Once	82	34.5
Twice	9	3.8

Table 3 shows the descriptive statistics of the continuous demographic variables.

Table 3

Descriptive Statistics of Continuous Demographic Variables

Variables	*n*	*Min.*	*Max.*	*M*	*SD*
Age	238	19	67	26.3	8.13
How many children are you caring for?	43	1	4	1.84	.924
How many hours a week are spent working?	225	0	80	12.5	13.8
How many hours a week are spent studying?	223	0	80	20.2	12.0

Academic Factors

Academic factors were examined to identify what resources participants who did not repeat a course utilized compared to those participants who successfully repeated a course. Table 4 shows participants who did not repeat a course report mean scores of peer mentoring 1.91/5.00 (*SD* = 1.26); academic and faculty advisement 2.62/5.00 (*SD* = 1.17); study groups 3.36/5.00 (*SD* = 1.43); seminars and coaching on test-taking strategies 1.82/5.00 (*SD* = .98); meetings with retention specialists 1.12/5.00 (*SD* = .35); additional support courses 1.77/5.00 (*SD* = 1.26); and friends and family support 4.04/5.00 (*SD* = 1.12). Participants heavily utilized friends and family support and study groups while enrolled in their courses. Participants reported low utilization of peer mentoring programs, academic and faculty advisement, seminars and coaching on test-taking strategies, and additional support courses. The researcher identified meetings with retention specialists as the least used resource.

Additionally, Table 4 shows participants who successfully repeated a failed course reported mean scores of peer mentoring 2.15/5.00 (*SD* = 1.24); academic and faculty advisement 3.26/5.00 (*SD* = .88); study groups 3.63/5.00 (*SD* = 1.10); seminars and coaching on test-taking strategies 1.76/5.00 (*SD* = .98); meetings with retention specialists 1.48/5.00 (*SD* = .92);

additional support courses 3.03/5.00 (*SD* = 1.12); and friends and family support 4.40/5.00 (*SD* = .89). Participants utilized friends and family support the most, followed by study groups, academic and faculty advisement, and additional support courses. Participants reported low utilization of peer mentorship programs and seminars and coaching on test-taking strategies. Meetings with retention specialists was also reported to be the least used resource.

Table 4

Academic Factors Utilized by Participants

	n	*Min.*	*Max.*	*M*	*SD*
Nursing students who did not repeat a course					
Peer mentoring program	113	1	5	1.91	1.26
Academic and faculty advisement	113	1	5	2.62	1.17
Study groups	113	1	5	3.36	1.42
Seminars and coaching on test-taking strategies	113	1	5	1.82	.984
Retention Specialist	113	1	5	1.12	.357
Additional support courses	113	1	5	1.77	1.26
Friends and family support	113	1	5	4.04	1.12
Nursing students who successfully repeated a failed course					
Peer mentoring program	91	1	5	2.15	1.24
Academic and faculty advisement	91	1	5	3.26	.880
Study groups	91	1	5	3.63	1.10
Seminars and coaching on test-taking strategies	91	1	5	1.76	.981
Retention Specialist	91	1	5	1.48	.923
Additional support courses	91	1	5	3.03	1.12
Friends and family support	91	1	5	4.40	.893

The researcher conducted a logistic regression to answer research questions two and three. As stated earlier, the dependent variable of academic performance of undergraduate nursing students was re-coded into two groups (0 = participants who successfully repeated a

failed course and 1 = participants who never repeated a course) to ensure their suitability for the logistic regression. The assumptions for logistic regression were tested, including the Box-Tidwell procedure and the absence of multicollinearity. The Box-Tidwell procedure assesses if the independent variables have a linear relationship to the outcome. The findings from this procedure showed that academic self-efficacy and hours spent studying may not have a linear relationship to the outcome, therefore, violating the assumption. Unfortunately, the SPSS package does not have a known correction for this assumption and will be considered a limitation of the study.

The assumption of the absence of multicollinearity refers to the low-level association between the predictor variables. The researcher examined this assumption by using variance inflation factors. Variance inflation factors (VIFs) below 10 indicate that predictors have a low association (Bannon, 2013). All VIFs were below 10, indicating this assumption was met. Table 5 presents the VIFs for the predictor variables.

Table 5

Variance Inflation Factors (VIFs) for Predictors

Variable	VIFs
Age	1.56
How many hours a week are spent working?	1.43
How many hours a week are spent studying?	1.52
Perceived Stress	1.65
Academic Self-Efficacy	1.96

Research Questions Two and Three

The overall findings of the logistic regression were statistically significant, $x^2(\text{df} = 5, n = 189) = 34.09, p < .001, r = 22.1)$, indicating that at least one of the predictor variables are

associated with students' academic performance. As shown in Table 6, only three of the independent variables made a statistically significant contribution to the model, hours spent studying, perceived stress, and academic self-efficacy. The results showed that the odds of being a non-repeater increased by a factor of 1.57 for every one unit increase in academic self-efficacy (p = .041; 95% CI: 1.02, 2.43). The results also showed that the odds of being a non-repeater increased by a factor of 1.07 for every one unit increase in hours spent studying (p = .001; 95% CI: 1.03, 1.12). The odds ratio of .44 for perceived stress was less than 1, therefore, for every one unit increase in perceived stress, the likelihood of being a non-repeater decreased by 56% (p = .014; 95% CI: .235, .852).

Table 6

Logistic Regression with Select Demographics, Perceived Stress, and Academic Self-efficacy Predicting the Academic Performance of Undergraduate Nursing Students

						95% CI for EXP(B)	
Variable	*B*	*SE*	*Exp(B)*	*Wald*	*p*	*Lower*	*Upper*
Age	.010	.025	1.01	.167	.683	.962	1.06
How many hours a week are spent working	.012	.013	1.01	.952	.329	.988	1.04
How many hours a week are spent studying	.070	.020	1.07	11.9	<.001	1.03	1.12
Perceived Stress	-.805	.328	.447	5.99	.014	.235	.852
Academic Self-Efficacy	.453	.222	1.57	4.19	.041	1.02	2.43

Note. CI = confidence interval; Overall model: x^2(df = 5, n = 189) = 34.09, p < .001, r = 22.1.

Research Question Four

The researcher utilized an independent t-test analysis to identify if there was a statistically significant difference in perceived stress between nursing students who repeated a

failed course and nursing students who never failed a course. The researcher conducted assumption testing, and the variance of the two groups was not the same, $p = .001$, violating the assumption of equal variance as shown in Table 8. However, there was a significant difference in the mean scores for nursing students who repeated a failed course ($M = 3.07$, $SD = .460$) and nursing students who never failed a course ($M = 2.79$, $SD = .653$; t (190) = 3.46, $p = .001$, two-tailed). The differences in the means (mean difference = .28, 95% *CI*: 11.8 to 43.3) show that nursing students who repeat failed courses experienced higher or more perceived stress than nursing students who never failed a course. The researcher utilized Cohen's d to calculate the effect size for the independent t-test (Cohen, 1992). Cohen (1992) suggested that 0.2 be considered a small effect size, 0.5 represents a medium effect size, and 0.8 a large effect size. Therefore, the results for this analysis was .480, indicating a moderate effect size. These findings are shown in Table 7.

