

THE RELATIONSHIP OF CAREER COMMITMENT AND SOCIAL DETERMINANTS
OF ACADEMIC ACHIEVEMENT ON PERCEIVED ACADEMIC PERSISTENCE
AMONG UNDERGRADUATE NURSING STUDENTS

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ABSTRACT

Examining why a student leaves a nursing program, voluntarily or involuntarily, after successfully meeting competitive admission criteria is an important area of research. The ability to persist in higher education, and in particular for student nurses, is a critical determinant of academic success. Attrition rates among nursing programs range on average from 30% to 50%. Attrition rates nationally and internationally in nursing programs are of concern as they reduce the supply of nurses and, furthermore, contribute to nursing shortages. A limitation of past research has been the lack of a theoretical framework that explains the relationship between nursing student academic persistence and career-related variables such as career commitment and social determinants of academic achievement. Guided by the Social Cognitive Career Theory, this descriptive cross-sectional study examined the relationship between career commitment on perceived student nurse persistence as well as considering the predictor variables of selected social determinants of academic achievement. Findings indicated a significant relationship between nursing student career commitment and

perceived academic persistence. The outcome of this study assists in the deployment of further intervention-based research that can guide institutional resources to provide persistence-based interventions that are evidence-based.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Graduate Studies, have examined a dissertation titled “The Relationship of Career Commitment and Social Determinants of Academic Achievement on Perceived Academic Persistence among Undergraduate Nursing Students,” presented by Robyn C. Walter, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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CHAPTER 1

INTRODUCTION

The ability of students to persist in higher education environments is a critical determinant of academic success (McKendry et al., 2014). Student attrition is currently a concern currently in higher education and even greater concern for undergraduate nursing programs (Harris et al., 2014). Nursing is experiencing an international workforce shortage driven by an aging population and escalating demands for health care. By 2029 there will be far more registered nurse jobs available than any other profession, more than 175,900 per year (American Association of Colleges of Nursing, 2020). The RN workforce is expected to grow from 3 million in 2019 to 3.3million in 2029, an increase of 221,900 or 7%. The Labor Bureau of Statistics also projects 175,900 openings for RNs each year through 2029 when nurse retirements and workforce exits are factored into the number of nurses needed in the U.S. (*Registered Nurses, 2020*). The attrition rate from pre-licensure nursing programs nationwide ranges widely, with typical attrition values between 30% and 50%. Attrition rates in nursing programs are of concern as they reduce the supply of registered nurses. Thus, identifying the barriers and facilitators for the undergraduate nursing student related to persistence and completion is important (Beauvais et al., 2014).

In an effort to address the shortages of nurses with undergraduate nursing degrees, nursing programs have been measuring student retention, attrition, and graduation rates. External credentialing organizations such as the Commission on Collegiate Nursing Education require the calculation of graduation rates for all nursing programs. The presumption is that measures such as graduation rates will help guide nursing programs in

monitoring their curriculum for successful retention and to provide feedback on improving or maintaining strategies that facilitate student success (Beauvais et al., 2014; Harris et al., 2014).

The need for more nurses is evident; however, graduating adequate numbers of competent and diverse nurses has been identified as a challenging task. Jeffreys (2015) noted the attrition of nursing students is presenting grave obstacles in alleviating the shortage of nurses. The question for many programs and schools of nursing with ample applicants is “How do we determine who will succeed?” Efforts have been made to determine risk factors for attrition as well as factors that facilitate student success. Retention as well as attrition of nursing students has been associated with demographic, academic, financial, cognitive, and personality/behavioral factors (Cameron et al., 2011; Jeffreys, 2015; Pitt et al., 2014; Williams, 2010). More recently, scholars have begun to contemplate non-cognitive factors such as affective and psychosocial factors as way to further academic success (Bernadin & McKendrick, 2015; Brown et al., 2008; Jeffreys, 2015; McKendry et al., 2014).

Commitment to a career in nursing is an ongoing, dynamic process that originates during the student’s pre-licensure nursing education experience (Kong et al., 2016). Nursing students who exhibit higher levels of role commitment when pursuing their nursing degree are more likely to demonstrate commitment as a new graduate registered nurse (Kong et al., 2016). Career commitment is conceptualized as a psychological link between a person and his or her occupation that is based on an affective reaction to that occupation (Lee et al., 2000). Career commitment, in this instance, is the process of developing self-generated goals

by psychologically committing to a career and identifying oneself with the career (Blau, 1985).

Individuals with a higher degree of career commitment may be prepared to embark on their career choice with persistence to overcome obstacles that may impede their attempt to realize their goal (Wang et al., 2006). Persistence and career commitment, as separate concepts, are known variables that influence student success. There is a gap in the literature with focus on the relationship between persistence and career commitment, particularly with nursing students and variables related to social determinants of academic achievement.

Recognizing factors that increase student nurse persistence may lead to an increase of qualified graduates entering the workforce. Despite clear links between work commitment and retention, there is little research exploring commitment in student nurses (Clements et al., 2015; Nesje, 2015). This work can add to the body of knowledge of student support and retention, resulting in targeted interventions to promote commitment, and thus persistence.

Definition of Terms

Academic Success/Achievement

Academic achievement is historically measured using academic outcomes such as scores on standardized college entry exams, college grades, and credit hours earned in consecutive terms, which represent progress toward the degree (Beauvais et al., 2014).

Attrition

In the context of higher education, attrition is defined as the difference between the number of students beginning each cohort and the number who completed that cohort (Urwin et al., 2010).

Career Commitment

Career commitment is conceptualized as a psychological link between a person and his or her occupation that is based on an affective reaction to that occupation (Lee et al., 2000). Career commitment is measured in this study with the Career Indecision Profile – Short (CIP-Short) (Xu & Tracey, 2017).

Career Indecision

Career indecision essentially denotes a state of being undecided about one's educational, occupational, or career-related path (Xu & Bhang, 2019). From a lifespan perspective, career decision-making is a continuous task throughout one's career, and individuals need not only to make initial career choices during their early life but also to make necessary adjustments to their choices after entry into the vocational world (Xu & Tracey, 2017).

Nursing Student

A nursing student for the purpose of this study is defined as a baccalaureate or associate degree nursing student enrolled in a required nursing course during the first year of professional study.

Persistence

Persistence has been described as the personal quality that allows someone to continue doing something or trying to do something even though it is difficult or opposed by other people (Habley et al., 2012). For the purpose of this study, persistence is defined as the student's perception of their ability to successfully complete the study-specific undergraduate nursing course. Perceived persistence was measured using The College Persistence Questionnaire (CPQ).

Retention

A popular term used in higher education to describe students re-enrolling from Fall to Fall semester; also used for completion rates in some studies (Fontaine, 2014; Jeffreys, 2015).

Social Determinants of Student Achievement

Social determinants of student achievement are the complex, integrated, and overlapping social structures and economic systems that are responsible for most social inequities. These social structures and economic systems include the social environment, physical environment, health services, and structural and societal factors (American Psychological Association, 2017b).

In this study, social determinants questions follow The National Committee on Vital and Health Statistics recommendations for measuring education, income, employment, and family size/relationships. This provides researchers and policy makers with a consistent, standardized measurement and collection approach to socioeconomic factors across groups

(American Psychological Association, 2017b). For the purposes of this study, social determinants of ethnicity, financial strain, and social support stress were explored.

Purpose

The purpose of this cross-sectional correlational study was to examine the relationship between career commitment on student nurses' perceived academic persistence and the predictor effects of selected social determinants of academic achievement at a single point during the first year of an undergraduate nursing program. Undergraduate includes associate degree and baccalaureate programs of study. This study tested the variables of career indecision and social determinants on perceived persistence among nursing students during their first year of nursing study in four Midwestern nursing schools using survey methodology. This study is innovative as it correlates career indecision and perceived persistence data with academic determinants of success.

Significance

Nursing shortages, declining enrollments, and high rates of attrition in nursing programs present a public health concern on a regional, national, and global level. The ill-understood nature of nursing student dropout behavior leaves nursing programs guessing at ways to improve student retention (Fagan & Coffey, 2019). Nearly 30-50% of newly enrolled undergraduate nursing students each year will not complete their program of study successfully (American Association of Colleges of Nursing, 2020; Harris et al., 2014; Jeffreys, 2015). While some attrition is expected and should occur to maintain a high-quality output, nursing educators are challenged to retain prospective high-performing students, with a focus on career preparation. Costs encountered with attrition include, but not limited to,

loss of nonrefundable tuition and fees, delay in degree conferral, non-acquisition of career goals, and the subsequent impact on nurse succession planning (Johnson et al., 2009). Given the current nursing shortage and projected shortage, increasing the throughput of qualified potential registered nurses is an essential component of addressing the dynamic nursing workforce demand (Auerbach et al., 2017).

An area of retention that requires more research involves examining factors that contribute to persistence and that seek to answer the question as to why students remain enrolled (Jeffreys, 2014; Seago et al., 2012; Shelton, 2012). The literature is consistent in terms of academic preparedness in relation to student nurse persistence. Overall, students who exhibit higher academic achievement in pre-nursing coursework and standardized tests also demonstrate a high level of persistence (Brown et al., 2008; Seago et al., 2012; Shelton, 2012). The achievement correlation is more evident in the affective learning domain, such as enmeshing commitment, motivation, and as related to social factors that contribute related to nursing student persistence (Fagan & Coffey, 2019). Smith-Wacholz et al. (2019) integrated literature review sought to find successful interventions to retain nursing students. The evidence led to a number of similar elements, including retention programs, mentorship implementation, and the use of clinical coaches. Based on the literature reviewed they created a retention template for nursing students. The retention plan is designed for educators to evaluate and act on student support needs at specific intervals during the education cycle, including holistic advising. Continued research on effectiveness of implementation of interventions designed to improve retention is needed (Smith-Wacholz et al., 2019).

There has been seminal work that explored the relationship between a student's career commitment and its effect on persistence in the areas of Science, Technology, Engineering, and Math (STEM). In relation to the concept of career commitment, engineering students expressing higher levels of career attachment demonstrate higher levels of academic persistence and completion (Lee et al., 2015; Wright & Perrone, 2008; Wright et al., 2014). Although studies have been conducted that examine effects of career commitment on persistence involving nursing students there are a scarcity of longitudinal studies that tested persistence influences. Additionally, there has been insufficient comprehensive assessment of theoretical frameworks that seek to illustrate the relationship between nursing student academic persistence and career-related variables such as career commitment. Recognizing and appraising social determinant is essential in order to make feasible appropriate adjustments that promote student success (Jeffreys, 2015). Social determinants do not merely encompass income, but also incorporates educational attainment, financial security, and subjective perceptions of social status and social class (American Psychological Association, 2017a; Metcalfe & Neubrandner, 2016). Furthermore, social determinants comprise quality of life attributes and societal opportunities and privileges afforded to individuals (American Psychological Association, 2017a; Metcalfe & Neubrandner, 2016). The context of poverty, is not consistent with a single factor, but rather is characterized by multiple physical and psychosocial stressors. These mutual factors can impact one's educational experience and are deemed consistent and reliable intrinsic predictors that influence personal outcomes across the life span, including academic achievement. As such, researchers assert there is a need for

further research that examines the correlation between social determinants and education achievement (American Psychological Association, 2017a; Metcalfe & Neubrandner, 2016).

Findings from this study further contributed to the body of knowledge that explored social factors that contribute to patterns of persistence and are relevant to career planning. As this study illustrates, these patterns of persistence correlate to student nurse performance and are principle to increasing nursing student completion rates therefore, adding new graduate registered nurses to the healthcare workforce. Accordingly, new approaches that recognize and address nursing student retention are needed at all degree levels in order to meet the ongoing demands of a dynamic healthcare environment across the care curriculum.

Specific Aims

The primary aim of this study was to explore the relationship of career commitment on perceived academic persistence among undergraduate nursing students. The study also examined the predictor variables of social determinants of academic achievement on career indecision and nursing student persistence. The study will ultimately inform the nursing education community on the impact of career commitment and social determinants as it relates to student nurse persistence.

Research Questions

The research questions for this study are as follows.

1. What is the relationship of career indecision on perceived academic persistence among undergraduate nursing students during their first semester of study?

2. What is the relationship between social determinants of academic achievement concepts of ethnicity, financial strain, and college stress on career indecision among undergraduate nursing students during their first semester of study?
3. What is the relationship between social determinants of academic achievement concepts of ethnicity, financial strain, and college stress on perceived academic persistence among undergraduate nursing students during their first semester of study?

CHAPTER 2

REVIEW OF LITERATURE/THEORETICAL FRAMEWORK

History of Traditional Retention Theories

Several current higher education retention practices evolved from educational theories of Vincent Tinto, John Bean, and Barbara Metzner. Their theories, independent of each other, triggered retention strategies employed in higher education.

Tinto's Retention Theory

Vincent Tinto's theory of student departure, a well-established theory with strong empirical support, identifies key determinants of academic persistence defined as academic and social integration factors (Hartley, 2011). Tinto's retention theory describes a specific transition, the ability or inability of a student to successfully transition from the role of a nonstudent to a role of a student (Tinto, 1975). Tinto (1993) revised his initial retention theory to the Student Integration Model. Tinto (1993) asserted that students enter college with various characteristics and background experiences and with different educational goals and levels of attachment for the college. The interplay of the student's interaction with the primary college system, both academic and social, greatly influences the student's decision to depart or persist. The secret to a successful retention program in a higher education system lies in the foundation of the institution's strategies to integrate the student both socially and academically (Tinto, 1993). His theory supports the idea that social interaction with the institution is the most important factor in improving student persistence (Tinto, 1993). Social integration can occur within smaller subunits such as fraternities, sororities, student government, athletic clubs, or other groups. Tinto's work is often cited in the literature and

has become the predominant model of premature departure from college used in research today (Jeffreys, 2012, 2015; Seago et al., 2012; Shelton, 2012; Wray et al., 2014).

Bean and Metzner's Model of Departure

During a similar timeframe, John Bean and Barbara Metzner (1985) expanded Tinto's model when applied to non-traditional students in community colleges. Recognizing the limitations of Tinto's model when applied to predicting withdrawal decision of students in community colleges, Bean and Metzner (1985) presented a model of departure for the older or nontraditional student. This model includes environmental factors such as finances, hours of employment, outside encouragement, family responsibilities, and opportunity to transfer; there is less emphasis on social interaction as a determinant for student persistence (Bean & Metzner, 1985). In a later study, Metzner and Bean (1987) presented a model indicating that dropout decisions for nontraditional students are based on four sets of variables that include; academic performance, psychological outcomes, background and defining variables, and environmental factors (Metzner & Bean, 1987).

Environmental factors are particularly important and, according to Bean and Metzner (1985), are the most influential factors for nontraditional student persistence and retention. Persistence is the complex interplay between an individual and his/her environment, to which degree an individual can influence and overcome obstacles to reach a successful outcome by using internal and external protective factors, defined as the personal qualities or contexts that predict positive outcomes under high-risk conditions (Hartley, 2011). Non-traditional students experience stressors that can impede academic performance (Bean & Metzner,

1985). Studies have demonstrated that when students overcome the stressors and barriers, greater persistence is a result (Hartley, 2011; Markle, 2015).

Attribution Theory

In recent years, motivational theories have been applied to the study of undergraduate retention. These motivational theories come from many different disciplines including managerial sciences, educational psychology, and social psychology. Attribution theory (Weiner, 1979, 1990) is probably the most influential contemporary theory with implications for academic motivation. It is the most widely applied motivation theory in the undergraduate retention literature (Demetriou & Schmitz-Sciborski, 2011). It incorporates behavior modification in that it emphasizes the idea that learners are strongly motivated by the pleasant outcome of being able to feel good about themselves. It emphasizes that learners' current self-perceptions will strongly influence the ways in which they will interpret the success or failure of their current efforts and hence their future tendency to perform these same behaviors.

An important assumption of attribution theory is that people will interpret their environment in such a way as to maintain a positive self-image. That is, they will attribute their successes or failures to factors that will enable them to feel as good as possible about themselves. In general, this means that when learners succeed at an academic task, they are likely to want to attribute this success to their own efforts or abilities; but when they fail, they will want to attribute their failure to factors over which they have no control, such as task difficulty or bad luck (Schunk & Zimmerman, 2006).

The basic principle of attribution theory as it applies to motivation is that a person's own perceptions or attributions for success or failure determine the amount of effort the person will expend on that activity in the future. Students will be most persistent at academic tasks under the following circumstances: (1) if they attribute their academic successes to either internal, unstable factors over which they have control (effort) or internal, stable factors over which they have little control but which may sometimes be disrupted by other factors (e.g., ability disrupted by occasional bad luck); and (2) if they attribute their failures to internal, unstable factors over which they have control (Schunk & Zimmerman, 2006).

Career Commitment

Nurses' commitment to their career continues to attract increasing interest as the profession attempts to examine and address issues related to recruitment and retention of registered nurses. Commitment to a career in nursing is an ongoing, dynamic process that originates during the student's pre-licensure nursing education experience (Kong et al., 2016). Nursing students who exhibit higher levels of role commitment when pursuing their nursing degree are more likely to demonstrate commitment as a new graduate registered nurse (Kong et al., 2016). Career commitment is conceptualized as a psychological link between a person and his or her occupation that is based on an affective reaction to that occupation (Lee et al., 2000). Nursing educators anticipate that it is not possible to retain all students for a variety of reasons. Identification of determinants that impede students' progression, performance, and completion is critical to the development and delivery of quality nursing programs. Research examining student nurses' attrition is needed as it

continues to be projected that the profession will experience a significant national and international nursing shortage (Auerbach et al., 2017).

Persistence

Persistence has been described as the personal quality that allows someone to continue doing something or trying to do something even though it is difficult or opposed by other people (Habley et al., 2012). Research in higher education and nursing substantiates that environmental factors have some level of influence in student academic achievement, persistence, and retention (Bean & Metzner, 1985; Jeffreys, 2014). In a cross-sectional study, Wray et al. (2014) surveyed 195 completing nursing students to determine factors that contributed to staying the course. Over 50% of the students contemplated withdrawing at one point or another. Academic, peer, and family support, and a strong desire (commitment) to become a nurse were significant factors that encouraged continuation (Wray et al., 2014). Perceived faculty support was related to both persistence and academic performance in a cross-sectional convenience sample of 458 nursing students, such that students with higher perceived faculty support were more likely to continue in a nursing program of study (Shelton, 2012). A literature review on nursing education retention programs supports the idea that poor retention is related not only to student ability, but also to a lack of necessary intervention by faculty beginning with the admission process and continuing throughout the curriculum (Mooring, 2016). Student retention is a multifaceted issue that requires a multi-modal approach (Mooring, 2016).

While attrition rates in undergraduate nursing programs have received significant attention in academe, few studies have explored the psychological attributes that contribute

to underlying persistence issues. Retention in a nursing program requires that students both persist by choosing to remain in the program and succeed by attaining a predetermined level of academic performance. There is evidence that most nursing students who leave a program of study will do so during the first year, though differences in persistence patterns are noticeable even within year one (Wray et al., 2014). Students who leave in the first semester of their program are generally unprepared for college level work, develop a strong dislike for the content, or lack commitment to complete. These students are less likely to return to nursing education. Students who leave in semester two prefer to stay, but personal events lead to a situation where they can no longer cope with the demands of the program. Equally, those students who leave later in year one often express a hope of returning to nursing (Wray et al., 2014).

Social Determinants of Academic Achievement

The social determinants of academic achievement are the conditions in which students are born, grow, live, work, and develop. Social determinants of academic achievement and success among students include socioeconomic factors, demographic indicators, the biases and injustices within the criminal and juvenile justice system, and civic, community, school-based opportunities. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels (Metcalfe & Neubrandner, 2016). Prospective college students from low socioeconomic backgrounds are less likely to have access to informational resources about college and success strategies (Brown et al., 2016). Additionally, compared to high socioeconomic counterparts, young adults from low

socioeconomic backgrounds are at a higher risk of accruing student loan debt burdens that exceed the national average (Houle, 2014).

Jeffreys (2007, 2012) evaluated the background variables that are of particular note for nursing students which include age, ethnicity, gender, language, prior education, and work experience. Student socioeconomic variables have a direct effect on persistence, self-efficacy, and motivation (Jeffreys, 2007, 2012). These variables must be assessed in addition to academic variables to fully understand the needs of the nursing student population. Environmental variables measured on the student perception tool were perceived by students as more influential than academic variables. The environmental variables included transportation, financial status, family financial support, hours of employment, family emotional support, family crisis, employment responsibilities, encouragement of friends, and childcare (Jeffreys, 2012, 2014).

Financial factors play an important role in students' college experiences and outcomes (Cox et al., 2016). Financial obligations can become a barrier for student nurses as some schools of nursing utilize a tiered tuition model, as well as charge clinical course fees, simulation fees, and remediation testing fees. In addition, clinical courses involve additional expenses such as uniforms, equipment, travel, and greater childcare costs due to lengthy clinical experiences (Jeffreys, 2015). The intangible psychological costs of worrying about funding serve to magnify the interference with students' academic and social integration into college (Cox et al., 2016). Levels of stress and burnout increase during nursing education. This development has consequences for nursing students' health, learning, competence, and interest in quality issues in healthcare (Frögéli et al., 2016). Student nurses have a diverse set

of barriers that lead to social and academic stress. Ethnically diverse and rural students have lifelong familial and geographical barriers that prevent them from succeeding. Students with lower socioeconomic standing experience stress on their time trying to balance additional work along with academic stressors. Student nurses also have academic stress related to the rigor and preparation for clinical studies (Frögéli et al., 2016; Jeffreys, 2015).

Nurse educators should understand the level of professional commitment students exemplify as they progress through their undergraduate nursing degree programs. Despite well-defined correlations between professional commitment and retention in the current nursing population, there is scant research that explores the context of social determinants of academic success and professional commitment and its impact on academic persistence within the undergraduate student nurse population (Clements et al., 2015).

Theoretical/Conceptual Framework: Social Cognitive Career Theory (SCCT)

The Social Cognitive Career Theory (SCCT) captures the interplay among the cognitive and behavioral factors that influence the development of career interests, choices, and performance behaviors (Lent et al., 1994; Lent et al., 2016). The SCCT hypothesizes that career and academic interests develop when individuals have confidence in their ability to perform specific academic or career-related tasks and when they anticipate positive consequences for engaging in these tasks (Lent et al., 1994). In their academic persistence model, career interests affect goals and career outcomes such as career satisfaction, engagement, performance, and persistence (Lent et al., 2000).

Within the SCCT framework, factors influencing career choice are viewed on two levels. Level 1 examines cognitive-person variables, which includes SCCT framework

concepts of self-efficacy, outcome expectations, and personal goals (Lent et al., 2000). Level 2 focuses on how additional variables such as gender, race, environmental characteristics, and learning experiences impact choice behavior, interest, performance, and academic persistence (Lent et al., 2000). The Level 2 variables in this framework align with social determinants of academic achievement. In addition, the concept of career commitment is considered an attribute that, given its influential and overlapping nature, can be viewed as part of SCCT's personal inputs. These variables in the research questions can be explored within the context of the SCCT performance model framework.

The Social Cognitive Career Theory performance model is the most appropriate framework for this study related to the research variables of career commitment and academic persistence (see Appendix A). The performance model is concerned with predicting and explaining two primary aspects of performance: the level of success that people attain in educational and occupational pursuits and the degree to which they persist in the face of obstacles (Brown et al., 2008). Academic-based research using the performance model has occurred for the science and technology disciplines as well as with gender and minority student studies (Lee et al., 2015; Lent et al., 2013).

Persistence and Social Cognitive Career Theory

The Social Cognitive Career Theory hypothesizes that self-efficacy beliefs (and outcome expectations) lead to a higher academic performance, in part, because persons with higher versus lower self-efficacy beliefs establish and work toward more challenging academic goals (Lent et al., 1994, 2000). Self-efficacy is a consequence and an antecedent of persistence (Maggard Stephens, 2013; Zulkosky, 2009). An individual will work harder when

they believe they are good at a task, and when a person is repeatedly successful at a task, a robust feeling of self-efficacy develops and they are less troubled by minor setbacks, thus promoting persistence (Maggard Stephens, 2013; Zulkowsky, 2009).

To demonstrate this conceptual relationship, Brown et al. (2008) tested the SCCT academic performance model using a two-stage approach that combined meta-analytic and structural equation modeling. Brown et al. posited that SCCT does an adequate to excellent job of modeling academic performance and persistence using the SCCT academic and career variables. Another study tested the SCCT academic persistence model among engineering students from a longitudinal perspective (Lee et al., 2015). The findings provide support for the applicability of the social cognitive career theory's academic persistence model with Latino/a and white engineering students by accounting for the relations from past academic performance to actual persistence in engineering via engineering self-efficacy and engineering goals over time (Lee et al., 2015).

Career Indecision and Social Cognitive Career Theory

Career decision self-efficacy is an individual's belief that he or she can successfully complete tasks necessary to make career decisions (Lent et al., 1994, 2000). Individuals choose to engage in or avoid specific tasks based on their self-judgment of their competence in accomplishing the tasks. In accordance with SCCT, research highlights the inextricable relationship between career and educational goals, explaining how career goals may provide the motivation to perform well in school and the motivation to persist until attainment of educational goals, thus demonstrating commitment to their chosen career (Wright et al., 2013).

Wright et al. (2014) expanded on his 2008 research in which he proposed an integrated framework utilizing attachment theory with SCCT to determine the influence of commitment on career variables including career commitment in college students. He found that commitment plays a key role in individuals' perceptions of supports and career barriers, including career commitment, as well as their academic self-efficacy and career decision self-efficacy. Future research is warranted to more fully understand the interrelationship of these variables in the context of the career development process with a broader range of individuals, as well as to provide the continued empirical support needed for the integration of attachment theory with SCCT (Wright et al., 2014).

The SCCT has relatively wide boundaries with three models within the framework. All models have been tested, yielding numerous individual studies and a meta-analysis (Price, 2009). While extensive studies have not been completed to test the theory specifically with nursing student commitment and persistence, other student groups such as engineering and science majors have been tested for multiple educational variables including career choice, academic persistence, and gender-related career variables. While the theory is relatively new, it is complex with multiple models (Lent et al., 2013) in which career development has been tested and predicted. This study did not test SCCT Performance model self-efficacy and outcome expectation variables, as these variables have been extensively tested in the literature and are not within the scope of this project.

Assessing Persistence

Perceived Persistence is measured using The College Persistence Questionnaire (CPQ) (see Appendix B). The original instrument assesses a diverse array of variables that

have been associated with retention and best distinguishes undergraduates that persist from those who will not persist at their institutions (Davidson et al., 2009). The instrument is effective for identifying at-risk students and also can facilitate the design of effective interventions. Davidson et al. (2009) reviewed the retention literature and developed a 53-item questionnaire. Component analysis of the responses of 2,022 students at four schools yielded six reliable factors: Institutional Commitment, Degree Commitment, Academic Integration, Social Integration, Support Services Satisfaction, and Academic Conscientiousness (Davidson et al., 2009). Part II of the same study with 283 first-semester freshmen examined whether factor scores predicted which students returned for their sophomore year with Logistic regression found that three factors were statistically significant predictors of enrollment status, after controlling for high school class rank and standardized test scores: Institutional Commitment, Academic Integration, and Academic Conscientiousness. Reliability coefficients range from .67 - .78 (Davidson et al., 2009). Predictive validity was measured with actual persistence one year after initial survey. The results of a logistic analysis were statistically significant, correctly classifying 66% of the students correctly (Davidson et al., 2009). Davidson, Beck, and Grisaffe (2015) confirmed the construct validity and reliability of a subset of items producing a short-form version, the CPQ-V3 (Short Form). The 32-item CPQ-V3 (Short Form) minimizes respondent burden and provides an instrument for collecting reliable and valid scores on institutional commitment (the prime predictor of student retention) and was utilized in this study (Davidson et al., 2015). Reliability coefficients range from .68 to .72 on the CPQ-V3 (Davidson et al., 2015).

Assessing Career Commitment

Career Commitment is measured with items from the Career Indecision Profile (CIP-Short) (see Appendix C) (Xu & Tracey, 2017). The CIP-Short assesses four types (factors) of career choice difficulty in an efficient manner: neuroticism/negative affectivity, choice/commitment anxiety, lack of readiness, and interpersonal conflicts (Xu & Tracey, 2017). Among these areas, NNA measures people's general anxiety and neuroticism (e.g., "Often feel fearful and anxious"); CC measures people's difficulty and anxiety in committing to a single career choice (e.g., "Can't commit, don't know other options"); LR measures people's difficulty in initiating a career decision-making process, which involves self-efficacy and identity issues (e.g., "I am quite confident that I will be able to find a career in which I'll perform well"); and IC measures people's decision-making difficulty resulting from disagreement with important people in their life (e.g., "Important people disagree with plans") (Xu & Tracey, 2017).