Table 7

Mean Scores of Undergraduate Nursing Students Perceived Stress

	Student Scores	*n*	*M*	Std. Deviation	Std. Error Mean
Perceived Stress	.00	88	3.0713	.46009	.04905
	1.00	108	2.7955	.65321	.06286

Note. Student Scores: .00 = participants who successfully repeated a failed course, 1.00 = participants who never repeated a course.

Table 8

Independent Samples T-test Results

		Levene's Test for Equality of Variances				
		F	Sig.	*t*	df	Two-sided *p*
Perceived Stress	Equal variances assumed	10.44	.001	3.342	194	<.001
	Equal variances not assumed			3.460	190	<.001

Research Question Five

The Mann-Whitney U test was used as an alternative to the independent t-test because the Kolmogorov-Smirnov test for academic self-efficacy (nursing students who never failed a course) was significant (p = .016), as shown in table 9. When the Kolmogorov-Smirnov test is significant, it means the assumption of normality was violated for the independent samples t-test and an alternate test, such as the Mann-Whitney U, for this analysis needs to be conducted. The Mann-Whitney U test examined if there was a significant difference in academic self-efficacy between nursing students who repeated a failed course and nursing students who never failed a course. The test revealed a significant difference in the academic self-efficacy of nursing students who repeated a failed course (M_{rank} = 6763, n = 87) and nursing students who never failed a course (M_{rank} =11573, n = 104), U = 2935, z = -4.18, p = <.001, rb = .30, indicating that nursing students who repeated failed courses experienced lower levels of academic self-efficacy than nursing students who never failed a course. In addition, the effect size was calculated to be .30, showing a small effect size, according to Cohen (1992). These findings are shown in Tables 10 and 11.

Table 9

Results of Normality Testing

		Kolmogorov-Smirnov			Shapiro-Wilk		
	Student Scores	Statistic	df	Sig.	Statistic	df	Sig.
Perceived Stress	.00	.076	87	.200	.961	87	.010
	1.00	.045	103	.200	.992	103	.839
Academic Self-Efficacy	.00	.092	87	.067	.961	87	.011
	1.00	.098	103	.016	.965	103	.008

Note. Student Scores: .00 = participants who successfully repeated a failed course, 1.00 = participants who never repeated a course.

Table 10

Mann-Whitney U Test Results of Undergraduate Nursing Students' Academic Self-efficacy

	Student Scores	*n*	Mean Rank	Sum of Ranks
Academic Self-Efficacy	.00	87	77.74	6763.00
	1.00	104	111.3	11573.00

Note. Student Scores: .00 = participants who successfully repeated a failed course, 1.00 = participants who never repeated a course.

Table 11

Statistics of the Mann-Whitney U Test

	Academic Self-Efficacy
Mann-Whitney U	2935.000
Wilcoxon W	6763.000
Z	-4.177
Asymp. Sig. (2-tailed)	<.001

Discussion

This study aimed to examine the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students and explore if select demographic characteristics and academic factors contributed to students' academic performance. The results suggest that hours spent studying, perceived stress, and academic self-efficacy significantly influence academic performance. Researchers have not simultaneously explored the perceived stress and academic self-efficacy of nursing students who repeated a failed course and nursing students who never repeated a course. This study's findings build on the evidence from studies that examined each of these variables independently, showing possible associations between these variables to undergraduate nursing students' academic performance.

Initially, the researcher examined demographic characteristics and academic factors. The sample of participants comprised a majority of female nursing students who identified as European American/White or African American/Black, similar to many of the studies reported in the literature. In addition, most participants reported living with a roommate, not being responsible for arranging childcare for children under the age of 15 and being enrolled as full-time students. These characteristics would classify participants as traditional nursing students (Bye et al., 2007). However, other reported data showed 14.7% of participants living with a spouse and 18.5% of participants caring for more than one child, classifying them as nontraditional nursing students (Bye et al., 2007). Investigating the relationship between course failure and repeating a course among traditional and nontraditional nursing students may provide unique study findings that can further impact the retention and success of nursing student repeaters.

Many of the studies regarding nursing students who repeat failed courses do not specifically mention which courses they failed that need repeating. Instead, researchers focused on discussing students' struggles with their academic workload, their utilization of resources, and perceptions concerning their social support (Crow & Bailey, 2015; Elmir et al., 2019; Karsten & DiCicco-Bloom, 2014; Tonelli, 2022). However, in this study's findings, participants reported failing adult health/med-surg and pharmacology courses more frequently. Identifying the reasons why nursing students failed these courses could be beneficial to nurse educators. In addition, analyzing course curricula and implementing supportive strategies aligned with these particular courses in nursing programs could enhance student success.

The literature notes various strategies to assist with nursing student success. Academic factors that nursing students who never failed a course reported as most significant contributors

to their success were study groups and friends and family support, while nursing students who successfully repeated a failed course reported that study groups, friends and family support, additional support courses, and academic and faculty advisement were the most significant contributors to their success. These findings are similar to reported studies describing family, peer, and nursing faculty support as helping nursing students progress and succeed in nursing programs (Handwerker, 2018; Lewis et al., 2018; McLaughlin, 2008; Mooring, 2016). Both groups demonstrated a minimal utilization of retention specialists. This finding surprised the researcher because retention specialists can support academic achievement and improve retention rates among nursing students (Harding, 2012). However, many retention specialists are hired through grant-funded positions within nursing programs to identify if student retention and success can be correlated to the employment of a retention specialist (Harding, 2012; Jeffreys, 2012; Schrum, 2015). Without grant-funded positions, nursing programs may not have the available faculty to fulfill the role of retention specialists, which may account for the minimal utilization by participants in this study. Another surprising finding was that both groups demonstrated low utilization of peer mentoring programs. In Bryer's (2012) study, findings showed an 81% increase in student retention after enrolling in a peer mentorship program after course failure. Research indicates that peer mentorship may benefit nursing students, especially those returning after course failure (Bryer, 2012). Exploring ways to establish peer mentorship programs within nursing schools can benefit nursing students who repeated failed courses and those who never repeated a course by developing supportive relationships among their peers, thus improving attrition rates.

A logistic regression was conducted to show how perceived stress, academic self-efficacy, and demographic characteristics were related to nursing students who never failed a

course and nursing students who successfully repeated a failed course. When a student has a higher level of perceived stress, their academic self-efficacy will be lower. Perceived stress experienced by nursing students is evident and frequently reported (Terp et al., 2019). The findings by Guo et al. (2019) suggest that perceived stress significantly affects nursing students' psychological well-being and academic performance, resulting in slower academic and clinical skill development. However, Smith and Yang (2017) proposed that self-efficacy counteracts the effects of stress in nursing students, which is demonstrated in the study's findings. Students with higher academic self-efficacy demonstrated lower levels of perceived stress. Bandura (1997) asserts that students with high academic self-efficacy undergo numerous experiences of mastery arising from successful performances. Therefore, students who continually do well academically accept challenges to succeed more readily and experience less stress.

There was a significant difference in perceived stress between nursing students who successfully repeated a failed course and nursing students who never failed a course. Nursing students who repeated a failed course demonstrated higher levels of perceived stress than nursing students who never failed a course. Numerous studies have shown that an increase in stress will lead to academic failure, higher attrition rates, and student burnout (Guo et al., 2019; Smith & Yang, 2017; Terp et al., 2019). However, it’s not certain if the stress levels of nursing students who repeated a failed course were derived prior to repeating—could the stress of the course have led to them repeating it, or was having to repeat a failed course what increased students stress scores. Therefore, nursing programs should ensure that nursing student repeaters have adequate stress management techniques and strategies to utilize while repeating a failed course.