Participants respond by indicating the extent to which they agree with each statement on a 6-point scale, which is rated from completely undecided (1) to very decided (6). The 20-item measure demonstrates adequate internal consistency reliability coefficients ($\alpha = .84-.88$), and structural validity of the CIP-Short was accomplished by examining fit indices of the four-factor model. Values of CFI (.94), RMSEA (.054), and SRMR (.069), the four-factor model of the CIP-Short, fit the data well (Xu & Tracey, 2017).

Assessing Social Determinants of Academic Achievement

Demographic and Social Determinant information includes age, gender, ethnic background, marital status, mother's occupation, father's occupation, current accumulative

college grade point average, current number of college credit hours, identification of first or continued generation status, number of hours per week spent on family obligations, student employment status, and family income (see Appendix D). Social determinants questions follow recommendations from The National Committee on Vital and Health Statistics for measuring education, income, employment, and family size/relationships. This provides researchers and policy makers with a consistent, standardized measurement and collection approach to socioeconomic factors across groups (American Psychological Association, 2017b).

The review identified career commitment and social determinants of academic achievement may have an impact on the persistence and subsequent academic success of nursing students. Persistence has been correlated to various constructs in previous studies such as self-efficacy and motivation. The review of the literature determined that career commitment and social determinants has potential constructs that have not been explored in regard to persistence or within the population of first year nursing students. The literature supports career commitment as being a potential facilitator to persistence and social determinants as being a potential barrier.

Early assessment and intervention of potential barriers to success can enhance a student's opportunity for achieving academic success in a nursing education program, completing the program on schedule, passing NCLEX-RN on their first attempt, and entering the nursing workforce (Abele et al., 2013). First year nursing students are at a higher risk of attrition than second or third year nursing students (Clements et al., 2015; Jeffreys, 2012). First semester nursing students often underestimate the rigorous demands of

a nursing program and often overestimate their support systems. In addition, first semester nursing students are at high risk for misconceptions of their chosen career in nursing. The first year experience has shown the need for urgent interventions targeted at first year undergraduate nursing students on admission if dropout rate is to be reduced and increased retention and graduation rates achieved (Abele et al., 2013; Jeffrey, 2012).

CHAPTER 3

METHODOLOGY

Study Method

The purpose of this descriptive study was to examine the relationship between the independent variables of self-assessed career commitment, persistence, and social determinants of academic achievement among undergraduate nursing students enrolled a nursing program of study. Polit and Beck (2017) defined descriptive research as methods to describe relationships or associations between variables. While descriptive research cannot determine a cause and effect relationship between variables, it can determine if a relationship exists between two or more variables as well as the strength of the relationship. This study aimed to provide data describing the relationship among these variables that would lead to effective evidence-based interventions.

Research Questions and Hypotheses

The research questions for this study are as follows.

1. What is the relationship of career indecision(IV) on perceived academic persistence (DV) among undergraduate nursing students during their first semester of study?

The hypothesis states there is a relationship between levels of career indecision and perceived academic persistence among undergraduate nursing students during their first semester of study.

The null hypothesis is there is no association between career indecision and self-assessed persistence.

2. What is the relationship between social determinants of academic achievement concepts (IV) of ethnicity, financial strain, and college stress on career indecision (DV) among undergraduate nursing students during their first semester of study?

The hypothesis states there is a relationship between ethnicity, financial strain, and social support stress on levels of career indecision among undergraduate nursing students during their first semester of study.

The null hypothesis is there is no association between ethnicity, financial strain, and social support stress levels on career indecision.

3. What is the relationship between social determinants of academic achievement concepts (IV) of ethnicity, financial strain, and college stress on perceived academic persistence (DV) among undergraduate nursing students during their first semester of study?

The hypothesis states there is a relationship between ethnicity, financial strain, and social support stress on levels of perceived academic persistence among undergraduate nursing students during their first semester of study.

The null hypothesis is there is no association between ethnicity, financial strain, and social support stress levels on perceived academic persistence.

Assumptions

1. Participants will willingly take part in the study.
2. Participants will respond truthfully to questions on the study instruments.
3. Participants will comprehend the questions on the study instruments.
4. Participants will be representative of the population at their institution.

Study Location

This study was conducted on the campuses of two community colleges and two universities located in the Midwest. The structures of the colleges differ slightly, and all nursing programs are fully approved by their respective accrediting body and state board of nursing. All four colleges and universities accept new nursing students each year for fall semester enrollment. These colleges have an overall enrollment of approximately 570 first year nursing students, which was ample to support the purpose and design of this study. The colleges are varied in mission and represent public and private institutions. Geographic area is also varied, representing both urban and rural areas; thus the population of students represent diverse characteristics.

Recruitment, Sample Procedure, and Size

The sample population is undergraduate nursing students in their first year of a registered nurse program located at one of the participating community colleges or universities located in two Midwestern states. The inclusion criteria are first year nursing students at each participating school. Students who held a licensed practical nurse (LPN) license and students who hold a registered nursing (RN) license enrolled in a baccalaureate completion program were excluded. When completing a t-test analyses for this study, a sample size of 64 participants was required for a power coefficient of .80 and a large effect of .50 at a significance level (alpha) of .05. When completing ANOVA (analysis of variance) for this study, a sample size of 42 participants with a coefficient of .80 and a large effect size of .50 was necessary for a significance level of (alpha) of .05 (Polit & Beck, 2017). Participation by 68 students was sufficient to meet the requirements of power and effect size.

To accommodate randomization and the possibility of achieving a larger effect size, the population size for recruitment was a total sample of 150 student nurses. The parameters were estimated based on similar studies in the literature (Chang et al., 2015; Numminen et al., 2016). Regression analysis requires a large sample size to be accurate. There should be a minimum of 20 cases per predictor, with a minimum of 60 total cases (Polit & Beck, 2017; Tonidandel & LeBreton, 2011). The above sampling plan accommodated the sampling requirement for a multivariate regression analysis.

Institutional Review Board (IRB) approval from the University of Missouri-Kansas City was initially received. Each participating college had unique approval practices and all processes were followed to obtain approval. The researcher contacted the Program Director or Dean at each college to review the research process and method of collection. During a recruiting meeting at each campus for each nursing student cohort, the researcher obtained consent to send an email that presented study objectives and the process. Once consent was obtained, the researcher had a list of all consenting nursing students, only identified by an email address. All students were recruited to participate and a convenience sample was used.

Institutional Review Board

The Institutional Review Board (IRB) approval was secured prior to the retrieval of the study data from the four study locations. Permission to conduct the study was also gained from participating program directors with varying approval processes fully completed at the specific educational sites. These IRBs review nursing research to ensure the ethical treatment of human subjects. The researcher received CITI© (CITI Program, 2019) training as required

by the IRB process. The CITI program is an agency which provides online training to investigators in biomedical and social sciences research.

Human Subjects Considerations

All researchers are expected to adhere to ethical principles in their research, and ethics is central to all aspects of a research study from commencement to completion (Polit & Beck, 2017). Institutional Review Board approval through the University of Missouri-Kansas City was obtained. Although this research was considered low risk, safeguards were placed in the consent form and can be found in Appendix E. Data were collected and stored in the Research Electronic Data Capture (REDCap) repository (Harris et al., 2009). This is a password protected data repository that was maintained by the primary researcher in a secure office location. Student demographic and survey information was safeguarded. The program directors and faculty at each site did not have access to participant data. Students were recruited by the researcher, and class time was not used to complete the instruments. The study material will be maintained in a confidential manner for seven years and then destroyed per University of Missouri-Kansas City policy. While completing the study survey tools, the participants may have encountered material that made them uncomfortable or created a negative emotional state. The participants were instructed that if this occurred, they had no obligation to answer the questions and no obligation to submit their electronic survey.

Study Design

A descriptive, multivariate, correlational design was applied in this study. The relationship of career commitment to perceived student nurse persistence was measured with an analysis of the effect of social determinants on career indecision and academic

achievement. Study data consisted of two previously validated instruments and self-disclosed demographic information. Career commitment is conceptualized as a psychological link between a person and his or her career decision or occupation that is based on an affective reaction to that occupation (Lee et al., 2000). A person with strong career commitment will more strongly identify with, and experience more positive feelings about the occupation than will one with a weak career commitment (Lee et al., 2000). Career commitment is a commitment to professional objectives, values, and beliefs and a willingness to continue in one's profession of choice (Teng et al., 2007). Nurses' career commitment starts to develop during their basic education and continues through a professional socialization process (Teng et al., 2007).

Social determinants of learning include socioeconomic factors, demographic indicators, the biases and injustices within the criminal and juvenile justice system, and civic, community, school-based opportunities. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels (Metcalf & Neubrandner, 2016). Persistence is a personality characteristic that has implications of motivation and action. Oftentimes unrelated to knowledge, persistence has been identified as the sum of those factors needed by the student to complete a program of study (Habley et al., 2012). Perceived persistence is the outcome variable in this study and is defined as the student's perception of their ability to successfully complete the first year of a nursing program of study.

Study Instruments and Data

Survey instruments were administered to student nurse participants during their first semester of their nursing program and measured perceived persistence, career indecision, and social determinants of academic achievement (see Table 1).

Procedure

Currently enrolled first year nursing students were recruited during a designated class period during the first semester of the first year of the student nurse's program of study with site visits to each college. All first year nursing students were recruited for the study at each of the pre-determined educational sites. The sample of students was randomly stratified by school in order to achieve representativeness from each study site. No course credit for completion was earned, and no course penalty was assigned for not participating. Participants were not required to complete the survey during class time, thereby reducing any sense of required participation.

Interested participants provided the researcher with their name and electronic mail address on the research consent form. Instructions on accessing the survey via a social media platform were described in detail on the consent form as well as explained by the researcher. The survey was built and data managed through the Research Electronic Data Capture (REDCap) system (Harris et al., 2009). The consent form had a unique student identifier number for each participant and was included with individual electronically mailed survey access.

Participants spent no more than 30 minutes to complete the survey instrumentation. Participants were sent a link to the survey instruments via the electronic mail address

Table 1

Research Instruments and Data Collection Approach

Concept	Variable	Measure	Psychometrics (Reliability and Validity)	Administration Time Points
Persistence	Persistence is the dependent (outcome) variable. Perceived persistence will be measured.	Perceived Persistence: The College Persistence Questionnaire-Version 3 (CPQ-V3) (Davidson et al., 2015)	Reliability coefficients range from .68 - .72. Predictive validity was measured with actual persistence one year after initial survey. The results of a logistic analysis were statistically significant, correctly classifying 66% of the students correctly.	Perceived persistence administered once during the participant's first semester of a nursing program of study.
Career Commitment measured by level of career indecision.	Career Commitment is a predictor variable (independent variable).	Career Indecision Profile - Short (CIP-Short) (Xu & Tracey, 2017)	Internal consistency reliability coefficients are ($\alpha = .84-.88$). Structural validity of the CIP-Short was accomplished by examining fit indices of the four-factor model. Values of CFI (.94), RMSEA (.054), and SRMR (.069), the four-factor model of the CIP-Short fit the data well (Xu & Tracey, 2017).	Career commitment administered once during the participant's first semester of a nursing program of study.
Social Determinants of Academic Achievement	These are predictor variables (independent variables)	Demographic and Social Factor Questionnaire based on The National Committee on Vital and Health Statistics recommendations for measuring education, income, employment, family size, and relationships.	These guidelines provide researchers and policy makers with a consistent, standardized measurement and collection approach to socioeconomic factors across groups (American Psychological Association, 2017b).	Social determinants of academic achievement administered once during the participant's first semester of a nursing program of study.

provided on the consent form. Participants who did not respond to the electronic request within five days received a reminder e-mail.

Data Management

The data were analyzed using IBM SPSS statistics (Version 26) predictive analytics software designed to assist researchers in planning research, collecting and analyzing data, and developing reports related to statistical procedures. An electronic database using SPSS version 26 was created by the researcher to organize the data. Safeguards were implemented to prevent the participants' loss of confidentiality. The student consent forms with identifiers were kept in a physical/electronic folder separate from study data. All study data were electronic password protected and encrypted in a computer database. Coding, which is a systematic approach, was used to organize data for this study automatically through the REDCap system (Harris et al., 2009). Data were analyzed via SPSS with a list of code numbers referencing each student. All study data were reported as aggregate data. In an attempt to prevent threats to the validity of the study, steps were taken to review data after the SPSS upload from REDCap to help ensure accuracy. Information related to the study will remain in a password-protected, encrypted computer in the researcher's secured office for seven years. After seven years, all computer files and documentation related to this study will be erased and shredded by the researcher.

CHAPTER 4

DATA ANALYSIS

The purpose of this descriptive study was to examine the relationship between career commitment on self-assessed academic persistence considering the impact of social determinants of academic achievement among undergraduate nursing students enrolled in the first semester of a registered nursing program. All study data were electronically uploaded from REDCap into IBM Statistics SPSS (Version 26). Responses were double-checked for accuracy. Each variable was then checked for normal distribution, and missing data were identified. A total of 84 participants consented to the study and participated. There were two participant surveys with one mislabeled response on each survey with two different questions. The researcher believed since it was a very small amount of partial data (less than 1% of the effected surveys) it should be included in the analysis. However, it should be noted that any partial or incomplete data may strengthen or weaken the relationship between variables.

Instruments

Participants completed Davidson et al.'s (2015) College Persistence Questionnaire, version 3 (CPQ-V3) survey to measure perceived persistence at the institution. Career commitment was measured with items from the Career Indecision Profile-Short (CIP-Short) (Xu & Tracey, 2017). Items from the Career Indecision Profile-Short (CIP Short) and the College Persistence Questionnaire V-3 (CPQ-V3) were scored according to the author's instructions. The researcher had obtained written permission from the creator of the CPQ-V3 and the CIP-Short to use the questionnaires (see Appendix F). Demographic and Social

Factors were obtained by an online questionnaire based on The National Committee on Vital and Health Statistics recommendations for measuring education, income, employment, family size, and relationships (American Psychological Association, 2017b).

College Persistence Questionnaire – Version 3 (CPQ-V3)

Participants completed Davidson et al.'s (2015) College Persistence Questionnaire, version 3 (CPQ-V3). The CPQ-V3 is comprised of 32 questions that elicit responses about the participant's social and academic integration and integration with the institution. CPQ-V3 questionnaire's 32 items make up 10 factors: academic integration, financial strain, social integration, degree commitment, college stress, advising, scholastic conscientiousness, institutional commitment, academic motivation, and academic efficacy. Items are measured using a 5-point Likert-type scale, with a sixth option, "not applicable" included for participants who think the item does not apply to them. On the 5 point scale, "1" refers to the item not pertaining to the participant, up to "5," which refers to the item pertaining strongly to the participant. An example question is as follows: "How would you rate the quality of instruction you are receiving from here?" The participant can answer from 5, excellent, to 1, very poor. Each factor has between three and four items. The CPQ-V3 instrument has 12 items that were reverse scored. The reversed scored items are as follows: items #3, 5, 8, 13, 15, 18, 23, 24, 25, 27, 28, and 31. After reverse scoring the appropriate items and determining point values for each item, as described in Appendix B, the items were sorted into the 10 established factors, and a score was created for each of the 10 factors by taking the mean of the applicable items.

Career Indecision Profile

Career Indecision Profile-Short (CIP-Short) (Xu & Tracey, 2017) is a 21-item self-report measure of career indecision. CIP-Short is an abbreviated version of Career Indecision Profile-65 (CIP-65; Hacker et al., 2013), which was originally developed based on the four-factor model of career indecision (Brown et al., 2012). The CIP-Short consists of one item that measures difficulty in making a career decision as well as 20 items that measure reasons for the decision making difficulty, including Neuroticism/Negative Affectivity (NNA; 5 items), Choice/Commitment Anxiety (CC; 5 items), Lack of Readiness/Immaturity (LR; 5 items), and Interpersonal Conflict (IC; 5 items). Participants rated the items of the CIP-Short on a 6-point Likert-type scale ranging from “1” meaning completely disagree to “6” meaning strongly agree, with higher scores indicating higher levels of indecision. An example question is as follows: “I really have a hard time making decisions without help?” The participant can answer from 1, strongly disagree, to 6 strongly agree. Each factor has five items. The CIP-Short instrument has five items that were reverse scored. The reversed scored items are as follows: Items #13, 16, 18, 19, and 20. After reverse scoring the appropriate items and determining point values for each item, as described in Appendix C, the items were sorted into the four factors and a score created for each of the four factors by taking the mean of the applicable items.

Demographics and Social Determinants of Academic Achievement

Demographic information on gender, age, race, class standing, residency, parental education, financial information, work status, parent career information, and GPA was collected. In addition, participants were identified by type of nursing program and current

credit hour load. This comprehensive and consistent approach to collecting and analyzing social determinants data provides researchers and policy makers with a standardized measurement approach to socioeconomic factors across groups (American Psychological Association, 2017b).

The impact of financial strain and college stress variables on perceived academic persistence and career indecision was measured by subscales in the College Persistence Questionnaire-Version 3 (CPQ-V3). Financial strain captures the stressful feelings about one's financial situation. Questions in this subscale assess difficulty in handling college costs, worry about having enough money to meet basic needs and essential resources for college, and the concern of not being able to do things that other students can afford to do. College stress variables capture the multiple stressors about college expectations, time management, personal stress, and social stress. Questions in this subscale assess pressure to meet deadlines, stress over various aspects of college life, and feelings of being overwhelmed. Perceived overwhelming negative stressors can lead to absenteeism, school dissatisfaction, and attrition (Frögéli et al., 2016). These subscales are described in more detail later in this chapter with the instrument reliability analysis. Gender, ethnicity, and type of school of nursing enrollment were measured through the self-reported demographic questionnaire.

Descriptive Statistics

Descriptive and frequency statistics are used to describe a study (Kellar & Kelvin, 2013; Polit & Beck, 2017). Descriptive statistical information was analyzed to describe the study population. Study participants were primarily female (89.3%), with age ranges of 17-

21 (39.3%), 22-29 (33.3%), 30-39 (22.6%), 40-49 (3.6%), and 50 and greater (1.2%). The ethnicity of the population was Asian (6.0%), Black or African American (8.4%), Hispanic (4.8%), White (74.7%), Middle Eastern (1.2%) and other or declined to state (4.8%) (see Table 2).

Table 2

Ethnicity

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Asian	5	6.0	6.0	6.0
	White	62	73.8	74.7	80.7
	Hispanic	4	4.8	4.8	85.5
	African-American	7	8.3	4.8	94.0
	Middle Eastern	7	1.2	1.2	95.2
	Other	3	3.6	3.6	98.8
	Declined to State	1	1.2	1.2	100.0
Missing System		1	1.2		
Total		84	100.0		

Study participants were from community colleges (41.0 %) or four-year universities (59.0%). The majority of the study participants worked part-time as defined by less than 20 hours per week (56.0%), full-time as defined by working more than 35 hours per week (11.9%), not working (31%), and declined to state (1.2%).

The majority of study participants were full-time students (60.7%) taking 12 credit hours or greater (see Table 3). The population study included single students (75%) and married students (23.8%). One student (1.2%) was separated.

Table 3

Credit Hours Enrolled

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	11 credit hours or less	27	32.1	32.5	32.5
	12-15 credit hours	38	45.2	45.8	78.3
	16 credit hours or greater	13	15.5	15.7	94.0
	Unsure	4	4.8	4.8	98.8
	Other	1	1.2	1.2	100.0
Missing System		1	1.2		
Total		84	100.0		

Study participants who grew up with two parents serving as primary guardians were 70.2%, with 69.0% of students reporting two-income families. Combined family income while growing up ranged broadly with almost 50% reporting family income less than \$74,999 (see Table 4). Participants who were dependent of their parents reported total parental income for current total household income; otherwise, participants reported on their own total current household income. Study participants with total current household income under \$19,000 was 20.2% (see Table 5). Study participants were asked about their parents' occupations, with 25% reporting a mother's occupation in professional healthcare occupations and 6.0% of fathers in professional healthcare occupations.

Table 4

Combined Family Income while Growing Up

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	\$16,000 through \$24,999	5	6.0	6.0	6.0
	\$25,000 through \$34, 999	5	6.0	6.0	11.9
	\$35,000 through \$49,000	13	15.5	15.5	27.4
	\$50,000 through 74,999	16	19.0	19.0	46.4
	\$75,000 through \$99,000	12	14.3	14.3	75.0
	\$100,000 through 249,000	12	14.3	14.3	75.0
	\$250,000 through 499,000	3	3.6	3.6	8.6
	\$500,000 through \$999,000	1	1.2	1.2	79.8
	\$1,000,000 or more	1	1.2	1.2	1.0
	Unsure	16	19.0	19.0	100.0
Total		84	100.0	100.0	

Table 5

Current Total Household Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	\$19,000 or less	17	20.2	20.2	20.2
	\$20,000 through \$60,000	28	33.3	33.3	53.6
	Over \$60,000	26	31.0	31.0	84.5
	Unsure	13	15.5	15.5	100.0
Total		84	100.0	100.0	

A majority of the participants' mothers (48.8%) and fathers (53.6%) had not achieved a college degree (see Tables 6 and 7). Approximately 40% of the fathers and mothers had a

bachelor's degree or higher. Note that data on education were missing for three fathers and indicated as unknown as selected by participants.

Table 6

Mother's Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Junior high/middle school (9 th grade)	2	2.4	2.4	2.4
	Partial high school (10 th or 11th grade)	5	6.0	6.0	8.3
	High school graduate	16	19.0	19.0	27.4
	Partial college	15	17.9	17.9	45.2
	Skilled trades training	3	3.6	3.6	48.8
	College degree	30	35.7	35.7	84.5
	Graduate degree	13	15.5		15.5
Total		84	100.0	100.0	100.0

Table 7

Father's Education Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 7 th grade	2	2.4	2.4	2.4
	Junior high/middle school (9 th grade)	6	7.1	7.1	9.5
	Partial high school (10 th or 11 th grade)	2	2.4	2.4	11.9
	High school graduate	9	17.9	17.9	29.8
	Partial college	11	10.7	10.7	40.5
	Skilled trades training	23	13.1	13.1	53.6
	College degree	23	27.4	27.4	81.0
	Graduate degree	13	15.5	15.5	96.4
	Unknown	3	3.6	3.6	100.0
Total		84	100.0	100.0	

Instrument Reliability

To measure internal consistency for the instruments, Cronbach's alpha were calculated. The College Persistence Questionnaire-Version 3 (CPQ-V3) has 32 items that measure a set of student experience variables and their direct and indirect relationships with institutional commitment on a 5-point Likert-type scale (Davidson et al., 2015). Student experience indices are dependent upon the student's interaction with the institution's academic and social environments (Davidson et al., 2015). The CPQ-V3 had an overall reliability with a .843 Cronbach's alpha score (see Table 8). Individual reliability scores ranged from .829 to .846 (see Table 9). This demonstrates a variance of -.14 to +.03. These are all within one Standard Deviation (SD) (which would be .47). The overall Cronbach's alpha score of .843 and associated range indicates a superior stable survey (Fowler, 2009).

Table 8

College Persistence Questionnaire – Version 3 (CPQ-V3) Instrument Reliability

Cronbach's Alpha	N of Items
.843	32

Table 9

College Persistence Questionnaire-Version 3 (CPQ-V3) Item Reliability

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
How much do you think you have in common with other students here?	50.95	155.874	.340	.839
How would you rate the quality of the instruction you are receiving here?	51.72	153.760	.480	.835
How often do you worry about having enough money to meet your needs? *	48.83	158.563	.145	.846
45 How confident are you that this is the right college or university for you?	51.84	152.505	.465	.835
How much pressure do you feel when trying to meet deadlines for course assignments? *	49.12	153.615	.405	.837
How satisfied are you with the academic advising here?	51.55	151.041	.448	.835
How confident are you that you can get the grades you want?	51.38	151.645	.499	.834
How often do you miss class for reasons other than illness or participation in school-related activities? *	51.61	158.241	.320	.839

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
Students vary widely in their view of what constitutes a good course, including the notion that the best course is one that asks students to do very little. In your own view, how much work would be asked of students in a really good course?	51.27	162.026	.120	.843
There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree?	52.01	154.086	.377	.838
46 How much have your interactions with other students had an impact on your personal growth, attitudes, and values?	51.15	154.299	.291	.841
How much do the instructors and the courses make you feel like you can do the work successfully?	51.44	150.891	.602	.832
How difficult is it for you or your family to be able to handle college costs? *	49.18	155.880	.195	.845
How likely is it you will earn a degree from here?	52.41	156.937	.563	.836

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution? *	48.65	159.984	.168	.843
How easy is it to get answers to your questions about things related to your education here?	51.60	154.095	.369	.838
When you are waiting for a submitted assignment to be graded, how assured do you feel that the work you have done is acceptable?	51.52	150.894	.513	.833
47 How often do you arrive late for classes, meetings, and other college events? *	51.32	161.108	.099	.845
In general, how enthused are you about doing academic tasks?	51.34	153.709	.432	.836
After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere?	52.48	159.215	.414	.839
How much have your interactions with other students had an impact on your intellectual growth and interest in ideas?	51.15	154.299	.298	.840

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
In general, how satisfied are you with the quality of instruction you are receiving here?	51.93	153.846	.481	.835
When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do? *	49.48	153.882	.241	.844
How much thought have you given to stopping your education here (perhaps transferring to another college, going to work, or leaving for other reasons)?*	50.89	142.963	.596	.829
How often do you feel overwhelmed by the academic workload here? *	48.90	157.027	.249	.841
How would you rate the academic advisement you receive here?	51.41	151.258	.471	.835
How much doubt do you have about being able to make the grades you want?*	49.87	150.340	.491	.834
How often do you turn in assignments past the due date?	51.67	156.224	.490	.836
Some courses seem to take a lot more time than others. How much extra time are you willing to devote to your studies in those courses? *	51.57	160.149	.162	.843

48

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Cronbach's Alpha if Item Deleted
At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere?	52.43	156.470	.530	.836
How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies? *	48.91	156.869	.175	.846

Note. *Indicates reverse coded item

Instrument reliability for the 10 factors of the CPQ-V3 had total reliability ranging from .556 (Degree Commitment) to .876 (Financial Strain) (see Table 10). Instrument reliability for the individual items by factor indicate just one Corrected Item Total Correlation below a .300 indicating the subscale of the overall CPQ-V3 as remarkably stable (see Table 11).

Table 10

College Persistence Questionnaire – Version 3 (CPQ-V3) Factor Subscale Reliability

CPQ-V3 Subscale	Cronbach's Alpha	N of Items
Academic Integration	.790	3
Motivation to Learn	.594	3
Academic Efficacy	.765	3
Financial Strain	.876	4
Social Integration	.834	3
Collegiate Stress	.770	3
Advising Effectiveness	.789	3
Degree Commitment	.556	3
Institutional Commitment	.669	4
Scholastic Conscientiousness	.675	3

Table 11

College Persistence Questionnaire – Version 3 (CPQ-V3) Item Reliability by Factor

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Academic Integration				
Q2: How would you rate the quality of the instruction you are receiving here?	1.90	2.039	.724	.613
Q22: In general, how satisfied are you with the quality of instruction you are receiving here?	1.63	2.286	.543	.810
Q12: How much do the instructors and the courses make you feel like you can do the work successfully?	2.11	2.220	.635	.711
Motivation to Learn				
Q9: Students vary widely in their view of what constitutes a good course, including the notion that the best course is one that asks students to do very little. In your own view, how much work would be asked of students in a really good course?	2.36	2.282	.281	.647
Q29: Some courses seem to take a lot more time than others. How much extra time are you willing to devote to your studies in those courses?	2.43	1.273	.537	.262
Q19: In general, how enthused are you about doing academic tasks?	2.65	1.620	.424	.461

Table continues

Academic Efficacy					
	Q7: How confident are you that you can get the grades you want?	3.90	3.077	.649	.629
	Q17: When you are waiting for a submitted assignment to be graded, how assured do you feel that the work you have done is acceptable?	4.05	3.282	.536	.750
	Q27: How much doubt do you have about being able to make the grades you want?	2.39	2.833	.612	.668
Financial Strain					
	Q3: How often do you worry about having enough money to meet your needs?	10.39	12.654	.716	.849
52	Q13: How difficult is it for you or your family to be able to handle college costs?	10.71	11.574	.723	.845
	Q23: When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do?	11.02	10.999	.764	.828
	Q31: How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies?	10.46	11.837	.735	.840
Social Integration					
	Q1: How much do you think you have in common with other students here?	3.00	4.951	.589	.870