Academic self-efficacy was shown to have a significant difference between nursing students who repeated a failed course and nursing students who never failed a course. Nursing

students who never failed a course experienced higher levels of academic self-efficacy than nursing students who repeated a failed course. These findings support the self-efficacy theory posited by Bandura (1997), emphasizing that experiences of mastery enhance the level and strength of one's self-efficacy. Nursing students who never repeated a course experienced a level of mastery in passing their courses each term, which in turn, enhanced their confidence and decreased their stress. Furthermore, the study by McLaughlin et al. (2010) supports these findings in that students with higher academic self-efficacy accept complex tasks as challenging rather than stressful. Nursing students who failed and repeated a course may have had mastery experiences due to passing previous courses prior to failure. However, the stress of failing and repeating may overshadow their ability to persist despite adversity.

The logistic regression also explored the predictive relationship of the independent variables to academic performance. The study findings determined that there was a significant association between hours spent studying, perceived stress, and academic self-efficacy. Hours spent studying was a significant predictor in the model, indicating that nursing students who studied more were likely not to fail a course. Perceived stress was a significant predictor in the model, indicating that nursing students with lower levels of perceived stress were less likely to become students who needed to repeat a failed course. Academic self-efficacy was also a significant predictor of the model, demonstrating that nursing students with higher levels of academic self-efficacy were one and a half times more likely not to repeat a failed course. This finding supports previous research studies that link academic self-efficacy to academic achievement (Byrne et al., 2014; Chemers et al., 2001; McLaughlin, 2008; McLaughlin et al., 2010). Neither age nor number of hours worked were significant predictors in the logistic regression model.

The findings of this study expand on the understanding of perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students. The study findings showed that nursing students who repeat failed courses exhibited higher perceived stress and lower academic self-efficacy, while nursing students who never failed a course demonstrated lower perceived stress and higher academic self-efficacy. The literature provides evidence that perceived stress is a phenomenon every nursing student will experience. However, the way in which nursing students cope with their stress determines their outcomes in nursing programs (Smith & Yang, 2017). Academic self-efficacy is positively associated with nursing student success, which suggests the need for more attention to be given to student repeaters to help develop this skill. Nurse educators should consider developing their teaching strategies and implementing learning activities designed to cultivate academic self-efficacy skills. Exploration of how these abilities can be strengthened and how they influence the progression and success of nursing students who repeat failed courses merits further study.

Strengths and Limitations

The strengths of this study are the descriptive correlational design, the use of Jeffery's (2012) NURS model as the study's supporting framework, and the inclusion of validated instruments to measure perceived stress and academic self-efficacy. Studies have examined perceived stress and self-efficacy in nursing students. However, the researcher was unable to identify studies comparing perceived stress and academic self-efficacy between nursing students who repeated a failed course and nursing students who never failed a course. In addition, the literature has not identified studies comparing demographic characteristics and academic factors related to students' academic performance. The results of this study aim to add to the literature and fill a gap related to nursing student repeaters' retention and success.

Study limitations also included the descriptive correlational design and the use of a convenience sample. One primary limitation of correlational approaches is that they cannot provide insight into causality. Therefore, we cannot determine the directionality of the relationships among the study variables. The researcher used a convenience sample in the study, raising the potential risk of restricted generalizability; however, this approach provides the advantage of increasing accessibility and decreasing expenses. Furthermore, the relatively large sample size in the study reduces the risk of bias. The homogeneity of the sample was also a limitation in that data were only collected from baccalaureate nursing programs in Texas; therefore, it may not fully represent all nursing students enrolled in baccalaureate nursing programs. In addition, the exclusion of nursing students currently repeating a course and nursing students who successfully repeated a course and graduated poses a study limitation. The majority of studies exploring the perceived stress and academic self-efficacy of nursing students have examined these variables while students remained enrolled in nursing programs to help facilitate strategies and interventions to improve student success (Guo et al., 2019; McLaughlin, 2008; McLaughlin et al., 2010; Smith & Yang, 2017; Terp et al., 2019). Although nursing students currently repeating a failed course could provide insights into their perceived stress and academic self-efficacy, this population does not meet the study's inclusion criteria and would not contribute to the evidence needed to answer the study's research questions.

Recommendations

The findings of this study have underscored the need to expand the research into the role perceived stress and academic self-efficacy have on nursing students who repeat failed courses. The combination of these two variables and hours spent studying collectively predicted the academic performance of undergraduate nursing students. The results suggest an intersectionality

of these variables, and further investigation would increase understanding of how their relationships contribute to being a nursing student who repeated a failed course or a nursing student who never failed a course. Additional research could include looking at grade point averages and identifying courses (both pre-requisite and professional nursing courses) that may predict student success in addition to these study variables.

Determining the role academic factors played in the success of these nursing students could be further examined. For example, questions could be asked that entailed the amount of time the academic factors were utilized during each school term, which course they were enrolled in when utilizing academic factors, students' satisfaction with the resources provided, and students' perspectives on other academic factors that academic institutions should implement within nursing programs not listed on the study survey. This information may better help researchers understand how academic factors contribute to undergraduate nursing students' academic performance.

Other components of perceived stress could be examined for associations to the academic performance of undergraduate nursing students. For example, the SNSI provides subscale scores on categories that include academic load, clinical concerns, personal problems, and interface worries. These subscale scores could be compared to the overall academic performance or the perceived stress mean scores of nursing students who repeated a failed course and nursing students who never failed a course. In addition, nursing programs could initiate stress management training to help students adopt better coping strategies. Rather than focusing on removing stressful features within nursing programs, more attention could be given to developing academic self-efficacy skills through positive learning experiences for the student. The emphasis on stress management and academic self-efficacy skills may enable nursing

student repeaters to thrive in clinical and academic areas and better prepare them to handle the rigors of nursing school.

To further explore the role academic self-efficacy may play in academic achievement, other tests, in addition to the ASES, could be used to broaden the understanding of how academic self-efficacy contributes to the academic performance of undergraduate nursing students. Tools that measure nursing students' coping mechanisms and motivation levels and the exploration into students' experience with previous success may prove useful. There are minimal studies showing how academic self-efficacy contributes to the academic performance of undergraduate nursing students; however, this study's findings suggest it may play a role in predicting the likelihood of nursing students who repeat failed courses and nursing students who never failed a course. Further investigation of the possible relationships between perceived stress and academic self-efficacy to undergraduate nursing students' academic performance may provide a subtle understanding of how these variables contribute to student progression and success within nursing programs and would assist faculty in providing strategies and interventions that support stress management and strengthening academic self-efficacy skills.

Summary

Student repeaters in nursing programs comprise a unique population, requiring a multifaceted approach, including academic and support structures, to ensure they meet the academic standards of the curricula (Elmir et al., 2019). However, the literature concerning interventions implemented to create successful outcomes among student repeaters remains inadequate. Exploring the demographic characteristics and academic factors between nursing students who repeated a failed course and nursing students who never failed a course may offer insights into resources that may provide success for nursing student repeaters. Therefore,

implementing these resources in future studies that solely target nursing student repeaters may provide significant correlations as to which resources provide the most success for students.