Table continues

Q11: How much have your interactions with other students had an impact on your personal growth, attitudes, and values?	3.16	3.500	.728	.739
Q21: How much have your interactions with other students had an impact on your intellectual growth and interest in ideas?	3.19	3.353	.803	.655
Collegiate Stress				
Q5: How much pressure do you feel when trying to meet deadlines for course assignments?	7.77	2.618	.618	.675
Q15: Students differ quite a lot in how distressed they get over various aspect of college life. Overall, how much stress would you say that you experience while attending this institution?	7.30	3.164	.547	.753
Q25: How often do you feel overwhelmed by the academic workload here?	7.55	2.445	.659	.628
Advising Effectiveness				
Q6: How satisfied are you with the academic advising you receive here?	2.25	3.264	.629	.722
Q16: How easy is it to get answers to your questions about things related to your education here?	2.36	4.112	.532	.811
Q26: How would you rate the academic advisement you receive here?	2.18	3.369	.748	.587

Table continues

Degree Commitment

Q10: There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree? .41 .903 .309 .731

Q30: At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere? .84 1.719 .359 .503

Q20: After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere? .82 1.369 .577 .213

54

Degree Commitment

Q10: There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree? .41 .903 .309 .731

Q30: At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere? .84 1.719 .359 .503

Q20: After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere? .82 1.369 .577 .213

Table continues

Institution Commitment

Q4: How confident are you that this is the right college or university for you? 2.17 4.168 .451 .603

Q24: How much thought have you given to stopping your education here (perhaps transferring to another college, going to work, or leaving for other reasons)? 2.74 5.304 .541 .612

Q32: How likely is it that you will reenroll here next semester? 1.22 2.396 .604 .544

Q14: How likely is it you will earn a degree from here? 2.79 5.154 .464 .621

Scholastic Conscientiousness

Q8: How often do you miss class for reasons other than illness or participation in school-related activities? 2.40 2.169 .551 .523

Q18: How often do you arrive late for classes, meetings, and other college events? 2.08 1.761 .404 .745

Q28: How often do you turn in assignments past the due date? 2.43 2.053 .558 .502

Instrument reliability for the 20 items of the Career Indecision Profile-Short (CIP-Short) is .863 (see Table 12), with item total reliability ranging from .848 to .866 (see Table 13). This demonstrates a variance of -.15 to +.03. This is well within the one SD goal (which is .74), identifying the CIP-Short as superior instrument (Fowler, 2009).

Table 12

Career Indecision Profile-Short (CIP-Short) Instrument Reliability

Cronbach's Alpha	N of Items
.863	20

Table 13

Career Indecision Profile-Short (CIP-Short) Item Reliability

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
When I experience a setback, it takes me a long time to feel good again.	24.49	186.911	.522	.855
I'd be going against the wishes of someone important to me if I follow the career path that most interests me.	26.18	197.032	.217	.866
I am easily embarrassed.	24.50	185.089	.501	.855
I really have a hard time making decisions without help.	24.79	179.840	.640	.850
I often feel discouraged about having to make a career decision.	25.58	176.754	.674	.848
I need to learn more about myself before I can make a good career decision.	25.20	184.187	.485	.856
It's difficult for me to choose a career because I like so many different things.	25.13	189.756	.332	.863
People who are important to me give me contradictory information about the career I should pursue.	25.93	187.159	.499	.856

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Important people in my life do not support my career plans.	26.59	199.106	.310	.862
I often feel fearful and anxious.	24.08	183.412	.429	.859
Important people in my life disagree about the career I should pursue.	26.56	197.996	.362	.861
I often feel insecure.	24.64	178.259	.567	.852
I am quite confident that I will be able to overcome obstacles to getting the career I want.*	25.68	191.691	.365	.861
I am not sure I can commit to a specific career because I don't know what other options might be available.	25.79	183.030	.601	.852
I'm concerned that my goals may change after I decide on a career.	25.28	182.987	.507	.855
I try to excel at everything I do.*	26.59	198.929	.324	.862
Important people in my life have discouraged me from pursuing the career I want.	26.25	192.595	.393	.859
I will be able to find a career that fits my interests.*	26.21	190.600	.504	.856

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I always work productively to get the job done.*	26.11	192.759	.395	.859
I am quite confident that I will be able to find a career in which I'll perform well.*	26.28	191.493	.505	.856

Note. *Indicates reverse coded item

Instrument reliability for the 4 factors of the CIP-Short had total reliability ranging from .783 (Interpersonal Conflicts) to .827 (Neuroticism/Negativity/Affectivity) (see Table 14). Instrument reliability for the individual items by factor indicate no Corrected Item Total Correlation below a .300 indicating the subscale of the overall CPQ-V3 as remarkably stable (see Table 15).

Table 14

Career Indecision Profile-Short (CIP-Short) Instrument Factor Subscale Reliability

CIP-Short Subscale	Cronbach's Alpha	N of Items
Neuroticism/Negativity Affectivity (NNA)	.827	5
Choice/Commitment Anxiety (CCA)	.814	5
Lack of Readiness (LR)	.806	5
Interpersonal Conflicts (IC)	.783	5

Table 15

Career Indecision Profile – Short (CIP-Short) Item Reliability by Factor

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Neuroticism/Negativity Affectivity (NNA)				
Q1: When I experience a setback, it takes me long time to feel good again.	9.69	25.716	.653	.789
Q3: I am easily embarrassed.	9.72	25.506	.567	.808
Q4: I really have a hard time making decisions without help.	10.02	25.674	.542	.814
Q10: I often feel fearful and anxious.	9.28	22.156	.644	.788
Q12: I often feel insecure.	9.88	21.310	.734	.757
Choice/Commitment Anxiety (CC)				
Q5: I often feel discouraged about having to make a career decision.	6.35	23.425	.595	.781
Q6: I need to learn more about myself before I can make a good career decision.	5.88	24.376	.492	.812
Q7: It's difficult for me to choose a career because I like so many different things.	5.90	23.527	.544	.797
Q14: I am not sure I can commit to a specific career because I don't know what other options might be available.	6.58	23.515	.719	.749

Table continues

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q15: I'm concerned that my goals may change after I decide on a career.	6.08	22.005	.699	.748
Lack of Readiness (LR)				
Q13: I try to excel at everything I do.	3.41	13.801	.507	.795
Q16: I am quite confident that I will be able to overcome obstacles to getting the career I want.	2.51	11.315	.492	.812
Q18: I will be able to find a career that fits my interests.	3.05	10.689	.793	.704
Q19: I always work productively to get the job done.	2.94	11.638	.567	.777
Q20: I am quite confident that I will be able to find a career in which I'll perform well.	3.11	11.753	.668	.747
Interpersonal Conflicts (IC)				
Q2: I'd be going against the wishes of someone important to me if I follow the career path that most interests me.	2.37	11.272	.478	.781
Q8: People who are important to me give me contradictory information about the career I should pursue.	2.12	11.244	.501	.769
Q9: Important people in my life do not support my career plans.	2.77	13.316	.564	.750

Results

Data Screening for Normality

A total of 84 participants completed the online survey questionnaires. No participants were excluded from the initial data set due to reasons such as univariate outliers, monotonous answers or significantly incomplete responses. The College Persistence Questionnaire-Version 3 scored results have an acceptable univariate normality. The CPQ-V3 scores, $D(84) = .088$, $p = .151$ did not deviate significantly from normal (see Figure 1). The Career Indecision Profile scores also did not deviate significantly from normal, $D(84) = .096$, $p = .056$ (see Figure 2).

Figure 1

CPQ-V3 Summed Scores Distribution

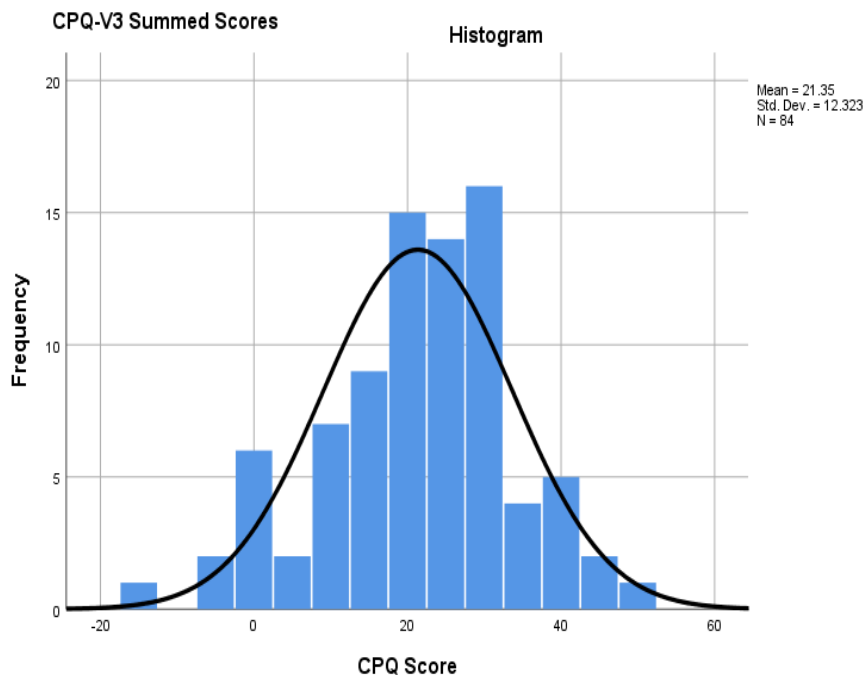
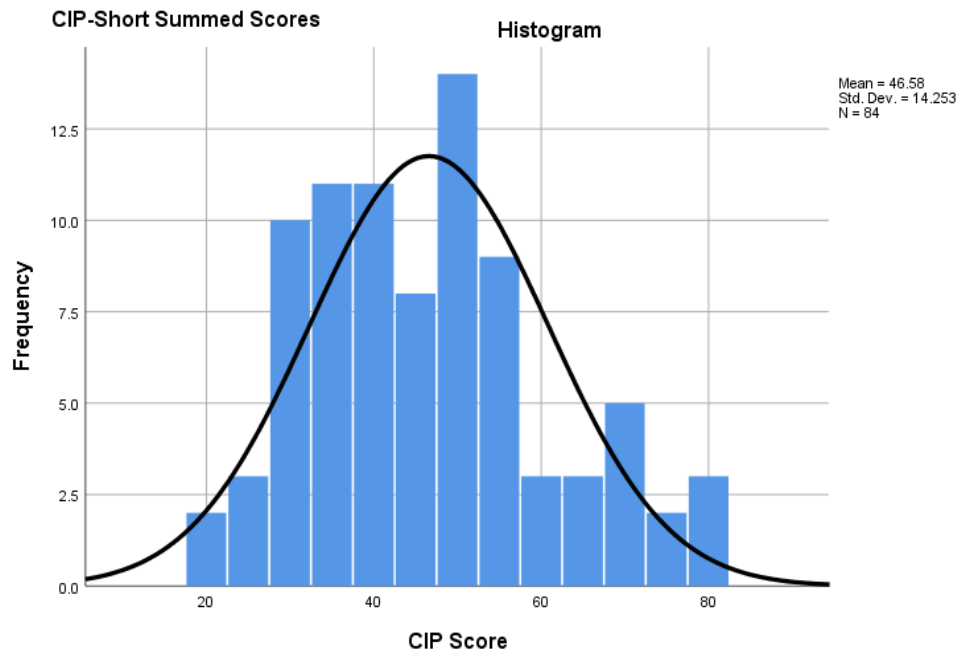


Figure 2

CIP-Short Summed Scores Distribution



Research Questions: Computing the Correlation Coefficient, *t*-tests, and Regression

The primary aim of this study was to explore the relationship of career commitment measured by career indecision on perceived academic persistence among undergraduate nursing students. The first research question is, “What is the relationship of career indecision on perceived academic persistence among undergraduate nursing students during their first semester of study?” The hypothesis states there is a relationship between levels of career indecision and perceived academic persistence among undergraduate nursing students during their first semester of study. The null hypothesis is there is no association between career indecision and self-assessed persistence. For this study, an alpha level of .05 and a two-tailed test were used. A two-tailed test was used to include both positive and negative relationships.

The types of data were reviewed. The measurement scales of the summed scores of both the CIP-Short and the CPQ-V3 are interval measurements and both are normally distributed. Based on these conditions, the Pearson's Correlation Coefficient, a bivariate parametric statistic was used.

There is a strong negative correlation between total student College Persistence scores and Career Indecision scores, $r(82) = -.64, p = .000$ (see Table 16) with $r^2(82) = .41, p = .000$, meaning 41% of the variance is shared (see Figure 3). The relationship has a negative correlation so as when Career Indecision scores increase College Persistence scores decrease and vice versa. If the absolute value of r is $> .50$, it should be regarded as substantial (Cohen, 1988).