Nursing students experience stress throughout their education due to various factors. High-stress levels affect students' physical and psychological well-being and influence their clinical and academic performances (Terp et al., 2019). The literature reports common causes of stress nursing students experience, including coursework, academic and clinical workload, finances, family, and health (Lo, 2002; Zhao et al., 2015). Zhao et al. (2015) suggest that further investment in stress management approaches for nursing students could enhance nursing education competence.

Although scholarly literature provides definitions of nursing students' perceived stress, the measurement of academic self-efficacy, specifically in nursing students, remains limited. Researchers have provided ample evidence that higher levels of academic self-efficacy in students are associated with academic achievement (Byrne et al., 2014; Fenollar et al., 2007). Chemers et al. (2001) suggested that students who experience higher levels of self-efficacy endured less stress, resulting in fewer health problems and better adjustments in academic settings. With nursing student repeaters at an increased risk for attrition, comparing their levels of perceived stress and academic self-efficacy to nursing students who never failed a course may provide an understanding of how nurse educators can better meet the academic needs of this vulnerable student population.

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Chapter 5: Summary and Conclusion

Nursing programs are responsible for preparing new nurses to provide safe and effective care to the American population (Crow & Bailey, 2015). However, nursing student attrition negatively affects the capacity of the healthcare system to provide these new nurses. A significant contributor to nursing student attrition is students who fail and need to repeat a required course to progress within their program. Repeating a failed course has been correlated to subsequent course failure and a lower probability of passing the NCLEX-RN, in addition to delayed graduation and entry into the workforce (Handwerker, 2018; Lewis et al., 2018; Lewis, 2019; Merkley, 2016). For nursing student repeaters to be successful and have an opportunity to contribute to the nursing workforce, nursing programs must adopt approaches that will meet the needs of this specific student population.

There has been limited evidence in the literature that provides an understanding of this population or ways to support their success in nursing school. Nursing programs continuously seek to support their students by implementing retention strategies and interventions. However, interventions to support nursing students who have failed and are now repeating have not been identified (Lewis, 2018). Emerging evidence suggests that attributes of perceived stress and academic self-efficacy may factor into identifying ways to support nursing student repeaters (Bandura, 1997; Lewis, 2018; McLaughlin, 2008; Smith & Yang, 2017). As discussed in chapter two, it is important to clarify the meaning of concepts relevant to nursing to guide nursing research. This chapter explored the concept, student repeaters in baccalaureate nursing programs, and reviewed how it was defined. Enhanced understanding may lead nursing programs to recognize that nursing students who repeat failed courses are a population with a significant

impact on program outcomes and how the collection of data about student repeaters on a state and national level can provide significant inferences about the incidence of this population.

Chapter three presented a scoping review of available literature examining course repetition in pre-licensure nursing students. Researchers highlighted students' desire to finish their program despite failure and provided insights into the familial, financial, and emotional challenges that may lead to course failure or program withdrawal (Elmir et al., 2019; Handwerker, 2018; Jakubec et al., 2020; Lewis, 2016; Litchfield, 2001). Very few studies provided evidence that explored interventions to retain nursing students that repeat failed courses. However, more studies are needed to discover which interventions demonstrate the most success for these students. Documented in Chapter four, the researcher conducted a descriptive, correlational study examining the relationship between perceived stress and academic self-efficacy to undergraduate nursing students' academic performance and explored if demographic characteristics and academic factors contributed to their academic performance. The findings of this study aligned with other studies showing significant associations when identifying nursing students who repeated a failed course and nursing students who never failed a course. Perceived stress, academic self-efficacy, and hours spent studying collectively predicted undergraduate nursing student's academic performance in this study. As the body of science grows concerning perceived stress and academic self-efficacy, and more is known about the incidence of nursing student repeaters within nursing programs, expanding this research to other nursing program types for a broader understanding of the retention challenges this student population faces is warranted. The researcher plans to solicit nursing retention experts with which to collaborate and expand the knowledge concerning perceived stress and academic self-efficacy within nursing student repeaters and disseminate this body of knowledge to nursing educators so that academic

resources and interventions to support stress management and academic self-efficacy skills can be tailored for these students. The optimization of these skills may help nursing student repeaters succeed academically, resulting in positive outcomes for the student, the school, and the profession.

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Appendix A. Course Repetition in Pre-licensure Nursing Students: A Scoping Review Literature Table

Table 1: Studies Included in the Scoping Review				
Author(s)/Year	**Study Design**	**Participants**	**Measure(s)**	**Findings**
				General Summary
Quantitative Studies				
Abele et al., 2013	Exploratory retrospective	n = 327	A review of records from 2002 to 2010 on students who failed a course and were readmitted.	The research explains students' academic performance in successful and unsuccessful courses. In addition, the findings raise awareness for nursing programs to initiate additional support in these courses for student success.
Bryer, 2012	Experimental, quantitative	n = 11	Assessment of students' academic performance after the implementation of a peer tutoring program	Peer tutoring programs increased the academic performance of returning nursing students.
Bulfone et al., 2020	Prospective follow-up	n = 624	Online survey	Researchers identified determinants of academic failure: pre-admission test scores, student motivation, self-efficacy, and demographic information.
Hadenfeldt, 2012	Exploratory retrospective	n = 384	A review of student records	An intervention success plan implemented among participants who failed a course showed to be successful when students took their NCLEX.
Lewis et al., 2018	Descriptive quantitative	n = 40	Online survey	Nursing programs should recognize that student repeaters are a population that may impact their outcomes. Therefore, these programs should evaluate their

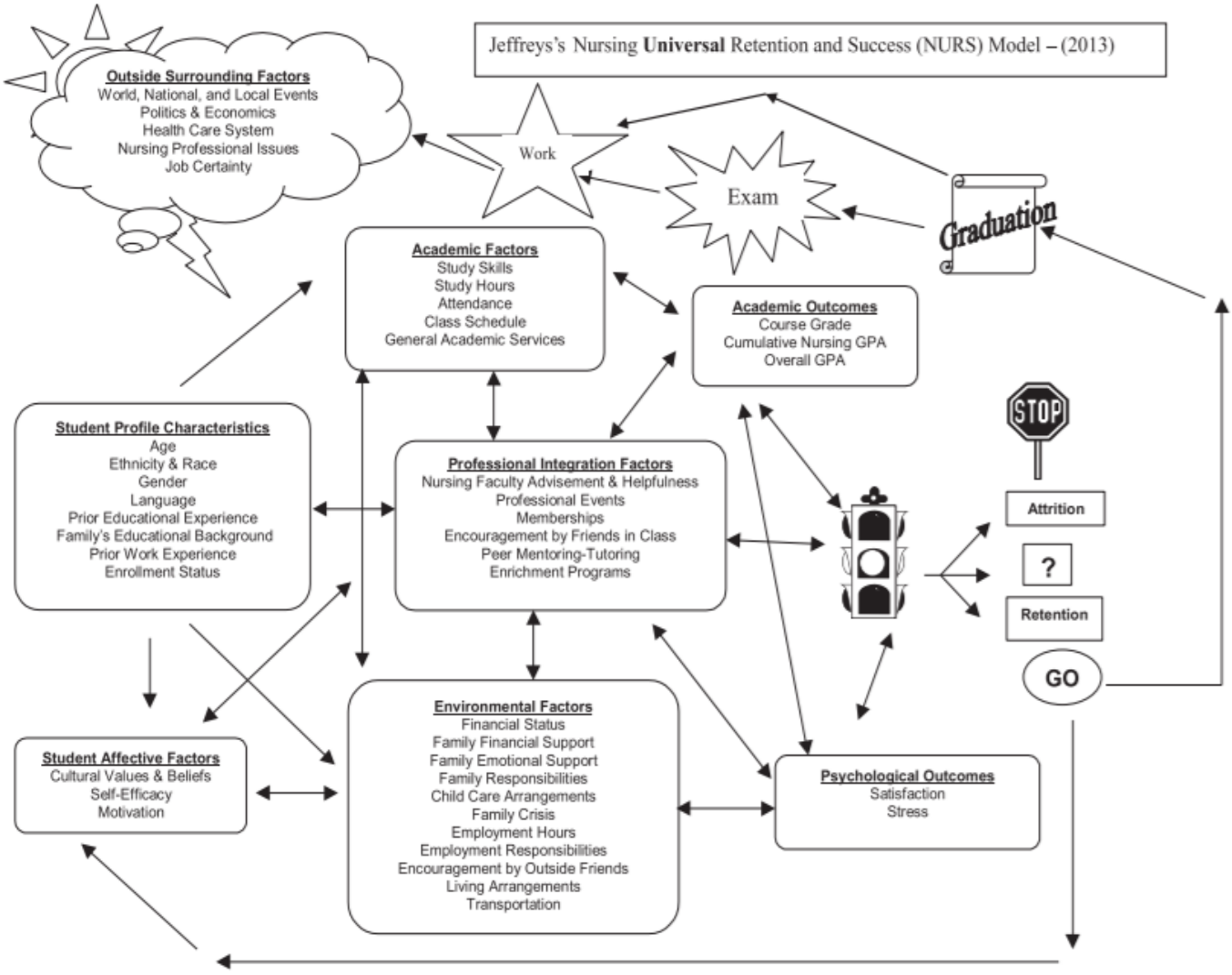
				progression policies to ensure the success of their students.
Lewis et al., 2021	Descriptive quantitative	n = 567	Online survey	The literature is sparse concerning nursing student repeaters. The incidence of repeaters was similar in all program types, but students may differ in their challenges in classroom and clinical settings.
Qualitative Studies				
Crow & Bailey, 2015	Narrative pedagogy	None	Reflection and dialogue of lived experiences	Open dialogue about progression policies, improving the student-faculty relationship, and considering suggestions from students who failed and repeated courses.
Diekelmann & McGregor, 2003	Narrative pedagogy	None	Reflection and dialogue of lived experiences	Researchers explored new ways of thinking regarding students who are failing, personalizing remediation for student failure, and effectively listening to students.
Elmir et al., 2019	Descriptive qualitative	n = 9	Semi-structured face-to-face and telephone interviews	Themes reflected struggles to meet workload expectations, minimal support, making academic adjustments, and the strength to carry on.
Handwerker, 2018	Qualitative phenomenological methodology	n = 11	Semi-structured, individual interviews	Nine themes reflected experiences of failure, return, success in school, struggles, triumphs, and challenges dealing with their emotions.

Jakubec et al., 2020	Qualitative phenomenological methodology	n = 10	Semi-structured, face-to-face interviews	Students experienced being uncomfortable and unsuccessful, finding confidence, and cultivating a new identity. The research supported additional themes of seeking feedback and building study habits.
Karsten & DiCicco-Bloom, 2014	Grounded Theory	n = 16	Individual, semi-structured, face-to-face, and telephone interviews	The themes of the participants reflected acknowledging the unexpected, seeking help, and achieving success. In addition, several sub-themes recognized the need to seek additional support from family, friends, and faculty.
Lewallen & DeBrew, 2012	Descriptive qualitative	n = 24	Individual, semi-structured, face-to-face, and telephone interviews	Researchers described the characteristics of successful and unsuccessful students. Faculty should hone in on these characteristics and develop strategies to provide success for unsuccessful students.
Lewis, 2016	Narrative inquiry	n = 14	Semi-structured, individual interviews	Familiar storylines that emerged included repeating is an emotional journey, no one can prepare you for nursing school, and the importance of helping other repeaters after conquering failure.
Lewis, 2018	Qualitative, narrative inquiry methodology	n = 14	Face-to-face interviews	The most significant storylines were "repeating is an emotional journey" and "ultimately

				repeating was the best thing for me."
Litchfield, 2001	Qualitative	n = 5	Semi-structured, individual interviews	Participant themes included not knowing what to tell students after failure, advising students to discontinue their studies, utilizing counseling, and supporting students despite course workload.
Owen, 2021	Qualitative, narrative inquiry methodology	n = 19	Face-to-face interviews	Intrinsic themes in the narratives were connecting concepts over time, work/life balance in nursing school, and awareness of resources. In addition, extrinsic themes noted negative faculty impacts and uncontrollable environmental factors.
Tonelli, 2022	Qualitative inquiry	n = 13	Semi-structured, individual interviews and focus groups	Students' reactions to failure, motivation, spirituality, and social support were the central themes of the study. These findings provide implications for policies and practices within nursing education.
Literature Reviews				
Lewis, 2019	Literature review	None	Arskey and O'Malley's methodological framework	The review included 19 articles. Needing to repeat nursing courses was correlated with adverse outcomes such as attrition, subsequent failure, and financial distress. However, the literature is sparse; additional research is needed to understand this population.

Wynn, 2017	Literature Review	None	Strategies/Interventions from a mental health practitioner	Exploring the utilization of a mental health practitioner to assist students that have failed a nursing course provided positive outcomes to students' overall well-being and encouraged them to continue moving forward.