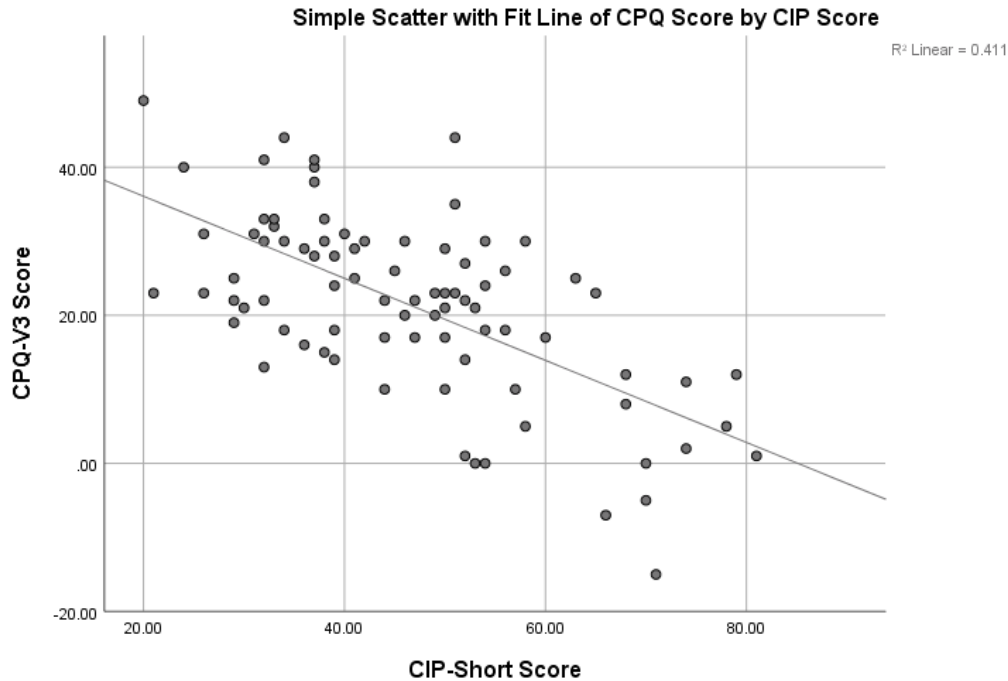
Table 16

Pearson Correlation Coefficient for CPQ-V3 and CIP Scores

		CPQ-V3 Score	CIP-Short Score
CPQ-V3 Score	Pearson Correlation	1	-.641
	Sig. (2-tailed)		.000
	N	84	84
CIP-Short Score	Pearson Correlation	-.641	1
	Sig. (2-tailed)	.000	
	N	84	84

Figure 3

Association between CPQ-V3 and CIP-Short Scores



Multiple regression was conducted to determine the best linear combination of the Career Indecision Profile–Short subscales of Neuroticism/Negative Affectivity (NNA), Choice/Commitment Anxiety (CC), Lack of Readiness/Immaturity (LR), and Interpersonal Conflict (IC) for predicting College Persistence scores. Assumptions of linearity, normally distributed errors, and uncorrelated errors were checked and met. Collinearity statistics indicate tolerance levels are well over .56 ($1-R^2$), indicating no multicollinearity difficulties. The means, standard deviations, and intercorrelations can be found in Table 17. This combination of four variables (all CIP-Short subscales) significantly predicted perceived college persistence scores, $F(4,79) = 17.76, p < .001$, with three of the four variables significantly contributing to the model. The adjusted R squared value was .44. This indicates

Table 17

Intercorrelations, Means, and Standard Deviation for CIP-Short Factor Scores (N=84)

Variable	<i>M</i>	<i>SD</i>	1	2	3	4
CPQ-V3 Scores Predictor Variable	21.35	12.32	-.437**	-.404**	-.574**	-.330
1. CIP NNA Factor			--	.486	.246	.233
2. CIP CC Factor			--	--	.155	.241
3. CIP LR Factor			--	--	--	.262
4. CIP IC Factor			--	--	--	--

* $p < .05$; ** $p < .01$.

that 44% of the variance in college persistence scores were explained by the model.

According to Polit and Beck (2017), this is a large effect. The beta weights presented in Table 18 suggest that Lack of Readiness (LR) contributes most to predicting college persistence scores. The beta coefficient is negative, indicating that for every 1-unit increase in the predictor variable, the outcome variable will decrease by the beta coefficient value.

This is consistent with the strong negative correlation between total student College Persistence Scores and Career Indecision Profile scores found with the Pearson Correlation.

Table 18

Multiple Regression Analysis Summary for CIP-Short Subscales Predicting College Persistence Scores (N=84)

Variable	<i>B</i>	<i>SEB</i>	β
CIP NNA Factor	-.397	.195	-.195*
CIP CC Factor	-.436	.196	-.210*
CIP LR Factor	-1.204	.224	-.464**
CIP IC Factor	-.333	.258	-.112

Note. $R^2 = .44$ $F(4,79) = 17.76$, $p < .001$

* $p < .05$; ** $p < .01$

An independent samples *t* test was performed to compare the means between gender and type of nursing school on college persistence and career indecision to better understand the dynamic of these variables. Inspection of the two group means indicates that the average College Persistence Score for female students ($M=21.77$) is higher than the average score ($M=17.88$) for males, yet not statistically significant (see Table 19). Similarly, there is no significant difference in the means for males ($M=47.00$) and females ($M=46.53$) on Career Indecision scores (see Table 19).

Table 19

Comparison of Male and Female Undergraduate Student Nurses on College Persistence Scores and Career Indecision Scores

Variable	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
CPQ-V3 Score			-.918	82	.183	.3
Male	17.78	14.84				
Female	21.77	12.03				
CIP-Short Scores			.092	82	.927	.03
Male	47.00	15.36				
Female	46.53	14.22				

Analysis of the two group means indicates that the average College Persistence Score for community college (2-year) student nurses ($M = 23.80$) is higher than the average score ($M = 19.84$) for university (4-year) student nurses, yet not statistically significant (see Table 20). Similarly, there is no significant difference in the means for community college (2-year) student nurses ($M = 43.00$) and university (4-year) student nurses ($M = 48.63$) on Career Indecision scores (see Table 20).

Table 20

Comparison of Community College (2-year) and University (4-year) Student Nurses on College Persistence Scores and Career Indecision Scores

Variable	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
CPQ-V3 Score			1.445	81	.370	.3
2-year	23.80	13.78				
4-year	19.84	11.12				
CIP-Short Scores			-1.809	81	.238	.4
2-year	43.00	15.35				
4-year	48.63	12.89				

The secondary aim of this study was to explore the relationship of selected social determinants of academic achievement on career indecision and on perceived academic persistence among undergraduate nursing students. The second research question is, “What is the relationship between social determinants of academic achievement concepts of, ethnicity, financial strain, and college stress on career indecision among undergraduate nursing students during their first semester of study? The hypothesis states there is a relationship between ethnicity, financial strain, and college stress on levels of career indecision among undergraduate nursing students during their first semester of study.

To investigate how well ethnicity, financial strain, and college stress predict career indecision, a hierarchical linear regression was computed. The assumptions of linearity, normally distributed errors, and uncorrelated errors were checked and met. The model summary indicates four models were run. When the CPQ score was entered alone, it significantly predicted career indecision, $F(1,82) = 57.16, p = .000, \text{adjusted } R^2 = .404$.

However, as indicated by the R^2 , only 40% of the variance in career indecision could be predicted by knowing the students perceived career persistence. When the other variables were added, in particular social support stress in model four, it significantly improved on the prediction by CPQ alone, explaining additional significant variance, $F(1,75) = 4.02, p = .048$, adjusted $R^2 = .429$. While CPQ remains a significant factor, of the social determinants studied, college stress is an additional significant factor (see Table 21).

Table 21

Hierarchical Multiple Regression Analysis Summary Predicting Career Indecision from Social Determinants of Student Achievement, when Controlling for CPQ Score (N=84)

Variable	<i>B</i>	<i>SEB</i>	β	R^2	ΔR^2
Step 1				.411	.411**
CPQ Score	-.741	.098	-.641		
Constant	62.41	2.41			
Step 2				.453	.042
CPQ Score	-.768	.103	-.664		
Asian	6.29	6.92	.105		
White	9.06	5.11	.281		
Non-Hispanic					
Hispanic	6.54	7.45	.098		
Black	3.53	6.44	.069		
Non-Hispanic					
Middle Eastern	-.563	12.00	-.043		
Constant	55.38	5.24			
Step 3				.458	.470
CPQ Score	-.796	.111	-.688		
Asian	6.55	6.96	.109		
White	8.96	5.13	.278		
Non-Hispanic					
Hispanic	6.18	7.50	.093		
Black	4.28	6.55	.084		
Non-Hispanic					
Middle Eastern	-4.81	12.10	-.037		
Financial Strain	.221	.323	.065		
Constant	56.50	5.551			
Step 4				.484	.028*
CPQ Score	-.722	.115	-.624		
Asian	5.08	6.86	.085		
White	8.49	5.03	.263		
Non-Hispanic					
Hispanic	4.81	7.33	.072		
Black	3.39	6.44	.066		
Non-Hispanic					
Middle Eastern	-7.58	11.94	-.058		
Financial Strain	.305	.319	.090		
College Stress	-.114	.570	-.188		
Constant	53.11	5.66			

* $p < .05$; ** $p < .01$

The third and final research question is, “What is the relationship between the social determinants of academic achievement concepts of ethnicity, financial strain, and college stress on perceived academic persistence among undergraduate nursing students during their first semester of study?” The hypothesis states there is a relationship between ethnicity, financial strain, and college stress on levels of perceived academic persistence among undergraduate nursing students during their first semester of study.

To investigate how well ethnicity, financial strain, and college stress predict college persistence, a hierarchical linear regression was computed. Again, the assumptions of linearity, normally distributed errors, and uncorrelated errors were checked and met. The model summary indicates four models were run. When the CIP score was entered alone, it significantly predicted perceived academic persistence, $F(1,82) = 57.16, p = .000$, adjusted $R^2 = .404$. However, as indicated by the R^2 , only 40% of the variance in perceived academic persistence could be predicted by knowing the students level of career indecision. When the other variables were added, in particular financial stress in model three, it significantly improved on the prediction by CIP alone, explaining additional significant variance, $F(1,75) = 9.28, p = .003$, adjusted $R^2 = .494$. While CIP remains a significant factor, of the social determinants studied, financial stress is an additional significant factor (see Table 22).

Table 22

Hierarchical Multiple Regression Analysis Summary Predicting College Persistence from Social Determinants of Student Achievement, when Controlling for CIP Score (N=84)

Variable	<i>B</i>	<i>SEB</i>	β	R^2	ΔR^2
Step 1				.411	.411**
CIP Score	-.544	.073	-.641		
Constant	47.16	3.57			
Step 2				.480	.069
CIP Score	-.546	.073	-.632		
Asian	3.84	5.57	.074		
White	7.54	4.31	.271		
Non-Hispanic					
Hispanic	-3.66	6.30	-.064		
Black	5.54	5.40	.125		
Non-Hispanic					
Middle Eastern	-5.51	10.11	-.049		
Constant	40.81	5.12			
Step 3				.536	.057**
CIP Score	-.507	.071	-.587		
Asian	3.84	5.57	.074		
White	6.62	4.11	.278		
Non-Hispanic					
Hispanic	-4.32	5.99	.237		
Black	7.55	5.18	-.075		
Non-Hispanic					
Middle Eastern	-2.29	9.66	.170		
Financial Strain	.221	.323	-.020		
Constant	41.29	4.87			
Step 4				.543	.007
CIP Score	-.478	.076	-.553		
Asian	4.28	5.58	.083		
White	6.53	4.10	.234		
Non-Hispanic					
Hispanic	-3.80	6.01	-.066		
Black	7.73	5.18	.174		
Non-Hispanic					
Middle Eastern	-.960	9.74	-.008		
Financial Strain	.692	.249	.235		
College Stress	.494	.473	.094		
Constant	40.92	4.88			

Note. * $p < .05$; ** $p < .01$.

CHAPTER 5

CONCLUSION

Academic success for nursing students is a complex, dynamic, multidimensional phenomenon influenced by the interaction of personal, academic, and environmental factors (Jeffreys, 2015). The purpose of this predictive, correlational study was to determine if a statistically significant association existed for undergraduate first semester nursing students among the factors measured by the Career Indecision Profile-Short and the College Persistence Questionnaire-V3. This study also analyzed a selection of social factors as predictor variables on the results of career indecision and perceived academic persistence. Robert Lent's (1994) social cognitive career theory served as the theoretical framework for this study by providing support in addressing the research questions, operationalizing the study variables and their relationships, and interpreting the results of this study. This framework was used to identify potential variables that may or may not have influenced career indecision in nursing students.

Discussion

Results of this research confirmed the alternative hypothesis that there is a relationship between career indecision and perceived academic persistence. There is a strong negative correlation between total student Career Indecision scores and College Persistence Scores, $r(82) = -.64, p = .000$ with $r^2(82) = .41, p = .000$, meaning 41% of the variance is shared. The relationship has a negative correlation so when Career Indecision scores increase, College Persistence scores decrease and vice versa. Multiple regression analysis was conducted to determine the best linear combination of the Career Indecision Profile-

Short (CIP-Short) subscales of Neuroticism/Negative Affectivity (NNA), Choice/Commitment Anxiety (CC), Lack of Readiness/Immaturity (LR), and Interpersonal Conflict (IC) for predicting College Persistence scores. This combination of four variables (all CIP-Short subscales) significantly predicted perceived college persistence scores, $F(4,79) = 17.76, p < .001$, with three of the four variables significantly contributing to the model. The adjusted R squared value was .44 indicating that 44% of the variance in college persistence scores was explained by the model. With this combination of four subscale predictors, the beta weights suggest that Lack of Readiness/Immaturity (LR) contributes most to predicting college persistence scores with the highest beta (-.464), and is the only variable that contributed at the highest level of significance ($p < .01$). Interpersonal Conflict (IC) was the only variable that did not significantly contribute with the lowest beta (-.112).

The CIP-Short subscale Lack of Readiness/Immaturity (LR) factors includes items such as confidence in overcoming barriers to obtain the desired career, concerns about finding a career that fits interest, and confidence in performing well in the desired career. Given the direct effects of Lack of Readiness/Immaturity factors on perceived persistence, it seems crucial for career counselors to assess and address student concerns regarding confidence in overcoming barriers, resilience concerns, and career fit. Students need be encouraged to define barriers and career goals while working toward their degree. Particularly, career counselors can focus on assisting students in clarifying and defining their concerns as well as facilitate a supportive environment to address indecision issues effectively and even prior to admission to a nursing program of study.

These findings are consistent with this study's theoretical framework. The social cognitive career theory (SCCT) hypothesizes that career and academic interests develop when individuals have confidence in their ability to perform specific academic or career related tasks and when they anticipate positive consequences for engaging in these tasks (Lent et al., 1994). In their academic persistence model, career interests affect goals and career outcomes such as career satisfaction, engagement, performance, and persistence (Lent et al., 2000). Congruent with prior research with students in other disciplines, career goals were strong predictors of future persistence actions in their chosen academic course of study (Brown et al., 2008; Leal-Muniz & Constantine, 2005; Lent et al., 2013, 2016).

Demographic variables were analyzed to describe the study population. Study participants were primarily female (89.3%), with age ranges of 17-21 (39.3%), 22-29 (33.3%), 30-39 (22.6%), 40-49 (3.6%), and 50 and greater (1.2%). Study participants were from community colleges (41.0 %) or four-year universities (59.0%). The ethnicity of the population was Asian (6.0%), Black or African American (8.4%), Hispanic (4.8%), White (73.8%), Middle Eastern (1.2%), and other or declined to state (4.8%).

The following national averages of minorities enrolled in basic RN programs in 2020 include: African American 11.1%, Hispanic 7.7%, Asian or Pacific Islander 11.7%, American Indian 0.4%, Other/Unknown 1.9% (National League for Nursing, 2021). Given the differences in the ratios of these ethnicity demographic variables between the current data and the current United States population of student nurses, careful attention is needed when generalizing the results to the overall population of all student nurses.

An independent samples *t* test was performed to compare the means between gender and school of nursing type on college persistence and career indecision. There is not a statistically significant difference between males ($M = 17.78$) and females ($M = 21.77$) on mean college persistence scores nor between males ($M = 47.00$) and females ($M = 46.53$) on mean career indecision scores. Likewise, there is not a statistically significant difference between students enrolled at the community colleges ($M = 23.80$) and universities ($M = 19.84$) on mean college persistence scores nor between students enrolled at the community colleges ($M = 43.00$) and universities ($M = 48.63$) on mean career indecision scores.

To answer research question two and to investigate how well ethnicity, financial strain, and college stress predict career indecision, a hierarchical linear regression was computed. When the CPQ-V3 summed score was entered alone, it significantly predicted career indecision, $F(1,82) = 57.16, p = .000$, adjusted $R^2 = .404$. When the other variables were added, in particular college stress in model four, it significantly improved on the prediction by CPQ alone, explaining additional significant variance, $F(1,75) = 4.02, p = .048$, adjusted $R^2 = .429$. While CPQ remains a significant factor of the social determinants studied, college stress is an additional significant factor for predicting career indecision.

To answer research question three and to investigate how well ethnicity, financial strain, and social support stress predict college persistence, a hierarchical linear regression was computed. When the CIP summed score was entered alone, it significantly predicted academic persistence, $F(1,82) = 57.16, p = .000$, adjusted $R^2 = .404$. When the other variables were added, in particular financial stress in model three, it significantly improved on the prediction by CIP alone, explaining additional significant variance, $F(1,75) = 9.28, p = .003$,

adjusted $R^2 = .494$. While CIP remains a significant factor, of the social determinants studied, financial stress is an additional significant factor for predicting college persistence.

These findings are consistent with research by Hopkins (2008), Jeffreys (2014, 2015), and Riley et al. (2019), who claimed that background variables such as age, ethnicity, gender, prior education, socioeconomic background, and academic stress can affect achievement outcomes for some nursing students. The aforementioned variables can have direct influences on student persistence, self-efficacy, and motivation (Jeffreys, 2015; Markle, 2015). Stress partially mediates the relationship between choosing nursing as a major and students' intention to commit. One possible explanation is that stress undermines students' belief that they are capable of providing the type of care necessary within the occupational specialty of nursing (Riley et al., 2019). Although in this study, ethnicity did not appear to be significant, future studies must be expanded in scope, as ethnicity alone does not determine academic outcomes. Resource disparities in prior schools, homes, neighborhoods, and social capital contribute significantly to achievement outcomes for students of color (Metcalf & Neubrander, 2016).

Since the results of this study indicate a relationship between career indecision and academic persistence in undergraduate nursing students, it seems appropriate to recommend programs that would assist students with career exploration, planning, and goal setting. Programs can include a career planning course, career counseling, or combination of both. A career counselor program designed to help ensure the success of undergraduate nursing students could improve student persistence. College is a time of exploration and maturation for many students, and one of their first tasks is determining their educational and career

goals. Assisting students in exploring options and clarifying their goals is critically important for students, their families, and schools (Belser et al., 2018).

The literature does not provide insight into whether an on-site professional career counselor, readily accessible to nursing students, is able to assist students to balance their career, social stress, and financial concerns. There is research that supports utilization of career counseling in other disciplines and undergraduates in general (Belser et al., 2017, 2018; Fontaine, 2014; Lynch & Lungrin, 2018). In terms of influence of career planning on career thoughts, Belser et al. (2018) found science, technology, engineering, and mathematics (STEM) students who participated in a career planning class showed a larger decrease in negative career thoughts than those who participated in the routine freshman seminar class. These results provide support for the efficacy of STEM-focused career planning courses and measuring negative career thoughts with STEM undergraduates. Reardon et al. (2015) studied archival data obtained from the university registrar to examine how engagement in a credit-bearing undergraduate career course related to college retention and graduation from one selected university. Results suggested that the course was one of four factors predicting graduation rates, including grade point average, changes in major, and withdrawals. A career course can positively influence students' ability to navigate the career decision-making process and increase their career choice certainty. More specifically, the career course helped participants become more focused and motivated in their career plans (Reardon et al., 2015).

High levels of career indecision, goal instability, and negative career thinking can prevent students from successfully moving through the career problem-solving and decision-making process. In light of research demonstrating how both an individual's career decision

state and the affective state can negatively impact various career development factors and outcomes, it is important to further explore how interventions, such as career courses, professional mentoring, and early job shadowing, can be used to enhance students' decision state, motivation, and career thoughts, and ultimately their successful transition through college (Reardon et al., 2015).

Understanding factors that influence students' commitment to their nursing major is important to administrators as they work to improve the number of students enrolled in accredited nursing programs with potential for completion. Specifically, they can use insights from this study to better develop recruitment and retention efforts by leveraging programs and services to decrease career indecision early in the academic process, particularly before the nursing admissions process.

Limitations

This study included several factors which might limit how much of the topic can be reasonably generalized for the following reasons:

1. This study was conducted at four undergraduate programs representing private and public community colleges and four-year universities. With that said, the location was limited to four schools within a single state, limiting the generalizability of results to other schools in other parts of the country and the world.

2. The study population consisted of nursing students in their first semester nursing course, limiting generalizability of results to other populations such as senior level students.

3. The College Persistence Questionnaire-Version 3 (CPQ-V3) assessment has been used with nursing students while the Career Indecision Profile-Short (CIP-Short) instrument has not been piloted with the student nurse population.

4. It is noteworthy to recognize that the correlations derived from the collected data may not necessarily result in identifying a causal relationship between the study's variables even though associations may be present in some fashion. The current study does not pursue development of causation.

5. Participant self-assessment is a limitation in this study. Participant self-assessment can be a limitation due to subjectivity and responder bias (Polit & Beck, 2017).

Implications for Future Research

Several of the recommendations for future research are connected to the limitations presented as noted above. An expanded study of the same model with additional sites (public and/or private institutions) is highly recommended and would extend the current research models and population of study. A longitudinal study would be beneficial to compare actual persistence with perceived levels of persistence and follow students through the nursing curriculum. Another recommendation for future research would be to expand the model of study on the impact of a broader set of social determinants of learning.

The encouraging results from this study could be the impetus needed for future research in nursing education aimed at the development of career and academic support programs and interventions designed to enhance student success. Due to the persistent nursing shortage and need for a diverse nursing workforce, faculty need to examine how nursing students persist and what can be done to enhance their persistence. Identifying career

indecision factors, especially those impacting confidence and readiness that have a negative impact on persistence, is the initial step in providing appropriate and valued interventions. Identification of students who might be most at risk early in the academic process, even prior to nursing admission, is worth further study. Evaluation of the effects of pre-college mentoring by professional nurses including active job shadowing programs on career indecision is another research area that could follow the findings from this study.

The CPQ-V3 has been shown to be a reasonable tool to help identify students at risk for attrition in the nursing program if used as a screening tool upon admission to the program (Betts et al., 2017). Using this assessment in addition to other admission testing could provide deeper understanding of social risk factors related to attrition that are not identified using academic admission testing alone. More research is needed on interventions that can positively impact those with social risk factors for attrition.

Conclusion

As universities continue to increase nursing student numbers to meet the demand for an expanded workforce, it is essential to identify factors which have the greatest impact on student persistence and completion. New approaches for understanding career choice and commitment are needed to advance nursing science towards meeting the challenges of today's complex health care climate. This is particularly important within the health care arena where nursing recruitment and retention are recognized priorities, as they directly impact the care of patients in various health care settings and communities.

Career exploration early in high school and first year of college with a focus on planning, goal-setting, and the identification of social risk factors can strengthen students'

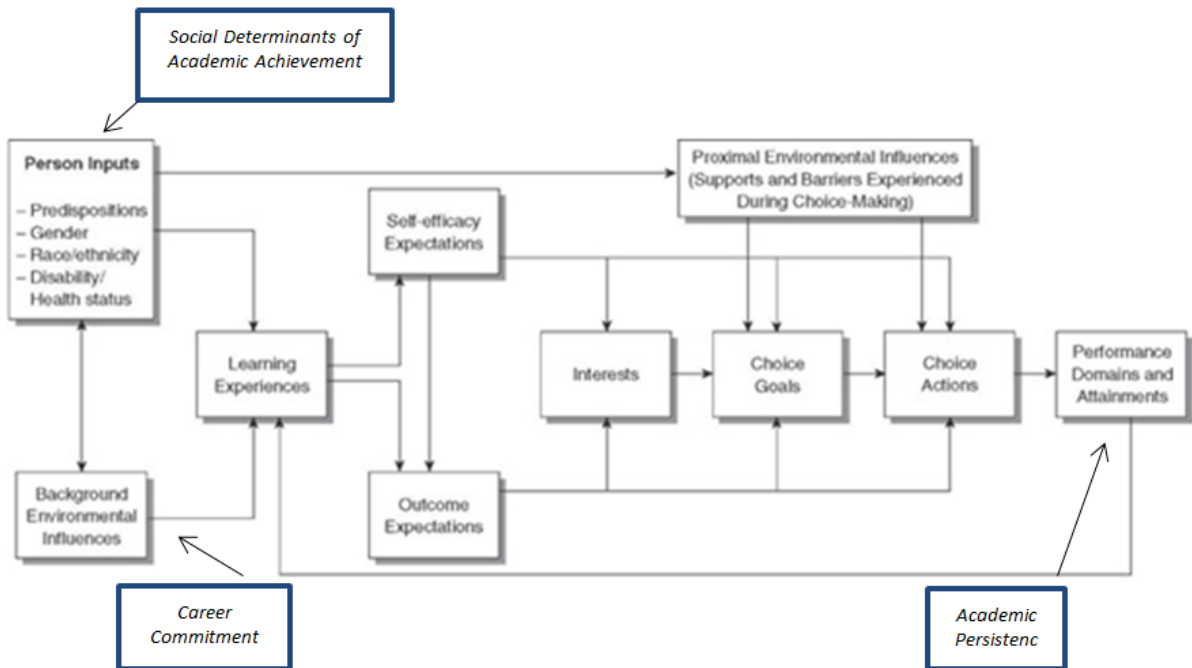
understanding and commitment to pursue a nursing degree. Based on this study, programs and services to support the factors of career indecision such as lack of confidence and readiness, social support stress, and financial stress should be evaluated as an effective strategy to understand persistence and academic success.

APPENDIX A

SOCIAL COGNITIVE CAREER THEORY PERFORMANCE MODEL

WITH STUDY VARIABLES

(Brown et al., 2008; Lent et al., 1994)



APPENDIX B

THE COLLEGE PERSISTENCE QUESTIONNAIRE – V3 – (SHORT FORM)

(Davidson et al., 2009)
(Permission granted by B. Davidson)

Unique Identifier: _____

1. How much do you think you have in common with other students here?

very much / much / some / little / very little / not applicable

2. How would you rate the quality of the instruction you are receiving here?

excellent / good / fair / poor / very poor / not applicable

3. How often do you worry about having enough money to meet your needs?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

4. How confident are you that this is the right college or university for you?

very confident / somewhat confident / neutral / somewhat unconfident / very unconfident /
not applicable

5. How much pressure do you feel when trying to meet deadlines for course assignments?

extreme pressure / much pressure / some pressure / a little pressure / hardly any pressure at
all / not applicable

6. How satisfied are you with the academic advising you receive here?

very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not
applicable

7. How confident are you that you can get the grades you want?

very confident / somewhat confident / neutral / somewhat unconfident / very unconfident /
not applicable

8. How often do you miss class for reasons other than illness or participation in school-related activities?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

9. Students vary widely in their view of what constitutes a good course, including the notion that the best course is one that asks students to do very little. In your own view, how much work would be asked of students in a really good course?

very much / much / some / little / very little / not applicable

10. There are so many things that can interfere with students making progress toward a degree, feelings of uncertainty about finishing are likely to occur along the way. At this moment in time, how certain are you that you will earn a college degree?

very certain / somewhat certain / neutral / somewhat uncertain / very uncertain / not applicable

11. How much have your interactions with other students had an impact on your personal growth, attitudes, and values?

very much / much / some / little / very little / not applicable

12. How much do the instructors and the courses make you feel like you can do the work successfully?

very much / much / some / little / very little / not applicable

13. How difficult is it for you or your family to be able to handle college costs?

very difficult / somewhat difficult / neutral / somewhat easy / very easy / not applicable

14. How likely is it you will earn a degree from here?

very likely / somewhat likely / neutral / somewhat unlikely / very unlikely / not applicable

15. Students differ quite a lot in how distressed they get over various aspect of college life.

Overall, how much stress would you say that you experience while attending this institution?

very much stress / much stress / some stress / a little stress / very little stress / not applicable

16. How easy is it to get answers to your questions about things related to your education here?

very easy / somewhat easy / neutral / somewhat hard / very hard / not applicable

17. When you are waiting for a submitted assignment to be graded, how assured do you feel that the work you have done is acceptable?

very assured / somewhat assured / neutral / somewhat unassured / very unassured / not applicable

18. How often do you arrive late for classes, meetings, and other college events?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

19. In general, how enthused are you about doing academic tasks?

very enthusiastic / somewhat enthusiastic / neutral / somewhat unenthusiastic / very unenthusiastic / not applicable

20. After beginning college, students sometimes discover that a college degree is not quite as important to them as it once was. How strong is your intention to persist in your pursuit of the degree, here or elsewhere?

very strong / somewhat strong / neutral / somewhat weak / very weak / not applicable

21. How much have your interactions with other students had an impact on your intellectual growth and interest in ideas?

very much / much / some / little / very little / not applicable

22. In general, how satisfied are you with the quality of instruction you are receiving here?
very satisfied / somewhat satisfied / neutral / somewhat dissatisfied / very dissatisfied / not applicable

23. When considering the financial costs of being in college, how often do you feel unable to do things that other students here can afford to do?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

24. How much thought have you given to stopping your education here (perhaps transferring to another college, going to work, or leaving for other reasons)?

a lot of thought / some thought / neutral / little thought / very little thought / not applicable

25. How often do you feel overwhelmed by the academic workload here?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

26. How would you rate the academic advisement you receive here?

excellent / good / fair / poor / very poor / not applicable

27. How much doubt do you have about being able to make the grades you want?

very much doubt / much doubt / some doubt / little doubt / very little doubt / not applicable

28. How often do you turn in assignments past the due date?

very often / somewhat often / sometimes / rarely / very rarely / not applicable

29. Some courses seem to take a lot more time than others. How much extra time are you willing to devote to your studies in those courses?

very much extra time / much extra time / some extra time / a little extra time / very little extra time / not applicable

30. At this moment in time, how strong would you say your commitment is to earning a college degree, here or elsewhere?

very strong / somewhat strong / neutral / somewhat weak / very weak / not applicable

31. How much of a financial strain is it for you to purchase the essential resources you need for courses such as books and supplies?

very large strain / somewhat of a strain / neutral / a little strain / hardly any strain at all / not applicable

32. How likely is it that you will reenroll here next semester?

very likely / somewhat likely / neutral / somewhat unlikely / very unlikely / not applicable

APPENDIX C

CAREER INDECISION PROFILE-SHORT

(Hacker et al., 2013; Xu & Tracey, 2017)
(Permission granted by Henry Xu)

Name _____

Unique Identifier Number _____

Age _____

Gender (circle one): Male, Female, or self-identified as _____

In general, how would you rate the degree of your difficulty in making a career decision?