Appendix B. Jeffreys's Nursing Universal Retention and Success (NURS) Model



Adapted from Jeffreys's Nursing Undergraduate Retention and Success (NURS) Model – (2012).
In Jeffreys, M. R. (2012). *Nursing Student Retention: Understanding the Process and Making a Difference. (2nd Ed.).* New York: Springer, p. 12.
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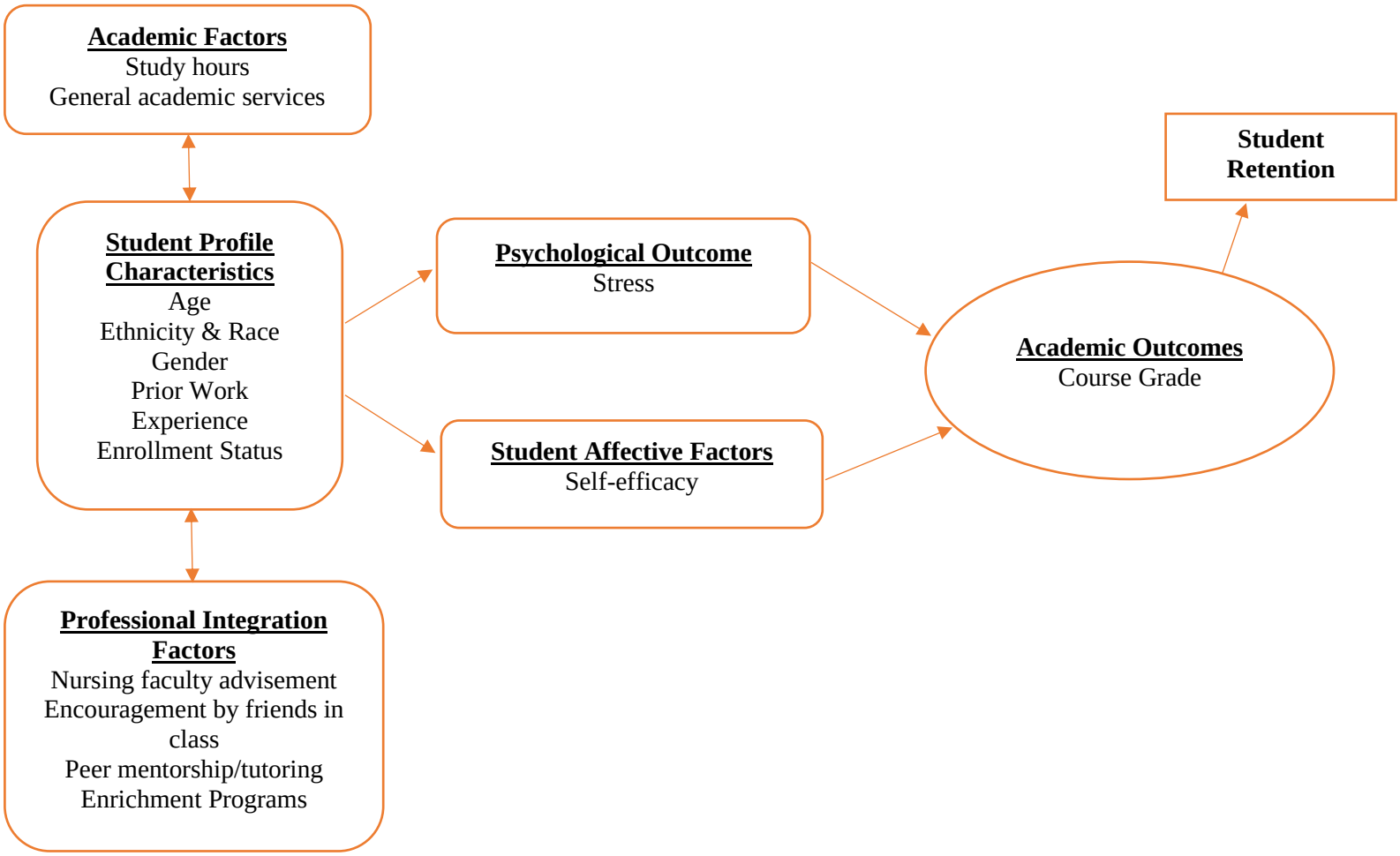
Fig. 1. Jeffreys's Nursing Universal Retention and Success (NURS) Model - (2013).

Appendix B2. Adaptive Model of Jeffreys's NURS Model for the Research Study



Appendix C. Student Nurse Stress Index

Below is a list of items that may be associated with stress by students such as yourself.

Think of actual events which have occurred in the past month in your role as a student. For each item, please circle the rating that applies to **YOU.** Answer all 22 items.

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
1	Amount of classwork material to be learned	1	2	3	4	5
2	Difficulty of classwork material to be learned	1	2	3	4	5
3	Examination and/or grades	1	2	3	4	5
4	Peer competition	1	2	3	4	5
5	Attitudes/expectations of other professionals towards nursing	1	2	3	4	5
6	Lack of free time	1	2	3	4	5
7	College/School response to student needs	1	2	3	4	5
8	Fear of failing in course	1	2	3	4	5
9	Actual personal health problems	1	2	3	4	5
10	Physical health of other family members	1	2	3	4	5
11	Relationships with parents	1	2	3	4	5
12	Other personal problems	1	2	3	4	5
13	Relations with other professionals	1	2	3	4	5
14	Too much responsibility	1	2	3	4	5
15	Lack of timely feedback about performance	1	2	3	4	5

Answer the following questions from your reflections on your clinical experience:

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
16	Client attitudes towards me	1	2	3	4	5
17	Client attitudes towards my profession	1	2	3	4	5
18	The atmosphere created by teaching staff	1	2	3	4	5
19	Relations with staff in the clinical area	1	2	3	4	5

Other academic and related items:

	ITEM	NOT STRESSFUL				EXTREMELY STRESSFUL
20	I am not sure what is expected of me	1	2	3	4	5
21	I have no time for entertainment	1	2	3	4	5
22	I do not have enough time for my family	1	2	3	4	5

Scoring instructions for Student Nurse Stress Index (SNSI.)

The SNSI has a four-factor structure (Jones & Johnston, 1997), with "***Academic load***," "***Clinical concerns***," "***Personal problems***," and "***Interface worries***" as underlying variables.

Evidence regarding the factor congruence across independent data sets and the reliability and validity of the measure can be obtained from Martyn Jones (m.c.jones@dundee.ac.uk).

The SNSI subscale and total scores are calculated using the unit weighting method of scoring.

SNSI. Total

Sum scores on items 1-22 to give an overall total ranging from 22 to 110.

*"**Academic load**"*

Sum scores on items 1, 2, 3, 8, 14, 18, and 20 to give a subscale total ranging from 7 to 35.

"Clinical concerns"

Sum scores on items 13, 14, 16, 17, 18, 19, and 20 to give a subscale total ranging from 7 to 35.

"***Personal problems***"

Sum scores on items 9, 10, 11, and 12 to give a subscale total ranging from 4 to 20.

"***Interface worries***"

Sum scores on items 4, 5, 6, 7, 15, 21, and 22 to give a subscale total ranging from 7 to 35.

Thu 10/7/2021 12:22 PM

Martyn Jones (Staff) <m.c.jones@dundee.ac.uk>

RE: Student Nurse Stress Index

To Ashley Pierre

This is the most recent version, but you made changes to another copy. Click here to see the other versions.
Follow up.
You forwarded this message on 10/15/2021 9:54 AM.

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You have my permission to use the SNSI. Find attached.

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Prof Jones

From: Ashley Pierre <pierrea@gram.edu>
Sent: 14 September 2021 21:56
To: Martyn Jones (Staff) <m.c.jones@dundee.ac.uk>
Subject: Student Nurse Stress Index

Appendix D. Academic Self-Efficacy Scale

This questionnaire has been designed to allow you to express how confident you are in your ability to tackle various academic tasks. Your responses will only be used for the purposes of this research project.

Name _____

Please indicate how confident you are in your ability to do the tasks listed below by **circling** the number that you think best describes your beliefs.