Low 1 2 3 4 5 6 7 High

Directions:

Read each statement carefully and indicate how well it describes you. Fill in the appropriate circle following each statement.

Use the disagree/agree scale above the circles to select your answer.

Although some items may seem similar, try to answer each without considering your other answers.

Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>

1. When I experience a setback, it takes me a long time to feel good again.
2. I'd be going against the wishes of someone important to me if I follow the career path that most interests me.
3. I am easily embarrassed.
4. I really have a hard time making decisions without help.
5. I often feel discouraged about having to make a career decision.
6. I need to learn more about myself before I can make a good career decision.
7. It's difficult for me to choose a career because I like so many different things.
8. People who are important to me give me contradictory information about the career I should pursue.
9. Important people in my life do not support my career plans.
10. I often feel fearful and anxious.
11. Important people in my life disagree about the career I should pursue.
12. I often feel insecure.

13. I am quite confident that I will be able to overcome obstacles to getting the career I want.
14. I am not sure I can commit to a specific career because I don't know what other options might be available.
15. I'm concerned that my goals may change after I decide on a career.
16. I try to excel at everything I do.
17. Important people in my life have discouraged me from pursuing the career I want.
18. I will be able to find a career that fits my interests.
19. I always work productively to get the job done.
20. I am quite confident that I will be able to find a career in which I'll perform well.

APPENDIX D

DEMOGRAPHIC AND SOCIOECONOMIC FACTORS INVENTORY (SFI)

The purpose of the following questions is to assess the various factors associated with your families' social and economic background.

Unique Identifier Number _____

Age _____

Marital Status

- a. Single
- b. Married
- c. Divorced
- d. Separated
- e. Decline to State

Race

- a. Asian
- b. White, not Hispanic origin
- c. Hispanic
- d. Black, not Hispanic origin
- e. Native Hawaiian or Pacific Islander
- f. Middle Eastern
- g. Other (please specify below)
- h. Unknown
- i. Decline to State

Employment Status while enrolled in classes

- a. Full-time (more than 35 hrs/wk)
- b. Part-time (less than 20 hrs/wk)
- c. Not working
- d. Decline to State

How many hours per week do you care for family members?

- a. More than 35 hours per week
- b. 25-34 hours per week
- c. 15-24 hours per week
- d. Less than 15 hours per week
- e. I have no family care obligations

Identify with the following gender

- a. Male
- b. Female
- c. Decline to State

Approximate Current Accumulative GPA _____

Total Credit Hours enrolled in this semester _____

1. While you were growing up who served as your primary guardian/caregiver(s)?
 - a. Both biological parents
 - b. One biological parent
 - c. One biological parent and a step-parent
 - d. Single Foster parent/guardian
 - e. Two foster parents/guardians
 - f. One grandparent
 - g. Two grandparents
 - h. Other family member (ex. aunt/uncle, older sibling)
 - i. Other Please describe _____

2. Indicate the number of people in your household while you were growing up for each of the following types (include yourself):
 - a. Adults _____
 - b. Juveniles (under age 18) _____

3. Total number of adults who contributed income/earnings in your household while you were growing up? _____

4. Circle the appropriate number for your Mother's, your Father's, your Spouse / Partner's, and your level of school completed. If you grew up in a single parent home, circle only the score from your one parent. If you are neither married nor partnered circle only your score. If you are a full time student circle only the scores for your parents.

<u>Level of School Completed</u>	<u>Mother</u>	<u>Father</u>	<u>Spouse</u>	<u>You</u>
Less than 7 th grade	3	3	3	3
Junior high / Middle school (9 th grade)	6	6	6	6
Partial high school (10 th or 11 th grade)	9	9	9	9

High school graduate	12	12	12	12
Partial college (at least one year)	15	15	15	15
College education	18	18	18	18
Graduate degree	21	21	21	21

5. Circle the appropriate number for your *Mother's*, your *Father's*, your *Spouse / Partner's*, and *your* occupation. If you grew up in a single parent home, use only the score from your one parent. If you are not married or partnered circle only your score. If you are not working while in school leave the "you" column blank.

<u>Occupation</u>	<u>Mother</u>	<u>Father</u>	<u>Spouse</u>	<u>You</u>
Day laborer, janitor, house cleaner, farm worker, food counter sales, food preparation worker, busboy.	5	5	5	5
Garbage collector, short-order cook, cab driver, shoe sales, assembly line workers, masons, baggage porter.	10	10	10	10
Painter, skilled construction trade, sales clerk, truck driver, cook, sales counter or general office clerk.	15	15	15	15
Automobile mechanic, typist, locksmith, farmer, carpenter, receptionist, construction laborer, hairdresser.	20	20	20	20
Machinist, musician, bookkeeper, secretary, insurance sales, cabinet maker, personnel specialist, welder.	25	25	25	25
Supervisor, librarian, aircraft mechanic, artist and artisan, electrician, administrator, military enlisted personnel, buyer.	30	30	30	30
Nurse, skilled technician, medical technician, counselor, manager, police and fire personnel, financial manager, physical, occupational, speech therapist.	35	35	35	35
Mechanical, nuclear, and electrical engineer, educational administrator, veterinarian, military officer, elementary, high school and special education teacher,	40	40	40	40
Physician, attorney, professor, chemical and aerospace engineer, judge, CEO, senior manager, public official, psychologist, pharmacist, accountant.	45	45	45	45

6. Which of the following categories best describes the total COMBINED family income (**includes income contributed by all adults in the home**)

that your family earned, per year, while you were growing up?

- a. \$5,000 through \$11,999
- b. \$12,000 through \$15,999
- c. \$16,000 through \$24,999
- d. \$25,000 through \$34,999
- e. \$35,000 through \$39,999
- f. \$50,000 through \$74,999
- g. \$75,000 through \$99,999
- h. \$100,000 through \$249,999
- i. \$250,000 through \$499,999
- j. \$500,000 through \$999,999
- k. \$1,000,000 or more
- l. Unsure

7. Which of the following categories best describe your current total household income (if you are a dependent of your parents please use parent income)?

- a. \$19,000 or less
- b. \$20,000-\$60,000
- c. Over \$60,000
- d. Unsure

APPENDIX E

CONSENT FORM FOR PARTICIPATION IN A RESEARCH STUDY

UMKC IRB PROTOCOL ID: 2016315

A CROSS-SECTIONAL STUDY TO EXAMINE THE RELATIONSHIP BETWEEN CAREER COMMITMENT AND THE MEDIATING AND/OR MODERATING EFFECTS OF SOCIAL DETERMINANTS OF ACADEMIC ACHIEVEMENT ON PERCEIVED STUDENT NURSE PERSISTENCE DURING THE FIRST YEAR OF AN UNDERGRADUATE NURSING PROGRAM.

Introduction

You are being asked to volunteer for a research study. This study is being conducted at the University of Missouri – Kansas City as part of a dissertation research project.

The researcher in charge of this study is Robyn Walter, MSN.

The study team is asking you to take part in this research study because you are a first year nursing student. Research studies only include people who choose to take part. Please read this consent form carefully. This consent form explains what to expect: the risks and benefits, if any, if you consent to be in the study.

Background

- Many newly enrolled nursing students do not complete their program of study successfully for a variety of reasons.
- An area of retention that requires more research is examining factors that contribute to persistence and that answer the question of why do students stay enrolled.

Purpose

- The purpose of this study is to examine the relationship between career commitment and the mediating and/or moderating (relationship) effects of social determinants of academic achievement on perceived student nurse persistence during the first year of an undergraduate nursing program.
- You will be one of about 215 subjects in the study from several nursing schools.

Study Procedures and Treatments

If you decide to participate in the study, you will be asked some questions about you and your persistence/career commitment factors.

The following procedures will occur:

- Interested participants will provide the researcher with their name and electronic mail address on the research consent form
- Participants will be electronically mailed a survey that will ask questions about college persistence and career commitment factors. The survey will take approximately 15-20 minutes and will be uploaded to the confidential RedCap data repository system.

Possible Risks or Side Effects of Taking Part in this Study

Risks of answering questions and documenting information:

- Participant may become uncomfortable with answering personal questions

Possible Benefits for Taking Part in this Study

- A potential benefit to you for participating in the study is the contribution to the nursing workforce issue.

- Other people may benefit from the information obtained in this study. The knowledge gained from the study may result in a better way to assist student with nursing program persistence and completion.

Costs for Taking Part in this Study

You will not have to pay for materials associated with this study.

Payment for Taking Part in this Study

No payment for participating is planned at this time.

Alternatives to Study Participation

You are not required to participate in this study. Your grades and program status will not be effected by participating or declining to participate.

Confidentiality and Access to your Records

The results of this research may be published or presented for scientific purposes. You will not be named in any reports of the results. Your survey tool that has your unique identifier on them may be shown to the Institutional Review Board (IRB) (a committee that reviews and approves research studies), or other governing agencies. This is to prove which study procedures you completed and to check the data reported about you. The researcher will keep all information about you confidential as provided by law, but complete confidentiality cannot be guaranteed.

Contacts for Questions about the Study

You should contact the IRB Administrator of UMKC's Institutional Review Board at 816-235-5927 if you have any questions, concerns or complaints about your rights as a research subject. You may call the researcher Robyn Walter at 314-413-3273 if you have any questions about this study. You may also call her if any problems come up.

Voluntary Participation

Taking part in this research study is voluntary. If you choose to be in the study, you are free to stop participating at any time and for any reason. If you choose not to be in the study or decide to stop participating, your decision will not affect any grades you have earned.

You have read this Consent Form or it has been read to you. You have been told why this research is being done and what will happen if you take part in the study, including the risks and benefits. You have had the chance to ask questions, and you may ask questions at any time in the future by calling Robyn Walter at 314-413-3273. By signing this consent form, you volunteer and consent to take part in this research study. A copy of this consent form will be emailed to you along with the electronic link to the brief survey.

APPENDIX F
PERMISSIONS

Re: CPQ Inquiry for Dissertation Research

From: Bill Davidson <William.Davidson@angelo.edu>
Sent: Saturday, April 14, 2018 3:02:00 PM
To: Walter, Robyn (UMKC-Student)
Subject: Re: CPQ Inquiry for Dissertation Research

Thanks for your interest in the CPQ, Robyn. You have our permission to use the instrument in your doctoral research. I am attaching a copy and the scoring instructions.
Best wishes in your research,
Bill

William B. Davidson, PhD
Professor of Psychology
Angelo State University
Department of Psychology, Sociology, and Social Work
ASU Station #10907
San Angelo, TX 76909
Phone: 325-227-1016 (mobile)
bill.davidson@angelo.edu

Fw: CIP Short Form

Sent: Sunday, April 15, 2018 1:17 PM
To: Walter, Robyn (UMKC-Student)
Subject: RE: CIP Short Form

Dear Robyn,

Your research is interesting. Attached is the CIP-Short. Good luck with your research!

Best,

Hui Xu, Ph.D./Dr. X
Assistant Professor
Counseling Psychology
School of Education
Loyola University Chicago
hxu2@luc.edu



Institutional Review Board
University of Missouri-Kansas City

5319 Rockhill Road
Kansas City, MO 64110
816-235-5927
umkcirb@umkc.edu

August 02, 2019

Principal Investigator: Carol Elizabeth Schmer
Department: Nursing - General

Your IRB Application to project entitled "The C-CaPS Study: Career Commitment and Persistence of Student Nurses" was reviewed and determined to qualify for IRB exemption according to the terms and conditions described below:

IRB Project Number	2016315
IRB Review Number	251432
Initial Application Approval Date	August 02, 2019
IRB Anniversary Date	August 02, 2020
Level of Review	Exempt
Exempt Categories	45 CFR 46.101b(2)
Risk Level	Minimal Risk

The principal investigator (PI) is responsible for all aspects and conduct of this study. The PI must comply with the following conditions of the determination:

1. No subjects may be involved in any study procedure prior to the determination date.
2. Changes that may affect the exempt determination must be submitted for confirmation prior to implementation utilizing the Exempt Amendment Form.
3. The Annual Exempt Form must be submitted 30 days prior to the determination anniversary date to keep the study active or to close it.
4. Maintain all research records for a period of seven years from the project completion date.

If you are offering subject payments and would like more information about research participant payments, please click here to view the UM system Policy on Research Subject Payments: https://www.umsystem.edu/oei/sharedservices/apss/nonpo_vouchers/research_subject_payments

If you have any questions, please contact the IRB at 816-235-5927 or umkcirb@umkc.edu.

Thank you,
UMKC Institutional Review Board

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VITA

Robyn C. Walter (née Batcheller) was born in New Orleans, Louisiana, and raised in St. Louis, Missouri. She found her love for the health care field during her part-time job as a physician's office assistant while in high school. Working alongside the nurse sparked a desire to serve people in this way. She graduated with a bachelor's degree in nursing from the University of Missouri-Columbia in 1987. After graduation she worked as an RN in the Cardiothoracic Stepdown Unit at St. Luke's Hospital. She has been married thirty-four years to her husband, Scott Walter. They are blessed with two daughters: Haley and Olivia. Robyn continued to work in healthcare as a home health nurse, manager, consultant, and now educator.

Robyn completed her MSN in 1996 at St. Louis University with the focus of an Administration specialty. Upon completion she began a consulting company assisting healthcare facilities with accreditation preparation, assessment, and quality improvement. She has been a nurse educator for the last 18 years. In 2018, Robyn enrolled in the Doctor of Philosophy in Nursing Program at University of Missouri-Kansas City. Robyn is also a member of Sigma Theta Tau International.