I feel confident in my ability that I can:		**Not at all Confident**	**Moderately not Confident**	**Slightly not Confident**	**Unsure**	**Slightly Confident**	**Moderately Confident**	**Completely Confident**
1	Follow and make sense of the material being covered in lectures	1	2	3	4	5	6	7
2	Study effectively on my own	1	2	3	4	5	6	7
3	Respond to questions asked in lectures.	1	2	3	4	5	6	7
4	Meet the deadlines for my assignments.	1	2	3	4	5	6	7
5	Produce my best work on exams	1	2	3	4	5	6	7
6	Approach my teachers to receive feedback.	1	2	3	4	5	6	7
7	Draw up a study plan.	1	2	3	4	5	6	7
8	Engage in academic discussions with my classmates	1	2	3	4	5	6	7
9	Ask questions in tutorials.	1	2	3	4	5	6	7
10	Make sense of the theoretical/conceptual aspects of my course modules	1	2	3	4	5	6	7
11	Implement the criteria required to get good grades on my assignments	1	2	3	4	5	6	7

12	Make a good attempt to answer assignment questions in advance	1	2	3	4	5	6	7
I feel confident in my ability that I can:		**Not at all Confident**	**Moderately not Confident**	**Slightly not Confident**	**Unsure**	**Slightly Confident**	**Moderately Confident**	**Completely Confident**
13	Ask for help from my teachers.	1	2	3	4	5	6	7
14	Explain material covered to a friend.	1	2	3	4	5	6	7
15	Answer an essay-style question.	1	2	3	4	5	6	7
16	Apply my knowledge to solve previously unseen questions	1	2	3	4	5	6	7
17	Ask questions in lectures.	1	2	3	4	5	6	7
18	Plan my time to study effectively for exams.	1	2	3	4	5	6	7
19	Make sense of the feedback I receive regarding my assignments	1	2	3	4	5	6	7
20	Ask for help from my tutors.	1	2	3	4	5	6	7
21	Implement the criteria required to get good grades on my examinations	1	2	3	4	5	6	7
22	Write up additional notes to support the material covered in lectures	1	2	3	4	5	6	7
23	Ask for help from my classmates if I do not understand	1	2	3	4	5	6	7
24	Respond to questions asked in my classes.	1	2	3	4	5	6	7
25	Make sense of the material I read in textbooks	1	2	3	4	5	6	7
26	Pass the course on the first attempt	1	2	3	4	5	6	7

Please check that you have answered ALL questions and thank you for your participation.

Mon 9/13/2021 3:13 AM

Barbara Flood <barbara.flood@dcu.ie>

Re: Academic self-efficacy scale

To Ashley Pierre

Flag for follow up.
You forwarded this message on 9/13/2021 11:49 AM.
If there are problems with how this message is displayed, click here to view it in a web browser.
Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Self efficacy instrument IAE jan 12.doc
66 KB

Dear Ashley,

My colleague, who is now retired, held all the final version of instruments distributed as part of that study to measure the self-efficacy of accounting students. However, please find attached a very close to final version of the instrument we used. You are welcome to use it in your study.

I wish you success in your doctoral studies.

Best wishes,

Barbara

On Sat, 11 Sept 2021 at 22:41, Ashley Pierre <pierrea@gram.edu> wrote:

> Good afternoon.
>
> My name is Ashley Pierre and I am a doctoral student who is interested in studying academic self-efficacy in nursing students. I came across you article, Measuring the Academic Self-Efficacy of First-year Accounting Students. I was interested in the scale you used and was wondering if you had access to the original 26-item scale. I look forward to speaking with you further. Thank you for your time.

Appendix E. Demographic Survey

DEMOGRAPHIC SURVEY

1._____1. With what gender do you identify?
a) Male
b) Female
c) Other
d) Prefer not to answer

2._____2. With what race do you identify?
a) European American or White
b) African American or Black
c) Native American or Indian
d) Alaskan Native
e) Asian
f) Native Hawaiian or Pacific Islander
g) Hispanic
h) Other: _____
i) Prefer not to answer

3._____3. What is your age in years? _____

4._____4. With whom do you live?
a) By myself
b) With a roommate
c) With spouse/ significant other
d) With spouse/significant other and children
e) With parents
f) With just my children

5._____5. Are you responsible for arranging childcare for a child or children under the age of 15 years old?
a) Yes
b) No- proceed to question 7

6._____6. How many child(ren) are you taking care of? _____

7._____7. How many hours a week, on average, are you currently working? _____

8._____8. How many hours a week, on average, do you spend studying? _____

9._____9. What is your current classification in the nursing program?
a) Sophomore
b) Junior
c) Senior

10.____10. What is your enrollment classification?
a) Part-time
b) Full-time

11.____11. Have you ever failed a nursing course?
a) Yes
b) No

If you choose No, please proceed to **page 2** of the survey.
If you choose Yes, please proceed to **page 3** of the survey.

1. What resources have you utilized that have contributed to your success thus far in your nursing program, and how often have you utilized these resources?
    a) Peer mentoring program
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    b) Academic advisement/Faculty advisement
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    c) Study groups
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    d) Seminars/Coaching on test-taking strategies
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    e) Retention Specialist
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    f) Additional support courses
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___
    g) Friends and family support
    Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

1) Are you currently retaking a failed nursing course?
    a) Yes—the survey will immediately end, and the student will be thanked for participating.
    b) No
2) Which nursing course did you fail?
    a) Health Assessment
    b) Fundamentals
    c) Pharmacology
    d) Pathophysiology
    e) Adult Health/Medical-Surgical
    f) Critical Care
    g) Maternal Health
    h) Pediatrics
    i) Mental Health
    j) Research/Evidence-Based Practice
    k) Community Health/Population Health
    l) Leadership
    m) Other: _____
3) How many times did you retake the failed course?
    a) Once
    b) Twice
    c) Three or more
4) Did you utilize any resources that may have contributed to successfully passing the repeated nursing course, and how often have you utilized these resources?

A) Peer mentorship program

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

b) Academic advisement/Faculty advisement

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

c) Study groups

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

d) Seminars/Coaching on test-taking strategies

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

e) Retention Specialist

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

f) Additional support courses

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

g) Friends and family support

Never ___ Rarely ___ Occasionally ___ Frequently ___ Very Frequently ___

Appendix F. Institutional Review Board Approval

UT Tyler
THE UNIVERSITY OF TEXAS AT TYLER

DATE: 01/18/2023

TO: Ashley Pierre, BSN, MSN
3900 University Blvd.
Tyler, TX 75799

SUBMISSION TYPE: Initial Review
PROTOCOL NUMBER: 2022-177
PROTOCOL TITLE: The Relationship Between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students

IRB ACTION: **APPROVED**
APPROVAL DATE: 01/18/2023
EXPIRATION DATE: 01/17/2024
REVIEW TYPE: Expedited Review
CONTINUING REVIEW INTERVAL: **12**

Thank you for your ***Initial Review Submission*** for the above-referenced study. The UT Tyler Institutional Review Board has APPROVED your submission by ***Expedited Review Categories:*** Expedited Category (7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

Items Submitted for Review:

- ***IRB Initial Review Submission Form***
  - ***Academic Self-Efficacy Survey.docx (Data Collection Tools)***
  - ***C. Thomas CV.docx (Investigator/Research Team CV or Resume)***
  - ***Deal CURRICULUM VITAE 2021.docx (Investigator/Research Team CV or Resume)***
  - ***Demographic Survey-2023.docx (Data Collection Tools)***
  - ***Letter of Permission to Conduct Research.docx (Patient Recruitment Materials)***
  - ***Pierre_Ashley-CV.docx (Investigator/Research Team CV or Resume)***
  - ***Project Summary Form-IRB Application.docx (Protocol)***
  - ***Student Nurse Stress Index Survey (Data Collection Tools)***

Research Team:
Ashley Pierre, BSN, MSN - Investigator
Belinda Deal, PhD, RN, CNE - Co-Investigator
Belinda Deal, PhD, RN, CNE - Faculty Advisor

Institutional Review Board Office
1100 East Lake Street, Suite 330, Box-14
Phone: 903-877-7632
Email: irb@uthct.edu

Christopher Thomas, PhD - Co-Investigator

The expedited review of this submission will be forwarded to the next available fully convened IRB meeting for acknowledgement.

All research must be conducted in accordance with this approved submission. Any changes to the research must be reviewed and approved by the UT Tyler Institutional Review Board prior to implementation, except when necessary to eliminate an apparent immediate hazard to the subject.

You are reminded that you must apply for, and undergo review, and be granted continued IRB approval for this study before the study expiration date in order to be able to conduct your study in an uninterrupted manner. If you do not receive approval before this date, you must cease and desist all research involving human subjects, their tissue, and their data until approval is granted. However, changes can be implemented if they are in the best interest of the subject due to safety evaluations or eliminating/reducing risks to them. The determination of "best interest of the subject" must be made by the IRB. Alternatively, if your study has concluded please complete the "Study Closure Form" and forward to the UT Health Science Center at Tyler/UT Health East Texas IRB Office.

Unanticipated problems and adverse events must be reported to this office in accordance with the UT Tyler Human Research Protections Program (HRPP) Standard Operating Procedures.

The UT Tyler Institutional Review Board is organized, operates, and is registered with the United States Office for Human Research Protections according to the regulations codified in the United States Code of Federal Regulations at 45 CFR 46 and 21 CFR 56. The UT Tyler Institutional Review Board operates under Federal Wide Assurance Numbers: 00003494, 00006044, and 00009775.

Any complaints or issues of non-compliance must be immediately reported to this office. If you have any questions or comments about this correspondence, please contact the IRB Office at 903-877-7632 or irb@uthct.edu

Appendix G. Informed Consent

Title: The Relationship Between Perceived Stress and Academic Self-Efficacy to the Academic Performance of Undergraduate Nursing Students

Investigator(s): Ashley Jordan Pierre, PhD(c), MSN, RN

The University of Texas at Tyler

The College of Nursing

Tyler, TX 75799

903-566-7000

Description: This research study will investigate the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students. The study will also explore if demographic characteristics and academic factors contributed to students' academic performance. Participants will be asked to complete a demographic survey and two short questionnaires discussing the current state of their perceived stress and academic self-efficacy while enrolled in the professional component of their nursing program.

Risks and Benefits: An anticipated risk for this research study is that it may cause stress or distraction to nursing students currently enrolled in coursework. The benefits of the study include potential influences on changes to program policies, curricula, and interventions concerning the progression and retention of nursing students.

Voluntary Participation: Your participation in the research study is entirely voluntary.

Confidentiality: All survey information from participants will be anonymous. In accordance with best research practices to maintain confidentiality, all electronic responses and research-related data will be maintained within a password-protected database with access limited to the primary investigator and research team. The results of the research study will be reported as aggregate data.

Right to Withdraw: You have the right to refuse to participate in the research study and withdraw at any time. Your decision to withdraw will result in no penalty for you.

Informed consent: I have read the description, including the purpose of the study, the procedures to be used, the potential risks and benefits, the confidentiality, and the option to withdraw from the study at any time. I understand what is involved, and proceeding to the next page and beginning the survey indicates that I freely agree to participate in this research study.

Proceeding to the next page, again, indicates that you fully understand what is involved regarding your participation in this research study and you consent to participating and completing the survey ----------  Continue

Appendix H. Letter to Conduct Research

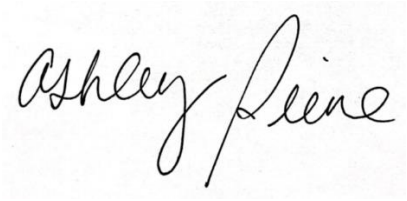
Dear participant,

My name is Ashley Pierre. I am a current Ph.D. student at The University of Texas at Tyler. I am requesting your participation in a doctoral research study that I am conducting that involves examining the ***relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students***. The study will also explore whether demographic characteristics and academic factors contribute to students' academic performance. The purpose of this study is to gain a deeper understanding about the relationship between perceived stress and academic self-efficacy among junior and senior nursing students enrolled in baccalaureate nursing programs.

This study involves collecting anonymous data via an online survey. Participation in this study is completely voluntary. The study survey should take approximately 10 minutes to complete, and you can exit at any time. Again, data that is collected will be anonymous. If you would like to participate, please click the link below.

https://uttyler.az1.qualtrics.com/jfe/form/SV_3DxngusqGOG70TY

Thank you,



Ashley Pierre Ph.D. (c), MSN, RN

Telephone: (504) 615-8799

Email: apierre@patriots.uttyler.edu

BIOGRAPHICAL SKETCH

NAME: Ashley Jordan Pierre

POSITION TITLE: Doctoral Student

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Grambling State University	BSN	12/2009	Nursing
Grambling State University	MSN	05/2014	Nursing Education
University of Texas at Tyler	PhD	12/2023	Nursing

A. Personal Statement

My program of research focuses on examining the retention and success of nursing students who repeat failed courses. For my doctoral work, I examined the relationship between perceived stress and academic self-efficacy to the academic performance of undergraduate nursing students. In completing the dissertation, I discovered that nursing students who repeat failed courses experience higher levels of perceived stress and lower levels of academic self-efficacy when compared to nursing students who never failed a course. While many researchers seek to understand strategies to improve the retention and success of nursing students, more studies are warranted to address which strategies and interventions can improve the success of nursing student repeaters. Therefore, I plan to continue my program of research on building the knowledge base of what is known about nursing student repeaters and discover proactive strategies to address their retention. In this endeavor, I hope to find conclusive interventions that are successful for this population of students and strengthen their retention within nursing programs.

B. Positions

2020-Present: Assistant Professor-BSN Program, Grambling State University, Grambling, LA

2018-2020: Director of the Skills and Simulation Laboratories, Grambling State University, Grambling, LA

2009-2020: Registered Nurse, Intensive Care Unit, Cardiac Cath Lab, Medical/Surgical Unit, Hospitals in Northern Louisiana, Ruston, LA

C. Honors

- Alpha Chi Academic Honor Society- University of Texas at Tyler Chapter
- 2023 Recipient of the LACANE Workforce Grant for Doctoral Studies
- 2022 Recipient of the LACANE Workforce Grant for Doctoral Studies

- 2022-2023 Recipient of The Herbert C. Buie & Melvina Buie Presidential Scholarship for Doctoral Studies in Nursing
- 2021-2022 Recipient of The Herbert C. Buie & Melvina Buie Presidential Scholarship for Doctoral Studies in Nursing
- 2020-2021 Recipient of The Herbert C. Buie & Melvina Buie Presidential Scholarship for Doctoral Studies in Nursing
- University Scholarship Recipient 2013-2014 Grambling State University for Master of Science in Nursing Education Program
- University Scholarship Recipient 2012-2013 Grambling State University for Master of Science in Nursing Education Program

D. Professional Memberships

2022-Present:	National Alliance of Mental Illness (NAMI) Ruston, LA Chapter
2021-Present:	Black Nurses Association-Shreveport, LA Chapter
2019-Present:	Sigma Theta Tau International Honor Society of Nursing (Sigma)

E. Contributions to Science

- Pierre, A. (2023). Course Repetition in Pre-Licensure Nursing Students. *Journal of Professional Nursing, 48*, 25-31. https://doi.org/10.1016/j.profnurs.2023.05.003